ILLINOIS HEALTH FACILITIES AND SERVICES REVIEW BOARD
18-040 APPLICATION FOR PERMIT

[ORIGINAL]

SECTION I. IDENTIFICATION, GENERAL INFORMATION, AND CERTIFICATION

RECEIVED
OCT 19 2018
HEALTH FACILITIES & SERVICES REVIEW BOARD

This Section must be completed for all projects.

Facility/Project Identification

Facility Name: Heart Transplantation Category of Service Re-establishment		
Street Address: 530 NE Glen Oak Avenue		
City and Zip Code: Peoria 61637		
County: Peoria	Health Service Area: 2	Health Planning Area: C-01

Applicant(s) [Provide for each applicant (refer to Part 1130.220)]

Exact Legal Name: OSF HealthCare System
Street Address: 800 NE Glen Oak Avenue
City and Zip Code: Peoria, IL 61603
Name of Registered Agent: Sister Theresa Ann Brazeau, OSF
Registered Agent Street Address: 1175 St. Francis Lane
Registered Agent City and Zip Code: East Peoria, IL 61611
Name of Chief Executive Officer: Robert C. Sehring
CEO Street Address: 800 NE Glen Oak Avenue
CEO City and Zip Code: Peoria, IL 61603
CEO Telephone Number: 309-655-2850

Type of Ownership of Applicants

- ☒ Non-profit Corporation
- ☐ For-profit Corporation
- ☐ Limited Liability Company
- ☐ Partnership
- ☐ Governmental
- ☐ Sole Proprietorship
- ☐ Other

- Corporations and limited liability companies must provide an **Illinois certificate of good standing.**
- Partnerships must provide the name of the state in which they are organized and the name and address of each partner specifying whether each is a general or limited partner.

APPEND DOCUMENTATION AS ATTACHMENT 1 IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Primary Contact [Person to receive ALL correspondence or inquiries]

Name: Mark E. Hohulin
Title: Senior Vice President, Healthcare Analytics
Company Name: OSF HealthCare System
Address: 800 NE Glen Oak Avenue, Peoria, IL 61603
Telephone Number: 309-308-9656
E-mail Address: mark.e.hohulin@osfhealthcare.org
Fax Number: 309-308-0530

Additional Contact [Person who is also authorized to discuss the application for permit]

Name: Edwin W. Parkhurst, Jr.
Title: Managing Principal
Company Name: PRISM Healthcare Consulting
Address: 800 Roosevelt Road, Building E, Suite 110, Glen Ellyn, Illinois 60137
Telephone Number: 630-790-1265
E-mail Address: eparkhurst@consultprism.com
Fax Number: 630-790-2696

ILLINOIS HEALTH FACILITIES AND SERVICES REVIEW BOARD
APPLICATION FOR PERMIT

SECTION I. IDENTIFICATION, GENERAL INFORMATION, AND CERTIFICATION

This Section must be completed for all projects.

Facility/Project Identification

Facility Name: Heart Transplantation Category of Service Re-establishment		
Street Address: 530 NE Glen Oak Avenue		
City and Zip Code: Peoria 61637		
County: Peoria	Health Service Area: 2	Health Planning Area: C-01

Applicant(s) [Provide for each applicant (refer to Part 1130.220)]

Exact Legal Name: OSF HealthCare System d/b/a OSF Saint Francis Medical Center
Street Address: 530 NE Glen Oak Avenue
City and Zip Code: Peoria, IL 61603
Name of Registered Agent: Sister Theresa Ann Brazeau, OSF
Registered Agent Street Address: 1175 St. Francis Lane
Registered Agent City and Zip Code: East Peoria, IL 61611
Name of Chief Executive Officer: Robert G. Anderson, President
CEO Street Address: 530 NE Glen Oak Avenue
CEO City and Zip Code: Peoria, IL 61637
CEO Telephone Number: 309-655-7796

Type of Ownership of Applicants

- ☒ Non-profit Corporation
- ☐ For-profit Corporation
- ☐ Limited Liability Company
- ☐ Partnership
- ☐ Governmental
- ☐ Sole Proprietorship
- ☐ Other

- Corporations and limited liability companies must provide an **Illinois certificate of good standing.**
- Partnerships must provide the name of the state in which they are organized and the name and address of each partner specifying whether each is a general or limited partner.

APPEND DOCUMENTATION AS ATTACHMENT 1 IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Primary Contact [Person to receive ALL correspondence or inquiries]

Name: Mark E. Hohulin
Title: Senior Vice President, Healthcare Analytics
Company Name: OSF HealthCare System
Address: 800 NE Glen Oak Avenue, Peoria, IL 61603
Telephone Number: 309-308-9656
E-mail Address: mark.e.hohulin@osfhealthcare.org
Fax Number: 309-308-0530

Additional Contact [Person who is also authorized to discuss the application for permit]

Name: Edwin W. Parkhurst, Jr.
Title: Managing Principal
Company Name: PRISM Healthcare Consulting
Address: 800 Roosevelt Road, Building E, Suite 110, Glen Ellyn, Illinois 60137
Telephone Number: 630-790-1265
E-mail Address: eparkhurst@consultprism.com
Fax Number: 630-790-2696

Post Permit Contact

[Person to receive all correspondence subsequent to permit issuance-**THIS PERSON MUST BE EMPLOYED BY THE LICENSED HEALTH CARE FACILITY AS DEFINED AT 20 ILCS 3960]**

Name: Mark E. Hohulin
Title: Senior Vice President, Healthcare Analytics
Company Name: OSF HealthCare System
Address: 800 NE Glen Oak Avenue, Peoria, IL 61603
Telephone Number: 309-308-9656
E-mail Address: mark.e.hohulin@osfhealthcare.org
Fax Number: 309-308-0530

Site Ownership

[Provide this information for each applicable site]

Exact Legal Name of Site Owner: OSF HealthCare System
Address of Site Owner: 800 NE Glen Oak Avenue, Peoria, IL 61603
Street Address or Legal Description of the Site: 530 NE Glen Oak Avenue, Peoria, IL 61637 **Proof of ownership or control of the site is to be provided as Attachment 2. Examples of proof of ownership are property tax statements, tax assessor's documentation, deed, notarized statement of the corporation attesting to ownership, an option to lease, a letter of intent to lease, or a lease.**
APPEND DOCUMENTATION AS ATTACHMENT 2, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Operating Identity/Licensee

[Provide this information for each applicable facility and insert after this page.]

Exact Legal Name: OSF HealthCare System d/b/a OSF Saint Francis Medical Center
Address: 800 NE Glen Oak Avenue, Peoria, IL 61603

☒ Non-profit Corporation ☐ Partnership
☐ For-profit Corporation ☐ Governmental
☐ Limited Liability Company ☐ Sole Proprietorship ☐
Other

- Corporations and limited liability companies must provide an Illinois Certificate of Good Standing.
- Partnerships must provide the name of the state in which organized and the name and address of each partner specifying whether each is a general or limited partner.
- **Persons with 5 percent or greater interest in the licensee must be identified with the % of ownership.**

APPEND DOCUMENTATION AS ATTACHMENT 3, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Organizational Relationships

Provide (for each applicant) an organizational chart containing the name and relationship of any person or entity who is related (as defined in Part 1130.140). If the related person or entity is participating in the development or funding of the project, describe the interest and the amount and type of any financial contribution.

APPEND DOCUMENTATION AS ATTACHMENT 4, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Post Permit Contact

[Person to receive all correspondence subsequent to permit issuance-**THIS PERSON MUST BE EMPLOYED BY THE LICENSED HEALTH CARE FACILITY AS DEFINED AT 20 ILCS 3960]**

Name: Mark E. Hohulin
Title: Senior Vice President, Healthcare Analytics
Company Name: OSF HealthCare System
Address: 800 NE Glen Oak Avenue, Peoria, IL 61603
Telephone Number: 309-308-9656
E-mail Address: mark.e.hohulin@osfhealthcare.org
Fax Number: 309-308-0530

Site Ownership

[Provide this information for each applicable site]

Exact Legal Name of Site Owner: OSF HealthCare System
Address of Site Owner: 800 NE Glen Oak Avenue, Peoria, IL 61603
Street Address or Legal Description of the Site: **Proof of ownership or control of the site is to be provided as Attachment 2. Examples of proof of ownership are property tax statements, tax assessor's documentation, deed, notarized statement of the corporation attesting to ownership, an option to lease, a letter of intent to lease, or a lease.**
APPEND DOCUMENTATION AS ATTACHMENT 2, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Operating Identity/Licensee

[Provide this information for each applicable facility and insert after this page.]

Exact Legal Name: OSF HealthCare System d/b/a OSF Saint Francis Medical Center
Address: 800 NE Glen Oak Avenue, Peoria, IL 61603
☒ Non-profit Corporation ☐ Partnership ☐ For-profit Corporation ☐ Governmental ☐ Limited Liability Company ☐ Sole Proprietorship ☐ Other o Corporations and limited liability companies must provide an Illinois Certificate of Good Standing. o Partnerships must provide the name of the state in which organized and the name and address of each partner specifying whether each is a general or limited partner. o **Persons with 5 percent or greater interest in the licensee must be identified with the % of ownership.**
APPEND DOCUMENTATION AS ATTACHMENT 3, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Organizational Relationships

Provide (for each applicant) an organizational chart containing the name and relationship of any person or entity who is related (as defined in Part 1130.140). If the related person or entity is participating in the development or funding of the project, describe the interest and the amount and type of any financial contribution.
APPEND DOCUMENTATION AS ATTACHMENT 4, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Flood Plain Requirements Not Applicable *

[Refer to application instructions.]

Provide documentation that the project complies with the requirements of Illinois Executive Order #2006-5 pertaining to construction activities in special flood hazard areas. As part of the flood plain requirements, please provide a map of the proposed project location showing any identified floodplain areas. Floodplain maps can be printed at **www.FEMA.gov** or **www.illinoisfloodmaps.org**. **This map must be in a readable format**. In addition, please provide a statement attesting that the project complies with the requirements of Illinois Executive Order #2006-5 **(http://www.hfsrb.illinois.gov)**.

APPEND DOCUMENTATION AS ATTACHMENT 5, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Historic Resources Preservation Act Requirements Not Applicable *

[Refer to application instructions.]

Provide documentation regarding compliance with the requirements of the Historic Resources Preservation Act.

APPEND DOCUMENTATION AS ATTACHMENT 6, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

DESCRIPTION OF PROJECT

1. Project Classification

[Check those applicable - refer to Part 1110.20 and Part 1120.20(b)]

Part 1110 Classification:

☒ Substantive

☐ Non-substantive

* There is no new construction modernization associated with the re-establishment of this designated category of service; Select Organ Transplantation. The program will be implemented in existing facilities.

2. Narrative Description

In the space below, provide a brief narrative description of the project. Explain **WHAT** is to be done in **State Board defined terms**, **NOT WHY** it is being done. If the project site does NOT have a street address, include a legal description of the site. Include the rationale regarding the project's classification as substantive or non-substantive.

OSF Saint Francis Medical Center (Medical Center), 530 NE Glen Oak Avenue, Peoria, 61637, is an approved organ transplant center as designated by the Centers for Medicare and Medicaid Services (CMS) and is recognized as such by the Illinois Department of Public Health. In Calendar Year (C.Y.) 2017, OSF Saint Francis Medical Center, performed 41 Kidney Transplantations and 3 Pancreas Transplantations.

The Medical Center performed its first heart transplantation 31 years ago on April 27, 1987 and, over the next 19-year period (1987-2006), successfully completed 197 transplants. The Medical Center's first heart transplant recipient was 55 at the time, and now 86 years old, returns twice a year for a check-up. The program was suspended in 2006 due to decreasing volume and imminent physician retirements. Since its suspension, concerted efforts have occurred to strengthen OSF HealthCare's cardiovascular services. Most recently, a qualified heart transplantation surgeon has joined the Medical Center staff. The new medical staff member provides the necessary surgical capability for program re-establishment.

In addition, since 2016, OSF HealthCare, an integrated health system, has developed a Cardiovascular Service Line in conjunction with twenty (20) area hospitals and nine (9) clinics to provide one of the most comprehensive cardiovascular programs, embracing the most advanced techniques and technologies available, in Illinois, to diagnose and treat heart disease.

Given the current Cardiovascular Service Line clinical strengths and capabilities, OSF HealthCare proposes to re-establish a heart transplantation program at the Medical Center and obtain re-approval from CMS; to do so, an approved CON Permit Application is required. This specific CON permit application responds to the State Agencies Criteria 1110.240, Select Organ Transplantation.

The project is substantive under Section 1120.20 (Classification of Projects) in that it proposes to (re-) establish a designated Category of Service, Select Organ Transplantation (Heart).

Support for this important program follows this narrative description.

Advocate Heart Institute
Advocate Christ Medical Center
4440 West 95th Street || Oak Lawn, IL 60453 || T 708.684.8000 || advocateheartinstitute.com

October 10th, 2018

I am Clinical Director of the Heart Failure and Transplantation Program at Advocate Christ Medical Center, As such, I fully support re-establishing OSF Saint Francis Medical Center's Heart Transplantation Program.

Heart disease is a chronic illness requiring a continuum of integrated services with heart transplantation being an end-stage component similar to kidney transplantation for end-stage renal disease. Re-establishing the heart transplantation program at OSF Saint Francis Medical Center will ensure advanced cardiovascular care accessible in downstate Illinois. In addition, the re-establishment will assist in ensuring population health in the region.

Again, I am pleased to support this important program and, if you have any questions, I can be reached at the contact information below.

Sincerely,

William Cotts, M.D., MS, FACC, FACP FAHA, FHFSA
Clinical Director Heart Transplantation and
Mechanical Assistance

(877) 684-4327
william.cotts@advocatehealth.com

A faith-based health system serving individuals, families and communities
Recipient of the Magnet award for excellence in nursing services by the American Nurses Credentialing Center

Project Costs and Sources of Funds * Not Applicable

Complete the following table listing all costs (refer to Part 1120.110) associated with the project. When a project or any component of a project is to be accomplished by lease, donation, gift, or other means, the fair market or dollar value (refer to Part 1130.140) of the component must be included in the estimated project cost. If the project contains non-reviewable components that are not related to the provision of health care, complete the second column of the table below. Note, the use and sources of funds must be equal.

Project Costs and Sources of Funds			
USE OF FUNDS	**CLINICAL**	**NONCLINICAL**	**TOTAL**
Preplanning Costs			
Site Survey and Soil Investigation			
Site Preparation			
Off Site Work			
New Construction Contracts			
Modernization Contracts			
Contingencies			
Architectural/Engineering Fees			
Consulting and Other Fees			
Movable or Other Equipment (not in construction contracts)			
Bond Issuance Expense (project related)			
Net Interest Expense During Construction (project related)			
Fair Market Value of Leased Space or Equipment			
Other Costs To Be Capitalized			
Acquisition of Building or Other Property (excluding land)			
TOTAL USES OF FUNDS	-0-	-0-	-0-
SOURCE OF FUNDS	**CLINICAL**	**NONCLINICAL**	**TOTAL**
Cash and Securities			
Pledges			
Gifts and Bequests			
Bond Issues (project related)			
Mortgages			
Leases (fair market value)			
Governmental Appropriations			
Grants			
Other Funds and Sources			
TOTAL SOURCES OF FUNDS	-0-	-0-	-0-
NOTE: ITEMIZATION OF EACH LINE ITEM MUST BE PROVIDED AT ATTACHMENT 7, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.			

* Not applicable, there are no capitalized project costs associated with re-establishing the Heart Transplant Category of Service at OSF Saint Francis Medical Center.

Related Project Costs

Provide the following information, as applicable, with respect to any land related to the project that will be or has been acquired during the last two calendar years:

Land acquisition is related to project ☐ Yes ☒ No
Purchase Price: $_____
Fair Market Value: $_____

The project involves the establishment of a new facility or a new category of service
☒ Yes ☐ No

If yes, provide the dollar amount of all **non-capitalized** operating start-up costs (including operating deficits) through the first full fiscal year when the project achieves or exceeds the target utilization specified in Part 1100.

Estimated start-up costs and operating deficit cost is $ 230,111.00

Project Status and Completion Schedules

For facilities in which prior permits have been issued please provide the permit numbers.

Indicate the stage of the project's architectural drawings: Not Applicable

☒ None or not applicable ☐ Preliminary

☐ Schematics ☐ Final Working

Anticipated project completion date (refer to Part 1130.140): NA – Program will commence on IHFSRB approval

Indicate the following with respect to project expenditures or to financial commitments (refer to Part 1130.140): Not applicable in that there are no capitalized project costs.

☐ Purchase orders, leases or contracts pertaining to the project have been executed. ☐ Financial commitment is contingent upon permit issuance. Provide a copy of the contingent "certification of financial commitment" document, highlighting any language related to CON Contingencies
☒ Financial Commitment will occur after permit issuance.

APPEND DOCUMENTATION AS ATTACHMENT 8, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

State Agency Submittals [Section 1130.620(c)]

Are the following submittals up to date as applicable:
☒ Cancer Registry
☒ APORS
☒ All formal document requests such as IDPH Questionnaires and Annual Bed Reports been submitted
☒ All reports regarding outstanding permits
Failure to be up to date with these requirements will result in the application for permit being deemed incomplete.

Cost Space Requirements * Not Applicable

Provide in the following format, the **Departmental Gross Square Feet (DGSF)** or the **Building Gross Square Feet (BGSF)** and cost. The type of gross square footage either **DGSF** or **BGSF** must be identified. The sum of the department costs **MUST** equal the total estimated project costs. Indicate if any space is being reallocated for a different purpose. Include outside wall measurements plus the department's or area's portion of the surrounding circulation space. **Explain the use of any vacated space.**

		Gross Square Feet		Amount of Proposed Total Gross Square Feet That Is:			
Dept. / Area	**Cost**	**Existing**	**Proposed**	**New Const.**	**Modernized**	**As Is**	**Vacated Space**
REVIEWABLE							
Medical Surgical							
Intensive Care							
Diagnostic Radiology							
MRI							
Total Clinical							
NON REVIEWABLE							
Administrative							
Parking							
Gift Shop							
Total Non-clinical							
TOTAL							

APPEND DOCUMENTATION AS ATTACHMENT 9, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

* Attachment #9 is not applicable because no new construction or modernization is involved with the heart transplant program re-establishment.

Facility Bed Capacity and Utilization (Unpublished)

Complete the following chart, as applicable. Complete a separate chart for each facility that is a part of the project and insert the chart after this page. Provide the existing bed capacity and utilization data for the latest **Calendar Year for which data is available. Include observation days in the patient day totals for each bed service.** Any bed capacity discrepancy from the Inventory will result in the application being deemed **incomplete**.

FACILITY NAME: OSF Saint Francis Medical Center			CITY: Peoria, 61637		
Category of Service	**Authorized Beds**	**Admissions**	**Patient Days**	**Bed Changes**	**Proposed Beds**
Medical/Surgical	379	20,519	105,763	0	379
Obstetrics	52	3,384	11,219	0	52
Pediatrics	40	2,381	9,983	0	40
Intensive Care	91	4,326	21,662	0	91
Comprehensive Physical Rehabilitation	27	536	8,185	0	27
Acute/Chronic Mental Illness	--	--	--	--	--
Neonatal Intensive Care	40	782	9,219	0	40
General Long Term Care	--	--	--	--	--
Specialized Long Term Care	--	--	--	--	--
Long Term Acute Care	--	--	--	--	--
Other ((identify)	--*	--	--	--	--
TOTALS:	629	31,928	166,031	0	629

* OSF Saint Francis Medical Center has 36 dedicated, non-CON authorized, observation beds; the source document indicates 1,917 dedicated observation days in these beds.

Source: 2017 Annual Hospital Questionnaire, dated March 30, 2018

CERTIFICATION

The Application must be signed by the authorized representatives of the applicant entity. Authorized representatives are:

- in the case of a corporation, any two of its officers or members of its Board of Directors;
- in the case of a limited liability company, any two of its managers or members (or the sole manager or member when two or more managers or members do not exist);
- in the case of a partnership, two of its general partners (or the sole general partner, when two or more general partners do not exist);
- in the case of estates and trusts, two of its beneficiaries (or the sole beneficiary when two or more beneficiaries do not exist); and
- in the case of a sole proprietor, the individual that is the proprietor.

This Application is filed on the behalf of OSF HealthCare System
*

in accordance with the requirements and procedures of the Illinois Health Facilities Planning Act. The undersigned certifies that he or she has the authority to execute and file this Application on behalf of the applicant entity. The undersigned further certifies that the data and information provided herein, and appended hereto, are complete and correct to the best of his or her knowledge and belief. The undersigned also certifies that the fee required for this application is sent herewith or will be paid upon request.

Robert C. Sehring
SIGNATURE

Robert C. Sehring
PRINTED NAME

Chief Executive Officer
PRINTED TITLE

Notarization:
Subscribed and sworn to before me
this 11th day of October 2018

Tonda L Stewart
Signature of Notary

Seal

OFFICIAL SEAL
TONDA L. STEWART
Notary Public - State of Illinois
My Commission Expires 8/26/2020

SIGNATURE

Mike A. Cruz, MD
PRINTED NAME

Chief Executive Officer, Central Region
PRINTED TITLE

Notarization:
Subscribed and sworn to before me
this 11th day of October 2018

Tonda L. Stewart
Signature of Notary

Seal

OFFICIAL SEAL
TONDA L. STEWART
Notary Public - State of Illinois
My Commission Expires 8/26/2020

*Insert the EXACT legal name of the applicant

CERTIFICATION

The Application must be signed by the authorized representatives of the applicant entity. Authorized representatives are:

- in the case of a corporation, any two of its officers or members of its Board of Directors;
- in the case of a limited liability company, any two of its managers or members (or the sole manager or member when two or more managers or members do not exist);
- in the case of a partnership, two of its general partners (or the sole general partner, when two or more general partners do not exist);
- in the case of estates and trusts, two of its beneficiaries (or the sole beneficiary when two or more beneficiaries do not exist); and
- in the case of a sole proprietor, the individual that is the proprietor.

This Application is filed on the behalf of OSF Saint Francis Medical Center*

in accordance with the requirements and procedures of the Illinois Health Facilities Planning Act. The undersigned certifies that he or she has the authority to execute and file this Application on behalf of the applicant entity. The undersigned further certifies that the data and information provided herein, and appended hereto, are complete and correct to the best of his or her knowledge and belief. The undersigned also certifies that the fee required for this application is sent herewith or will be paid upon request.

SIGNATURE

Mike A. Cruz, MD
PRINTED NAME

Chief Executive Officer, Central Region
PRINTED TITLE

Notarization:
Subscribed and sworn to before me this 11th day of October 2018

Signature of Notary

Seal

OFFICIAL SEAL
TONDA L. STEWART
Notary Public - State of Illinois
My Commission Expires 8/26/2020

SIGNATURE

Robert G. Anderson
PRINTED NAME

President
PRINTED TITLE

Notarization:
Subscribed and sworn to before me this 11th day of October 2018

Signature of Notary

Seal

OFFICIAL SEAL
TONDA L. STEWART
Notary Public - State of Illinois
My Commission Expires 8/26/2020

*Insert the EXACT legal name of the applicant

After paginating the entire completed application indicate, in the chart below, the page numbers for the included attachments: **To be updated prior to final draft (submission)**

INDEX OF ATTACHMENTS

ATTACHMENT NO.		PAGES
1	Applicant Identification including Certificate of Good Standing	17 – 19
2	Site Ownership	20 – 21
3	Persons with 5 percent or greater interest in the licensee must be identified with the % of ownership.	22 – 24
4	Organizational Relationships (Organizational Chart) Certificate of Good Standing Etc.	25 – 26
5	Flood Plain Requirements	27
6	Historic Preservation Act Requirements	28
7	Project and Sources of Funds Itemization	29
8	Financial Commitment Document if required	30 – 31
9	Cost Space Requirements	32
10	Discontinuation	NA
11	Background of the Applicant	33 – 36
12	Purpose of the Project	37 – 38
13	Alternatives to the Project	39 – 40
14	Size of the Project	41 – 42
15	Project Service Utilization	43
16	Unfinished or Shell Space	NA
17	Assurances for Unfinished/Shell Space	NA
18	Master Design Project	NA
	Service Specific:	
19	Medical Surgical Pediatrics, Obstetrics, ICU	NA
20	Comprehensive Physical Rehabilitation	NA
21	Acute Mental Illness	NA
22	Open Heart Surgery	NA
23	Cardiac Catheterization	NA
24	In-Center Hemodialysis	NA
25	Non-Hospital Based Ambulatory Surgery	NA
26	Selected Organ Transplantation	45 – 73
27	Kidney Transplantation	NA
28	Subacute Care Hospital Model	NA
29	Community-Based Residential Rehabilitation Center	NA
30	Long Term Acute Care Hospital	NA
31	Clinical Service Areas Other than Categories of Service	NA
32	Freestanding Emergency Center Medical Services	NA
33	Birth Center	NA
	Financial and Economic Feasibility:	
34	Availability of Funds	NA
35	Financial Waiver	NA
36	Financial Viability	NA
37	Economic Feasibility	NA
38	Safety Net Impact Statement	76 – 77
39	Charity Care Information	78
Appendix A	Surgical Staff Resumes / CV's	79 – 162

Attachments

Type of Ownership of Applicants

☒	Non-profit Corporation	☐	Partnership
☐	For-profit Corporation	☐	Governmental
☐	Limited Liability Company	☐	Sole Proprietorship ☐
	Other		

- Corporations and limited liability companies must provide an **Illinois certificate of good standing.**
- Partnerships must provide the name of the state in which they are organized and the name and address of each partner specifying whether each is a general or limited partner.

APPEND DOCUMENTATION AS ATTACHMENT 1 IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Exact Legal Name: OSF HealthCare System
Street Address: 800 NE Glen Oak Avenue
City and Zip Code: Peoria, IL 61603
Name of Registered Agent: Sister Theresa Ann Brazeau, OSF
Registered Agent Street Address: 1175 St. Francis Lane
Registered Agent City and Zip Code: East Peoria, IL 61611
Name of Chief Executive Officer: Robert C. Sehring
CEO Street Address: 800 NE Glen Oak Avenue
CEO City and Zip Code: Peoria, IL 61603
CEO Telephone Number: 309-655-2850

Applicant(s) [Provide for each applicant (refer to Part 1130.220)]

Exact Legal Name: OSF HealthCare System d/b/a OSF Saint Francis Medical Center
Street Address: 530 NE Glen Oak Avenue
City and Zip Code: Peoria, IL 61603
Name of Registered Agent: Sister Theresa Ann Brazeau, OSF
Registered Agent Street Address: 1175 St. Francis Lane
Registered Agent City and Zip Code: East Peoria, IL 61611
Name of Chief Executive Officer: Robert G. Anderson, President
CEO Street Address: 530 NE Glen Oak Avenue
CEO City and Zip Code: Peoria, IL 61637
CEO Telephone Number: 309-655-7796

File Number 0107-414-8

To all to whom these Presents Shall Come, Greeting:

I, Jesse White, Secretary of State of the State of Illinois, do hereby certify that I am the keeper of the records of the Department of Business Services. I certify that

OSF HEALTHCARE SYSTEM, A DOMESTIC CORPORATION, INCORPORATED UNDER THE LAWS OF THIS STATE ON JANUARY 02, 1880, APPEARS TO HAVE COMPLIED WITH ALL THE PROVISIONS OF THE GENERAL NOT FOR PROFIT CORPORATION ACT OF THIS STATE, AND AS OF THIS DATE, IS IN GOOD STANDING AS A DOMESTIC CORPORATION IN THE STATE OF ILLINOIS.

Authentication #: 1817601890 verifiable until 06/25/2019
Authenticate at: http://www.cyberdriveillinois.com

In Testimony Whereof, *I hereto set my hand and cause to be affixed the Great Seal of the State of Illinois, this* 25TH *day of* JUNE *A.D.* 2018 .

Jesse White

SECRETARY OF STATE

File Number 0107-414-8

To all to whom these Presents Shall Come, Greeting:

I, Jesse White, Secretary of State of the State of Illinois, do hereby certify that I am the keeper of the records of the Department of Business Services. I certify that

OSF HEALTHCARE SYSTEM, A DOMESTIC CORPORATION, INCORPORATED UNDER THE LAWS OF THIS STATE ON JANUARY 02, 1880, APPEARS TO HAVE COMPLIED WITH ALL THE PROVISIONS OF THE GENERAL NOT FOR PROFIT CORPORATION ACT OF THIS STATE, AND AS OF THIS DATE, IS IN GOOD STANDING AS A DOMESTIC CORPORATION IN THE STATE OF ILLINOIS.

Authentication #: 1817601890 verifiable until 06/25/2019
Authenticate at: http://www.cyberdriveillinois.com

In Testimony Whereof, *I hereto set my hand and cause to be affixed the Great Seal of the State of Illinois, this* 25TH *day of* JUNE *A.D.* 2018 .

Jesse White

SECRETARY OF STATE

Site Ownership

[Provide this information for each applicable site]

Exact Legal Name of Site Owner: OSF HealthCare System
Address of Site Owner: 800 NE Glen Oak Avenue, Peoria, IL 61603
Street Address or Legal Description of the Site: 530 NE Glen Oak Avenue, Peoria, IL 61637 **Proof of ownership or control of the site is to be provided as Attachment 2. Examples of proof of ownership are property tax statements, tax assessor's documentation, deed, notarized statement of the corporation attesting to ownership, an option to lease, a letter of intent to lease, or a lease.**
APPEND DOCUMENTATION AS ATTACHMENT 2, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

OSF
HEALTHCARE SYSTEM

My name is Robert C. Sehring. As Chief Executive Officer, OSF HealthCare System, I attest to the fact OSF Healthcare owns the OSF Saint Francis Medical Center Site.

Attested by: Robert C. Sehring
Robert C. Sehring, Chief Executive Officer
OSF HealthCare System

Date: October 11, 2018

Notarization:

Subscribed and sworn to before me
this 11th day of October 2018
Tonda L Stewart
Signature of Notary

Seal

OFFICIAL SEAL
TONDA L. STEWART
Notary Public - State of Illinois
My Commission Expires 8/26/2020

800 N.E. Glen Oak Avenue, Peoria, Illinois 61603-3200 Phone (309) 655-2850 www.osfhealthcare.org
The Sisters of the Third Order of St. Francis

Type of Ownership of Applicants

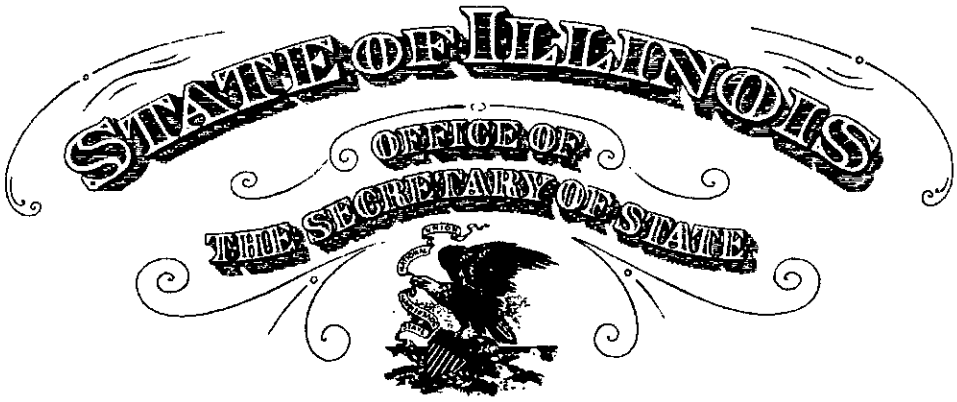
Exact Legal Name: OSF HealthCare System d/b/a OSF Saint Francis Medical Center
Address: 800 NE Glen Oak Avenue, Peoria, IL 61603
☒ Non-profit Corporation ☐ Partnership ☐ For-profit Corporation ☐ Governmental ☐ Limited Liability Company ☐ Sole Proprietorship ☐ Other o Corporations and limited liability companies must provide an Illinois Certificate of Good Standing. o Partnerships must provide the name of the state in which organized and the name and address of each partner specifying whether each is a general or limited partner. o **Persons with 5 percent or greater interest in the licensee must be identified with the % of ownership.**
APPEND DOCUMENTATION AS ATTACHMENT 3, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Exact Legal Name: OSF HealthCare System
Street Address: 800 NE Glen Oak Avenue
City and Zip Code: Peoria, IL 61603
Name of Registered Agent: Sister Theresa Ann Brazeau, OSF
Registered Agent Street Address: 1175 St. Francis Lane
Registered Agent City and Zip Code: East Peoria, IL 61611
Name of Chief Executive Officer: Robert C. Sehring
CEO Street Address: 800 NE Glen Oak Avenue
CEO City and Zip Code: Peoria, IL 61603
CEO Telephone Number: 309-655-2850

Applicant(s) [Provide for each applicant (refer to Part 1130.220)]

Exact Legal Name: OSF HealthCare System d/b/a OSF Saint Francis Medical Center
Street Address: 530 NE Glen Oak Avenue
City and Zip Code: Peoria, IL 61603
Name of Registered Agent: Sister Theresa Ann Brazeau, OSF
Registered Agent Street Address: 1175 St. Francis Lane
Registered Agent City and Zip Code: East Peoria, IL 61611
Name of Chief Executive Officer: Robert G. Anderson, President
CEO Street Address: 530 NE Glen Oak Avenue
CEO City and Zip Code: Peoria, IL 61637
CEO Telephone Number: 309-655-7796

File Number 0107-414-8



To all to whom these Presents Shall Come, Greeting:

I, Jesse White, Secretary of State of the State of Illinois, do hereby certify that I am the keeper of the records of the Department of Business Services. I certify that

OSF HEALTHCARE SYSTEM, A DOMESTIC CORPORATION, INCORPORATED UNDER THE LAWS OF THIS STATE ON JANUARY 02, 1880, APPEARS TO HAVE COMPLIED WITH ALL THE PROVISIONS OF THE GENERAL NOT FOR PROFIT CORPORATION ACT OF THIS STATE, AND AS OF THIS DATE, IS IN GOOD STANDING AS A DOMESTIC CORPORATION IN THE STATE OF ILLINOIS.

Authentication #: 1817601890 verifiable until 06/25/2019
Authenticate at: http://www.cyberdriveillinois.com

In Testimony Whereof, *I hereto set my hand and cause to be affixed the Great Seal of the State of Illinois, this* 25TH *day of* JUNE *A.D.* 2018 .

Jesse White

SECRETARY OF STATE

File Number 0107-414-8

To all to whom these Presents Shall Come, Greeting:

I, Jesse White, Secretary of State of the State of Illinois, do hereby certify that I am the keeper of the records of the Department of Business Services. I certify that

OSF HEALTHCARE SYSTEM, A DOMESTIC CORPORATION, INCORPORATED UNDER THE LAWS OF THIS STATE ON JANUARY 02, 1880, APPEARS TO HAVE COMPLIED WITH ALL THE PROVISIONS OF THE GENERAL NOT FOR PROFIT CORPORATION ACT OF THIS STATE, AND AS OF THIS DATE, IS IN GOOD STANDING AS A DOMESTIC CORPORATION IN THE STATE OF ILLINOIS.

Authentication #: 1817601890 verifiable until 06/25/2019
Authenticate at: http://www.cyberdriveillinois.com

In Testimony Whereof, *I hereto set my hand and cause to be affixed the Great Seal of the State of Illinois, this* 25TH *day of* JUNE *A.D.* 2018 .

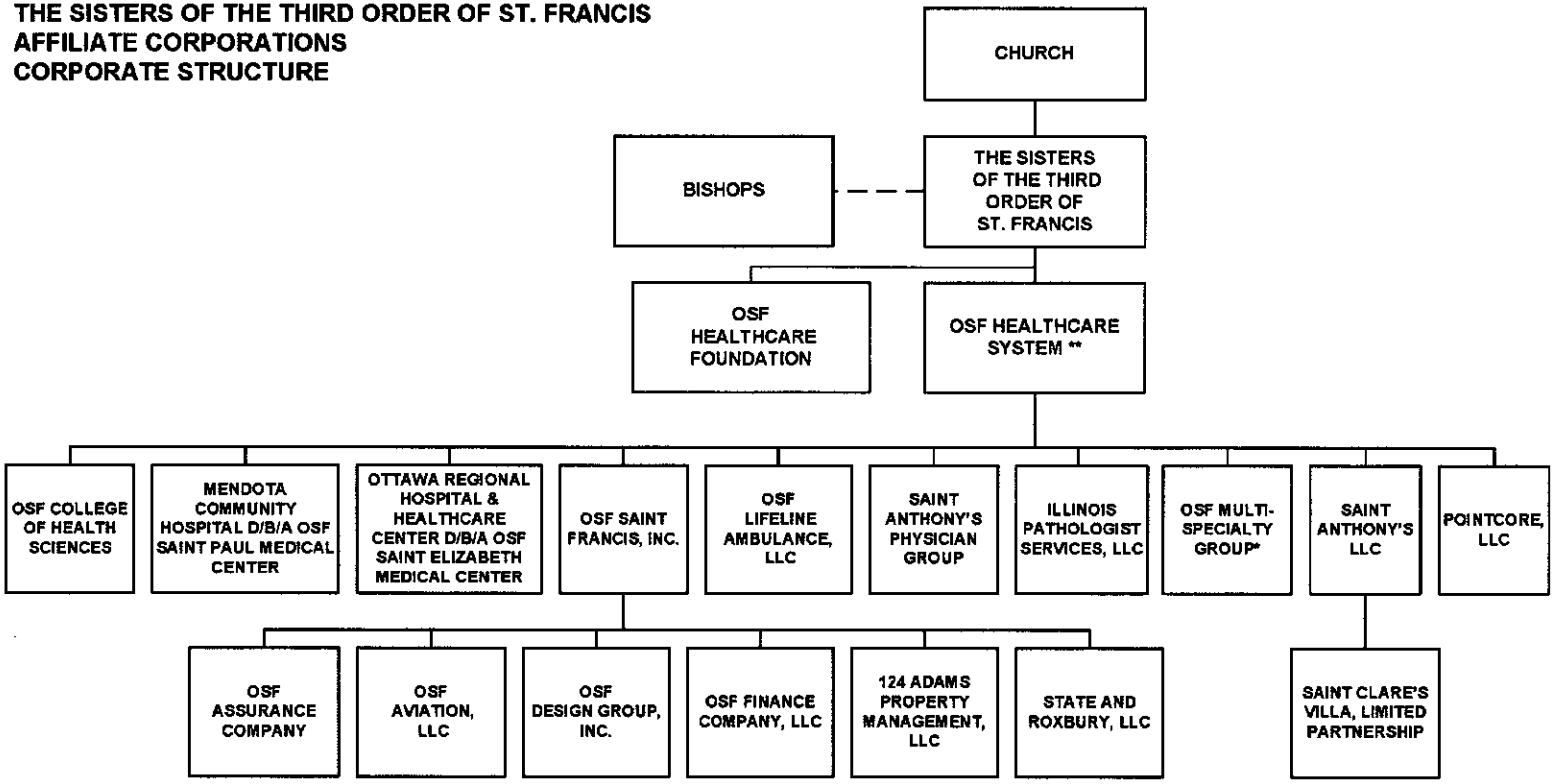
Jesse White

SECRETARY OF STATE

Organizational Relationships

Provide (for each applicant) an organizational chart containing the name and relationship of any person or entity who is related (as defined in Part 1130.140). If the related person or entity is participating in the development or funding of the project, describe the interest and the amount and type of any financial contribution.
APPEND DOCUMENTATION AS ATTACHMENT 4, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

THE SISTERS OF THE THIRD ORDER OF ST. FRANCIS
AFFILIATE CORPORATIONS
CORPORATE STRUCTURE



** OSF Healthcare System

OSF St. Francis Hospital – Escanaba, Michigan
OSF Saint Anthony Medical Center – Rockford
OSF Saint James-John W. Albrecht Medical Center – Pontiac
OSF St. Joseph Medical Center – Bloomington
OSF Heart of Mary Medical Center - Urbana
OSF Sacred Heart Medical Center – Danville
OSF Saint Francis Medical Center - Peoria
OSF St. Mary Medical Center - Galesburg
OSF Holy Family Medical Center - Monmouth
OSF Saint Luke Medical Center - Kewanee
OSF Saint Anthony's Health Center - Alton
OSF Home Care Services

*OSF Multi-Specialty Group

OSF Medical Group
Cardiovascular Services
Neuroscience Services
Children's Services
Ambulatory Services

Legend:

——— Direct Responsibility

- — — — Advisory

Flood Plain Requirements * Non Applicable
[Refer to application instructions.]

Provide documentation that the project complies with the requirements of Illinois Executive Order #2006-5 pertaining to construction activities in special flood hazard areas. As part of the flood plain requirements, please provide a map of the proposed project location showing any identified floodplain areas. Floodplain maps can be printed at **www.FEMA.gov** or **www.illinoisfloodmaps.org**. **This map must be in a readable format**. In addition, please provide a statement attesting that the project complies with the requirements of Illinois Executive Order #2006-5 **(http://www.hfsrb.illinois.gov)**.
APPEND DOCUMENTATION AS ATTACHMENT 5, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

* This criterion is judged to be non-applicable in that there is no new construction or modernization associated with the Heart Transplantation Program Re-establishment. The program will be conducted in an existing healthcare facility, OSF Saint Francis Medical Center which has the capacity to implement the program.

Historic Resources Preservation Act Requirements * Non Applicable

[Refer to application instructions.]

Provide documentation regarding compliance with the requirements of the Historic Resources Preservation Act.
APPEND DOCUMENTATION AS ATTACHMENT 6, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

* This criterion is judged to be non-applicable in that the Heart Transplantation Program Re-establishment will be conducted in an existing healthcare facility, OSF Saint Francis Medical Center.

Project Costs and Sources of Funds * Not Applicable

Complete the following table listing all costs (refer to Part 1120.110) associated with the project. When a project or any component of a project is to be accomplished by lease, donation, gift, or other means, the fair market or dollar value (refer to Part 1130.140) of the component must be included in the estimated project cost. If the project contains non-reviewable components that are not related to the provision of health care, complete the second column of the table below. Note, the use and sources of funds must be equal.

Project Costs and Sources of Funds			
USE OF FUNDS	**CLINICAL**	**NONCLINICAL**	**TOTAL**
Preplanning Costs			
Site Survey and Soil Investigation			
Site Preparation			
Off Site Work			
New Construction Contracts			
Modernization Contracts			
Contingencies			
Architectural/Engineering Fees			
Consulting and Other Fees			
Movable or Other Equipment (not in construction contracts)			
Bond Issuance Expense (project related)			
Net Interest Expense During Construction (project related)			
Fair Market Value of Leased Space or Equipment			
Other Costs To Be Capitalized			
Acquisition of Building or Other Property (excluding land)			
TOTAL USES OF FUNDS	-0-	-0-	-0-
SOURCE OF FUNDS	**CLINICAL**	**NONCLINICAL**	**TOTAL**
Cash and Securities			
Pledges			
Gifts and Bequests			
Bond Issues (project related)			
Mortgages			
Leases (fair market value)			
Governmental Appropriations			
Grants			
Other Funds and Sources			
TOTAL SOURCES OF FUNDS	-0-	-0-	-0-
NOTE: ITEMIZATION OF EACH LINE ITEM MUST BE PROVIDED AT ATTACHMENT 7, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.			

* Not applicable, there are no capitalized project costs associated with re-establishing the Heart Transplant Category of Service at OSF Saint Francis Medical Center.

Project Status and Completion Schedules

For facilities in which prior permits have been issued please provide the permit numbers.

Indicate the stage of the project's architectural drawings: Not Applicable

☒ None or not applicable ☐ Preliminary

☐ Schematics ☐ Final Working

Anticipated project completion date (refer to Part 1130.140): NA – Program will commence on IHFSRB approval

Indicate the following with respect to project expenditures or to financial commitments (refer to Part 1130.140): Not applicable in that there are no capitalized project costs

☐ Purchase orders, leases or contracts pertaining to the project have been executed. ☐ Financial commitment is contingent upon permit issuance. Provide a copy of the contingent "certification of financial commitment" document, highlighting any language related to CON Contingencies

☒ Financial Commitment will occur after permit issuance.

APPEND DOCUMENTATION AS ATTACHMENT 8, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

State Agency Submittals (Section 1130.620 (c))

OSF Healthcare System Open Projects

OSF Saint Anthony Medical Center, Major Modernization through Construction of a 4-story Bed Pavilion, Rockford
Project #: 15-021

OSF St. Mary Medical Center, Construction of New Space & Modernization of Existing Space, Galesburg
Project #: 16-010

OSF Healthcare System d/b/a Ottawa Regional Hospital & Health Center, OSF Center for Health-Streator, Streator
Project #: 17-008

OSF St. Joseph Medical Center, MOB, Bloomington
Project #: 17-050

OSF Saint Anthony Health Center – Cancer Treatment Center, Alton
Project #: 17-051

Certificate of Exemptions to be heard at the October Board meeting

OSF Saint Anthony Medical Center, Discontinuation of a Category of Service, Rockford
Project #: E-044-18

OSF Saint Anthony Health Center, Discontinuation of a Category of Service
Project #: E-047-18

Cost Space Requirements * Not Applicable

Provide in the following format, the **Departmental Gross Square Feet (DGSF)** or the **Building Gross Square Feet (BGSF)** and cost. The type of gross square footage either **DGSF** or **BGSF** must be identified. The sum of the department costs **MUST** equal the total estimated project costs. Indicate if any space is being reallocated for a different purpose. Include outside wall measurements plus the department's or area's portion of the surrounding circulation space. **Explain the use of any vacated space.**

		Gross Square Feet		Amount of Proposed Total Gross Square Feet That Is:			
Dept. / Area	**Cost**	**Existing**	**Proposed**	**New Const.**	**Modernized**	**As Is**	**Vacated Space**
REVIEWABLE							
Medical Surgical							
Intensive Care							
Diagnostic Radiology							
MRI							
Total Clinical							
NON REVIEWABLE							
Administrative							
Parking							
Gift Shop							
Total Non-clinical							
TOTAL							

APPEND DOCUMENTATION AS ATTACHMENT 9, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

* Attachment #9 is not applicable because no new construction or modernization is involved with the heart transplant program re-establishment.

SECTION III. BACKGROUND, PURPOSE OF THE PROJECT, AND ALTERNATIVES - INFORMATION REQUIREMENTS

This Section is applicable to all projects except those that are solely for discontinuation with no project costs.

1110.110(a) – Background of the Applicant

READ THE REVIEW CRITERION and provide the following required information:

BACKGROUND OF APPLICANT

1. A listing of all health care facilities owned or operated by the applicant, including licensing, and certification if applicable.

2. A certified listing of any adverse action taken against any facility owned and/or operated by the applicant during the three years prior to the filing of the application.

3. Authorization permitting HFSRB and DPH access to any documents necessary to verify the information submitted, including, but not limited to official records of DPH or other State agencies; the licensing or certification records of other states, when applicable; and the records of nationally recognized accreditation organizations. **Failure to provide such authorization shall constitute an abandonment or withdrawal of the application without any further action by HFSRB.**

4. If, during a given calendar year, an applicant submits more than one application for permit, the documentation provided with the prior applications may be utilized to fulfill the information requirements of this criterion. In such instances, the applicant shall attest that the information was previously provided, cite the project number of the prior application, and certify that no changes have occurred regarding the information that has been previously provided. The applicant is able to submit amendments to previously submitted information, as needed, to update and/or clarify data.

APPEND DOCUMENTATION AS ATTACHMENT 11, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM. EACH ITEM (1-4) MUST BE IDENTIFIED IN ATTACHMENT 11.

OSF Healthcare System List of Facilities in Illinois

OSF HealthCare Holy Family Medical Center
1000 W. Harlem Avenue
Monmouth, Illinois 61462
License #: 0005439, Expiration 4/11/19
JCAHO: 6/3/17, 36 months

OSF HealthCare Saint Francis Medical Center
530 NE Glen Oak Avenue
Peoria, IL 61637
License #: 0002394, Expiration 12/31/18
JCAHO: 4/8/17, 36 months

OSF HealthCare Saint Anthony's Health Center
One Saint Anthony's Way
Alton, Illinois 62002-0340
License #: 0005942, Expiration 10/31/19
JCAHO: 12/2/17, 36 months

OSF HealthCare Saint James-John W. Albrecht Medical Center
2500 W. Reynolds Street
Pontiac, Illinois 61764
License #: 0005264, Expiration 3/2/19/19
JCAHO: 3/9/17, 36 months

OSF HealthCare St. Joseph Medical Center
2200 E. Washington Street
Bloomington, Illinois 61701
License #: 0002535, Expiration 12/31/18
JCAHO: 3/17/17, 36 months

OSF HealthCare Saint Anthony Medical Center
5666 E. State Street
Rockford, IL 61108-2472
License #: 0002253, Expiration 12/31/18
JCAHO: 2/25/17, 36 months

OSF HealthCare Saint Luke Medical Center
1051 West South Street
Kewanee, IL 61443
License #: 0005926, Expiration 3/31/19
JCAHO: Critical Access Hospital-no JCAHO Certificate

OSF HealthCare Saint Elizabeth Medical Center
1100 E. Norris Drive
Ottawa, Illinois 61350
License #: 0005520, Expiration 5/14/19
JCAHO: 6/24/17, 36 months

OSF HealthCare St. Mary Medical Center
3333 N. Seminary Street
Galesburg, Illinois 61401
License #: 0002675, Expiration 12/31/18
JCAHO: 1/21/17, 36 months

OSF HealthCare Saint Paul Medical Center
1401 E. 12th Street
Mendota, Illinois 61342
License #: 0005819, Expiration 12/6/18
JCAHO: Critical Access Hospital-no JCAHO Certificate

OSF Healthcare Sacred Heart Medical Center
812 N. Logan Avenue
Danville, IL 61832
License #: 0006072, Expiration 2/1/19
JCAHO: 5/19/17, 36 months

OSF HealthCare Heart of Mary Medical Center
1400 W. Park Street
Urbana, IL 61801
License #: 0006080, Expiration 2/1/19
JCAHO: 6/3/17, 36 months

OSF Saint Elizabeth Medical Center Freestanding Emergency Center
111 Spring Street
Streator, Il 61364
License #: 22006, Expiration 8/8/19
JCAHO: 6/24/17, 36 months (included with Saint Elizabeth Medical Center)

HF114573

Illinois Department of
PUBLIC HEALTH

LICENSE, PERMIT, CERTIFICATION, REGISTRATION

The person, firm or corporation whose name appears on this certificate has complied with the provisions of the Illinois statutes and/or rules and regulations and is hereby authorized to engage in the activity as indicated below.

Nirav D. Shah, M.D.,J.D.
Director

Issued under the authority of the Illinois Department of Public Health

Expiration Date	Category	License Number
12/31/2018		0002394

General Hospital

Effective: 01/01/2018

Saint Francis Medical Center
530 North East Glen Oak Avenue
Peoria, IL 61637

The face of this license has a colored background. Printed by Authority of the State of Illinois • PO 448246 5M 5/16

DISPLAY THIS PART IN A CONSPICUOUS PLACE

Exp. Date 12/31/2018
Lic Number 0002394

Date Printed 11/21/2017

Saint Francis Medical Center

530 North East Glen Oak Avenue
Peoria, IL 61637

FEE RECEIPT NO.

OSF Saint Francis Medical Center

Peoria, IL

has been Accredited by

The Joint Commission

Which has surveyed this organization and found it to meet the requirements for the

Hospital Accreditation Program

April 8, 2017

Accreditation is customarily valid for up to 36 months.

Craig W. Jones, FACHE
Chair, Board of Commissioners

ID #7410
Print/Reprint Date: 07/24/2017

Mark R. Chassin, MD, FACP, MPP, MPH
President

The Joint Commission is an independent, not-for-profit national body that oversees the safety and quality of health care and other services provided in accredited organizations. Information about accredited organizations may be provided directly to The Joint Commission at 1-800-994-6610. Information regarding accreditation and the accreditation performance of individual organizations can be obtained through The Joint Commission's web site at www.jointcommission.org.

OSF
HEALTHCARE SYSTEM

My name is Robert C. Sehring. As Chief Executive Officer, OSF HealthCare System, I certify and attest to the following relevant to the Heart Transplantation Category of Service Re-Establishment in response to the Illinois Health Facilities and Services Review Board, Criterion 1110.110 (a) (2) (3). More specifically:

1) There has not been any adverse action taken against any OSF HealthCare System facility during the three (3) years prior to filing this specific permit application.
2) OSF HealthCare authorizes the Illinois Department of Public Health and the Illinois Health Facilities and Services Review Board to access any documents necessary to verify the information submitted, including, but not limited to official records of DPH or other State Agencies; the licensing or certification records of other states, where applicable; and the records of nationally recognized accreditation organizations.

Attested by: Robert C. Sehring

Robert C. Sehring
Chief Executive Officer, OSF HealthCare System

Notarization:

Subscribed and sworn to before me
this 11th day of October 2018

Tonda L. Stewart
Signature of Notary

Seal

OFFICIAL SEAL
TONDA L. STEWART
Notary Public - State of Illinois
My Commission Expires 8/26/2020

800 N.E. Glen Oak Avenue, Peoria, Illinois 61603-3200 Phone (309) 655-2850 www.osfhealthcare.org
The Sisters of the Third Order of St. Francis

Criterion 1110.110(b) & (d)

PURPOSE OF PROJECT

1. Document that the project will provide health services that improve the health care or well-being of the market area population to be served.
2. Define the planning area or market area, or other relevant area, per the applicant's definition.
3. Identify the existing problems or issues that need to be addressed as applicable and appropriate for the project.
4. Cite the sources of the documentation.
5. Detail how the project will address or improve the previously referenced issues, as well as the population's health status and well-being.
6. Provide goals with quantified and measurable objectives, with specific timeframes that relate to achieving the stated goals **as appropriate.**

For projects involving modernization, describe the conditions being upgraded, if any. For facility projects, include statements of the age and condition of the project site, as well as regulatory citations, if any. For equipment being replaced, include repair and maintenance records.

NOTE: Information regarding the "Purpose of the Project" will be included in the State Board Staff Report.

APPEND DOCUMENTATION AS ATTACHMENT 12, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM. EACH ITEM (1-6) MUST BE IDENTIFIED IN ATTACHMENT 12.

Project Purpose (Criterion 1110.110 (b) and (d)

Contemporary cardiovascular care requires a continuum of highly specialized services initiated by prevention type programs through, ultimately, heart transplantation as determined by the patients clinical condition. The over-riding goal for OSF HealthCare System is to provide a full continuum of cardiovascular care to its patients.

OSF HealthCare and its affiliated medical centers, in particular OSF Saint Francis Medical Center, along with their medical staffs, provides a full range of cardiovascular diagnostic and treatment services, excepting heart transplants

The planning area or market area to be served by OSF HealthCare System is defined as the markets currently served by its twelve (12) Illinois medical centers. Attachment #26 herein provides the geographic market areas to be served.

Through re-establishing the Heart Transplant Category of Service at OSF Saint Francis Medical Center, the System will be able to provide a full continuum of care for the cardiovascular disease which accounts for approximately 633,842 deaths nationally, or 197.2 / 100,000 population. (Source: CDC, 2015) (most recent CDC published data) or 1 in every 4 deaths in the USA.

Heart disease is the leading cause of death for both men and women.

By re-establishing the Heart Transplant Program at OSF Saint Francis Medical Center, OSF HealthCare will improve the health care and well-being of those patients with heart disease served by the System. Currently, heart transplant centers in Illinois are clustered in the Chicago area and downstate Illinois has no centers. By definition, therefore, there is no maldistribution.

Please reference Attachment # 26 for information in compliance with this specific criterion.

ALTERNATIVES

1) Identify **ALL** of the alternatives to the proposed project:

Alternative options **must** include:

A) Proposing a project of greater or lesser scope and cost;

B) Pursuing a joint venture or similar arrangement with one or more providers or entities to meet all or a portion of the project's intended purposes; developing alternative settings to meet all or a portion of the project's intended purposes;

C) Utilizing other health care resources that are available to serve all or a portion of the population proposed to be served by the project; and

D) Provide the reasons why the chosen alternative was selected.

2) Documentation shall consist of a comparison of the project to alternative options. The comparison shall address issues of total costs, patient access, quality and financial benefits in both the short-term (within one to three years after project completion) and long-term. This may vary by project or situation. **FOR EVERY ALTERNATIVE IDENTIFIED, THE TOTAL PROJECT COST AND THE REASONS WHY THE ALTERNATIVE WAS REJECTED MUST BE PROVIDED.**

3) The applicant shall provide empirical evidence, including quantified outcome data that verifies improved quality of care, as available.

APPEND DOCUMENTATION AS ATTACHMENT 13, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Criterion 1110.110 Alternatives

No reasonable alternatives were identified for re-establishing the Heart Transplantation Category of Service at the OSF Saint Francis Medical Center. The re-establishment will enhance the current cardiovascular disease program by expanding the existing continuum of care and thereby providing a full care continuum for this disease.

Attachment 26, Criterion 1110.240, Select Organ Transplantation, further outlines the need for this important program, as well as compliance with the applicable criteria.

SECTION IV. PROJECT SCOPE, UTILIZATION, AND UNFINISHED/SHELL SPACE

Criterion 1110.120 - Project Scope, Utilization, and Unfinished/Shell Space

READ THE REVIEW CRITERION and provide the following information:

SIZE OF PROJECT:

1. Document that the amount of physical space proposed for the proposed project is necessary and not excessive. **This must be a narrative and it shall include the basis used for determining the space and the methodology applied.**

2. If the gross square footage exceeds the BGSF/DGSF standards in Appendix B, justify the discrepancy by documenting one of the following:

   a. Additional space is needed due to the scope of services provided, justified by clinical or operational needs, as supported by published data or studies and certified by the facility's Medical Director.

   b. The existing facility's physical configuration has constraints or impediments and requires an architectural design that delineates the constraints or impediments.

   c. The project involves the conversion of existing space that results in excess square footage.

   d. Additional space is mandated by governmental or certification agency requirements that were not in existence when Appendix B standards were adopted.

Provide a narrative for any discrepancies from the State Standard. A table must be provided in the following format with Attachment 14.

SIZE OF PROJECT				
DEPARTMENT/SERVICE	**PROPOSED BGSF/DGSF**	**STATE STANDARD**	**DIFFERENCE**	**MET STANDARD?**

APPEND DOCUMENTATION AS ATTACHMENT 14, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Attachment 14

The IHFSRB has not identified applicable criterion for this type program. The heart transplantation program will be housed within existing OSF HealthCare facilities including OSF Saint Francis Medical Center. Hence, this criterion is judged to be non-applicable.

PROJECT SERVICES UTILIZATION:

This criterion is applicable only to projects or portions of projects that involve services, functions or equipment for which HFSRB has established utilization standards or occupancy targets in 77 Ill. Adm. Code 1100.

Document that in the second year of operation, the annual utilization of the service or equipment shall meet or exceed the utilization standards specified in 1110.Appendix B. **A narrative of the rationale that supports the projections must be provided.**

A table must be provided in the following format with Attachment 15.

UTILIZATION					
	DEPT./ SERVICE	HISTORICAL UTILIZATION (PATIENT DAYS) (TREATMENTS) ETC.	PROJECTED UTILIZATION	STATE STANDARD	MEET STANDARD?
YEAR 1					
YEAR 2					

APPEND DOCUMENTATION AS ATTACHMENT 15, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Attachment 15

The IHFSRB has no applicable review criterion. Thus, the criterion is not applicable to the heart transplantation program re-establishment. Attachment #26 provides a population based methodology to support the Heart Transplantation program re-establishment.

Attachments

Attachments #16 through #25 as well as #27 through #33 are not applicable to the heart transplantation program category of service re-establishment.

SECTION VI. SERVICE SPECIFIC REVIEW CRITERIA

H. Criterion 1110.240 - Selected Organ Transplantation

This section is applicable to projects involving the establishment or modernization of the Selected Organ Transplantation service.

1. Applicants proposing to establish or modernize the Selected Organ Transplantation category of service must submit the following information:

2. Indicate changes by Service: Indicate # of rooms changed by action(s):

Transplantation Type	# Existing Beds	# Proposed Beds	Available within current bed complement
☒ Heart_____	0	0	

3. READ the applicable review criteria outlined below and **submit the required documentation for the criteria:**

APPLICABLE REVIEW CRITERIA	Establish	Modernize
1110.240(b)(1) – Planning Area Need - 7 Ill. Adm. Code 1100 (formula calculation)	X	
1110.240(b)(2) – Planning Area Need - Service to Planning Area Residents	X	
1110.240(b)(3) – Planning Area Need - Service Demand - Establishment of Category of Service	X	
1110.240(b)(4) – Planning Area Need - Service Accessibility	X	
1110.240(c)(1) – Unnecessary Duplication of Services	X	
1110.240(c)(2) – Maldistribution	X	
1110.240(c)(3) – Impact of Project on Other Area Providers	X	
1110.240(d)(1), (2), and (3) – Deteriorated Facilities		X
1110.240(d)(4) – Utilization		X
1110.240(e) – Staffing Availability	X	
1110.240(f) – Surgical Staff	X	
1110.240(g) – Collaborative Support	X	
1110.240(h) – Support Services	X	
1110.240(i) – Performance Requirements	X	X
1110.240(j) – Assurances	X	X

APPEND DOCUMENTATION AS ATTACHMENT 26, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Program Description

OSF Saint Francis Medical Center proposes to re-establish its Heart Transplantation Program which was first initiated in 1987 and later suspended in 2006 due to decreasing volume and physician retirements. Over its 19-year duration, the Program successfully completed 197 heart transplants. The first recipient is now 86 years old and returns to OSF Saint Francis Medical Center twice a year for check-ups.

Background Data

Annually, the American Heart Association (AHA), in partnership with the Centers for Disease Control (CDC), the National Institute of Health (NIH), several federal agencies, as well as other experts, compile a single document with the most up-to-date cardiovascular disease statistics. Each version of the Statistical Update includes relevant scientific findings and statistics regarding heart disease. The 2018 update was published on January 31, 2018.

This report provides several relevant factors pertinent to OSF's proposed heart transplantation program re-establishment. Some are:

- Estimates indicate cardiovascular diseases are prevalent in more than 1 in 3 adults aged 18+ or approximately 94.6 million adults in 2017.
- Heart disease is the leading cause of death in the United States.
- Chronic diseases of the normal heart, or cardiomyopathy, include such clinical conditions as muscle thickening, stiffening, or thinning out. This clinical condition impacts heart functioning and can lead to heart failure. The estimated prevalence of heart failure in the U.S. is estimated to be approximately 7.26 M adults or 2.8 percent of the population aged 15+; annual new cases approximate 960,000.
- Heart failure occurs when the heart cannot pump sufficient oxygen carrying blood to support the body's organs.
- Heart failure is a rapidly growing public health issue. The number of people diagnosed with heart failure (i.e. those who are potential candidates for a heart transplantation) is expected to rise 46 percent from 2012 to 2030.

- Approximately 1 percent of current adult heart failure patients are candidates to be wait listed for transplantation, or 72,600 adults in 2017.
- In September, 2018, the Organ Procurement and Transplantation Network (OPTN) indicates there were 3,897 heart transplant candidates on the waiting list. This number represents significantly less than 1 percent of those estimated heart failure patients based on the CDC estimate of 7.26 M adults with heart failure.
- Thus, based on these estimates, approximately 5.4 percent of those eligible for a transplant will actually become wait listed for a transplantation.
- Based on 1,860 adult heart transplants nationally in 2017, less than 50 percent of those actually wait listed will be transplanted, on the average (± 47.7%).

These statistics form the basis to calculate an estimated Planning Area Need, Section 1110.240 (b) (1) for heart transplantations in that the Illinois Facilities and Services Review Board (IHFSRB) has not established a need formula for a Heart Transplantation Category of Service.

Projection Model

The heart transplantation utilization projection model for Illinois and the OSF HealthCare System is based on the following population based methodology or steps:

1) Establish Illinois and OSF's geographic service areas;
2) Derive the total adult population to be served (service population);
3) Assume there will be no in- or out-migration from either Illinois or from OSF's adult derived service population for the heart transplantation program;
4) Establish / determine the prevalence rate for adult heart failure in the marketplace;
5) Derive the estimated adult population with heart failure within either Illinois or OSF's geographic service areas or markets;
6) Establish the percent of adult heart failure patients eligible for a heart transplant;
7) Establish the percent of those eligible for a heart transplant to be placed on the transplant waiting list;
8) Establish the percent of adults on the heart transplant list who will become recipients;
9) Derive / estimate the number of adults within Illinois, and the OSF HealthCare System, who will receive a transplant heart;
10) Provide for follow-up care post-transplantation (OSF Healthcare System).

Data sources to populate the model include: IDPH / IHFSRB published AHQ data; IDPH population projections; American Heart Association; Organ Procurement and Transplantation Network (OPTN); United Network for Organ Sharing (UNOS); Centers for Disease Control and Prevention (CDC); National Center for Health Statistics (NCHS); National Institute of Health (NIH); OSF HealthCare System records; and The Advisory Board

Illinois Need for Heart Transplantation (Criterion 1110.240 (b) (1)

The designated planning area for a heart transplantation Category of Service is the entire state per the Illinois Department of Public Health (IDPH) need determinations. Additionally, IDPH and the IHFSRB have not determined, or derived, a State-wide need, nor utilization standard, for heart transplantation, so it is the responsibility of the applicant proposing a Heart Transplantation Category of Service to document need. State-wide need, as well as for the OSF HealthCare System and OSF Saint Francis Medical Center are included in the need analysis.

Attached are exhibits (Exhibits 26-1, 26-2, and 26-3) which set out certain assumptions to derive / document the associated heart transplant need for both Illinois and the OSF HealthCare System based on a population driven model. These exhibits demonstrate;

1. The 2016 adult M/S admissions to all Illinois hospitals is 1,005,729, and;
2. If the 2016 adult population is 10,454,190 individuals aged 15+;
3. Then, the adult M/S admissions (excluding OB/GYN, Pediatrics, AMI, and Rehabilitation) is 96.2 admissions / 1,000 population aged 15+.

Considering a derived or calculated heart transplantation utilization model for the State of Illinois residents:

1. If the 2016 adult population aged 15 + in the USA is approximately 245.3 M,
2. And, the Illinois adult population approximates 10.54 M in 2016.
3. Then, Illinois represents approximately 4.30 percent of the US adult population.
4. Thus, if there are 2.8 percent of the adult population with heart failure, there are approximately 295,120 Illinois adults aged 15 + with this clinical condition.
5. Similarly, if the US had approximately 7.26 M adults with heart failure; then it can be derived that, on the average, the State of Illinois conservatively has 312,181 adults aged 15+ with this clinical condition based on Illinois having 4.30 percent of the US adult population.

6. Thus, the calculated range of Illinois adults with heart failure is between 295,120 to 312,181 persons / individuals.
7. Hence, if 1 percent of current adult heart failure patients are eligible to be wait listed for heart transplantation, based on their clinical conditions, there are between 2,952 to 3,122 adults in Illinois eligible for the heart transplantation wait list.
8. The Organ Procurement and Transplantation Network (OPTN) indicates there are currently 3,897 heart transplant candidates currently on the waiting list, nationally (September 25, 2018), with 229 candidates, or 5.9 percent, listed in Illinois Transplant Centers (eligible wait list candidates).
9. Similarly, based on OPTN data, and the Illinois percent of national population, the State adult population could potentially drive a need for between 159 to 169 heart transplant candidates placed on a waiting list (calculated actual wait listed candidates).
10. Based on national data, approximately 47.7 percent of waitlisted candidates will receive a heart transplantation, thus the derived Illinois adult resident population who will become a recipient is between 76 and 81 individuals.

Historical Illinois Volume and Trends

Heart transplant volume within the four (4) existing Illinois programs has grown over the last 10-years and is expected to increase due to a variety of factors including increased organ availability. The 2018 annualized adult heart transplantations in Illinois are expected to be 152 (8 months annualized) or an increase of 23.6 percent over 2017 actual transplants. Over the last 10 years, adult heart transplants performed in Illinois have increased 44.8 percent.

Year	2008	2009	2010	2011	2012	5 year % Change
Heart Transplants	85	83	63	67	79	--
Percent Change	--	(2.4%)	(24.1%)	6.4%	17.9%	(7.1%)
Year	2013	2014	2015	2016	2017	5 year % Change
Heart Transplants	89	96	91	124	123	--
Percent Change	12.7%	7.9%	(5.2%)	36.3%	--	38.3%
						10 year % Change
						44.8%

Source: UNOS

Historical adult heart transplant volume has increased over time in Illinois, and given the increasing prevalence of heart failure, nationally, a similar need for increasing heart transplantations will occur within the State.

Conservatively, the average annual estimated growth in adult heart transplantation in Illinois, over the last 5-years, is 7.9 percent and is expected to increase based on expanded organ availability, in the future.

Hearts are becoming more available for transplantation due to two primary factors. First, there is more emphasis, nationally, to provide donor organs; and second, tragically, more organs are becoming available due to deaths associated with the opiod epidemic.

OSF HealthCare / OSF Saint Francis Medical Center Heart Transplantation Derivation

The OSF HealthCare System Ten (10) Medical Centers in the designated Primary Geographic Service Area accounted for approximately 5.3 percent of adult M/S admissions to Illinois Hospitals in 2016. (Source: Published AHQ Data and Exhibits 26-1, 26-2, and 26-3)

Based on this data, one can calculate the estimated utilization of an OSF HealthCare System heart transplantation program based on the following:

1. If the System has 53,706 adult M/S admissions in the designated Primary Geographic Service Area, the adult M/S market share is 5.3 percent, as noted above.
2. And, if the adult M/S admission rate is 96.2 admissions / 1,000 population.
3. Then, Exhibits 26-2 and 26-3 calculate OSF's population served (or service population) to be 558,278 adults in the primary geographic service area and 88,597 adults in the secondary geographic service area or 646,875 adults, in total.
4. If 2.8 percent of these adults, on the average, have heart failure, then OSF HealthCare, conservatively is caring for between 15,632 adults in the primary geographic area and 2,481 adults in the secondary geographic area, or a calculated total of 18,113 adults, with heart failure or approximately 6.1 percent of the Illinois estimated patients with this clinical condition.
5. Thus, based on these derived service populations, and 1 percent being candidates for a heart transplant waiting list, OSF HealthCare can potentially list 157 candidates from its primary geographic market and 25 candidates from the secondary geographic market for a total 182 heart transplant wait list candidates.
6. Assuming 5.4 percent of those wait listed candidates are actually placed on a wait list, the OSF HealthCare System derived market-based utilization is approximately 10 heart transplantation candidates.
7. Assuming no in-and-out migration, and that 47.7 percent of the wait listed transplant candidates will receive a heart, OSF has a calculated current estimated utilization of approximately 5 heart transplants annually based on its current geographic markets and market share, assuming no change in demographics or demand factors.

8. Assuming the OSF HealthCare System has a 6.2 percent state-wide market share (Exhibit 26-3) from its primary and secondary geographic markets, its derived potential utilization, based on the CY 2017 actual 123 adult heart transplants in Illinois, the derived utilization approximates 8 heart transplants based on historical trends.
9. Thus, based on a population based derivation model, OSF HealthCare System conservatively estimates the re-established heart transplantation program could initially perform 5 transplants based on its current geographic market characteristics, not withstanding organ availability.

   Based on an average annual historical growth in heart transplants approximating 7.9 percent, the expected potential OSF HealthCare System volume, once the heart transplant program is re-established, is, conservatively, estimated to be in the range noted in the following table based on both the System's current market and its adult market share within Illinois.

Year	2017	2018	2019	2020	2021	2022
Est. Volume	5 – 8	6 – 9	7 – 10	8 – 11	9 – 12	10 – 13

Sg^2 Analytics, in a separate forecast for OSF Saint Francis Medical Center, indicated that by 2022 there would be 22 heart transplant discharges from its Primary Service Area. This projection suggests a more aggressive potential utilization for a heart transplant program than the conservative methodology utilized above to derive an initial 5- to 8-heart transplantations for the re-established designated Category of Service at OSF Saint Francis Medical Center with estimated increases over time as indicated in the foregoing table.

Similarly, the Advisory Board suggests an increase in transplantations nationally based on improved clinical protocols and expanded organ availability; thereby, supporting the forecast.

By re-establishing the Heart Transplantation Program, the OSF HealthCare System and OSF Saint Francis Medical Center will respond to these trends and provide a full continuum of cardiovascular services for its patients.

Exhibit 26-1

OSF HealthCare System 2016 Service Population Derivation Heart Transplant Program
CON Permit Application
Adult Admissions / 1,000 Population in Illinois

2016 Illinois Hospital Data (AHQ)		
Adult (15+) M/S Admissions	854,445	
ICU Direct Admissions	151,284	
Est Total Adult (15+) Admissions (ADM)		1,005,729

IDPH Population Projections

	2015	2016 (derived)	2020
Adults aged 15+	10,424,929	10,454,190	10,571,234

Adult Admissions / 1,000 Population Derivation	
Population aged 15+	10,454,190 / persons
÷ 1,000 =	10,454 / persons
Adult (15+) Adm / 1,000	1 ,005,729 ADM/10,454 persons = 96.2 (15+) Admissions 1,000 population

Data Sources: Illinois Health Facilities and Services Review Board

Compiled by: PRISM Healthcare Consulting

Exhibit 26-2

OSF HealthCare System
Heart Transplant Program
CON Permit Application
Primary Geographic Service Area Service Population Derivation (10 – Medical Centers)

Hospital Name (Primary Geographic Service Area) *** (OSF HealthCare Medical Centers)	Location	2016 Adult (15+) M/S Admissions	Derived (est.) Service Population **
Holy Family	Monmouth	247	2,568
Saint Francis	Peoria	24,654	256,729
Saint Anthony	Rockford	11,146	115,683
Saint Anthony's	Alton	2,498	25,967
Saint Elizabeth's	Ottawa	2,336	24,283
Saint Joseph	Bloomington	5,556	57,755
Saint James, John W. Albrecht	Pontiac	1,505	15,645
Saint Luke	Kewanee	390	4,054
Saint Paul	Mendota	434	4,512
St. Mary	Galesburg	2,637	27,412
Total Primary Geographic Service Area		53,706	558,278
		Adult (15+) Admissions	Est. Adult Population Served

* Includes Admissions aged 15+ Adult and ICU Direct Admissions
** Formula; Service population = Admissions ÷ 96.2 Adult Admissions / 1,000 population x 1,000
*** Excludes OSF Heart of Mary (Urbana) and OSF Sacred Heart (Danville) which are in the Secondary Geographic Service Area

Data Sources: Illinois Health Facilities and Services Review Board

Compiled by: PRISM HealthCare Consulting

Exhibit 26-3

OSF HealthCare System 2016 Service Population
Heart Transplantation Program
CON Permit Application
System-wide Service Population Derivation Model
Primary and Secondary Geographic Markets

	OSF HealthCare Service Population Derivation	
	2016 Adult 15+ M/S Admissions	Derived (Est. *) Service Population
Primary Geographic Service Area Medical Centers (See Exhibit 26-2) (10 Healthcare Facilities)	53,706	558,278
Secondary Geographic Service Area Medical Centers		
OSF Heart of Mary (Urbana)	4,313	44,834
OSF Sacred Heart (Danville)	4,210	43,763
	8,523	88,597
Total OSF HealthCare System / Illinois Hospitals **	62,229	646,875

* Based on 96.2 Adult (15+) Admissions / 1,000 Population (Exhibit 26-1)

** This represents an approximate 5.3 percent adult inpatient(15+) market share based on primary service area medical center admissions and 6.2 percent state-wide market share including primary and secondary geographic service area hospital's.

Data Sources: Illinois Health Facilities and Services Review Board

Compiled by: PRISM Healthcare Consulting

Service for Planning Area Residents (Criterion 1110.240 (b) (2)

IDPH and the IHFSRB have designated the entire State of Illinois as the service area for a heart transplantation program Category of Service. As is pertains to the OSF HealthCare System and OSF Saint Francis Medical Center, two geographic service areas have been defined. The first is a 23-county geographic area in north and western Illinois stretching from Alton to Rockford (Primary Geographic Market). The second is an approximate 7-county area which includes the cities of Champaign / Urbana and Danville (Secondary Geographic Market). These two market areas are based on OSF HealthCare Medical Center locations within these areas (See Exhibits 26-2 and 26-3) and their respective adult (15+) 2016 M/S admissions which is the latest published AHQ data for analysis purposes.

OSF HealthCare derived service population in the primary geographic market area is 558,278 adults and 88,597 adults in the defined secondary geographic area for a total adult population served / service population of 646,875 adults (15+). This is approximately 6.2 percent of Illinois adult population in 2016.

Based on a 62,229 adult M/S admissions to the OSF HealthCare System's twelve (12) Illinois Medical Centers, the System has an approximate 6.2 percent market share overall, with an approximate 5.3 percent market share in the primary geographic market based on 53,706 adult admissions, and 0.9 percent market share in the secondary geographic market based on 8,523 adult admissions.

These respective adult population and admission based percentages are derived from the same macro analytical approach, so they are expected to be similar. However, both the population served / service population estimates and actual adult M/S admissions were necessary to derive the potential utilization of a heart transplant program (Reference Attachment 26, Criterion 1110.240 (b) (1)) as previously derived.

Geographically, within Illinois, there are no heart transplant centers in either of the defined OSF HealthCare System's Geographic Service Areas. In fact, the four designated centers are concentrated in the Chicago area. There are no "out-state" or "down-state" centers. The designated Illinois centers are:

Advocate Christ Medical Center (Oak Lawn)
Loyola University Medical Center (Maywood)
Northwestern Memorial Hospital (Chicago)
University of Chicago Medical Center (Chicago)

Hence, given the current heart transplantation centers clustered in the Chicago area, Illinois residents outside this focused North-Eastern Illinois geographic area must travel long distances for heart transplants, if the procedure were to occur within the State. A heart transplant program at OSF Saint Francis Medical Center will improve geographic access within Illinois and potentially provide a higher-quality outcome, recognizing these patients fragile health condition, by reducing travel time, not withstanding having access to a full continuum of care within the System.

This projects primary purpose is to provide a fully integrated continuum of cardiovascular care to OSF HealthCare System patients who reside in these two defined geographic service areas. Access to more locally provided healthcare is but one positive outcome based on providing advanced cardiovascular care and improving quality through enhanced access to the continuum.

Service Demand – Category of Service Establishment (Criterion 1110.240 (b) (3)

OSF HealthCare has developed a cardiovascular service line in conjunction with twenty (20) area hospitals and nine (9) clinics. This service-line has at its hub OSF Saint Francis Medical Center, Peoria. This service-line provides one of the most comprehensive cardiovascular programs, embracing advanced techniques and technologies, in Illinois. A missing program component is a heart transplantation program.

Service demand for heart transplantation, an end-stage clinical technology for heart disease and those in heart failure, is based primarily on those patients with this primary diagnosis. OSF HealthCare System patients with heart failure is profiled below.

OSF HealthCare Patients With a Primary Heart Failure Diagnosis

Primary Geographic Service Area Medical Centers	2014	2015	2016	2017	4-Year Total
Holy Family	43	157	133	163	496
Saint Francis	1,519	1,630	1,791	2,056	6,996
Saint Anthony	1,385	1,347	1,392	1,487	5,611
Saint Anthony's	--	--	234	299	533
Saint Elizabeth's	246	296	436	449	1,427
St. Joseph	605	484	502	584	2175
Saint James, John W. Albrecht	243	243	258	334	1,078
Saint Luke	--	--	--	135	135
Saint Paul	--	--	--	--	--
St. Mary	395	437	437	483	1,752
Subtotal	4,436	4,594	5,183	5,990	20.203
Secondary Geographic Service Area Medical Centers					
Heart of Mary	--	--	--	--	*
Sacred Heart	--	--	--	--	*
Subtotal	--	--	--	--	*
Grand Total	4,436	4,594	5,183	5,990	20.203

Source: Medical Center Records; note the actual number of patients is greater than that calculated in Criterion 1110.240 (b) (1)

* There are expected to be approximately 98 heart failure patients with this diagnosis in 2018 (Total is 196) for these centers.

Heart transplant patients originate from those patients diagnosed with heart failure. The previous criterion delineates those OSF HealthCare System patients, by facility, with a heart failure diagnosis. The data clearly indicates significant patient volume at OSF Saint Francis Medical Center, and also within the OSF HealthCare System, to justify re-establishing the heart transplant program Category of Service. (See also Section 1110.240, Introduction / Background; and Criterion
1110.240 (b) (1) and 1110.240 (b) (2)).

Criterion 1110.240 (b) (3) (A) / Historical Referrals

The following table documents those OSF Saint Francis Medical Center Patients who received heart transplants over the previous three (3) years.

See following page for a table providing the information requested by this criterion.

OSF Saint Francis Medical Center

Review Criteria 1110.240 (b) (3) (A)

Historical Heart Transplant Referrals *

Year 2015	Patient	Zip Code	Physician	Zip Code	Recipient Hospital
Total 1 Patient	01493710	61544	David Best, MD	Interventional Cardiology	Northwestern
Year 2016					
Total 4 Patients	02093959	61375	David Best, MD	Interventional Cardiology	Northwestern
	00952515	61548	Barry Clemson, MD	Advanced Heart Failure	Northwestern
	02229129	61614	Barry Clemson, MD	Advanced Heart Failure	Northwestern
	05268337	81520	David Best, MD	Interventional Cardiology	University of Chicago
Year 2017					
Total 3 Patients	00640702	61379	David Best, MD	Interventional Cardiology	University of Chicago
	00888805	61603	David Best, MD	Interventional Cardiology	Northwestern
	00463512	61761	Chetan Bardwaj, MD	Advanced Heart Failure	Northwestern

* Actual Transplantations, excludes waiting list candidates

Source: Hospital Records, OSF HealthCare Saint Francis Medical Center

Criterion 1110 (b) (3) (B) Projected Referrals

OSF HealthCare System has developed a cardiovascular service line in conjunction with 20 area hospitals and their medical staffs who will, based on patient preference, refer patients into the transplant program. In addition, OSF has twelve (12) Illinois facilities whose medical staffs will also refer patients into the re-established Heart Transplantation Program. Locally, OSF Saint Francis Medical Center has a Cardiovascular Institute and a growing group of over 55 cardiologists and several cardiovascular surgeons, including a qualified heart transplantation specialist. Thus, there is an extensive physician base to provide patient referrals into a re-established heart transplantation program. The sheer size of this collaborating physician base, not-withstanding an additional over 300 primary care providers, hinders providing notarized referral letters. That said, the existing patient volume supports program establishment.

Exhibit 26-4 provides a referral attestation letter from Stephen E. Hippler, MD, Chief Clinical Officer, OSF Healthcare System, demonstrating compliance with this criterion.

To the best of our knowledge, no other heart transplantation category of service re-establishment or establishment is being proposed in Illinois. Hence, the current and anticipated utilization volumes have not been used to support a pending, or approved, CON application.

Service Accessibility (Criterion 1120.240 (b) (4)

Criterion 1120.240 (b) (4) (A) (i) Service Restrictions

IDPH and the IHFSRB have designated Illinois the service or planning area for a heart transplant program Category of Service. Criterion 1120/240 (b) (2) documents there are currently four (4) Illinois heart transplantation centers, all of which are geographically clustered in the Chicago area. Hence, outstate or downstate Illinois is deficient in having this Category of Service locally available. Thus, by definition, there is a maldistribution within the state. Geographic access to this highly specialized program is compromised. As well, patient safety and quality care is jeopardized by fostering potentially excessive travel for those fragile heart failure patients requiring a time sensitive transplantation once a donor / recipient match is made.

Criterion 1110.240 (b) (2) describes two service or geographic planning areas for the OSF HealthCare System. These geographic market sub-components are within the designated Illinois planning area for a heart transplant program but are separate from the Chicago area. Hence, there is a heart transplantation program absence within the OSF HealthCare System defined geographic planning areas. (Criterion 1120.240 (b) (4) (A i)) As such, re-establishing the OSF Saint Francis Medical Center Heart Transplant Program will improve access for the defined planning area residents by providing better geographic distribution and eliminating the service restrictions created, in part, by geographic placement, and, associated travel time, when considering current Illinois heart transplant centers are clustered in the Chicago area.

OSF
HEALTHCARE SYSTEM

My name is Stephen E. Hippler, M.D. As Chief Clinical Officer for OSF HealthCare System, I attest to the fact patients and their families receiving care throughout the OSF HealthCare System, prefer to remain therein for their heart transplantation based on the System's ability to provide complex and robust comprehensive care, pre- and post-transplantation, including care provided by various other OSF specialty providers. Those physicians associated with our integrated system and, in particular, OSF Saint Francis Medical Center, prefer to refer their cardiovascular and heart failure patients within the System to ensure a continuum of care, while clearly allowing for patient and family preference.

OSF HealthCare System has a physician organization employing over 700 physicians as well as having independent physicians on our affiliated hospital medical staffs. As such, to request individual physician patient referral letters for the Heart Transplant Program Category of Service re-establishment is an over-whelming task. Thus, this attestation letter is provided to meet Illinois Health Facility Board Criterion 1110.240 (b) (3) (B).

We fully expect to meet the conservative heart transplants, as projected herein, through associated referrals into the re-established Program.

Stephen E. Hippler, M.D
Chief Clinical Officer, OSF HealthCare System

Notarization:

Subscribed and sworn to before me
this 10th day of October 2018

Signature of Notary

Seal

OFFICIAL SEAL
TONDA L. STEWART
Notary Public - State of Illinois
My Commission Expires 8/26/2020

800 N.E. Glen Oak Avenue, Peoria, Illinois 61603-3200 Phone (309) 655-2850 www.osfhealthcare.org
The Sisters of the Third Order of St. Francis

Criterion 1102.240 (b) (4) (B) Supporting Documentation

Criterion 1120.240 (b) (4) (B) (i) Planning Area Service Providers

The location and utilization of the four Chicago heart transplant center providers follows below:

	Adult Heart Transplants				
Facility / Heart Transplant Centers	2014	2015	2016	2017	2018 *
Advocate Christ Medical Center	14	16	26	23	33
Loyola University Medical Center	12	18	36	27	26
Northwestern Memorial Hospital	32	24	31	39	51
University of Chicago Medical Center	35	33	31	33	39
Total	93	91	124	122	149

* 8-months, annualized

Source: Organ Procurement and Transplantation Network (OPTN)

Criterion 1120.240 (b) (4) (B) (ii) Patient Location By Zip Code

This information is not available. COMPData, from the Illinois Hospital Association, does not differentiate between mechanically assisted heart technology and transplanted heart patients / recipients. Zip code data, by the four Illinois heart transplant centers, is not publically available.

Criterion 1120.240 (b) (4) (B) (iii) Travel Time

In this instance, given the sheer market size, the State of Illinois, and as well the heart transplant center clustering in Chicago, this criterion is not fully relevant. However, the travel times between OSF Saint Francis Medical Center and Chicago based transplant centers, approximately 160 to 180 miles away, can be several hours based on the travel mode … automobile, ambulance, or air transport, not withstanding traffic conditions, construction, and weather. Once a donor heart is procured, and a candidate match is made, there is a short window of time, which is less than 6 hours, from procurement to transplantation. Hence, these two travel times are relevant for a successful heart transplantation. First, transporting the procured organ to the transplant center, and second, transporting the recipient to the respective center.

Criterion 1120.240 (b) (4) (B) (iv) Waiting Time

This criterion is judged to be not applicable because the clinical protocol for heart transplant patients is very complex. First the patient must meet rigorous clinical criteria to be placed on a transplant waiting list and, second, the process to procure a donor heart and match it to a recipient is complex. Thus, the waiting time criteria is more relevant to organ availability and subsequent transplantation than waiting time related to "access" to a facility or program such as an emergency room, for example.

Criterion 1120.240 (b) (4) (B) (v) Admission Restrictions

This criterion is judged to be not-applicable to the proposed heart transplantation re-establishment program at OSF Saint Francis Medical Center in that any potential restrictions are patient specific (clinical status), and not facility related, due to the clinical evaluations and protocols in place for a heart transplant recipient.

Criterion 1120.240. (b) (4) (B) (vi) Population Characteristics / access problems

This criterion is judged to be not-applicable. Other sections of this CON permit application document the need / demand for heart transplants in Illinois based on several factors. The actual number of transplants varies yearly based on potential donor organ availability and recipient compatibility. There does not appear to be an access problem, (based on this criteria), excepting geographic access and state-wide program maldistribution (clustering in the Chicago area).

Criterion 1120.240 (b) (4) (B) (vii) AHQ Questionnaire)

We assume the latest AHQ data will be provided in the relevant SAR.

OSF Saint Francis Medical Center has a robust cardiovascular program as demonstrated by the following program specific information.

Year	2015	2016	2017
Adult Cardiac Surgery Cases (15+)	815	670	428
Adult Diagnostic Cardiac Caths (15+)	2,300	1,915	1,845
Adult Interventional Caths (15+)	1,230	1,392	1,230
Adult EP Caths (15+)	977	1,163	1,128
Coronary Artery Bypass Grafts (CABG)	198	185	190

Source: Annual Hospital Questionnaire; IDPH Health Systems Development, Published Data 2015 - 2016; 2017 as submitted for publication

Unnecessary Service Duplication (Criterion 1110.240 (c)

Criterion (1120.240 (c) (1) (A) (B) (C) Three (3) hour normal travel time, Population and existing facilities

Within Illinois, a 3-hour normal travel time from OSF Saint Francis Medical Center, Peoria, encompasses almost the entire state. To the north, the geographic boundary is the entire Illinois / Wisconsin state line. On the west, the geographic boundary is the Illinois / Iowa state line continuing south to Red Bud which is south of East St. Louis. On the east, the geographic boundary is the Illinois / Indiana state line continuing south to Robinson, Illinois. The southern, 3-hour normal travel time boundary beings in Rose Bud and moves northeast towards Salem and ultimately Robinson near the Illinois/Indiana border.

The criterion requests a population based zip code analysis, yet the IHFSRB prefers the use of IDPH/IHFSRB developed population projections which are based on county data; hence, county based data will be utilized in responding to this criterion.

Illinois has 102 counties with 1,569 distinct zip codes. The 3-hour normal travel time boundaries, from Peoria, contain 82 counties; only 20 counties in southernmost Illinois are not included in this geographic area. Based on IDPH/IHFSRB population data, this 82-county geographic area has an approximate 2016 population of 12,601,085 individuals or 97.1 percent of the Illinois population. The 82 counties within the 3-hour normal travel time from OSF Saint Francis Medical Center contain approximately 1,421 zip codes in that the zip code and county boundaries are not co-terminus.

All of the Illinois heart transplant centers within a 3-hour normal drive time from OSF Saint Francis Medical Center, Peoria, are clustered in the Chicago area. These centers are:

Advocate Christ Medical Center – Oak Lawn, Illinois
Loyola University Medical Center – Maywood, Illinois
Northwestern Memorial Hospital – Chicago, Illinois
University of Chicago Medical Center – Chicago, Illinois

Service Maldistribution (Criterion 1110.240 (c) (2) (A) (B)

Currently, within the designated state-wide planning area for a heart transplantation program, there are four centers, all clustered in the Chicago area. Because the State Agency has no evaluation criteria, a maldistribution based on utilization or excess capacity is irrelevant.

However, as previously documented, there is a geographic maldistribution with the State.

Impact on Other Area Providers (Criterion 1110.240 (c) (3) (A) (B))

Given there is no applicable IHFSRB occupancy utilization criteria for a heart transplant program, there is no way to logically respond to this impact criterion. Hence, it is judged to be irrelevant to the heart transplantation program. However, given the increasing trend for actual and potential heart transplantations, no impact on existing programs is expected due to demonstrated utilization increases (Criterion 1110.240 (b) (1) (Illinois Historical Volume and Trends)

Category of Service Modernization (Criterion 1110.240. (d) (1) (2) (3))

Not applicable; there is no modernization related to the proposed heart transplantation program re-establishment. OSF Saint Francis Medical Center has existing capacity.

Utilization (Criterion 1110.240 (d) (4))

Not applicable; there is no stated IHFSRB utilization criterion related to the proposed heart transplantation category of service re-establishment.

Staffing Availability (Criterion 1110.240 (e))

OSF Saint Francis Medical Center is presently a designated transplantation center. Thus, the staffing is currently in place for re-establishing the heart transplant program.

One can view the proposed program as an extension of the current cardiovascular surgery program that performed 480 adult cardiac surgery cases and 190 Coronary Artery Bypass Grafts (CABG) in 2017.

Surgical Staff (Criterion 1110.240 (f))

Most recently OSF Saint Francis Medical Center added a qualified heart transplantation surgeon to its medical staff. Resumes for this individual as well as existing cardiovascular surgeons are attached. (See Appendix A)

In addition, given OSF Saint Francis Medical Center is currently a designated transplantation center for other organs, other professionals are available with training and experience in related transplant surgery services, post-operative care and long-term organ recipient care, including immuno-suppressive care. Currently, the cardiovascular program manages local post-heart transplant patients who return to the area from other centers.

The most recent program survey is included to demonstrate ongoing compliance with OPTN and OPO criterion.

Collaborative Support (Criterion 1110.240 (g))

As a designated organ transplant center for kidney and pancreas transplantation, the support services are currently available and existing protocols / operational policies and procedures will be utilized as appropriate, for the re-established heart transplantation program.

See also the enclosed UNOS April 5, 2017 Survey

Support Services (Criterion 1110.240 (h)

Attached is an attestation / certification statement from Robert G. Anderson, President, OSF Saint Francis Medical Center, indicating compliance with this criteria.

Performance Requirements (Criterion 1110.240 (i)

Assurances (Criterion 1110.240 (j)

Given there are no utilization criteria for the heart transplantation program, nor occupancy standards, this criterion is not applicable to the heart transplantation program re-establishment.

Surgical Staff Resumes / CV's

Copies of the Resumes / CV's follow the application in Appendix A

Pages 80 – 162

Dr. Amulraj – Heart Transplant Surgeon

Dr. Clemson – Cardiologist

Dr. Munns – Cardiac and Thoracic Surgeon

Dr. Plunkett - Chief, Pediatric and Congenital Heart Surgery

OSF HEALTHCARE

My name is Robert G. Anderson. As President, OSF Saint Francis Medical Center ("Medical Center"), I certify and attest to the following facts relevant to the Heart Transplantation Program re-establishment and Illinois Health Facilities and Services Review Board Criterion 1110.240 (f) (g) (h) (i). More specifically:

1) The Medical Center medical staff has the appropriate heart transplantation certificates and experience.
2) There is on-site access at the Medical Center to the defined support services noted in the criterion.
3) The Medical Center is a teaching institution associated with the University of Illinois College Of Medicine at Peoria which sponsors eleven (11) residency training programs and six (6) fellowship programs.
4) The heart transplant program will be performed in conjunction with associated graduate medical education (G.M.E.) programs.
5) The facility is a member of the Organ Procurement and Transplantation Network (OPTN) as documented by our current transplant programs.

Attested by: Robert G. Anderson
Robert G. Anderson, President OSF Saint Francis Medical Center

Date: 10-11-18

Notarization:

Subscribed and sworn to before me
this 11th day of October, 2018

Tonda L. Stewart
Signature of Notary

Seal

OFFICIAL SEAL
TONDA L. STEWART
Notary Public - State of Illinois
My Commission Expires 8/26/2020

OSF HealthCare Saint Francis Medical Center | 530 NE Glen Oak Avenue, Peoria, IL 61637 | (309) 655-2000

UNOS
UNITED NETWORK FOR ORGAN SHARING

Working together. Saving lives.

700 North 4th Street, Richmond, VA 23219
tel: 804-782-4800
fax: 804-782-4816
www.unos.org

Brian M. Shepard
Executive Director & CEO

CONFIDENTIAL MEDICAL PEER REVIEW

April 5, 2017

VIA SECURE EMAIL

Manish Gupta, M.D.
Transplant Surgeon
OSF Saint Francis Medical Center
Suite 209
200 Pennsylvania Avenue
Peoria, IL 61603

Dear Dr. Gupta:

I appreciate your assistance during the MPSC-directed focused desk review of the OSF Saint Francis Medical Center (ILSF) kidney transplant program's compliance with Policy 8.4 conducted on March 16-17, 2017. I have enclosed the report; there were no violations identified during the review. Member Quality at UNOS acknowledges your efforts to ensure compliance with OPTN Policies.

Thank you for your time and consideration in submitting the requested medical record documentation. As of April 5, 2017, this portion of the review is complete.

The OPTN/UNOS Membership and Professional Standards Committee (MPSC) reviews survey results three times per year, including the compliance scores of all recently conducted site surveys. Based on the data, the MPSC may request additional information from a program, or consider an adverse action against the member if there is apparent violation of OPTN Policies.

The MPSC has a responsibility to monitor compliance with OPTN Policies. These policies have been adopted by the OPTN/UNOS Board of Directors pursuant to its contract with the Department of Health and Human Services (DHHS) and after circulation and discussion among organ transplant professionals and patient representatives. UNOS is responsible for keeping these policies up-to-date and for overseeing implementation by OPTN members.

If you have any further questions regarding the review, please contact me at (804) 782-4687 or keesha.sellers@unos.org.

President
Stuart C. Sweet, M.D., Ph.D.

Vice President
Yolanda T. Becker, M.D.

Vice President
Patient & Donor Affairs
Kenyon W. Murphy, J.D.

Secretary
Diane LaPointe Rudow, APN-BC, DNP, CCTC

Treasurer
Richard E. Pietroski, M.S., CPTC

Immediate Past President
Betsy J. Walsh, J.D., M.P.H

Regional Councillors
David A. Axelrod, M.D., M.B.A. (1)
David J. Reich, M.D., FACS (2)
Thomas C. Pearson, M.D., D.Phil. (3)
Adam W. Bingaman, M.D., Ph.D. (4)
Lisa Stocks, RN, M.S.N., FNP (5)
Christian S. Kuhr, M.D. (6)
David C. Cronin, M.D., Ph.D. (7)
Christie P. Thomas, M.B., FRCP, FASN, FAHA (8)
Lewis W. Teperman, M.D. (9)
Tim E. Taber, M.D. (10)
Robert J. Stratta, M.D. (11)

At Large Board Members
Sharon M. Barnish, M.D.
John Belcher, B.S., CCEMT-P, CPTC
Gordon R. Bowen, M.S.
Mandy M. Burchfield, RN, B.S.N., CPTC
John R. Campbell, PA, J.D.
Jonathan M. Chen, M.D.
Trine Engebretsen, M.D., M.S.
Cass Franklin, M.D.
Michael D. Gautreaux, Ph.D., D(ABHI)
Alexandra K. Glazier, J.D., M.P.H.
James M. Gleason, B.S., M.A.
Melissa Greenwald, M.D.
Kim B. Harbur, B.S.
Mitchell L. Henry, M.D.
Michael G. Ison, M.D.
Bradley T. Kornfeld, J.D.
Carrie Landower, RN, M.B.A., CPTC, CCTC
Christopher McLaughlin
Walt Nichols, RN, B.S.N., CCRN, CPTC
Willie J. Oler, Ed.D.
Kim M. Olthoff, M.D.
Dennis L. Santana, B.S.
Elizabeth A. Schumacher, J.D.
Mary Kathleen Schwab, B.S.N., CCTC
Peter G. Stock, M.D., Ph.D.
Anat R. Tambur, D.M.D., Ph.D., D(ABHI)
W. Kenneth Washburn, M.D.

CONFIDENTIAL MEDICAL PEER REVIEW

Sincerely,

Keesha Sellers RN

Keesha Sellers, RN
Site Surveyor
UNOS Member Quality

Enclosure

cc: Michael A. Cruz, President and CEO
Timothy P. O'Connor, M.D., FACS, OPTN/UNOS Representative
Karen Welborn, RN, B.S.N., Primary Program Administrator

OSF Saint Francis Medical Center
Site Survey Report-Kidney
Date of Review: March 16-17, 2017
Review Period: September 15, 2015-February 10, 2017

CONFIDENTIAL MEDICAL PEER REVIEW

The United Network for Organ Sharing (UNOS) has a contract with the Health Resources and Services Administration (HRSA), Department of Health and Human Services, to administer the Organ Procurement and Transplantation (OPTN) Network. One requirement of this contract is that UNOS conduct reviews of member organizations' compliance with OPTN requirements. OPTN requirements include National Organ Transplant Act (NOTA), [as amended, 42 U.S.C. 273 et seq], OPTN Final Rule, [42 CFR Part 121], and OPTN Policies and Bylaws.

According to Title 42, Part 121 of the Code of Federal Regulations (CFR), the OPTN shall conduct "ongoing and periodic reviews and evaluations of each member OPO and transplant hospital for compliance with these rules and OPTN policies."

UNOS conducted a routine on-site survey of the OSF Saint Francis Medical Center (ILSF) kidney transplant program on July 20-21,2015. At its meeting on October 29, 2015, the OPTN/UNOS Membership and Professional Standards Committee (MPSC) reviewed the results of this survey. Based on its review, the MPSC recommended that UNOS conduct a focused desk review of the kidney program's compliance with Policy 8.4 in one year.

UNOS conducted an MPSC-directed focused desk review of the OSF Saint Francis Medical Center (ILSF) kidney transplant program's compliance with Policy 8.4 on March 16-17, 2017.

PROGRAM BACKGROUND

The OSF Saint Francis Medical Center kidney transplant program was approved for membership with UNOS on November 4, 1987, and remains a member in good standing. UNOS staff notified the primary program administrator that a desk review would take place. UNOS staff scheduled the review and confirmed this date in writing on February 14, 2017. The written confirmation included a list of patient records that UNOS site surveyors requested to review.

REVIEW METHODOLOGY

The following methods were used in this survey of compliance with OPTN requirements:

1. A sample of medical records, and any material incorporated into the medical record by reference, was reviewed to verify the accuracy of OPTN-required data reported to UNOS.
2. A sample of medical records, and any material incorporated into the medical record by reference, was reviewed to verify that transplant-related activities are carried out in a manner consistent with OPTN requirements.

INTRODUCTION

This report outlines the results of the kidney transplant program survey in the following areas:

I. Medical Record Review - Clinical: summarizes the identified issues with a list of corresponding candidates
   A. OPTN Policy 8.4 Waiting Time

II. Medical Record Review - Administrative: summarizes the identified issues with a list of corresponding candidates
   A. OPTN Policy 8.4 Waiting Time – discrepancies that do not change the candidate's clinical status
   B. Demographic and data verification

Please Note: A complete copy of OPTN policies can be found at http://optn.transplant.hrsa.gov.

I. Medical Record Review – Clinical

A. OPTN Policy 8.4 Waiting Time

20 records reviewed **0 unverified listings**

II. Medical Record Review - Administrative

A. OPTN Policy 8.4 Waiting Time (discrepancies that do not change the candidate's clinical status)

20 records reviewed **20 listings reviewed** **0 unverified listings**

B. Demographic and Data Verification

UNOS site surveyors verified data and demographic information including name, social security number, date of birth, date of transplant or death, diagnosis, and accuracy of removal code usage for reasons other than transplant or death. The review identified zero instances of discrepancies between UNet℠ and the medical record.

Financial and Economic Feasibility

Attachments 34 through 37

There are no capitalized project costs associated with re-establishing the Heart Transplantation Category of Service. Hence, these criterion are considered not applicable.

SECTION X. SAFETY NET IMPACT STATEMENT

SAFETY NET IMPACT STATEMENT that describes all of the following must be submitted for ALL SUBSTANTIVE PROJECTS AND PROJECTS TO DISCONTINUE STATE-OWNED HEALTH CARE FACILITIES [20 ILCS 3960/5.4]:

1. The project's material impact, if any, on essential safety net services in the community, to the extent that it is feasible for an applicant to have such knowledge.
2. The project's impact on the ability of another provider or health care system to cross-subsidize safety net services, if reasonably known to the applicant.
3. How the discontinuation of a facility or service might impact the remaining safety net providers in a given community, if reasonably known by the applicant.

Safety Net Impact Statements shall also include all of the following:

1. For the 3 fiscal years prior to the application, a certification describing the amount of charity care provided by the applicant. The amount calculated by hospital applicants shall be in accordance with the reporting requirements for charity care reporting in the Illinois Community Benefits Act. Non-hospital applicants shall report charity care, at cost, in accordance with an appropriate methodology specified by the Board.
2. For the 3 fiscal years prior to the application, a certification of the amount of care provided to Medicaid patients. Hospital and non-hospital applicants shall provide Medicaid information in a manner consistent with the information reported each year to the Illinois Department of Public Health regarding "Inpatients and Outpatients Served by Payor Source" and "Inpatient and Outpatient Net Revenue by Payor Source" as required by the Board under Section 13 of this Act and published in the Annual Hospital Profile.
3. Any information the applicant believes is directly relevant to safety net services, including information regarding teaching, research, and any other service.

A table in the following format must be provided as part of Attachment 38.

Safety Net Information per PA 96-0031			
CHARITY CARE			
Charity (# of patients)	**Year**	**Year**	**Year**
Inpatient			
Outpatient			
Total			
Charity (cost in dollars)			
Inpatient			
Outpatient			
Total			
MEDICAID			
Medicaid (# of patients)	**Year**	**Year**	**Year**
Inpatient			
Outpatient			
Total			
Medicaid (revenue)			
Inpatient			
Outpatient			
Total			

APPEND DOCUMENTATION AS ATTACHMENT 38, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Safety Net Impact Statement

By re-establishing the Heart Transplantation Category of Service at OSF Saint Francis Medical Center, safety net services will be enhanced due to providing local access. There will be no changes in OSF HealthCare System nor OSF Saint Francis Medical Center financial policies. Hence, safety net services will not be impacted.

Attachment #39 provides safety net information consistent with the requirements of Attachment #38.

SECTION XI. CHARITY CARE INFORMATION

Charity Care information MUST be furnished for ALL projects [1120.20(c)].

1. All applicants and co-applicants shall indicate the amount of charity care for the latest three **audited** fiscal years, the cost of charity care and the ratio of that charity care cost to net patient revenue.

2. If the applicant owns or operates one or more facilities, the reporting shall be for each individual facility located in Illinois. If charity care costs are reported on a consolidated basis, the applicant shall provide documentation as to the cost of charity care; the ratio of that charity care to the net patient revenue for the consolidated financial statement; the allocation of charity care costs; and the ratio of charity care cost to net patient revenue for the facility under review.

3. If the applicant is not an existing facility, it shall submit the facility's projected patient mix by payer source, anticipated charity care expense and projected ratio of charity care to net patient revenue by the end of its second year of operation.

Charity care" means care provided by a health care facility for which the provider does not expect to receive payment from the patient or a third-party payer (20 ILCS 3960/3). Charity Care must be provided at cost.

A table in the following format must be provided for all facilities as part of Attachment 39.

CHARITY CARE			
	Year	Year	Year
Net Patient Revenue			
Amount of Charity Care (charges)			
Cost of Charity Care			

APPEND DOCUMENTATION AS ATTACHMENT 39, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

OSF HEALTHCARE SYSTEM			
CHARITY CARE			
	2015	**2016**	**2017 ***
Net Patient Revenue	1,917,020,581	1,970,497,456	2,057,383,657
Amount of Charity Care (charges)	123,694,713	121,815,596	123,255,304
Cost of Charity Care	24,351,000	25,170,596	26,127,456

OSF SAINT FRANCIS MEDICAL CENTER			
CHARITY CARE			
	2015	**2016**	**2017 ***
Net Patient Revenue	1,014,273,408	1,021,803,803	1,082,355,144
Amount of Charity Care (charges)	62,261,622	65,695,605	65,319,955
Cost of Charity Care	13,031.517	13,322,866	13,218,733
Patients Served	3,473	4,411	5,199

* Source: Unpublished; AHQ Survey Questionnaire

Appendix A

Resumes / CV's

EMMANUEL ANTONY AMULRAJ

Mobile: (409)-692-0667
Email: emmanuel.amulraj@BSWHealth.org

License

USMLE 1	*April*	*2000*
USMLE 2	*September*	*2000*
USMLE 3	*October*	*2004*

State License:

TEXAS MEDICAL LICENSE
ILLINOIS MEDICAL LICENSE
INDIANA STATE MEDICAL LICENSE - inactive
CALIFORNIA STATE MEDICAL LICENSE - inactive

Certifications

BOARD CERTIFIED IN CARDIOTHORACIC SURGERY (ABTS)
BOARD CERTIFIED IN GENERAL SURGERY (ABS)

Educational Commission of Foreign Medical Graduates (ECFMG)
ADVANCED CARDIAC LIFE SUPPORT
BASIC CARDIAC LIFE SUPPORT

Clinical Appointments

Aug2015 — ***Baylor Scott and White Healthcare***
Assistant Professor - Texas A&M College of Medicine
Surgical director - Heart transplantation and Mechanical Assist Devices
Temple, Texas

2014 – 2015 — ***University of Texas Medical Branch***
July-Aug — ***Assistant professor***
Surgical director for Heart transplantation
Galveston, Texas

2013-2014 — ***Stanford University Hospitals and Clinics***
Sept - July — *Clinical Instructor*

2012- 2013 — ***Northwestern memorial Hospital***
Aug- Aug — ***Bluhm Cardiovascular Institute***
Northwestern University
Clinical Instructor

2009-2010 — ***Artemis Health Sciences***
Associate Consultant in Cardiothoracic and vascular surgery
Gurgaon, New Delhi , India

1999 Aug	***Vijay Mallya Hospital*** ***Honorary House Officer*** *Observership in Surgery* Bangalore, India
1998- 1999	***Madame Curie Center of Oncology, Pvt .ltd.*** (An Affiliate of advanced Health care Resources Inc, USA) *Junior House officer (Resident) / Radiation Oncology* Bangalore, India

Residency and fellowships

09/2013-07/2014	***Transplantation and Mechanical Circulatory Support fellowship*** *Stanford University Hospitals and Clinics* *Palo Alto, California*
08/2012-08/2013	***Advanced cardiac fellowship*** *Northwestern Memorial Hospital* *Bluhm Cardiovascular Institute* *Chicago, Illinois*
01/2012- 06/2012 (6m)	***Advanced Cardiac Fellowship*** *Loyola University Medical Center* *Maywood, Illinois*
07/2007- 06/ 2009	***Cardiothoracic Surgery Fellowship*** *Loyola University Medical Center* *Maywood, Illinois.*
07/2006- 06/2007	***General Surgery Residency- Chief resident (PGY 5)*** *State University of New York, Downstate Medical Center* Brooklyn, New York.
06/2003- 07/2006	***General Surgery Residency (PGY 2-PGY 4)*** *State University of New York, Downstate Medical Center* Brooklyn, New York.
06/2001- 07/2002	***General Surgery Internship (PGY 1)*** *State University of New York, Downstate Medical Center* Brooklyn, New York.
08/1997- 12/1998	***Internship (Transitional Year)*** *St. John's Medical College,* Bangalore, India

Medical Education

08/1992- 08/1999	***ST JOHN'S NATIONAL ACADEMY OF HEALTH SCIENCES*** (St. John's Medical College)
Graduation 02/2000	Bachelor of Medicine; Bachelor of Surgery (M.B; B.S) Bangalore University, India

Education

1990- 1992 ***State Bank Officer's Association, School and Junior College;***
ALL INDIA SENIOR SCHOOL CERTIFICATE EXAMINATION;
(Central Board of Secondary Education), Madras, India.

1985-1990 ***New Indian School***
Primary and Secondary schooling (up to 10th Grade)
Al- Jabriya, Kuwait.

Committees

2014 – Present ***Member of Region 4 - Heart Regional Review Board, Texas***
Blood Conservation committee
Cardiac transplantation and VAD Selection Committee

2014 ***Faculty Mentor for Cardiac Surgery Club at UTMB***

Professional Memberships

Society of Thoracic Surgeons
International Society of Heart and Lung Transplantation (ISHLT)
International Society of Minimal Invasive Cardiac Surgery
American Heart Association
American College of Cardiology

Personal Data

Marital Status	*Married*
Citizenship	*United States of America*
Email	*eamulraj@sw.org/ Emmanuel.amulraj@BSWHealth.org*
Address	*1259 Frederick Lane* *Temple , Tx 76502*

Voluntary Work

1997-1999 ***Pulse Polio 2000***
Nationwide immunization against polio
Objective: Eradication of Polio by the year 2000
Bangalore, India.

Ongoing Research & Projects:

2017

1. Collaborative research with S.U.N.Y Downstate medical Center- Characterization of the inflammatory response in adipose and cardiovascular tissues in patients with heart failure with and without type 2 Diabetes- A Pilot Study

2. Designs for total artificial heart and ventricular assist device with nanotechnology Intellectual property protection and patents – pending

3. Measurement and Treatment of vascular hyper-permeability in the setting of CPB IRB- approval pending

2016

1. Book Chapter: Total Artificial Heart

2. Poster Presentations at ISHLT 2016

a. ***Changing Characteristics of Heart Transplant Donors and Their Effect on Recipient Mortality***

b. ***Does Pulmonary Hypertension Affect Survival after Heart Transplantation Based on Recipient Body Mass Index?***

c. ***Does Pulmonary Hypertension Affect Survival after Heart Transplantation Based on Recipient Body Mass Index?***

Older Publications:

Oct 2013 ***1. Transaortic Alfieri Mitral Valve Repair as an Adjunct to Septal Myectomy in Patients With Hypertrophic Cardiomyopathy***

The Canadian journal of cardiology 29(10):S206-S207 · October 2013

2. Distal Aortoplasty for Management of the Distal Ascending Aortic Remnant during Aortic Root Replacement

Emmanuel A. Amulraj, MD, William D.T. Kent, MD, MS, S. Chris Malaisrie, MD

The Annals of Thoracic Surgery, October 2013, Volume 96, Issue 4, Pages 1499-1501.

2005 ***Thoracoscopic removal of a knife impaled in the chest***

Joshua H. Burack, MD, Emmanuel A. Amulraj, MD, Patricia O'Neill, MD, Gregory Brevetti, MD, Robert C. Lowery, MD

J.Thoracic Cardiovascular Surgery(JTCVS) 2005; 130:1213-1214

1998 ***A Geriatric Study on the Factors affecting the Physical and Mental Health in a Typical Indian Rural Setup – Poster Presentation***
Dept. of Community Medicine, St. John's Medical College, India.

1997 ***Use of Antidepressant Medications in Non Psychiatric departments***
Dept. of Psychiatry, St. John's Medical College
Bangalore, India.

1994 ***Dermatographic Patterns related to Down's Syndrome***
Dept. of Anatomy, St. John's Medical College
Bangalore, India.

CME Talks / Event:

2017 ***The 1st Annual Waco Cardiology Conference***

The State of the Heart

Director of the event, speaker and moderator

2016 ***ECMO transport - Annual ECMO symposium***

Cardiothoracic surgery Grand Rounds

Anomalous takeoff of the left main coronary artery

Traumatic aortopulmonary fistula

Cardiac Tumors
(at the combined Grand rounds of Dept of Cardiology and Cardiothoracic Surgery, State of the Heart)

The Dilemma – Prosthetic Aortic valve salvage vs complete root replacement in emergent redosurgery

Congenital cystic adenomatoid malformations

Diaphragmatic Pacemakers

Coronary endarterectomy- Revisited

Surgical Management of Acute pulmonary embolisim

Pulmonary endarterectomy

Esophageal Reconstruction and Conduits

Surgical Management of sternal wound infections

Gen Surgery Grand Rounds

Chief Residency

Surgical Options and decision making in Parathyroid Surgery

Surgical Management of Pheochromocytoma

Surgical Management of Upper Limb Ischemia

BARRY S. CLEMSON, M.D., F.A.C.C., F.A.H.A., F.A.C.P.
CURRICULUM VITAE

DATE OF BIRTH:	September 17, 1958
PLACE OF BIRTH:	Philadelphia, Pennsylvania
BUSINESS ADDRESS:	OSF HealthCare Cardiovascular Institute 5405 North Knoxville Avenue Peoria, Illinois 61614
BUSINESS TELEPHONE: BUSINESS FAX:	(309) 691-4410 (309) 692-4730
MEDICAL LICENSURE:	Illinois - 036-086030 Pennsylvania - MD031862E

EDUCATION

1972-1975	Frankford High School, Philadelphia, Pennsylvania (rank 2/776)
1975-1979	University of Pennsylvania (Cum Laude), Philadelphia, Pennsylvania, B.A. (Microbiology)
1979-1983	Thomas Jefferson University College of Medicine (High Honors), Philadelphia, Pennsylvania, Doctor of Medicine

POST-GRADUATE EDUCATION

1983-1984	Internship, Department of Medicine, The Milton S. Hershey Medical Center, The Pennsylvania State University Hospital, Hershey, Pennsylvania
1984-1986	Resident, Department of Medicine, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania
1986-1989	Fellow, Division of Cardiology, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania
1988-1989	Chief Fellow, Division of Cardiology, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania

HONORS

1982	Alpha Omega Alpha Medical Honor Society, Thomas Jefferson University, College of Medicine, Philadelphia, Pennsylvania
1982	Hobart Amory Hare Honor Society, Thomas Jefferson University, College of Medicine, Philadelphia, Pennsylvania

BOARD CERTIFICATIONS

	Diplomat, National Board of Internal Medicine Examiners American Board of Internal Medicine American Board of Internal Medicine, Cardiovascular Diseases
1999-2009	American Board of Internal Medicine, Interventional Cardiology American Board of Internal Medicine, Advance Heart Failure/Transplantation

WORK HISTORY

1989-1993	Cardiologist, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania
1993-2012	Cardiologist, HeartCare Midwest, Ltd., a wholly-owned subsidiary of OSF Saint Francis Medical Center, Peoria, Illinois
2012- 2015	Cardiologist, Penn State Hershey Medical Center, The Penn State University, Hershey, Pennsylvania
2015-present	Cardiologist, OSF HealthCare Cardiovascular Institute, Peoria, Illinois

PROFESSIONAL ACTIVITIES

1980	Summer NIH Student Research Project, Department of Biochemistry, Thomas Jefferson University College of Medicine, Philadelphia, Pennsylvania
1989-1991	Assistant Director, Cardiac Transplantation Program, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania

PROFESSIONAL ACTIVITIES (continued)

1991-1992	Associate Director, Cardiac Transplantation Program, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania
1991-1993	Director, Heart Failure Clinic, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania
1992-1993	Director, Cardiac Transplantation Program, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania
1993-1996	Co-Medical Director, Downstate Heart Transplant Program, OSF Saint Francis Medical Center, Peoria, Illinois
1994-2010	Course Director, HeartCare Midwest Annual Cardiovascular Symposium
1994-2006	Cardiovascular Education Director, Internal Medicine Resident and Medical Student Cardiovascular Disease Rotations
1995-2012	Medical Director, CHF Clinic, HeartCare Midwest, Peoria, Illinois
1996-2012	Medical Director, Downstate Heart Transplant Program, OSF Saint Francis Medical Center, Peoria, Illinois
1997-2004	Medical Director, Coronary Care Unit, OSF Saint Francis Medical Center, Peoria, IL
2000-2004	Vice Chairman, Department of Transplant, OSF Saint Francis Medical Center, Peoria, IL
2000-2002	QA Committee Chairman, Transplant Section, Department of Cardiovascular Medicine and Surgery, OSF Saint Francis Medical Center, Peoria, IL
2001-2012	Medical Director, OSF Heart Failure Program, OSF Saint Francis Medical Center, Peoria, IL
7/2004-9/2004	Acting Chairman, Department of Transplant, OSF Saint Francis Medical Center, Peoria, IL
9/2004-10/2006	Chairman, Department of Transplant, OSF Saint Francis Medical Center, Peoria, IL
10/2006-2010	Vice Chairman, Department of Transplant, OSF Saint Francis Medical Center, Peoria, IL

PROFESSIONAL ACTIVITIES (continued)

10/2005-10/2007	Vice President of Medical Staff, OSF Saint Francis Medical Center
10/2007-10/2009	President of Medical Staff, OSF Saint Francis Medical Center
10/2009-10/2011	Past President of Medical Staff, OSF Saint Francis Medical Center
11/2006-2012	Chair, HeartCare Midwest Research Committee, Peoria, IL
2007-2012	Chair, Heart Failure Steering Committee, OSF Saint Francis Medical Center, Peoria, IL
2005	Co-chair, Tri-county American Heart Association, Sweetheart Ball, Peoria, IL
2007	Peoria Medical Society 2007 Mini-Internship Program
2008	Chairman, American Heart Association Tri-County Heart Walk, Peoria, IL
2013-2014	Course Director, Dimensions in Heart and Vascular Care, Penn State Heart and Vascular Institute Symposium
2013-2015	Medical Director, Heart Transplant Program, Penn State Milton S. Hershey Medical Center, Penn State University
2015-present	Steering Committee, Dimensions in Heart and Vascular Care, Penn State Heart and Vascular Institute Symposium

ACADEMIC APPOINTMENTS

1987-1990	Clinical Instructor of Medicine, Division of Emergency Medicine, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania
1989-1990	Clinical Instructor of Medicine, Division of Cardiology, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania
1990-1993	Assistant Professor of Medicine, Division of Cardiology, The Milton S. Hershey Medical Center, The Pennsylvania State University, University Hospital, Hershey, Pennsylvania
1995-2004	Clinical Assistant Professor of Medicine, University of Illinois College of Medicine at Peoria

ACADEMIC APPOINTMENTS (continued)

2004-2016	Clinical Associate Professor of Medicine, University of Illinois College of Medicine at Peoria
2012-2015	Associate Professor of Medicine, Cardiologist, Penn State Milton S. Hershey Medical Center, Penn State College of Medicine, Hershey, Pennsylvania
2016-	Clinical Professor of Medicine, University of Illinois College of Medicine at Peoria

NATIONAL COMMITTEES

2015-present	Heart Failure Society of America National Quality of Care Heart Failure Care Educational Initiative Task Force

MEMBERSHIPS

1979-Present	Phi Delta Epsilon Medical Fraternity
1980-1990	American Medical Association
1982-Present	Alpha Omega Alpha Honor Society
1984-Present	American College of Physicians
1986-1993	American Heart Association, PA Affiliate
1986-1989	Trainee, American College of Cardiology
1989-1990	Affiliate, American College of Cardiology
1990-Present	Fellow, American College of Cardiology
1990-2012	Cardiac Transplant Research Database
1990-1993	Greater Delaware Valley Society of Transplant Surgeons
1992-Present	Fellow, Council on Clinical Cardiology, American Heart Association
1992-Present	International Society Heart & Lung Transplantation
1993-2000	American Medical Association
1993-2012	Illinois State Medical Society
1993-2012	Peoria Medical Society
1997-Present	Heart Failure Society of America
2005-Present	Fellow, American College of Physicians

HOSPITAL AFFILIATIONS

07/89-06/93	University Hospital, The Milton S. Hershey Medical Center, Hershey. PA
06/93-04/12	OSF Saint Francis Medical Center, 530 N.E. Glen Oak Ave., Peoria, IL
01/93-04/12	Methodist Medical Center of Illinois, 221 N.E. Glen Oak Ave., Peoria, IL
10/93-04/12	Proctor Hospital, 5409 North Knoxville Ave., Peoria, IL
08/93-04/12	Pekin Hospital, 600 South Thirteenth Street, Pekin, IL
10/03-04/12	Perry Memorial Hospital, 530 Park Avenue East, Princeton, IL

HOSPITAL AFFILIATIONS (continued)

01/05-04/12	Ottawa Regional Hospital, 1100 E. Norris Dr., Ottawa, IL
02/05-04/12	BroMenn Regional Medical Center, Virginia at Franklin, Normal, IL
02/05-04/12	OSF St. Joseph Medical Center, 2200 E. Washington St., Bloomington, IL
11/99-04/03	OSF St. Anthony's Hospital, 2400 North Rockton Avenue, Rockford, IL
12/99-10/07	Galesburg Cottage Hospital, 695 North Kellogg Street, Galesburg, IL
02/00-10/07	St. Mary's Hospital, 3333 North Seminary Street, Galesburg, IL
11/93-10/10	Kewanee Hospital, 719 Elliott Street, Kewanee, IL
12/05-09/11	OSF Saint James – John W. Albrecht Medical Center, Pontiac, IL
04/12-04/15	University Hospital, Penn State Milton S. Hershey Medical Center, Hershey PA
01//15-04/15	Penn State Hershey Rehabilitation Hospital, Hershey PA
05/15-present	OSF HealthCare Saint Francis Medical Center, 530 N.E. Glen Oak Ave., Peoria, IL
06/15-present	UnityPoint Health Methodist, 221 N.E. Glen Oak Ave., Peoria, IL
06/15-present	UnityPoint Health Proctor, 5409 North Knoxville Ave., Peoria, IL

MEDICAL STAFF COMMITTEES

1991-6/1993	Center for Humanistic Medicine, Hershey Medical Center
1993-1994	Surgical/Cardiovascular ICU, OSF Saint Francis Medical Center
1994-1995	Coronary/Medical Intensive Care Unit, OSF Saint Francis Medical Center
1994-2012	Professional Staff Quality Assurance, OSF Saint Francis Medical Center
1994-2012	Advisory Committee, Department of Cardiovascular Medicine and Surgery, OSF Saint Francis Medical Center
1995-2002	Patient Centered Care, OSF Saint Francis Medical Center
1997-2000	CHF Task Force, OSF Saint Francis Medical Center
1997-2003	Midwest Heart Institute Operations Committee, OSF Saint Francis Medical Center
2002-2004	Adult Critical Care Committee, OSF Saint Francis Medical Center
2002-2012	OSF Capacity Committee, OSF Saint Francis Medical Center
2003-2012	Utilization Management, OSF Saint Francis Medical Center
2004-2011	OSF Medical Staff Executive Committee
2005-2009	OSF Quality and Safety Board

MEDICAL STAFF COMMITTEES (continued)

10/2005-10/2007	Vice President of Medical Staff, OSF Saint Francis Medical Center
10/2007-10/2009	President of Medical Staff, OSF Saint Francis Medical Center
10/2009-10/2011	Past-President of Medical Staff, OSF Saint Francis Medical Center
2007-2012	Quality Quest for Health: Evidence-Based Care Standards 6 Sigma Team
4/2009-2012	Regional Physician Transition Council (EPIC), OSF Healthcare System
5/2009-2012	Executive Physician Advisory Council (EPIC), OSF Saint Francis Medical Center
5/2009-2012	We Care Project, (EPIC EMR Implementation), OSF Saint Francis Medical Center
3/2013-4/2015	Clinical IT Advisory team, Penn State Hershey Medical Center/College of Medicine
9/2013-4/2015	Penn State HVI Heart Transplant Quality of Care Committee
9/2013-4/2015	Penn State HVI Mechanical Circulatory Support Quality of Care Committee
11/2013-4/2015	Penn State HVI Practice Site Redesign Committee
12/2013-4/2015	Penn State Hershey Medical Center Quality Leadership Team
6/2013-4/2015	Penn State HVI-ICU Quality of Care Committee

EDITORIAL RESPONSIBILITIES

REVIEWER

The Journal of Heart and Lung Transplantation
The American Journal of Cardiology
Congestive Heart Failure

ABSTRACT REVIEWER

International Society for Heart and Lung Transplantation, 2012

PUBLICATIONS

Book Chapter

1. Zelis R, Sinoway L, Musch T, Davis D, Clemson B, Leuenberger U: Metabolic and neurogenic determinants of blood flow in congestive heart failure. In: "Heart Failure - Mechanisms and Management" pp. 385-395. Edited by B.S. Lewis and O.A. Kimchi, Springer-Verlag, Berlin Heidleburg, 1991.

ABSTRACTS

1. Clemson B, Hogeman C, Strzlecka D, Hoover R, Patel A, Davis D, Baily R, Zelis R: Is sympathetic nervous system activity increased in the rat myocardial infarction model of compensated heart failure? Clin Res 36:539A, 1988.

2. Clemson B, Davis D, Zelis R: Silent myocardial ischemia during exercise testing does not correlate with anatomic parameters of extent of coronary artery disease. Clin Res 36:268A, 1988.

3. Clemson B, Davis D, Baily R, Deiling S, Strzlecka D, Zelis R: Norepinephrine clearance in heart failure is low despite abnormal neuronal uptake. Circulation 78:II-106,1988.

4. Zelis R, Sinoway L, Musch T, Davis D, Clemson B, Leuenberger U: Metabolic and neurogenic determinants of blood flow in congestive heart failure. In: "Heart Failure - Mechanisms and Management". Presented at the 1st International Symposium on Heart Failure - Mechanisms and Management, May 22 - May 25, 1989, Jerusalem

5. Gaul L. Zelis, R., Clemson B, Campsey M, Et al. Prejunctional angiotensin II receptors exist in humans and can regulate norepinephrine release. Clin Res, 40(2):156A, April 1992.

6. Young, J.B., Naftel, D.C., Bourge, R.C., Kirkiln, J.K., Clemson, B.S., Porter, C.B., Rodeheffer, R.J., Kenzora, J.L., and the Transplant Cardiologists Research Database (TCRD) Group. Matching the Heart Donor and Recipient; Clues for Successful Expansion of the Donor Pool: A multi-Variable and Multi-Institutional Study. J Heart Lung Transplant 12: S67, 1993.

7. Grady K, White-Williams C, Naftel D, Costanzo M, Pitts D, Rayburn B, VanBakel A, Jaski B, Bourge R, Kirklin J, and the Cardiac Transplant Research Database (CTRD), J of Heart and Lung Transplantation 16(1):273.

8. Ventura H, Kirklin J, Eisen H, Michler R, Clemson B, O'Donnell J, Dumas-Hicks D, Porter C, Naftel D, McGiffin D, and the Cardiac Transplant Research Database (CTRD). The Combined Impact of Pretransplant Risk Factors and Rejection Frequency and Severity on the Prevalence of Post-Transplant Coronary Vasculopathy. J Heart Lung Transplant 1997 16:66.

9. Kushwaha S, Rodeheffer RJ, Weiss T, Jarcho J, Pritzker M, Smith AL, Heilman KJ, Clemson BS, Rayburn BK, Bourge R, Kirklin J for the Cardiac Transplant Research Database (CTRD). Longer distance from Transplant center is not associated with decreased survival in post cardiac transplant patients. J Heart Lung Transplant 2001 20(2):236-237.

10. Clemson, B, Kirklin, JK, Canter, CE, Naftel, DC, Young, JA, Hill, JA, Rodeheffer, RJ, Radovancevic, B, Faulkner, S, the Cardiac Transplant Research Database, University of Alabama at Birmingham, Birmingham, AL. Late Outcomes After Heart Transplantation in Adults with Congenital Heart Disease: A Multi-Institutional Analysis. J Heart Lung Transplant 2004, 23(2):168-169.

11. Vijayappa, M, Clemson, B, Alsorogi, M, Al-Hawarey, S, Joseph, D, Matthew, M, Talkad, A, Wang, D. The Rate of Stroke Associated with the Use of Thoratec Ventricular Assist Device in Oder Patients. Accepted at European Stroke Conference (Glasgow, UK) held in May 2007.

CONTRIBUTIONS TO ABSTRACTS

1. Bourge RC, Naftel DC, Costanzo-Nordin M, Kirklin JK, Young J and the Transplant Cardiologists' Research Database Group: Risk factors for death after cardiac transplantation: A multi-institutional study. J Heart and Lung Transplantation 11 (1)Pt 2:191, Jan/Feb 1992.

2. Miller LW, Naftel DC, Bourge RC, Kirklin JK, Brozena SC, and the Transplant Cardiologists' Research Database Group. Infection following cardiac transplantation: A multi-institutional analysis. J of Heart and Lung Transplantation 11(1)Pt 2:192, Jan/Feb 1992.

3. Kobashigawa J, Naftel DC, Bourge RC, Kirklin JK, Ventura HO, and the Transplant Cardiologists' Research Database Group. Acute rejection after cardiac transplantation: A multi-institutional analysis. J of Heart and Lung Transplantation 11(1) Pt 2:192, Jan/Feb 1992.

4. Jarcho J, Naftel DC, Shroyer TW, Kirklin JK, Bourge RC, Barr ML, Pitts, DG, Starling RC and the Transplant Cardiologists' Research Database (TCRD) Group, Does HLA mismatch affect the incidence of rejection after cardiac transplantation? A multi-institutional study. J of Heart and Lung Transplantation 12(1)Pt 2:S77, 1993

5. Kirklin JK, Naftel DC, Levine TB, Bourge RC, Pelletier GB, O'Nonnell J, Miller LW, Pritzker MR and the Transplant Cardiologists' Research Database (TCRD) Group. Cytomegalovirus: Can we alter its incidence and impact? A multi-variable, multi-institutional study. J of Heart and Lung Transplantation 12(1)Pt 2:S89, 1993.

6. Kubo, S.H., Naftel, D.C., Mills, R.C., O'Donnell, J., Rodeheffer, R.J., Vijay, R.R., Kenzora, J.L., Bourge, R.C., Kirklin, J.K. Who is at Risk for Late Recurrent Rejection After Cardiac Transplantation. A Multi-Institutional, Multivariable Analysis. J Heart Lung Transplant 13:S71, 1994.

7. Smart, F.H., Naftel, D.C., Costanzo, M.R., Levine, T.B., Pelletier, G.B., Yancy, C.W., Hobbs, R.E., Kirklin, J.K., Bourge, R.C. Multi-Institutional Risk Factors for Infection After Heart Transplantation. J Heart Lung Transplant 13:S80, 1994

8. Bourge, R.C., Naftel, D.C., Kirklin, J.K., Spears, J., Kobashigawa, J.A., Young, J.B., Jarcho, J., Kubo, S., Smart, F., and the Cardiac Transplant Research Database (CTRD) Group. Computerization of the Application of Parametric Multivariable Risk Factor Analysis to Estimate the Risk of Events After Cardiac Transplantation. Journal of the American College of Cardiology, 328A, February, 1995.

9. Rodeheffer, R., Naftel, D., Warner-Stevenson, L., Porter, C., Young, J., Miller, L., Kenzora, J., Haas, G., Kirklin, J., Bourge, R., and the Cardiac Research Database (CTRD). Changing Patterns in Recipient and Donor Management in Cardiac Transplantation. J Heart Lung Transplant 14:S35, 1995.

10. Mills R, Naftel D, Kirklin J, Van Bakel A, Jaski B, Massin E, Eisen H, Lee F, Fishbein D, Bourge R, and the Cardiac Transplant Research Database. Cardiac Transplant Rejection with Hemodynamic Compromise: A Multi-Institutional Study of Risk Factors and Endomyocardial Cellular Infiltrate. J Heart Lung Transplant 14:S45, 1995.

11. Bourge R, Warner-Stevenson L, Naftel DC, Kirklin JK, Hobbs RE, Hamilton M, Mullen GM, Young JB, Boehmer JP, Tolman D for the Cardiac Transplant research Database Group. Risk Factors for Death in Critically Ill Patients Awaiting Cardiac Transplantation: A Multi-Institutional Study. Circulation 1995; 92:11-149.

12. Stevenson LW, Bourge RC, Naftel DC, Kubo S, Kirklin JK, Ventura HO, Costanzo MR, Kenzora JL, Miller LW, Rodeheffer RJ, and the Cardiac Transplant Research Database Group. Deterioration and Death on the Current Waiting List: A Multicenter Study of Patients Awaiting Heart Transplantation. Circulation 1995; 92:1-125.

13. Costanzo MR, Naftel DC, Pritzker MR, Hellman, III JK, Boehmer JP, Brozena SC, Dec GW, Ventura HO, Kirklin JK, Bourge RC, Miller LW, for the Cardiac Transplant Research Database (CTRD). Heart Transplant Coronary Artery Disease Detected by Angiography: A Multi-Institutional Study. J Heart Lung Transplant 1996; 14:S39.

14. Kubo S, Stevenson L, Miller L, Kobashigawa J, Kenzora G, Torre G, Tolman D, Naftel D, Bourge R, Kirklin J, and the Cardiac Transplant Research Database Group. Outcomes in Non-Urgent Patients (Status II) Awaiting Transplantation: Risk Factors for Death or Deterioration to Status I (Urgent Status). J Heart Lung Transplant 1997; 16:42.

15. Moriguchi J, Kirklin J, Stevenson L, Boehmer J, Mullen G, Smart F, Rodeheffer R, Costanzo M, Naftel D, Bourge R, and the Cardiac Transplant Research Database (CTRD). Risk Factors for Sudden Unexpected Death in Non-Urgent (Status II) Patients Awaiting Cardiac Transplantation. J Heart Lung Transplant 1997; 16:42.

16. Grady K, White-Williams C, Naftel D, Costanzo M, Pitts D, Rayburn R, VanBakel A, Jaski B, Bourge R, Kirklin J, and the Cardiac Transplant Research Database (CTRD). Is Preoperative Weight a Factor Risk for Post-Transplant Morbidity and Mortality: A Multi-Institutional Study of Preoperative Weight-Height Indices. J Heart Lung Transplant 1997; 16:109.

17. DeSalvo TG, Naftel DC, Kasper EK, Rayburn BK, Leier CV, Massin EK, Cintron GB, Yancy CW, Keck S, Aaronson K, Kirklin JK and the Cardiac Transplant Research Database Group. The Differing Hazard of Lymphoma vs Other Malignancies in the Current Era-A Multi institutional Study. J Heart Lung Transplant 1998 17:70.

18.. Bourge RC, Stevenson L, Naftel DC, Hobbs RE, Bohemer JP, Hamilton MA, Kubo SH, Kenzora JL, Smart FW, Kirklin JK and the Cardiac Transplant Research Database (CTRD). Pre-Transplant Study Group. Death Awaiting Cardiac Transplantation: Impact of the Implantable Cardioverter Defibrillator. J Heart Lung Transplant 1998; 17:61.

19. Stevenson LW, Bourge RC, Naftel DC, Dec W, Krauskop T, Young JB, Mullen GM, Tolman DE, Rodeheffer RJ, Kirklin JK. Weekly Risk of Death While Awaiting Transplantation: Relationship to Support Required. Journal of the American College of Cardiology 1998; 31:251A.

20. Jaski BE, Kim J, Naftel DC, Lingle RJ, Brozena SC, Jarcho J, Costanzo MR, Eisen HI, Kirklin JK, Bourge RC, for the Cardiac Transplant Research Database. Cardiac Transplant Outcome Between Patients Supported on a Left Ventricular Assist Device Versus Intravenous Inotropic Therapy. J Heart Lung Transplant 1999 18:37.

21. Kirklin JK, Naftel DC, Boehmer JP, Kobashigawa JA, Kenzora JL, Mehra MR, Miller LW, Kubo SH, Stevenson LW, Bourge RC, and the Cardiac Transplant Research Database (CTRD) Group. Refining the Criteria for Heart Transplant Listing a Status: A Multi-institutional Risk Factor Analysis for Rehospitalization Following Listing. J Heart Lung Transplant 1999 18:47.

22. Rayburn BK, Rodeheffer RJ, Young JB, Mulen GM, Torre G, Tolman DE, Gibbons RJ, Brown RN, Bourge RC, for the Cardiac Transplant Research Database Investigators. Prognostic Value of the Relative Lymphocyte Concentration and White Blood Cell Count in Heart Failure. J Heart Lung Transplant 1999 18:47.

23. Lake KD, Smith CI, Pritzker MR, Renlund DE, Heilman JK, Smith AL, Miller LW, Weiss LT, Kirklin JK, Bourge RC, and the Cardiac Transplant Research Database (CTRD). Outcomes with Hepatitis C Following Cardiac Transplantation - A Multi-Institutional Study. J Heart Lung Transplant 1999 18:81.

24. Yancy CW, Naftel DC, Foley BA, Kobashigawa JA, Pitts JA, Rodeheffer RJ, Renlund DG, Ewald G, Kaiser G, McGriffin DC for the Cardiac Transplant research Database Group (CTRD). Death After Heart Transplantation: A Competing Outcomes Analysis. J Heart Lung Transplant 2000 19:52.

25. Bourge RC, Kirklin JK, Thomas K, Czerska B. Lee F, Kasper EK, Waggoner L, Bohemer JP, Hill JA, Naftel DC for the Cardiac Transplant Research Database (CTRD). The emergence of co-morbid disease impacting survival after cardiac transplantation, a ten year multi-institutional experience. J Heart Lung Transplant 2001 20:167-168.

26. Kirklin J, Miller LW, Brown RN, Alvarez RJ, Porter CB, Vanbakel AB, Jaski BE, Wannenburg T, White-Williams C, Bourge RC, for the Cardiac Transplant Research Database (CTRD). Who is most likely to enjoy long term survival after cardiac transplantation? Risk stratification in a 10 year multi-institutional experience. J Heart Lung Transplant 2001:2:168-169.

27. Costanzo MR, Eisen HJ, Brown RN, Mehra M, Benza R, Torre G, Yancy CW, Davis S, McCloud M, Kirklin J. Are there specific risk factors for fatal allograft vasculopathy? An analysis of over 7,000 cardiac transplant patients. J Heart Lung Transplant 2001 20(2):152

28. Young JB, Hauptman PJ, Naftel DC, Ewald K, Aaronson GW, Dec DO, Taylor R. Higgins, L.Platt, J. Kirklin for the Cardiac Transplant Research Database (CTRD). Determinants of early graft failure following cardiac transplantation, a 10 year, multi-institutional, multi-variable analysis. J Heart Lung Transplant 2001 20(2):212.

29. Radovancevic B, McGriffin DC, Kobashigawa JA, Cintron GB, Mullen GM, Pitts DE, O'Donnel J, Thomas C, Bourge RC, Naftel DC for the Cardiac Transplant Research Database (CTRD). A multi-institutional study of cardiac retransplantation: incidence, risk factors for mortality, and outcome. The Journal of Heart and Lung Transplantation, 2001 20(2):181.

30. Packer M, Califf R, Konstam M, Krum H, McMurray J, Rouleau J-L, Swedberg K for the OVERTURE Study Group. Comparison of Omapatrilat and Enalapril in Patients with Chronic Heart Failure. The Omapatrilat Versus Enalapril Randomized Trial of Utility in Reducing Events (OVERTURE). Circulation 2002:106:920.

31. Bristow MR, Saxon LA, Boehmer J, Krueger S, McGrew F, Botteron G, Wagoner L, Kass D, Mann D, DeMarco T, Singh S, Carson P, DiCarlo L, Goldstein S., DeMets D, White BG, DeVries DW, Feldman AM for the COMPANION Investigators. Cardiac Resynchronization Therapy (CRT) Reduces Hospitalizations, and CRT + an Implantable Defibrillator (CRT-D) Reduces Mortality in Chronic Heart Failure: Preliminary Results of the COMPANION Trial. JACC 2003.

ARTICLES

1. Clemson B, Baily RG, Davis D, Zelis R: Effects of Desipramine on Norepinephrine Clearance in normal subjects and patients with CHF. Am J Physiol 259(Endocrinol. Metab. 22):E261-E265, 1990. Peer reviewed.

2. Gilchrist I, Clemson B: Angioplasty of occluded coronary arteries: Use of thin shaft balloon over-the-wire system without pre-dilatation. Catheterization and Cardiovascular Diagnosis 21:121-123, 1990. Peer reviewed.

3. Zelis R, Sinoway LI, Leuenberger U, Clemson BS, Davis D: Time-constant adaptations in heart failure. Eur Heart J 12:1991.

4. Leuenberger U, Kenney G, Davis D, Clemson BS, Zelis R: Comparison of norepinephrine and isoproterenol clearance in congestive heart failure. American Journal of Physiology 263:(Heart and Circulation Physiol 32):H56-H60, 1992. Peer reviewed.

5. Quinn RD, Myers JL, Pae, Jr., WE, Clemson BS, Davis D. Orthotopic heart transplantation with preoperative unsuspected left superior vena cava and absence of right superior vena cava. J Heart Lung Transplant 1992; 11:147-51. Peer reviewed.

6. Clemson BS, Miller WR, Luck JC, Ferriss JA: Acute myocarditis in fulminant systemic sclerosis. Chest 101(3):872-74, 1992. Peer reviewed.

7. Zelis R, Clemson B, Baily R, Davis D: Regulation of tissue noradrenaline in the rat myocardial infarction model of chronic congestive heart failure. Cardiovascular Research 26:933-938, 1992. Peer reviewed.

8. Young JB, Naftel DC, Bourge RC, Kirklin JK, Clemson BS, Porter CB, Rodehaffer RJ, Kenzora JL, and the Transplant Cardiologists' Research Database (TCRD) Group. Matching the heart donor and recipient: Clues for successful expansion of the donor pool: A multi-variable and multi-institutional study. J of Heart and Lung Transplantation 12(1)Pt 2:S67, 1993. Peer reviewed.

9. Aufiero TX, Pae WE, Clemson BS, Pawlush DG, Davis D. Heart transplantation for tumor. Annals of Thoracic Surgery 56(5):1174-6, Nov. 1993. Peer reviewed.

10. Clemson B, Zelis R, Gaul L, Campsey M, et al. Prejunctional angiotensin II receptors: Facilitation of Norepinephrine release in the human forearm. J Clin Investigation 93:684-691, Feb. 1994. Peer reviewed.

11. Baily RG, Davis D, Clemson B, Zelis R. Normalization of the Norepinephrine kinetic response to orthostatic stress post cardiac transplantation. American Journal of Cardiology 74:624-625, Sept. 15, 1994. Peer reviewed.

12. Zelis R, Nussberger J, Clemson B, Waeber B, Grouzmann E: Neuropeptide Y infusion decreases plasma renin activity in postmyocardial infarction rats. Journal of Cardiovascular Pharmacology 24(No. 6):896-899, 1994. Peer reviewed.

13. Young JB, Naftel DC, Bourge RC, Kirklin JK, Clemson BS, Porter CB, Rodeheffer RJ, Kenzora JL and the cardiac Transplant Research Database (CTRD) Group. Matching the heart donor and heart transplant recipient. Clues for successful expansion of the donor pool: a multivariable, multi institutional report. Journal of Heart & Lung Transplantation. 13(3):353-64; discussion 364-5, May-June 1994. Peer reviewed.

14. Haque WA, Boehmer J, Clemson BS, Leuenberger UA, Silber DH, Sinoway, LI. Hemodynamic effects of supplemental oxygen administration in congestive heart failure. Journal of the American College of Cardiology. 27(2)353-7, Feb. 1996. Peer reviewed.

15. Brozena SC, Johnson MR, Ventura H, Hobbs R, Miller L, Olivari MT, Clemson B, Bourge R, Quigg R, Mills RM Jr, Naftel D. Effectiveness and safety of diltiazem or lisinopril in treatment of hypertension after heart transplantation. Results of a prospective, randomized multicenter trial. Journal of the American College of Cardiology. 27(7):1707-12. June 1996. Peer reviewed.

16. Anderson J, Krause-Steinrauf H, Goldman S, Clemson B, Domanski M, Hager D, Mann D, Massie B, McNamara D, Murray D, Oren R, Rogers W. Failure of Benefit and Early Hazard of Bucindolol in Class IV Heart Failure. Circulation 2000, Supplement II; Vol 102, No18:11-779. November 2000. Peer reviewed.

17. Tisol WB, Mueller DK, Hoy FB, Gomez RC, Clemson BC, Hussain SM. Ventricular Assist Device Use with Mechanical Heart Valves: An Outcome Series and Literature Review. Annals of Thoracic Surgery, 2001. 72:2051-5. Peer reviewed.

18. Goldman S, Massie B, Krause-Steinrauf, H, McNamara D, Clemson B, Murray D, Domanski M, Oren R, Hager D, Rogers W, Mann D. Failure of Benefit and Early Hazard of Bucindolol for Class IV Heart Failure. Journal of Cardiac Failure, 2003 Aug; 9(4):266-77. Peer reviewed.

19. McGiffin DC, Brown R, Kirklin JK, Naftel DC, Bourge RC, Pritzker MR, Kasper EK, Stevens T, Clemson BS, Smith AL, Hill JA, Rodeheffer RJ. The Case for Selective Re-Issurance of Medical Certificates to Allow Pilots Who Have Received a Heart Transplant to Resume Flying. J Heart and Lung Transplant, 2005 March; 24(3): 259-69.

20. Aly El Banayosy, Michael M. Koerner, Christoph Brehm, Edward R. Stevenson, Walter E. Pae, Barry Clemson, Javier Banchs, Mario D. Gonzalez, Larry Shears, Ali Ghodsizad. Intracardiac Echocardiography for Diagnosis and Management of Left Ventricular Assist Device Inlet Obstruction. ASAIO Journal 2014; 60:e1-e2.

CONTRIBUTIONS TO ARTICLES

1. Bourge RC, Naftel DC, Costanzo-Nordin MR, Kirklin JK, Young JB, Kubo SH, Olivari MT, Kasper EK, and the TCRD Group. Pretransplantation risk factors for death after heart transplantation: a multi institutional study. J Heart Lung Transplant 1993; 12:549-62.

2. Kobashigawa JA, Kirklin JK, Naftel DC, Bourge RC, Ventura HO, Mohanty PK, Cintron GB, Bhat G and The Cardiac Transplant Research Database Group. Pretransplantation Risk Factors for Acute Rejection after Heart Transplantation: A Multiinstitutional Study. J Heart Lung Transplant. 1993; 12:355-366.

3. The GUSTO Investigators. An international randomized trial comparing four thrombolytic strategies for acute myocardial infarction. N Engl J Med 1993; 329:672-82.

4. Miller LW, Naftel DC, Bourge RC, Kirklin JK, Brozena SC, Jarcho J, Hobbs RE, Mills RM, and The Cardiac Transplant Research Database Group. Infection Following Cardiac Transplantation: A Multi-institutional Study. J Heart Lung Transplant. 1994; 13:381-393.

5. Kirklin JK, Naftel DC, Levine TB, Bourge RC, Pelletier GB, O'Donnell J, Miller LW, Pritzker MR, and The Cardiac Transplant Research Database Group. Cytomegalovirus: Can We Alter Its Incidence and Impact? A Multi-Variable, Multi- Institutional Study. J Heart Lung Transplant. 1994; 13:394-404.

6. Jarcho J, Naftel DC, Shroyer TW, Kirklin JK, Bourge RC, Barr ML, Pitts DG, Starling RC and The Cardiac Transplant Research Database Group. Influence of HLA Mismatch on Rejection after Cardiac Transplantation: A Multi-Institutional Study. J Heart Lung Transplant. 1994; 13:583-596.

7. Kubo SH, Naftel DC, Mills RM, O'Donnell J, Rodeheffer RJ, Vijay RR, Kenzora JL, Bourge RC, Kirklin JK and The Cardiac Transplant Research Database Group. Who is at Risk for Late Recurrent Rejection After Cardiac Transplantation?: A Multi-Institutional, Multi-Variable Analysis. J Heart Lung Transplant. 1995; 14:3, 409-418.

8. Smart FH, Naftel DC, Costanzo-Nordin M, Levine TB, Pelletier GB, Yancy CW, Hobbs RE, Kirklin JK, Bourge RC, and The Cardiac Transplant Research Database Group. Multi-Institutional Risk Factors for Infection after Heart Transplantation. J Heart Lung Transplant. 1996; 15:4, 329-341.

9. Rodeheffer R, Naftel D, Warner-Stevenson L, Porter C, Young J, Miller L, Kenzora J, Haas G, Kirklin J, Bourge R and The Cardiac Transplant Research Database Group. Changing Patterns in Recipient and Donor Management in Cardiac Transplantation. Circulation. 1996; 94; 2883-2889.

10. Johnson M, Naftel D, Hobbs R, Kobashigawa J, Pitts D, Levine T, Tolman D, Bhat G, Kirklin J, Bourge R and The Cardiac Transplant Research Database Group. The Incremental Risk of Female Gender in Cardiac Transplantation: A Multi-Institutional Study of Pregnancy and Peripartum Cardiomyopathy. J Heart Lung Transplant. 1997; 16:801-12.

11. Mills R, Naftel D, Kirklin J, Van Bakel A, Jaski B, Massin E, Eisen H, Lee F, Fishbein D, Bourge R and The Cardiac Transplant Research Database Group. Cardiac Transplant Rejection with Hemodynamic Compromise: A Multi-Institutional Study of Risk factors and Endomyocardial Cellular Infiltrate. J Heart Lung Transplant. 1997; 16:813-21.

12. Costanzo MR, Naftel DC, Pritzker MR, Heilman JK, III, Boehmer JP, Brozena SC, Dec GW, Ventura HO, Kirklin JK, Bourge RC, Miller LM, and The Cardiac Transplant Research Database Group. Heart Transplant Coronary Artery Disease Detected By Angiography: A Multi-Institutional Study. J Heart Lung Transplant. 1998; 17:744-53.

13. McGriffin DC, Naftel DC, Spann JL, Kirklin JK, Young JB, Bourge RC, Mil, Jr. RM, and The Cardiac Transplant Database Group. Risk of Death or Incapacitation after Heart Transplantation, with Particular Reference to Pilots. J Heart Lung Transplant. 1998 17:497-504.

14. Grady K, White-Williams C, Naftel D, Costanzo M, Pitts D, Rayburn R, VanBakel A, Jaski B, Bourge R, Kirklin J and the Cardiac Transplant Research Database (CTRD). Morbidity and Mortality: A Multi-Institutional Study of Preoperative Weight-Height Indices. J Heart Lung Transplant 1999; 18:750-763.

15. O'Neill W, Serruys P, Knudtson M, Van Es G, Timmis G, Zwaan C, Kleiman J, Gong J, Roecker E, Dreiling R, Alexander J, Anders R. Long-term treatment with a platelet glycoprotein-receptor antagonist after percutaneous coronary revascularization. EXCITE Trial Investigators. Evaluation of Oral Xemilofiban in Controlling Thrombotic Events. N Engl J Med. 342(18):1316-24, 2000 May 4.

16. Jaski BE, Kim JC, Naftel DC, Jarch J, Costanzo MR, Eisen HJ, Jirkin JK, Bourge RC, and The Cardiac Transplant Research Database (CTRD). Cardiac Transplant Outcome of Patients Supported on Left Ventricular Assist Device vs Intravenous Inotropic Therapy. J Heart Lung Transplant 2001; 20:449-456.

17. Stone GW, Grines CL, Cox DA, Garcia E, Tcheng JE, Griffin JJ, Guagliumi G, Stuckey T, Turco M, Carroll JD, Rutherford BD, and Lansky AJ, for the Controlled Abciximab and Device Investigation to Lower Late Angioplasty Complications (CADILLAC) Investigators. Comparison of Angioplasty with Stenting, with or without Abciximab, in Acute Myocardial Infarction. N Engl J Med 2002; 346:957-966.

18. Steinhubl S, Berger P, Mann JT, Fry ETA, DeLago A, Wilmer C, Topol E for the CREDO Investigators. Early and Sustained Dual Oral Antiplatelet Therapy Following Percutaneous Coronary Intervention: A randomized controlled Trial. JAMA, November 20, 2002, 288(19):2411.

19. Pfeffer MA, McMurray JJ, Velazquez EJ, Roulean J, Keber L, Maggioni AP, Solomon SD, Swedberg K, Van de Werf F, White H, Leimberger JD, Henis M, Edwards S, Zelenkofske S, Sellers MA, and Califf RM for the Valsartan in Acute Myocardial Infarction Trial Investigators. Valsartan, Captopril, or Both in Myocardial Infarction Complicated by Heart Failure, Left Ventricular Dysfunction, or Both. N Engl J Med 2003; 349:1893-906.

20. Pitt B, Remme W, Zannad F, Neaton J, Martinez F, Roniker B, Bittman R, Hurley S, Kleiman J, Gatlin M for the Eplernone Post-Acute Myocardial Infarction Heart Failure Efficacy and Survival Study Investigators. Eplenenone, a Selective Aldosterone Blocker, in Patients with Left Ventricular Dysfunction after Myocardial Infarction. N Engl J Med 2003; 348:1309-21.

21. Massie B, Krol W, Ammon S, Armstrong P, Cleland J, Collins J., Ezekowitz M, Jafri S, O'Connor C, Packer M, Schulman K, Teo K, Warren S, The Warfarin and Antiplatelet Therapy in Heart Failure Trial (WATCH): Rationale, Design, and Baseline Patient Characteristics. Journal of Cardiac Failure 2004; 10(2):101-112, April 2004.

22. Gheorghiade M, Gattis WA, O'Connor CM, Adams, KF, Elkayam U, Barbagelata A, Ghali JK, Benza RL, McGrew FA, Klapholz M, Oyuang J, Orlandi C for the Acute and Chronic Therapeutic Impact of a Vasopressin Antagonist in Congestive Heart Failure (ACTIV in CHF) Investigators: Effects of Tolvaptan, a Vasopressin Antagonist, in Patients Hospitalized with Worsening Heart Failure. JAMA 2004; 291:1963-1971.

23. Bristow M.R., Saxon L.A., Boehmer J, Krueger S, Kass D.A., De Marco T., Carson P, DiCarlo L, DeMets D, White B.G., DeVries D.W., Feldman A.M., the Comparison of Medical Therapy, Pacing, and Defibrillation in Heart Failure (COMPANION) Investigators. Cardiac-Resynchronization Therapy with or without an Implantable Defibrillator in Advanced Chronic Heart Failure. N Engl J Med 2004; 350:2140-2150, May 20, 2004.

24. The Effect of Age, Diagnosis, and Previous Surgery in Children and Adults Undergoing Heart Transplantation for Congenital Heart Disease. JACC; accepted for publication, April, 2009.

RESEARCH

Principal-Investigator

1. A Randomized Dose Study of the Chronic Administration of Vesnarinone in Heart Failure (22-95-201), started 1994, concluded 1995.

2. A Randomized, Double Blind, Placebo Controlled, Multiple Dose Study of the Chronic Administration of Vesnarinone in Heart Failure (VEST), started in 1995, concluded 1996.

3. An Open Label Multiple Dose Study of the Chronic Administration of Vesnarinone (OPC-8212) in Heart Failure (22-95-209), started in 1995, concluded 1999.
4. Beta-blocker Evaluation of Survival Trial (BEST), started in 1996 concluded 11/1999.

5. Efficacy and Safety of Xemilofiban Hydrochloride Administration to Patients Undergoing Coronary Angioplasty or Stent Placement (EXCITE), started 1997, concluded 1999.

6. A Randomized Comparison of the ACS RX MULTI-LINK Coronary Stent System with or without Abciximab versus PTCA with or without Abciximab in the Treatment of Patients with Acute Myocardial Infarction (CADILLAC), started 1998, concluded 2000.

7. Warfarin and Antiplatelet Therapy Study in Chronic Heart Failure (WATCH), started 1999, concluded.
8. Prevention of Restenosis with Tranilast and Its Outcomes: A Placebo-Controlled Trial (PRESTO), started 1999, concluded 2001.

9. Immunex Protocol 16.0021-multicenter Double-Blind, Randomized, Placebo Controlled, Phase II/III Study of Efficacy and Safety of Recombinant Human Tumor Necrosis Factor Receptor (p75) Fc Fusion Protein (TNFR:Fc) (etanercept) in Patients with Chronic Heart Failure (Class II-IV) (RENAISSANCE), concluded December, 2001.

10. Comparison of Medical Therapy, Pacing, and Defibrillation in Chronic Heart Failure (COMPANION). Started 2000, concluded.

11. A Double-Blind Randomized, Placebo-Controlled Trial Evaluating the Safety and Efficacy of Eplerenone in Patients with Heart Failure Following Acute Myocardial Infraction. Protocol #:IE3-99-02-035 (EPHESUS).

12. Oral Enoximone in Intravenous Inotrope-dependant Subjects (EMOTE)–A Phase III, Randomizes Double-Blind, Placebo-Controlled Parallel Study of Oral Enoximone in Intravenous Inotrope-Dependant Subjects (EMOTE, Protocol MY-022).

13. Omapatrilat Versus Enalapril Randomized Trial of Utility in Reducing Events (OVERTURE, BMSCV 137-068).

14. Oral Enoximone in Intravenous Inotrope-Dependant Subjects (EMOTE)- A Phase III, Randomized Double-Blind, Placebo-Controlled Paralleled Study of Oral Enoximone in Intravenous Intrope-Dependant Subjects.

15. Management of Patients with CHF after Hospitalization; Follow-Up Serial Infusions of Natrecor-FUSION 1, A Pilot Study. Concluded.

16. Irbesartan in Heart Failure with Preserved Systolic Function (I-Preserve), Protocol #: CV131-148. Started 2002. Sponsor: Bristol-Myers Squibb.

17. A Multi-Center, Randomized, Double-Blind, Parallel Group, Placebo-Controlled Study to Assess the Effects of Vasogen's Immune Modulation Therapy (IMT) on Mortality and Morbidity in Patients with Chronic Heart Failure – [**ACCLAIM**] Sponsor: Vasogen Inc. Started 2004.

18. Multi-center, Randomized, Double-blind, Placebo-controlled Study to Evaluate the Long Term Efficacy and Safety of Oral Tolvaptan Tablets in Subjects Hospitalized with Worsening Congestive Heart Failure. EVEREST. Sponsor: Otsuka Maryland Research Institute, Inc.

19. A Double-Blind, Randomized, Multicenter, Dose-Ranging Trial of CS-747 Compared with Clopidogrel in Subjects Undergoing Percutaneous Coronary Intervention. Joint Utilization of Medications to Block Platelets Optimally (**JUMBO**-TIMI 26) Protocol H7T-MC-TAAH. Sponsor: Eli Lilly

20. Registry of Cardiac Resynchronization Therapy-U.S. (**RESTORE-U.S.**) Sponsor: Medtronic

21. A Multicenter, Randomized, Double Blind, Double Dummy, Parallel Group Study to Compare Effects of Coreg CR and Coreg IR on Ejection Fraction in Subjects with Stable Chronic Heart Failure #104852 **(Compare).** Sponsor: Barry H. Greenberg, MD @ UCSD Medical Center San Diego, CA

22. A Phase 2, Placebo-Controlled, Randomized, Double-Blind, Parallel Arm, Dose Ranging Study to Evaluate Safety and Efficacy of Apixaban In Patients with a Recent Acute Coronary Syndrome **(APPRAISE).** Sponsor: Bristol-Myers Squibb

23. "**T**ilarginine Acetate Injection in a **R**andomized **I**nternational Study in **U**nstable **AMI** **P**atients / Cardiogenic **S**hock" **(TRIUMPH)** Sponsor: Arginox Pharmaceuticals, Inc

24. A Comparison of CS-747 and Clopidogrel in Acute Coronary Syndrome Subjects who are to Undergo Percutaneous Coronary Intervention/TIMI-38 (**TRITON**) Sponsor: Eli Lilly

25. Metabolic Efficiency with Ranolazine for Less Ischemia in Non-ST elevation Acute Coronary Syndromes (**MERLIN**) – TIMI 36 Sponsor: CV Therapeutics, Inc.

26. **A**ggressive **R**eduction of **I**nflammation **S**tops **E**vents (**ARISE**) Sponsor: AtheroGenics

27. The **ACUITY** Trial: A randomized comparison of Angiomax® (bivalirudin) versus Lovenox®/Clexane® (enoxaparin) in patients undergoing early invasive management for acute coronary syndromes without ST-segment elevation Sponsor: The Medicines Co.

28. Irbesartan in Heart Failure with Preserved Systolic Function (**I-Preserve**) Sponsor: Bristol-Myers Squibb (BMS) & Sanofi-Synthelabo (SASY)

29. Follow-up Of Clinical Outcomes: The Long-Term AGI-1067 plus Usual Care Study **(FOCUS)** Sponsor: AtheroGenics

30. Clopidogrel optimal loading dose Usage to Reduce Recurrent EveNTs/ Optimal Antiplatelet Strategy for InterventionS **(CURRENT)**/OASIS 7 Sponsor: Sanofi Aventis

31. A randomized, double-blind, parallel-group, placebo-controlled, multinational clinical trial to evaluate the efficacy of Aliskiren and Valsartan versus placebo in lowering levels on NT-proBNP in stabilized patients post acute coronary syndrome. **(AVANT GARDE)** Sponsor: Novartis

32. Treatment Of Preserved Cardiac function heart failure with an Aldosterone anTagonist **(TOPCAT)** Sponsor: NHLBI

33. Double-Blind, Placebo-Controlled, Multicenter Acute Study of Clinical Effectiveness of Nesiritide in Subjects with Decompensated Heart Failure **(ASCEND)** Sponsor: Scios Inc.

34. Treatment of Hyponatremia Based on Lixivaptan in NYHA Class III/IV Cardiac Patient Evaluation **(BALANCE)** Sponsor: Cardiokine Biopharma, LLC

35. Phase 1/2a, Multicenter Double Blind, Vehicle Controlled, Randomized, Escalating, Single and Repeat Dose Study to Evaluate the Safety, Tolerability, Immunogenicity, Pharmacokinetics and Pharmacodynamics of Cardeva (BNP Analog-Recombinant Human Albumin Fusion Protein) Administered Subcutaneously to Subjects with New York Heart Association Class II or III Heart Failure Attributable to Ischemic Heart Disease **(CARD-001)** Sponsor: CoGenesys, Inc.

36. CDx000004: Identification of Gene Expression Patterns in Circulating Cells that Predict the Presence of Coronary Artery Disease **(PREDICT)**

37. A Comparison of Prasugrel and Clopidogrel in Acute Coronary Syndrome (ACS) Subjects with Unstable Angina/Non-ST-Elevation Myocardial Infarction (UA/NSTEMI) Who are Medically Managed **(TRILOGY ACS)** Sponsor: Eli Lilly & Co.

38. CardioMEMS Heart Sensor Allows Monitoring of Pressure to Improve Outcomes in NYHA Class III heart failure patients **(CHAMPION)** Sponsor: CardioMems PI: Clemson

39. Apixaban for Prevention of Acute Ischemic Events – 2 A Phase 3 Randomized Evaluation of the Safety and Efficacy of Apixaban in Patients with a Recent Acute Coronary Syndrome (**APPRAISE II**) Sponsor: Bristol-Myers Squibb

40. Retrospective Study to Assess the Quality of Anticoagulation with Warfarin in Patients with Nonvalvular Atrial Fibrillation (**DUCCS BI_TTR**) Sponsor: Boehringer Ingelheim

41. The TIMI 38 Coronary Stent Registry: Long-Term Follow Up of Subjects with PCI and Stenting for ACS (**TIMI 38 CSR**) Sponsor: Eli Lilly & Co.

42. The TRANSLATE-ACS Study: TReatment with ADP receptor iNhibitorS: Longitudinal Assessment of Treatment Patterns and Events after Acute Coronary Syndrome (**TRANSLATE ACS**) Sponsor: Eli Lilly & Co.

43. **IN**crease **O**f **VA**gal **T**on**E** in chronic **H**eart **F**ailure - A Randomized Study to establish the Safety and Efficacy of CardioFit™ for the Treatment of Subjects with Heart Failure and Left Ventricular Dysfunction (**INOVATE-HF**) Sponsor: BioControl Medical, Inc.

44. Bridging Anticoagulation in Patients who Require Temporary Interruption of Warfarin Therapy for an Elective Invasive Procedure or Surgery (**BRIDGE**) Sponsor: National Heart Lung and Blood Institute.

45. CAT-HF Study: Cardiovascular Improvements with Minute Ventilation-targeted ASV Therapy in Heart Failure. Sponsor: ResMed.

46. Phosphodiesterase Type 5 Inhibition with Tadalafil Changes Outcomes in Heart Failure (PITCH-HF). Sponsor: National Heart lung and Blood Institute.

Sub-Investigator

1. A Multi-center, Double-Blind, Randomized, Parallel, Placebo-Controlled Study to Investigate the Effects of Losartan on the Exercise Capacity and Clinical Status of Patients with Symptomatic Heart Failure (LEXUS), started 1994, concluded 1995.

2. Global use of Strategies to Open Occluded Arteries in Acute Coronary Syndromes (GUSTO II), started 1994, concluded 1995.

3. A Randomized, Double-Blind Efficacy and Safety Evaluation of Two Dosing Regiments of Integrelin versus Placebo for Reducing the Complications of Coronary Angioplasty (IMPACT II) started 1994, concluded 1995.

4. Open-Label Extension Phase of a Multiple, Double-Blind, Randomizes, Parallel, Placebo-Controlled Study to Investigate the Effects of Losartan on the Exercise Capacity and Clinical Status of Patients with Symptomatic Heart Failure (LEXUS), started 1995, concluded 1996.

5. A Study of Patients Intolerant of Converting Enzyme Inhibitors (SPICE), started 1996, concluded 1997.

6. Prospective Randomized Amlodipine Survival Evaluation-2. A Randomized, Double-Blind, Dose-Titration, Parallel Group, Placebo-Controlled Study to Evaluate the Effect of Amlodipine on Survival in Patients with Congestive Heart failure (PRAISE II), started 1996, concluded 2/2000.

7. A Triple-Blind, Parallel Study to Investigate the Effect of Losartan versus Atenolol on the Reduction of Morbidity and Mortality in Hypertensive Patients with Left Ventricular Hypertrophy (LIFE), started 1996, concluded 3/2002.

8. Prevention of Events with Angiotensin Converting Enzyme Inhibition (PEACE). Principal Investigator: Paul J. Schmidt, M.D. Started 1996, concluded 12/03.

9. A Randomized, Double-Blind Evaluation of the Efficacy and Safety of Integrelin Versus Placebo for Reducing Mortality and Myocardial (re)infraction in Patients with Unstable Angina or Non-Q Wave Myocardial Infraction (PURSUIT), started 1996, concluded 1997.

10. A Phase II, Randomized, Open-label, Multicenter, International Angiographic Trial of the Efficacy of TNK-tPA Compared with Accelerated Activase Alteplase rt-PA in Acute Myocardial Infraction (TIMI 10B) started 1996, concluded 1997.

11. A Randomized Trial of Reteplase (r-PA) Versus Accelerated Altephase (t-PA) for the Treatment of Acute Myocardial Infraction (GUSTO III), started 1996, concluded 1997.

12. A Double-Blind, Placebo-Controlled, Multicenter Study of CY-1503 in Prevention of Myocardial Reperfusion Injury in Patients with Acute Myocardial Infraction Treated with Angioplasty (CALYPSO), started 1996, concluded 1/1997

13. A Double-Blind, Randomized, Multicenter Study to Evaluate the Effectiveness of Intravenous Milrinone versus Placebo in Reducing the Number of Days of Hospitalization in the 60 Days Following Entry Into the Study for Treatment of Left-Sided Heart Failure (opTIME) started 1997, concluded 11/1999.

14. A Multi-Center, Double-Blind, Randomized, Parallel, Captopril-Controlled Study to Evaluate the Effects of Losartan on Mortality in Patients with Symptomatic Heart Failure (ELITE II), started 1997, concluded 9/1999.

15. A 12-Week Double-Blind, Placebo-Controlled Study to Assess the Safety, Tolerability, Pharmacokinetics and Effect on Platelet Aggregation of a Dose Range of SB 214857 When Added to Aspirin in Patients with Myocardial Infraction, Unstable Angina, Transient Ischemic Attack or Stroke (APLAUD), started 1997, concluded 1998.

16. A Phase 2 Safety and Pharmacology Study of HU23F2G in Patients with Acute Myocardial Infraction Treated With Primary Angioplasty (FESTIVAL), started 1997, concluded 11/1997.

17. A Phase II, Multi-Center, Randomized, Double-Blind, Placebo-Controlled Study Evaluating the Effects of 30, 40, and 50mg Orbofiban Administered Twice Daily and 50 mg Orofiban Administered Global Use of Strategies to Open Occluded Arteries in Acute Coronary Syndromes (GUSTO II), started 1994, concluded 1995.

18. A Phase II, multicenter, international, randomized, double-blind aspirin-controlled study to valuate the efficacy and safety of sibrafiban (Ro 48-3657), and oral platelet glycoprotein IAB/III antagonist, as therapy for the prevention of secondary vascular events in patients after Acute Coronary Syndrome (SYMPHONY), started 1997, concluded 1999.

19. A Randomized, Double-Blind, placebo-Controlled Trial of the Effect of Weekly Azithromycin on the Incidence of Coronary Artery Disease in Subjects with Evidence or Exposure to C.Pneumonide (WIZARD), started 1997, concluded 1/2002.

20. Antiplatelet Therapy vs Lovenox plus Antiplatelet Therapy for Patients with an Increased Risk of Stent Thrombosis (ATLAST), started 1997, concluded 1999.

21. A Phase II Randomized, Open-Label Angiographic Trial Evaluating the Benefit of ReoPro Bolus Plus 12-Hour Infusion Alone or in Conjunction with Thrombolytic Therapy for Acute Myocardial Infraction (TIMI 14A), started 1997, concluded 1998.

22. Double-Blind, Randomized, Multi-Center Trial of Single-Bolus Lanoteplase versus Accelerated Alteplase for the Treatment of Subjects with Acute Myocardial Infraction (inTIME II), started 1997, concluded 1999.

23. A Randomized, Double-Blind Placebo-Controlled Dose-Ranging Study to Determine the Safety and Efficacy of AM579 in Patients with Acute Myocardial Infraction treated with Primary Angioplasty (ADMIRE), started 1998, concluded 1999/

24. A Randomized, double-blind, placebo-controlled study of Lamifban (Ro 44-9883) in patients with unstable angina/non-Q wave myocardial infraction (PARAGON B), started 1998, concluded 2000.

25. The Effect of LDL-Cholesterol Lowering Beyond Currently Recommended Minimum Targets on Coronary Heart Disease (CHD) Recurrence in Patients with Pre-Existing CHD (TNT), started 1998, ongoing. Donald McElroy, Principal Investigator. Sponsor: Parke-Davis & Pfizer

26. A Phase III Randomized, Double-Blind, Parallel Group, International Trial of Single Bolus TNK-Tissue Plasminogen Activator (t-PA) Versus Accelerated Infusion of rt-PA (alteplase, Activase) in Acute Myocardial Infraction (ASSNET II), started 1998, concluded 1999.

27. Multi-national, multi-center, double-blind, randomized, active controlled, parallel group study comparing the efficacy and safety of long-term treatment with valsartan, captopril and their combination in high-risk patients after myocardial infraction (VALIANT), started 1999, ongoing.

28. A Phase III, multi-center, international, randomized, double-blind, aspirin-controlled trial to evaluate the efficacy and safety of two regimens with Xubix (sibrafiban; Ro 48-3657), an oral platelet glycoprotein IAB/III receptor antagonist, as therapy for the long term prevention of secondary vascular events in patients after an Acute Coronary Syndrome, (The 2nd SYMPHONY Trial), started 1999, concluded 2000.

29. A 12-Week, Double-Blind, Placebo-Controlled, Multicenter Study of Oral YM087 (CI-1025) to Assess Functional Capacity in Patients With Class III Chronic Heart Failure (protocol 1025-014), started 1999, (ADVANCE), concluded 9/2000.

30. Comparison of Amlodipine versus Enalapril to Limit Occurrences of Thrombosis (CAMELOT), Once Daily in Patients with Stabilized Ischemic Syndromes (SOAR), started 1997, concluded 6/1997.

31. A Phase III, Randomized, Open-Label, Trial Evaluating the Efficacy and Safety of ReoPro (abciximab) in Combination with Reduced Dose Retavase/Rapilysin (Recombinant Plasminogen Activator, Reteplase, r-PA) for the Treatment of Acute Myocardial Infraction (GUSTO V), started 1999, concluded 2001.

32. Blockade of the GP IIIB/III Receptor to Avoid Vascular Occlusion (BRAVO), started 1999, concluded 12/2000.

33. Candesartan Cilexetil (Candesartan) In Heart Failure Assessment of Reduction on Mortality and Morbidity (CHARM), started 1999, ongoing.

34. Clopidogrel for Reduction of Events During Observation (CREDO), started 1999, concluded July, 2002.

35. Multicenter, Randomized, Double-Blind, Placebo-Controlled, Study of OPC-41061 to Evaluate the Effects Of OPC-41061 on the Acute and Chronic Outcome of Patients Hospitalized with Worsening Congestive Heart Failure. Acute and Chronic Therapeutic Impact of a Vasopressin antagonist in Congestive Heart Failure. (ACTIV-CHF), concluded 12/2001.

36. A Multi-center, Randomized, Controlled, Double-Blind Trial to Investigate the Clinical Efficacy and Tolerability of Early Treatment with Simvastatin 40 mg daily for 30 days, followed by Simvastatin 80mg daily. Thereafter in Tirofiban-Treated Acute Coronary Syndrome Patients who Have been Randomized to Receive Enoxaparin or Unfractionated Heparin in Conjunction with Aspirin. (A To Z), PROTOCOL No: 180-00/ZOC467. Principal Investigator: A. Alan Chu, M.D. Started 2000, concluded 2003.

37. A Multi-center, Randomized, Double-Blind , Placebo-controlled Study of the Hemodynamic and Clinical Effects of Natrecor (nesiritide) Compared with Nitroglycerin Therapy for Symptomatic Decompensated CHF, (NATRECOR), concluded 2/2001.

38. Pravastatin or Atorvastatin Evaluation and Infection Therapy (PROVE IT). Started 2000. Sponsor Bristol-Myers Squibb. Donald McElroy, Principal Investigator

39. High Scaffolding Stent SVG Registry (COLOSSUS Study). Started 2000, concluded 4/2002.

40. Occluded Artery Trial (OAT Study), sponsored by the National Heart, Lung, Blood Institute. Principal Investigator: A. Alan Chu, M.D. Started 2000, ongoing.

41. A Randomized, Multicenter, Double-Blind, Abciximab-Controlled Study to Evaluate the Efficacy of Tirofiban in Patients Undergoing Percutaneous Coronary Intervention with Intracoronary Stent Placement. (TARGET, Protocol # 030-00), started 2000, concluded 1/2002.

42. A Double-blind, parallel-group, multi-center, randomized, placebo-controlled research study to assess the efficacy and safety of Ro 61-0612 (tezosentan) in patients with acute heart failure associated with acute coronary syndrome, RITZ-4 (protocol# AC-051-304), concluded 7/2001.

43. A prospective, Randomized, Open-Label, Multi-center Study in Patients Presenting with Acute Coronary Syndromes (ACS) SYNERGY. ENO. GMA. 301. Principal Investigator: A. Alan Chu, M.D.

44. A Multi-center, Randomized, Placebo-controlled, Double Blind, Trial to evaluate the Effects of Vasopressin V2 Receptor Antagonist (SR121463B) on Clinical Improvement in Patients with Severe Chronic Heart Failure (AQUAretic Vasopressin V2 Receptor Inhibitor Trial) AQUAVIT.

45. A Phase IIIb, Multi-center, Randomized, Double-Blind, Placebo-Controlled Study To determine the Safety, Efficacy, and Tolerability of Fenoldopam Mesylate in Subjects Undergoing Invasive Cardiology Procedures. Study Number: 2000-025. Concluded.

46. Initiation Management Predischarge: Assessment of Coreg Therapy for Heart Failure (IMPACT-HF). Concluded November, 2002.

47. A Double-Blind, Randomized Comparator Study Comparing the Renal Effects of Visipaque 320 (indixanol) vs. Optiray 320 (ioversol) in Chronic Stable Renal Failure Subjects Undergoing Coronary Angiography/Interventions. November, 2002.

48. American-Australian-African trial with DronedarONe In atrial fibrillation or flutter patients for the maintenance of Sinus rhythm. (ADONIS). Principal Investigator: A. Alan Chu, M.D. Started 2002.

49. A Randomized, Open-Label Parallel Group, Dose-Response Pilot Study of Intravenous DTI-0009 for ventricular rate control in adult patients with atrial fibrillation, started 2001, concluded, 2002.

50. Feasibility IDE: Lowering Adverse Outcomes With Temperature Regulations (Low Temp). Started 2002. Protocol #: ALSIUS 02-040. Sponsor: Alsius Corp.

51. The Surgical Treatment for Ischemic Heart – Failure (STICH), started 2002. Study # 1ROIHL69015-01. Principal Investigator: A. Alan Chu, M.D. Sponsor NHLBI.

52. The SLK- View™ Side-Access Coronary Stent - Non randomized Pivotal Study. (**BOSS SLK - Stent**). Principal Investigator: A. Alan Chu, M.D. Sponsor: Advanced Stent Technologies

53. Atrial Fibrillation Clopidogrel Trial with Irbesartan for Prevention of Vascular Events (**ACTIVE**), Principal Investigator: Robert Bauernfeind, M.D. Sponsor: Sanofi-Synthelabo. Started 2003.

54. A multinational, randomized, double-blind, placebo-controlled, forced-titration, 2x2 factorial design study of the efficacy and safety of long term administration of nateglinide and valsartan in the prevention of diabetes and cardiovascular outcomes in subjects with impaired glucose tolerance. **NAVIGATOR** Principal Investigator: A. Alan Chu, M.D. Sponsor: Novartis. Started 2003.

55. Randomized, Multicenter EValuation of Intravenous leVosimendan Efficacy versus placebo in the short term treatment of decompensated chronic heart failure. (**REVIVE**) Principal Investigator: A. Alan Chu, M.D. Sponsor: Orion Pharma. Started 2003.

56. An International, Randomized, Double- Blind Study Evaluating the Efficacy and Safety of Fondaparinux versus Enoxaparin in the Acute Treatment of Unstable Angina / Non ST-Segment Elevation MI Acute Coronary Syndromes (**OASIS 5**) Protocol #: **EFC3197** Principal Investigator: A. Alan Chu, M.D. Sponsor: Sanofi Synthelabo Recherche. Started 2003.

57. **A**ggressive **R**eduction of **I**nflammation **S**tops **E**vents (**ARISE**) Principal Investigator: A. Alan Chu, Sponsor: AtheroGenics. Started 2003.

58. Prospective Evaluation of the Impact of Stent Deployment on Clinical Outcomes of Patients Treated with the Cypher™ Stent. (**Stellar Registry**) Sponsor: Cordis Corporation, a Johnson & Johnson Company Principal Investigator: A. Alan Chu, M.D. Started 2004.

59. The **ACUITY** Trial: A randomized comparison of Angiomax® (bivalirudin) versus Lovenox®/Clexane® (enoxaparin) in patients undergoing early invasive management for acute coronary syndromes without ST-segment elevation Principal Investigator: A. Alan Chu, M.D. Sponsor: The Medicines Co. Started 2004.

60. A multicenter, non-inferiority randomized, controlled trial to evaluate the safety and efficacy of the Medtronic AVE interceptor coronary filter system in subjects with *de novo* and restenotic lesions of saphenous vein grafts. (**AMETHYST**) Sponsor: Medtronic AVE, Inc. Principal Investigator: Darrel C. Gumm, M.D. Started 2004.

61. **LUNAR** A 12-week, Randomized, Open-Label, 3-Arm, Parallel Group, Multicenter, Phase IIIb Study Comparing the Efficacy and Safety of Rosuvastatin 20 mg and 40 mg with that of Atorvastatin 80 mg in Subjects with Acute Coronary Syndromes Sponsor: AstraZeneca Principal Investigator: A. Alan Chu, M.D., Donald B. McElroy. M.D.

62. Placebo controlled double blind dose ranging study of the efficacy and safety of ssr149744c 50, 100, 200, or 300 mg od, with amiodarone as calibrator for the maintenance of sinus rhythm in patients with recent atrial fibrillation/flutter. **(MAIA)** Sponsor: Sanofi Synthelabo Principal Investigator: Robert A. Bauernfeind, M.D.

63. A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Safety of SCH 530348 in Subjects Undergoing Non-Urgent Percutaneous Coronary Intervention (Thrombin Receptor AntagoNiSt for Clinical EveNt reDuction ovEr StaNdard Concomitant thErapies in **PCI** **(TRANSCENDENCE-PCI)** Sponsor: Schering Plough Research Institute Principal Investigator: John Rashid, M.D.

64. IMProved Reduction of Outcomes: Vytorin Efficacy International Trial **(IMPROVE IT)** Sponsor: Schering-Plough Research Institute Principal Investigator: Donald McElroy, M.D.

65. Intracoronary Kai-9803 For Injection As An Adjunct To Primary Percutaneous Coronary Intervention For Acute St-Elevation Myocardial Infarction. **(DELTA MI)** Sponsor: KAI Pharmaceuticals Principal Investigator: John Rashid, M.D.

66. A dual arm randomized trial in patients with ST segment elevation AMI to compare the results of using anticoagulation with either unfractionated heparin plus routine IIb/IIIa inhibition with bivalirudin and bail-out IIb/IIIa inhibition, and primary angioplasty with stent implantation with either a slow rate-release paclitaxel-eluting stent (TAXUS™) or an otherwise identical uncoated bare metal stent (Express™). **(HORIZONS)** Sponsor: Cardiovascular Research Foundation Principal Investigator: John Rashid, M.D.

67. A Multicenter, Randomized, Double-Blind, Parallel-group, Placebo-Controlled Study of Pexelizumab in Patients with Acute Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention **(APEX AMI)** Sponsor: Procter & Gamble Pharmaceuticals; and Alexion Pharmaceuticals Principal Investigator: Paul Schmidt, M.D.

68. Early Glycoprotein IIb/IIIa Inhibition in Non-ST-segment Elevation Acute Coronary Syndrome: A Randomized, Placebo-Controlled Trial Evaluating the Clinical Benefits of Early Front-loaded Eptifibatide in the Treatment of Patients with Non-ST-segment Elevation Acute Coronary Syndrome **(EARLY ACS)** Sponsor: Millennium Pharmaceuticals, Inc. Schering-Plough Research Institute Principal Investigator: Darrel Gumm, M.D.

69. A Prospective, Randomized, Double-Blind, Double-Dummy, Parallel-Group, Multicenter, Event-Driven, Non-inferiority Study Comparing the Efficacy and Safety of Once-Daily Oral Rivaroxaban (BAY 59-7939) With Adjusted-Dose Oral Warfarin for the Prevention of Stroke and Non-Central Nervous System Systemic Embolism in Subjects With Non-Valvular Atrial Fibrillation **(ROCKET)** Sponsor: Johnson & Johnson Principal Investigator: Robert Bauernfeind, M.D.

70. A Randomized, Double-Blind, Triple-Dummy, Dose-Ranging Study, Including and Active Control of Unfractional Heparin and Eptifibatide, to Evaluate the Clinical Efficacy and Safety of Otamixaban, in Patients with Non-ST Elevation Acute Coronary Syndrome and Planned Early Invasive Strategy **(SEPIA-ACS)** Sponsor: Sanofi-Aventis Principal Investigator: Marco Barzallo, M.D.

71. A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Safety and Efficacy of SCH 530348 in Addition to Standard of Care in Subjects With a History of Atherosclerotic Disease: Thrombin Receptor Antagonist in Secondary Prevention of Atherothrombotic Ischemic Events **(TRA 2°P – TIMI 50)** Sponsor: Schering-Plough.

72. Registry of AT/AF Episodes in the CRM Device. **(RATE)** Sponsor: St. Jude Medical PI: Bauernfeind

73. Advanced Pacemaker Detection Study **(CAM-EKG)** Sponsor: GE Healthcare PI: Bauernfeind

74. A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Safety and Efficacy of SCH 530348 in Addition to Standard of Care in Subjects With Acute Coronary Syndrome: Thrombin Receptor Antagonist for Clinical Event Reduction in Acute Coronary Syndrome (TRA•CER) Sponsor: Schering Plough PI: Dr. Gumm

75. Occluded Artery Trial **(OAT)** Sponsor: National Heart Lung and Blood Institute PI: S. Craig Kurtz, MD

76. Surgical Treatment for Ischemic Heart Failure Trial **(STICH)** Sponsor: National Heart Lung and Blood Institute PI: R. Parker McRae, MD

77. A Randomized, Controlled Trial to Evaluate the Safety and Efficacy of the ZoMaxx™ Drug Eluting Coronary Stent System as Compared to the TAXUSTM Express2™ Paclitaxel-Eluting Stent in *de novo* Coronary Artery Lesions **(ZoMaxx II)** Sponsor: Abbott Vascular PI: Marco Barzallo, MD

78. Endeavor Drug eluting stenting: Understanding Care, Antiplatelet agents and Thrombotic Events **(EDUCATE)** Sponsor: Medtronic Vascular, Inc. PI: Darrel Gumm, MD

79. A Clinical Outcomes Study of Darapladib versus Placebo in Subjects Following Acute Coronary Syndrome to Compare the Incidence of Major Adverse Cardiovascular Events. Short Title: The Stabilization Of Plaques Using Darapladib Thrombolysis in Myocardial Infarction 52 **(SOLID-TIMI 52)** Sponsor: GlaxoSmithKline PI: Darrel Gumm, MD

80. Evaluation of XIENCE PRIME™ or XIENCE V® versus Coronary Artery Bypass Surgery for Effectiveness of Left Main Revascularization (**EXCEL**) Sponsor: Abbott Vascular PI: John F. Rashid, MD

81. Randomized EValuation of the Effects of Anacetrapib through Lipid-modification: A large-scale, randomized placebo-controlled trial of the clinical effects of anacetrapib among people with established vascular disease (**HPS 3/TIMI 55: REVEAL**) Sponsor: University of Oxford PI: Donald B. McElroy, MD

82. A Double-Blind, Randomized, Placebo-controlled, Multicenter, Dose-ranging Study to Evaluate Tolerability and Efficacy of AMG 145 on LDL-C in Combination with HMG-CoA Reductase Inhibitors in Hypercholesterolemic Subjects (**LAPLACE TIMI 57**) Sponsor: Amgen, Inc. PI: Donald B. McElroy, MD

83. Left Atrial Pressure Monitoring to Optimize Heart Failure Therapy Study (**LAPTOP-HF**), Sponsor: St Jude Medical. PI: John P. Boehmer, MD.

84. Risk Assessment and Comparative Effectiveness Of Left Ventricular Assist Device and Medical Management in Ambulatory Heart Failure Patients. Sponsor: HeartWare Inc. PI: John P. Boehmer, MD.

85. A Prospective, Randomized, Controlled, Unblinded Multi-Center Clinical Trial to Evaluate the HeartWare Ventricular Assist Device System for Destination Therapy of Advanced Heart Failure. Sponsor: HeartWare, Inc. PI: Aly El-Banayosy, MD.

86. Right Ventricular Failure risk prediction model in patients with continuous flow left ventricular assist devices. PI: Chetan Bhardwaj, MD.

INVITED LECTURES

1. OSF Saint Francis Medical Center to Pekin Hospital as part of Case Review Program. Congestive Heart Failure. March 18, 1997.

2. Peoria Junior Women's Club. Women and Heart Disease. February 10, 1998.

3. OSF Saint Anthony Medical Center, Rockford. Newly-Diagnosed Cardiomyopathy Patient Evaluation and Treatment. September 30, 1998.

4. Midwest Heart Institute at Starved Rock Lodge and Conference Center. Advances in the Management of Congestive Heart Failure. October 28, 1998.

5. Illinois Academy of Family Physicians for 47th Annual Medicine for Today program at Trinity Medical Center. Congestive Heart Failure. November 5, 1998.

6. For National Initiatives in Mason City, Iowa. Adjunctive Pharmacology in ACS, Coronary Interventions and Acute MI. November 12, 1998.

7. University of Illinois College of Medicine at Peoria at Community Hospital of Ottawa. IIb/IIIa Inhibitors for Acute Coronary Syndrome. January 12, 1999.

8. OSF Regional Heart Institute in Rockford, Illinois. Advanced Treatments of Congestive Heart Failure. June 8, 1999.

9. Midwest Heart Institute in East Peoria. Advanced Treatments of Congestive Heart Failure. August 23, 1999.

10. University of Illinois College of Medicine at Peoria Master Clinician Program. Physical Diagnosis: Cardiovascular. September 21, 1999.

11. Illinois Academy of Family Physicians postgraduate program, Medicine for Today 1999. Congestive Heart Failure. September 30, 1999.

12. University of Illinois College of Medicine at Peoria Master Clinician Program. CHF Update. October 13, 1999.

13. Midwest Heart Institute 2000 Spring Physician Cardiac Symposium in Peru. Heart Failure: Management in the 21st Century. June 6, 2000.

14. OSF Saint Francis Medical Center Internal Medicine Resident Conference. Principles of Heart Failure Management. August 18, 2000.

15. Midwest Heart Institute 2000 Physician Cardiac Symposium in Macomb. Heart Failure: Management in the 21st Century. August 23, 2000.

16. University of Illinois College of Medicine at Peoria for Family Medicine Grand Rounds. Beyond Symptom Relief: Slowing the Progression of Heart Failure. October 5, 2000.

17. Renin Angiotensin System in Congestive Heart Failure. November 9, 2000.

18. Rockford Health System. Update on Cardiac Transplantation. November 15, 2000.

19. HeartCare Midwest Educational Meeting. IIb/IIIa – How do we use them? How should we use them? January 11, 2001.

20. University of Illinois College of Medicine at Peoria Cardiovascular and Renal Organ Segment Lecture. Dilated Cardiomyopathy. February 8, 2001.

21. Hult Education Center: Community Lecture. What I Should Know About Heart Failure. February 15, 2001.

22. Midwest Heart Institute 2001 Physician Cardiac Symposium in Galesburg. Heart Failure: Management in the 21st Century. April 18, 2001.

23. Midwest Heart Institute 2001 Physician Cardiac Symposium in Macomb. Heart Failure: Management in the 21st Century. May 22, 2001.

24. Midwest Heart Institute 2001 Physician Cardiac Symposium in Kewanee. Heart Failure: Management in the 21st Century. May 23, 2001.

25. Midwest Heart Institute 2001 Physician Cardiac Symposium in Macomb. Optimizing Heart Failure Treatment. August 22, 2001.

26. Midwest Heart Institute 2001 Physician Cardiac Symposium in Peru. Optimizing Heart Failure Treatment. August 29, 2001.

27. 8th Annual HeartCare Midwest Cardiovascular Symposium. Optimizing Management of Systolic Congestive Heart Failure. September 28-30, 2001.

28. OSF Saint Francis Medical Center. OSF Health Summit in East Peoria. Optimizing Heart Failure. October 4, 2001.

29. OSF Saint Francis Medical Center at the 12th Annual Midwest Cardiac Care Symposium. What's on the Heart Failure Horizon? October 25, 2001

30. Midwest Heart Institute. A Modern Day Epidemic: Heart Failure. January 22, 2002.

31. University of Illinois College of Medicine at Peoria Cardiovascular and Renal Organ Segment Lecture. Dilated Cardiomyopathy. February 14, 2002.

32. Midwest Heart Institute Physician Symposium 2002. A New Era in Cardiac Care. February 21, 2002.

33. OSF Saint Francis Medical Center OSF Health Summit in East Peoria. B-type Natriuretic Peptide (BNP) in the Diagnosis, Prognosis, and Treatment of CHF. October 23, 2002.

34. University of Illinois College of Medicine at Peoria to internal medicine house staff. B-type Natriuretic Peptide (BNP) in the Diagnosis, Prognosis, and Treatment of CHF. November 5, 2002.

35. University of Illinois College of Medicine at Peoria Master Clinician Program. Physical Diagnosis. February 10, 2003

36. University of Illinois College of Medicine at Peoria Master Clinician Program. CHF Update. February 13, 2003

37. Heart Failure: What You Should Know. Hult Health Education Center's "SENIORS-ON-THE-GO" health education seminar. February 20, 2003.

38. Illinois Academy of Family Physicians Medicine for Today Program. Congestive Heart Failure. March 27, 2003.

39. Plavix Meeting. The Management of Acute Coronary Syndrome (Unstable Angina/Non Q-Wave MI) Patients. August 19, 2003.

40. Methodist Family Practice Cardiology Conference. ALLHAT – Review of the Anti-hypertensive trial results. September 4, 2003.

41. 10th Annual HeartCare Midwest Cardiovascular Symposium. Acute Coronary Syndrome: Current Trends and Guidelines. September 12-14, 2003.

42. OSF Saint Francis Medical Center OSF Health Summit in East Peoria. Small Group Discussion: Heart Failure. October 16, 2003.

43. University of Illinois College of Medicine at Peoria. Cardiovascular and Renal Organ Segment Lecture. Dilated Cardiomyopathy. March 23, 2004.

44. OSF Saint Francis Medical Center Rehabilitation Services Conference. Current Trends in the Field of Cardiology Diagnostics and Medications. July 10, 2004.

45. OSF Saint Francis Medical Center OSF Health Summit in East Peoria. Small Group Discussion: Heart Failure: What the Guidelines Say. October 7, 2004.

46. Hult Education Center: Community Lecture. Atherosclerosis Coronary and Peripheral: What Do We Need to Know. October 14, 2004.

47. GlaxoSmithKline-Sponsored Non-independent Speaker Program in Bloomington, IL. CHAMP: A Focus on the Management of Patients with Post-MI LVD and HF. December 22, 2004.

48. GlaxoSmithKline-Sponsored Non-independent Speaker Program in Peoria, IL. CHAMP: What Can We Do for the Patient with Post-MI LVD and HF. January 20, 2005.

49. Community Hospital of Ottawa: Community Lecture as part of Celebrate Health. Heart Attack Facts. February 9, 2005.

50. University of Illinois College of Medicine at Peoria. Cardiovascular and Renal Organ Segment Lecture. Dilated Cardiomyopathy. March 25, 2005.

51. American Heart Association – Peoria, IL. Get With the Guidelines – Heart Failure Seminar. "Heart Failure: The Science Behind the Get with the Guidelines – Heart Failure. June 23, 2005.

52. Nursing Education sponsored by Pfizer Pharmaceuticals. "New Developments in Treating the Post-MI Patient with CHF." July 13, 2005.

53. Scios sponsored HeartCare Midwest Education in Peoria, IL. Managing the Acutely Decompensated Heart Failure Patient. July 25, 2005.

54. Pekin Hospital Grand Rounds. Optimizing Treatment of Acute Decompensated Heart Failure. July 27, 2005.

55. Community Hospital of Ottawa. Women and Heart Disease. February 3, 2006.

56. OSF St. Mary Medical Center. Failure is Not an Option. February 23, 2006.

57. HeartCare Midwest Educational Meeting. Mechanical Circulatory Support. March 9, 2006.

58. University of Illinois College of Medicine at Peoria. Cardiovascular and Renal Organ Segment Lecture. Dilated Cardiomyopathy. March 23, 2006.

59. HeartCare Midwest. Living with Heart Failure. April 6, 2006.

60. GlaxoSmithKline-Sponsored Program in Bloomington, IL. Current Insights in the Treatment of Post-MI LVD and HF. December 7, 2006.

61. Regional Cardiac Network at OSF Saint Francis Medical Center. Management of Diuretic Resistance/Fluid Overload in Heart Failure. March 20, 2007.

62. University of Illinois College of Medicine at Peoria. Cardiovascular and Renal Organ Segment Lecture. Dilated Cardiomyopathy. March 22, 2007.

63. Community Educational Talk. Acute Decompensated Heart Failure – Ready to ASCEND. September 22, 2007.

64. HCM Physician Education Night. Acute Decompensated Heart Failure – Ready to ASCEND. October 11, 2007.

65. Internal Medicine Residents at OSF Saint Francis Medical Center. Optimal Management of Volume Overload in Heart Failure. October 16, 2007.

66. Internal Medicine Residents at OSF Saint Francis Medical Center. Ultrafiltration for Congestive Heart Failure. October 16, 2007.

67. Emergency Department Residency Conference. Acute Decompensated Heart Failure – Ready to ASCEND. November 1, 2007.

68. University of Illinois College of Medicine at Peoria. Cardiovascular and Renal Organ Segment Lecture. Dilated Cardiomyopathy. March 20, 2008.

69. Patient Care Facilitator Educational Program. Evaluation and Management of Heart Failure. March 18, 2008.

70. University of Illinois College of Medicine at Peoria. Cardiovascular and Renal Organ Segment Lecture. Dilated Cardiomyopathy. March 5, 2009.

71. Bradley University Osher Lifelong Learning Institute, Continuing Education. Medical Research and Updates: Cardiovascular Medicine. September 30, 2009.

72. University of Illinois College of Medicine at Peoria. Cardiovascular and Renal Organ Segment Lecture. Dilated Cardiomyopathy. February 22, 2011.

73. Perry Memorial. Women's Heart Health What is It and How to Reduce Risk. March 20, 2011.

74. OSF Saint Francis Heart Hospital at the 21st Annual Midwest Cardiovascular Thoracic Symposium. Diagnosis and Management of Pulmonary Arterial Hypertension: Practical Considerations for Allied Health Professionals. November 10, 2011.

75. University of Illinois College of Medicine at Peoria. Cardiovascular and Renal Organ Segment Lecture. Case Based Discussion. January 18, 2012.

76. Heart Beats in Hershey 2012. Peripartum Cardiomyopathy: Evaluation and Management. October 5, 2012.

77. Penn State Hershey Heart and Vascular Institute Primary Care Colloquium. Synergy in the Treatment of Cardiovascular Disease. Treatment Options for Advanced Heart Failure: Keeping Your Patient at Home. January 26, 2013.

78. Community Lecture, Cross Keys Residential Center. Heart Failure: A Modern Day Epidemic; A "Heart to Heart" with Barry Clemson MD. February 26, 2013.

79. Dimensions in Heart and Vascular Care: Advancing Your Scope of Excellence. What's New in the American Heart Association/ACCF 2013 Heart Failure Guidelines. October 18, 2013.

80. Dimensions in Heart and Vascular Care: Advancing Your Scope of Excellence. Heart Failure with Preserved Ejection Fraction: A Major Cause of Pulmonary Hypertension. October 18, 2013.

81. Cardiology Fellow's Conference. Peripartum Cardiomyopathy: Pathophysiology and Management. November 20, 2013.

82. Cardiology Fellow's Conference. Heart Failure with Preserved Ejection Fraction: A Major Cause of Pulmonary Hypertension. November 27, 2013.

83. Cardiology Fellow's Conference. Pulmonary Hypertension: Overview of Pathophysiology, Evaluation and Management. March 5, 2014.

84. Cardiology Fellow's Conference. Management of Acute Heart Failure. August 6, 2014.

85. Cardiology Fellow's Conference. Cardiogenic Shock. August 27, 2014.

86. Dimensions in Heart and Vascular Care, Penn State Hershey Heart and Vascular Institute. Pulmonary Hypertension: An Overview of Evaluation and Management. November 7, 2014.

87. Penn State Hershey Heart and Vascular Institute Primary Care Colloquium; Synergy in the Treatment of Cardiovascular Disease. Heart Failure with Preserved Ejection Fraction: A Major Cause of Pulmonary Hypertension. March 6, 2015.

JAMES R. MUNNS, M.D.
CURRICULUM VITAE

MEMBERSHIPS:

BUSINESS ADDRESS: [illegible]
HeartCare Midwest, 5405 N. Knoxville Avenue, Peoria, IL 61614
[illegible]
CELL PHONE: 309-264-9703

EMAIL: jrmunns44@yahoo.com

PUBLICATIONS:

BIRTH: [illegible] Aged, Archives of Surgery, 110: 513-517, 1975, W. [illegible] and J. Munns
December 20, 1944, Iowa Falls, Iowa, USA
Effect of [illegible] Bypass on Gastric Secretion, American Journal of Surgery, 131: 162-168, [illegible]

MEDICAL LICENSURE: [illegible]
03/2017 - Present, Hawaii, MD-19009
06/1982 - Present, Illinois, 036064426 [illegible] Grafts by Antiplatelet Therapy, [illegible], Vol.
10/1979 - 10/2005, Wisconsin, 22726-20 [illegible] G. Ollager, J. Pepper, J. Munns,
07/1972 - 12/2004, Iowa, MD-18661

EDUCATION: [illegible] Thoracic Aorta, IL Medical Journal, Vol. 174, #3, September, 1983,
1963 - 1967, University of Iowa, Iowa City, IA, B.S.
1967 - 1971, University of Iowa College of Medicine, Iowa City, IA, Doctor of Medicine
Prolonged Ventricular Support Using a Centrifugal Pump, Canadian Journal of Surgery, Vol. 32

POST-GRADUATE EDUCATION: [illegible], RN, R. Gomez, J. Munns, D. Geiss, D. [illegible], D. [illegible],
07/1971 - 07/1972, Internship, Hennepin County General Hospital, Minneapolis, MN
07/1972 - 06/1976, Resident, General Surgery, University of Iowa Hospital & Clinics, Iowa City, IA
07/1979 - 06/1980, Research Fellow, Cardiothoracic Lab, Medical College of WI, Milwaukee, WI
07/1980 - 06/1982, Resident, Cardiovascular & Thoracic Surgery, Med College of WI, Milwaukee, WI
L. [illegible] C. Linnet, RN, R. Gomez

BOARD CERTIFICATIONS:
1983-Present, American Board of Thoracic Surgery [illegible] Resection, The Annals of Thoracic Surgery, [illegible] Print, D. [illegible], J. Becker, S. [illegible], K. Karamchandani, J. Munns,

WORK HISTORY:
09/1976 - 09/1977 121st Evacuation Hospital, Attending Surgeon, Seoul, Korea
09/1977 - 09/1979, General Leonard Wood Army Hospital, Attending Surgeon, Fort Leonard Wood, MO
07/1982 - 11/2003, Illinois Cardiac Surgery Associates, S.C., Peoria, IL
11/2003 - Present Cardiac and Thoracic Surgeon, HeartCare Midwest, Ltd, a wholly-owned subsidiary of OSF Saint Francis Medical Center, Peoria, IL

HOSPITAL AFFILIATIONS: Hyperlipidemia on Lipid Accumulation in Animate Vein Grafts,
07/1982 - Present: [illegible] Spring, Meeting, March 29, 1980
OSF Saint Francis Medical Center, Peoria, IL
Unity Point Health Methodist, Peoria, IL
UnityPoint Health Proctor Hospital, Peoria, IL
Pekin Hospital, Pekin, IL
07/2002 Alley [illegible] Fellow, New World of Healthcare
07/1983 - 01/2003, President, Illinois Cardiac Surgery Associates

ACADEMIC APPOINTMENTS: [illegible] Heartcare Midwest
1989 - Present, Clinical Assistant Professor of Surgery, University of Illinois College of Medicine at Peoria, Peoria, Illinois [illegible] Intensive Care Unit, St. Francis Medical Center
07/1985 - Present, Chairman/Member of Critical Care Committee, St. Francis Medical Center
07/2013 - Present, Advisory Board, Heartcare Midwest
1987 -1989, Board of Directors, Peoria Medical Society
12/1991 - 11/1995, Board of Directors [illegible] Midwest Affiliate

SUMMARY:

- Practicing Cardiovascular Surgeon with more than 35 years of Cardiac surgery experience
- Cumulatively performed more than 5000 cardiac operations including coronary bypasses, single & multiple valve replacements, valve repairs, complex aortic replacements & repair, cardiac-transplants, TAUR, aortic endografting of both thoracic & abdominal aortas, and ECMO support
- Long standing interest in vascular surgery in addition to aortic bifemoral & femoral popliteal bypass with more than 900 carotid endarterectomies and less than one-percent clinical stroke rate
- Continue to enjoy cardiovascular/thoracic work producing high-quality results with fervent belief that high-quality cardiac surgeries result from of a high-quality team
- Set up STS data monitoring system, more than 20-years ago, in Peoria & served as its director until 2013
- Concurrently ran previous private practice surgery group until joining Heartcare Midwest in 2003
- Proven practitioner plus reliable & compassionate leader with much to offer your team
- Appreciate the opportunity & look forward to exploring a cardiovascular position with you

Curriculum Vitae

MARK DAVID PLUNKETT, M.D.

Chief, Pediatric and Congenital Heart Surgery
Co-Director, Congenital Heart Center
OSF Children's Hospital of Illinois
Associate Professor of Surgery
University of Illinois College of Medicine
420 N.E. Glen Oak Ave, #301
Peoria, Illinois 61603
mplunket@UIC.edu
Phone 309-655-3453
Fax 309-655-3410

Background:	Birthdate: March 12, 1960	
	Hometown: Princess Anne, Maryland	
Education:	**Duke University**, B.S.	1978-1982
	University of North Carolina, M.D.	1982-1986
Residency:	**Duke University Medical Center**	
	Director: *David C. Sabiston, Jr., MD*	
	Intern in Surgery	1986-1987
	Junior Resident in Surgery	1987-1988
	Fellow in Cardiovascular Research	1988-1990
	Senior Resident in Surgery	1990-1992
	Chief Resident in General Surgery	1992-1993
Fellowship:	**Duke University Medical Center**	
	Directors: *David C. Sabiston, Jr., MD* *Robert W. Anderson, MD*	
	Fellow in Cardiothoracic Surgery	1993-1995

Fellowship:	**UCLA Center for the Health Sciences** **UCLA Mattel Children's Hospital**	
	Director: *Hillel Laks, MD*	
	Fellow in Pediatric and Congenital Cardiac Surgery	1995-1996
Board Certifications:	**American Board of Thoracic Surgery** **Congenital Heart Surgery**	
	Certificate # 87	2010
	Maintenance of Certification	2015
	American Board of Thoracic Surgery	
	Certificate # 5872	1995
	Maintenance of Certification	2005
	Maintenance of Certification	2016
	American Board of Surgery	
	Certificate # 39873	1994
	National Board of Medical Examiners	
	Certificate # 334018	1987
Academic Appointments:		
	University of Illinois **College of Medicine at Peoria** Department of Surgery	
	Associate Professor of Surgery	2015-present
	University of Minnesota **School of Medicine** Department of Surgery	
	Associate Professor of Surgery	2014-2015
	University of Kentucky **College of Medicine** Department of Surgery and Pediatrics	
	Associate Professor of Surgery Associate Professor of Pediatrics	2008-2013
	UCLA School of Medicine Department of Surgery	
	Associate Professor of Surgery	2003-2008
	UCLA School of Medicine Department of Surgery	
	Assistant Professor of Surgery	1999-2003

University of Illinois
College of Medicine
Department of Surgery
Assistant Professor of Surgery 1996-1999

UCLA School of Medicine
Department of Surgery
Assistant Professor of Surgery 1995-1996

Administrative Appointments:

Children's Hospital of Illinois
OSF Saint Francis Medical Center
Congenital Heart Center

Chief, Pediatric and Congenital Heart Surgery 2015-present
Children's Hospital of Illinois

Co-Director, Congenital Heart Center 2015-present
Children's Hospital of Illinois

Director of Pediatric ECMO Program 2017-present
Children's Hospital of Illinois

UK College of Medicine
Department of Surgery
Division of Cardiothoracic Surgery

Chief, Pediatric and Congenital Heart Surgery
Kentucky Children's Hospital 2007-2013

Chief, Division of Cardiothoracic Surgery 2007-2013
Frank C. Spencer, MD Endowed Chair

Co-Director, Congenital Heart Center
Kentucky Children's Hospital 2008-2013

Surgical Director, UK *Gill Heart Institute* 2007-2013
UK Chandler Medical Center

UCLA School of Medicine
Department of Surgery
Division of Cardiothoracic Surgery

Chief, Pediatric and Congenital Heart Surgery
UCLA Mattel Children's Hospital 2006-2007

Surgical Director, UCLA Pediatric Heart Transplantation Program UCLA Mattel Children's Hospital	2000-2007
Surgical Director, UCLA Pediatric and Adult VAD and Mechanical Circulatory Support Program	2002-2007
Director, UCLA Pediatric ECMO program UCLA Mattel Children's Hospital	2004-2007

Faculty Teaching Appointments and Courses:

University of Illinois **College of Medicine at Peoria** Associate Professor of Surgery	2015-present
University of Minnesota **School of Medicine** Associate Professor of Surgery	2014-2015
University of Kentucky **College of Medicine** Associate Professor of Surgery	2008-2013
Associate Professor of Pediatrics	2008-2013
Program Director, UK Cardiothoracic Surgery Residency Training Program	2008-2013
Program Director, UK *Integrated 6-Year* Cardiothoracic Surgery Residency Program	2012-2013
Medical Student Mentorship Program Gina Mittenzwei Cara Lawrence James Lynch	2007-2013
UCLA **School of Medicine** Assistant Professor of Surgery	1999-2003
Associate Professor of Surgery	2003-2008
Program Director, UCLA Cardiothoracic Surgery Residency Training Program	2003-2008
Associate Program Director, UCLA Cardiothoracic Surgery Residency Training Program	1999-2003

Program Director, Fellowship Training Program in Pediatric Cardiac Surgery	1999-2008
Program Director, Fellowship Training Program in Heart and Lung Transplantation	1999-2008
UCLA **School of Medicine** Course Chair, Senior Medical Student Subinternship in Pediatric Heart Surgery Course SU386.02	2002-2008
Course Chair, Medical Student Clerkship Thoracic and Cardiovascular Surgery Course SU410.02	2005-2008
Short Term Training Program (STTP) Medical Student Summer Research Simin Bahrami J Neelankavil Joe Springer Meena Said	2002-2008
University of Illinois **College of Medicine at Peoria** Assistant Professor of Surgery	1996-1999
UCLA **School of Medicine** Assistant Professor of Surgery	1995-1996
Duke University **School of Medicine** Clinical Instructor in Surgery Teaching Scholar in Surgery	1993-1994 1994-1995

Hospital Appointments and Clinical Privileges:

Children's Hospital of Illinois **OSF Saint Francis Medical Center** Peoria, Illinois Active Staff Pediatric and Adult Cardiothoracic Surgery	2014-present

UK Chandler Medical Center
Kentucky Children's Hospital
Lexington, Kentucky
Active Staff
Pediatric and Adult Cardiothoracic Surgery 2008-2013

UCLA Center for the Health Science
UCLA Mattel Children's Hospital
Westwood, California
Active Staff
Pediatric and Adult Cardiothoracic Surgery 1999-2008

Santa Monica /UCLA Hospital
Santa Monica, California
Active Staff
Adult Cardiothoracic Surgery 1999-2001

West LA VA Medical Center
Los Angeles, California
Active Staff
Adult Cardiothoracic Surgery 1999-2004

Harbor UCLA Medical Center
Torrance, California
Consultant Staff
Adult and Pediatric Cardiothoracic Surgery 2000-2008

OSF Healthcare Children's Hospital of Illinois
OSF Saint Francis Medical Center
Peoria, Illinois
Active Staff
Illinois Cardiac Surgery Associates
Pediatric and Adult Cardiothoracic Surgery 1996-1999

Methodist Medical Center
Peoria, Illinois
Active Staff
Illinois Cardiac Surgery Associates
Adult Cardiothoracic Surgery 1996-1999

Proctor Hospital
Peoria, Illinois
Active Staff
Illinois Cardiac Surgery Associates
Adult Cardiothoracic Surgery 1996-1999

Professional Memberships and Societies:

Adult Congenital Heart Association	2017
MidWest Society of Pediatric Cardiology	2015
Peoria Medical Society	2015
Illinois State Medical Society	2015
Institute of Engineering in Medicine University of Minnesota	2014
International Society for Adult Congenital Heart Disease	2014
Congenital Heart Surgeons Society	2010
American Society for Artificial Internal Organs	2009
Southern Thoracic Surgical Association	2008
World Society for Congenital and Pediatric Cardiac Surgery	2007
Western Society of Pediatric Cardiology	2005
Thoracic Surgery Director's Association	2003
International Society for Heart and Lung Transplantation	2001
Society of Thoracic Surgeons	1998
American Heart Association	1998
Duke Medical Alumni Association	1996
William P. Longmire, M.D. Surgical Society	1996
New York Academy of Science	1996
American Association for the Advancement of Science	1996
David C. Sabiston, Jr. M.D. Surgical Society	1993
UNC Alumni Association	1986
American Medical Association	1986
Duke Alumni Association	1982

Honorary Memberships:

Peruvian American Medical Society	2010
Helping Hands for Honduras "Manos Ayudando a Honduras"	2017

Hospital and University Committees:

University of Illinois College of Medicine at Peoria
Children's Hospital of Illinois
OSF Saint Francis Medical Cente 2015-present

Congenital Heart Center Steering Committee
Dept of Surgery PIPS Committee
Children's Hospital of Illinois Congenital Care Council
Dept of Surgery CSLW Quality & Cost Committee
Pediatric ECMO Program Committee
Children's Hospital of Illinois Council
UICOMP Dept of Pediatrics Recruitment Committee
STS/ELSO Database Committee

University of Kentucky 2007-2013
College of Medicine
Chandler Medical Center

TAVR Program Development Committee
OR Executive committee
Dept Surgery Executive Committee
Heart and Lung Transplant Committee
UK Chandler Replacement Hospital OR Planning Committee
GME Resident Education Committee
Markey Cancer Center Director Search Committee
Kentucky Children's Hospital Executive Committee
Kentucky Children's Heart Center Committee
PICU Management Committee

UCLA School of Medicine 1999-2007
UCLA Center for the Health Sciences

Dept. of Surgery Resident Education Council
Enterprise Business Development and Outreach Group
Healthcare Strategy Committee
Dept of Surgery Alliance Committee, Chair
Clinical Pathways in Congenital Heart Surgery Committee
Heart Transplantation Executive Committee
Heart and Heart-Lung Transplant Selection Committee
Multidisciplinary Pediatric Heart Transplant Committee
Ventricular Assist Device Review Committee
UCLA Replacement Hospital OR Planning Committee

National Committees And Activities:

Society of Thoracic Surgeons (STS) Abstract Reviewer: Congenital	2018
Society of Thoracic Surgeons (STS) PUF CHSD Review Committee	2018
Society of Thoracic Surgeons (STS) Abstract Reviewer: Congenital	2017
CHSS & ECHSA Joint Meeting Moderator: Congenital Sessions	2016
Society of Thoracic Surgeons (STS) Abstract Reviewer: Congenital	2016
Southern Thoracic Surgery Association (STSA) Congenital Session Moderator and Discussant	2015
Midwest Society of Pediatric Cardiology Congenital Heart Surgery Session Moderator	2015
Society of Thoracic Surgeons (STS) Abstract Reviewer: Congenital	2015
Society of Thoracic Surgeons (STS) Abstract Reviewer: Congenital	2014
ASAIO Annual Meeting Moderator: ECMO Presentations	2013
TSDA/JCTSE Curriculum Committee	2013
Joint Council on Thoracic Surgery Education (JCTSE) I-Six Year Program Analysis Committee	2013
Society of Thoracic Surgeons (STS) Abstract Reviewer: Congenital	2013
Society of Thoracic Surgeons (STS) Abstract Reviewer: Congenital	2012
American Transplant Congress (ATC) Abstract Reviewer: Adult and Pediatric Heart Transplantation	2011
Society of Thoracic Surgeons (STS) Abstract Reviewer: Congenital	2011

	American College of Cardiology (ACC) Kentucky Chapter Annual Meeting Moderator: Surgical vs TransCatheter Valve Therapy	2011
	Society of Thoracic Surgeons (STS) Abstract Reviewer: Congenital 2011 Program Workforce	2010
	Society of Thoracic Surgeons (STS) 2010 Program Planning Workforce	2009
	Society of Thoracic Surgeons (STS) Co-Chair Surgical Symposium Task Force Chair, Congenital Surgical Symposium	2009
	Society of Thoracic Surgeons (STS) Congenital Surgery Symposium Task Force	2008
	Thoracic Surgery Director's Association (TSDA) Core Curriculum Committee	2008-2013
	American Board of Thoracic Surgery (ABTS) SESATS VIII Congenital Heart Surgery Subcommittee	2006
	International Society of Heart and Lung Transplantation Pediatric Scientific Council (ISHLT) Mechanical Circulatory Support Council	 2005-present 2008-present
	American Heart Association (AHA) Council on Cardiothoracic and Vascular Surgery Council on Cardiovascular Disease in the Young	 2005-present 2005- present
Editorial Boards:	*ASAIO Journal* Section Editor: *Pediatric Circulatory Support*	2010- 2016
Guest Reviewer:	*Cardiology in the Young*	2017-present
	Journal of Visualized Experimentation	2013-present
	World Journal for Pediatric and Congenital Heart Surgery	2011-present

ASME Journal of Medical Devices	2010-present
Congenital Heart Disease Journal	2009-present
Journal of heart and Lung Transplantation	2008-present
American Heart Journal	2008-present
ASAIO Journal	2008-present
Journal of Thoracic and Cardiovascular Surgery	2000-present
Annals of Thoracic Surgery	2002-present

State Medical Licensures:

Illinois State Board of Medical Examiners 1996
Certificate # 03609344 Restoration 2014
Active

Minnesota State Board of Medical Examiners 2014
Certificate #57046
Active

California State Board of Medical Examiners 1995
Certificate # G080946
Active

Florida State Board of Medical Examiners 2013
Certificate #ME117359
Inactive

Kentucky Board of Medical Licensure 2008
Certificate # 42233
Inactive

North Carolina State Board of Medical Examiners 1993
Certificate # 93-00281
Inactive

Honors and Awards:

America's Top Surgeons Consumers Research Council of America	2007-2016
Best Doctors in America	2009-2013
Frank C. Spencer, MD Endowed Chair University of Kentucky College of Medicine	2008-2013

	Who's Who in Academic Medicine Academic Keys Foundation	2012
	Honoree, *Gala del Sol* Fundraising Benefit, UCLA School of Medicine	2006
	Davison Society *"Excellence in Teaching"* Award Duke University School of Medicine	1995
	North Carolina *Board of Governors Scholarship* UNC School of Medicine	1982-1986
	Willis Smith Academic Scholarship Duke University	1978-1982
	Magna cum Laude Graduate Duke University	1982
	Phi Eta Sigma Freshman Honor Society Duke University	1978
Fundraising and Charity:	*International Children's Heart Foundation*	2014-present
	"Camp Del Corozon" Foundation Advisory Board	2004-present
	"Corozones Con Esperanza" *"Hearts with Hope"* Foundation	2005-present
	Mending Kids Foundation	2004-2007
International Outreach and Mission Trips :	***"Hearts with Hope"* Foundation** Los Angeles, CA	
	"Helping Hands for Honduras" Foundation Tegucigalpa, Honduras	
	Mission to San Pedro Sula, Honduras Aug 25th to Sept 3rd	2017
	International Childrens' Heart Foundation Memphis, TN	
	"Helping Hands for Honduras" Foundation Tegucigalpa, Honduras	
	Mission to Tegucigalpa Honduras Aug 23rd to Sept 6th	2014

***"Hearts with Hope"* Foundation**
Corozones Con Esperanzo
Los Angeles, CA

Serving Children in Latin America with Congenital Heart Disease

Mission to Arequipa, Peru
Oct 21st – Nov 3rd 2007

Mission to Arequipa, Peru
Sept 13th - 23rd 2008

Mission to Arequipa, Peru
Sept 26th-Oct 6th 2009

Mission to Arequipa, Peru
Sept 30th –Oct 12th 2010

Mission to Arequipa, Peru
Oct 22nd-Nov 1st 2011

Mission to Arequipa, Peru
May 3rd – May 12th 2013

World Heart Foundation International Teleconference Symposium
Adults with Congenital Heart Disease Symposium

Hong Kong; Vietnam; Cambodia; Thailand; Japan; Phillipines; 2010

Mending Kids International 2004-2007
Los Angeles, CA

Clinical and Basic Science Research:

University of Illinois College of Medicine at Peoria
OSF Children's Hospital of Illinois
Jump Simulation and Education Center

Clinical Use of Virtual Reality Imaging in the Surgical Evaluation and Management of Complex Congenital Heart Defects
Co Investigator 2016-present

Clinical Use of 3-D Heart Modeling in the Surgical Repair of Complex Congenital Heart Defects
Co Investigator 2015-present

HDE Use of Contegra Bovine Valved Conduit in Repair of Congenital Heart Defects.
IRB # 703285
Principle Investigator 2015-present

Atrioventricular Septal Defects- A CHSS Inception Cohort Study
CHSS Clinical Research Database
IRB # 182889
Co Investigator 2015-present

University of Minnesota Medical Center
Experimental Surgical Services
Cardiovascular Research 2014-2015

Total Cavopulmonary Support using a Berlin Heart Excor Pulsatile VAD and a Novel Graft Configuration in a Sheep Model of a Failing Fontan
Principle Invstigator

University of Kentucky Medical Center
Cardiovascular Research 2007-2013

Mechanical Cavopulmonary Assist in a Sheep Model of Failing Fontan Physiology.
UK IACUC# 2009-0551
Co Investigator

Left Ventricular Apical Cannulation for Dual-Lumen Catheter-based LVAD Support in a Lamb Model.
UK IACUC # 2009-0621
Co Investigator

Syncardia Total Artificial Heart (TAH) Freedom Driver Clinical Trial
UK IRB # 12-0193-F2L
Co Investigator

INTERMACS (*Interagency Registry for Mechanically Assisted Circulatory Support*)
UK IRB # 08-0630-F6A
Co Investigator

Levitronix CentriMag *VAD Failure to Wean From Cardiopulmonary Bypass Clinical Trial*
Co Investigator

Use of Contegra Bovine Valved Conduit in Repair of Congenital Heart Defects.
UK IRB # 08-0435
Principle Investigator

UCLA Medical Center
Clinical Cardiovascular Research 1999-2007

Cyclosporin vs Tacrolimus for Primary Immunosuppressive therapy in Pediatric Heart Transplantation

Use of Porcine Bioprosthetic Valves for Pulmonary Valve Replacement in Congenital Heart Disease

Use of ECMO as Bridge to Heart Transplantation in Pediatric Patients with Cardiomyopathy

Use of the Berlin Heart for Refractory Heart Failure in Children

Use of the Jarvik 2000 Left Ventricular Assist Device as Bridge to Transplantation in Patients with End-Stage Heart Failure

Use of the AbioCor Mechanical Heart in Patients with Heart Failure

The Impact of Incidental Thymectomy on Immune Parameters in Heart Children with Congenital Disease

Duke University Medical Center
Cardiovascular Labratory Research 1988-1995

Senior Investigator: James E. Lowe, M.D.
Professor of Surgery
Duke University Medical Center

Chronic Hypoxia and Neonatal Myocardial Metabolism

Direct Mechanical Ventricular Actuation using the Anstadt Cardiac Assist Device

Optimal Temperature Preservation for Cardiac Transplantation

Gas Denucleation of Bioprosthetic Vascular Grafts

Cardiac Metabolism and Function Following Global Ischemia

Nitric Oxide Metabolism and Pulmonary Hypertension in a Porcine Model

University of North Carolina at Chapel Hill
Neurosciences Research Laboratory 1983-1986

Principle Investigator: Edward R Perl, MD
Professor of Physiology
UNC School of Medicine

Mapping of *Cutaneous Nociceptor Afferent Pain Fiber Pathways in the Spinal Cord.*

Research Funding:

National Institutes of Health
NHLBI 1 R41 HL107062-01A1
Principle Investiagtor: Dong Fang Wang, MD
Co Investigators: Mark D. Plunkett, MD,
JB Zwischenberger, MD

Mechanical Cavopulmonary Assist in a Sheep Model of Failing Fontan Physiology
$175,000 2011-2013

National Institutes of Health
NHLBI 1 R43 HL110562-01A1
Principle Investiagtor: Dong Fang Wang, MD
Co Investigators: Mark D. Plunkett, MD,
JB Zwischenberger, MD

Development of Dual Lumen Cannulae for Percutaneous Right Heart Assist
$150,000 2012-2013

National Institutes of Health
National Research Service Award (NRSA)
NHLBI

The Effects of Chronic Hypoxia on Neonatal Myocardial Metabolism in a Cyanotic Piglet Model

Duke University Medical Center
Principle Investigator: Mark D. Plunkett, MD
Senior Investigator: James E. Lowe, M.D.
$54,000 1988-1990

KSTC SBIR-STTR Matching Funds Award
KSTC-11-DCIS-133
Principle Investigator: Dong Fang Wang, MD
Co Invstigators: Mark D. Plunkett, MD,
J B Zwischenberger, MD

Percutaneous Double Lumen Cannula for Cavopulmonary Support
$150, 000 2011-2013

University of Kentucky College of Medicine
Johnston-Wright Foundation Research Fund
Principle Investigator: Mark D. Plunkett, MD
Co-Investigators: Dong Fang Wang, MD,
J B Zwischenberger, MD

Dual Lumen Catheter Based system for Mechanical Cavopulmonary Assist in a Sheep Model of Failing Fontan Physiology
$300,000 2008-2013

Medtronic Research Foundation
Principle Investigator: Mark D. Plunkett, MD

Use of Mosaic and Hancock II Porcine Bioprostheses for PVR in Congenital Heart Disease

$120,000 2004-2007

Samantha Harrison Research Foundation
UCLA Medical Center
Principle Investigator: Mark D. Plunkett, MD

Congenital Heart Surgery Clinical Data Research
$4,000 2005-2006

Other Interests:

Music/Drums/Percussion
World History/Medical History
Travel/Medical Missions
Rare and Antique Books

Manuscripts

1. *Comparison of Direct Mechanical Ventricular Actuation and Cardiopulmonary Bypass*
   Anstadt MP, Hendry PJ, **Plunkett M,** Menius, JA, Pacifico AD Jr, Lowe JE:.
   American Society of Artificial Internal Organs Transactions, 35 (3):464-467, 1989.
   PMID 2597508

2. *Surgical Treatment of Automatic Atrial Tachycardias.*
   Hendry PJ, Packer DL, Anstadt MP, **Plunkett M**, Lowe JE:
   Annals of Thoracic Surgery, 49 (2): 253-260, 1990
   PMID 2306147

3. *Optimal Temperature for Preservation of Donor Myocardium*
   Hendry PJ, Anstadt MP, **Plunkett MD**, Pacifico AD, Jr, Mikat EM, Menius, JA, Lowe JE:
   Circulation, 82(5 Suppl): IV-306-312, 1990.
   PMID 2225422

4. *Mechanical Myocardial Actuation During Ventricular Fibrillation Improves Tolerance to Ischemia Compared with Cardiopulmonary Bypass*
   Anstadt MP, Hendry PJ, **Plunkett M**, Menius JA, Pacifico AD Jr, Lowe JE:,
   Circulation, 82 (5 Suppl): IV 284-290, 1990.
   PMID 2225418

5. *Mechanical Cardiac Actuation Achieves Hemodynamics Similar to Cardiopulmonary Bypass*
   Anstadt MP, Hendry PJ, **Plunkett M**, Menius JA, Pacifico AD Jr, Lowe JE:
   Surgery, 108 (2): 442-451, 1990.
   PMID 2382236

6. *Myocardial Tolerance to Ischemia After Resuscitation: Direct Mechanical Ventricular Actuation Versus Cardiopulmonary Bypass.*
   Anstadt MP, Taber JE, Hendry PJ, **Plunkett M**,Tedder M, Menius JA, Lowe JE:
   American Society of Artificial Internal Organs Transactions, 37 (3): M518-519, 1991.
   PMID 1751261

7. *First Successful Bridge to Cardiac Transplantation Using Direct Mechanical Ventricular Actuation*
   Lowe JE, Anstadt MP, Van Trigt P, Smith PK, Hendrey PJ, **Plunkett M,** Anstadt GL:.
   Annals of Thoracic Surgery, 52 (6):1237-1245, 1991.
   PMID 1755676

8. *Effects of Amrinone Versus Dobutamine on Subsequent Tolerance to Global Myocardial Ischemia.*

Annals of Thoracic Surgery_ 69 (6):1945-47, 2000.
PMID 10892959

18. *Surgical Management of Pulmonary Atresia with Intact Septum.*
Laks H, **Plunkett M**:
Progress in Pediatric Cardiology, Vol. 13, 183-197, 2001.

19. *Use of Assist Devices and ECMO to Bridge Pediatric Patients with Cardiomyopathy Patients to Transplantation.*
Levi D, Marelli D, **Plunkett M**, Alejos J, Bresson J, Tran J, Eisenring C, Sadeghi A, Galindo A,Fazio D, Gupta A, Burch C, George B, Laks H:
Journal of Heart and Lung Transplantation 21 (7); 760-770, 2002.
PMID 12100902

20. *Short-term Bridge to Heart Transplant Using the BVS 5000 External Ventricular Assist Device.*
Tsai F, Marelli D, Laks H, Moriguchi J, Sopher M, Bresson J, Litwin P, Sale S, Kubak B, Esmailian F, Ardehali A, **Plunkett M**, Kobashigawa J:
American Journal of Transplantation 2 (7); 646- 651, 2002.
PMID 12201366

21. *Use of Hearts Transplanted from Donors with Atraumatic Intracranial Bleeds.*
Marelli D, Tsai F, Laks H, Bresson J, Gjertson D, Kermani R, Patel J, Ardehali A, Brown M, Esmailian F, Fonarow G, Hage A, Hamilton M, Houston E, Mark M, Moriguchi J, **Plunkett M**, Hage A, Brown M, Mark M, Kobashigawa J:
Journal of Heart and Lung Transplantation. 20(2): 256, 2001.
PMID 11250513

22. *Recent Trends in Early Outcomes of Adult Patients after Heart Transplantation: A Single Institution Review of 251 Transplants Using Standard Donor Organs.*
Tsai F, Marelli D, Bresson J, Gjertson D, Ardehali A, Esmailian F, Hamilton M, Fonarow GC, Moriguchi J, **Plunkett M**, Hage A, Tran J, Kobashigawa J, Laks H:
American Journal of Transplantation 2 (6): 539-545, 2002.
PMID 12118898

23. *Seventeen Year Experience with 1083 Heart Transplants at a Single Institution.*
Marelli D, Laks H, Kobashigawa J, Bresson J, Ardehali A, Esmailian F, **Plunkett M**, Kubak B, Tsai FC, Karandikar K, Monempour S:
Annals of Thoracic Surgery 74 (5); 1558-1567, 2002.
PMID 12440609

24. *Results After Transplantation using Donor Hearts with Preexisting Coronary Artery Disease.*
Marelli D, Laks H, Bresson S, Ardehali A, Bresson J, Esmailian F, **Plunkett M**, Moriguchi J, Kobashigawa J:
Journal of Thoracic and Cardiovascular Surgery 126 (3): 821-5, 2003.
PMID 12440609

25. *Use of Two Recipient List for Adults Requiring Heart Transplantation.*
Laks H, Marelli D, Fonarow G, Hamilton M, Ardehali A, Moriguchi J, Bresson J,

Gjertson D, Kobashigawa J, Camara R, Esmailian F, Hage A, Kawata N, Kubak B, **Plunkett M**, Sadeghi A, Salehmoghaddam:
Journal of Thoracic and Cardiovascular Surgery, 125 (1): 49-59, 2003.

26. *Heart Transplantation in Patients with Diabetes in the Current Era.*
Marelli D, Laks H, Patel B, Kermani R, Marmureanu A, Patel J, Kobashigawa J, Ardehali A, Esmailian F, Fonarow G, Hage A, Hamilton M, Moriguchi J, Odim J, **Plunkett M**:
Journal of Heart and Lung Transplantation, 22 (10): 1091-1097, 2003.

27. *Atrial Extracellular Matrix Remodeling and the Maintenance of Atrial Fibrillation.*
Xu J, Cui G, Esmailian F, **Plunkett M**, Marelli D, Ardehali A, Odim J, Laks, H, Sen L:
Circulation109 (3): 363-368, 2004.
PMID14732752

28. *Failing Fontan Circulation Necessitating Transplantation: A Clinicopathologic Correlation.*
Mitropoulos F, Laks H, Neelankavil J, Alejos J, Child J, Allada V, Drant S, Kobashigawa J, Odim J, Fishbein M, **Plunkett M**.
Journal of the American College of Cardiology, Vol 43(5) Supplement A, 2004.

29. *Thymic Function and Impaired Maintenance of Peripheral T-cell Populations.*
Halnon NJ, Jamieson B D, **Plunkett M**, Kitchen CM, Pham J, Krogstad Paul:
Pediatrics Research 57 (1): 42-48, 2005.
PMID 15531736

30. *Successful Management of Patients with Pulmonary Atresia with Intact Ventricular Septum Using a Three Tier Grading System for Right Ventricular Hypoplasia*
Odim J, Laks H, **Plunkett M**, Tung TC.
Annals of Thoracic Surgery 81(2): 678-84, 2006.
PMID 16427873

31. *Pathophysiologic Implications of the Helical Ventricular Myocardial Band: Considerations for Right Ventricular Restoration*
Plunkett M, Buckberg G: .
Seminars in Thoracic and Cardiovascular Surgery,
Pediatric Cardiac Surgery Annual 10: 68-75, 2007.
PMID 17433995

32. *Fontan Operation and the Single Ventricle*
AboulHosn JA, Shavelle DM, Castellon Y, Criley JM, **Plunkett M**, Pelikan P, Dinh H, Child JS.
Congenital Heart Disease,Clinical Studies from Fetus to Adulthood, 2:2-11, 2007.
PMID 18377510

33. *Intraoperative Pulmonary Artery Stenting. An Alternative Technique for the Management of Congenital Pulmonary Artery Stenosis.*

Mitropoulos F, Laks H, Kapadia N, Gurvitz M, Levi D, Williams R, **Plunkett M**: Annals of Thoracic Surgery, 84 (4): 1338-1342, 2007.
PMID 17888994

35. *Long Term Outcomes of Heart Transplantion in Older Recipients*
Marelli D, Kobashigawa J, Hamilton M, Noguchi E, Moriguchi J, Patel J, Laks H, , Beygui R, **Plunkett M**, Shemin R, Esmailian F,
Journal of Heart and Lung Transplantation, 27 (8); 830-834, 2008.
PMID 18656794

36. *Tricuspid Valve Regurgitation After Heart Transplantation.*
Marelli D, Esmailian F, Wong, S, Kobashigawa J, Kwon M, Beygui R, Laks H, **Plunkett M**, Ardehali A and Shemin R:
Journal of Thoracic and Cardiovascular Surgery, 137 (6); 1557-9, 2009.
PMID 19464484

37. *Truncal Valve Repair in Neonates Using Pericardial Leaflet Extension.*
Bahrami S, Mitropoulos F, Leong F, Levi D, Laks H, **Plunkett M**:
Congenital Heart Disease Journal, Clinical Studies from Fetus to Adulthood, 4 (4): 281-283, 2009.
PMID 19664033

38. *Preferential Use of "Off-Pump" Glenn Shunts: A Single Center Experience.*
Levi D, Bryan T, Scott V, **Plunkett M**:
Congenital Heart Disease, Clinical Studies from Fetus to Adult, 4: 81-85, 2009.

40. *Arrhythmia recurrence in adult patients with single ventricle physiology following surgical Fontan conversion.*
AboulHosn J, Williams R, Shivkumar K, **Plunkett M**, Miner P, Houser L, Laks H, Reemtsen B, Shannon K, Child J.
Congenital Heart Disease, Clinical Studies from Fetus to Adult; 5 (5): 430-4. 2010.
PMID 21087427

41. *Repair of anomalous origin of right pulmonary artery from ascending aorta without cardiopulmonary bypass.*
Mitropoulos FA, Kanakis MA, **Plunkett M**, Davlouros PA, Laks H.
Heart Surgery Forum;13:E339-41, 2010.
PMID 20961839

42. *Wang-Zwisch Double Lumen Cannula (DLC) Leads to Total Cavopulmonary Support in a Failing Fontan Sheep Model.*
Wang D, **Plunkett M**, Lynch J, Zhou X, Ballard-Croft C, Zwischenberger J:
Annals of Thoracic Surgery, 91(6): 1956-60, 2011.
PMID 21531379

43. *Successful Use of Pneumatic Biventricular Assist Device as a Bridge to Transplantation in Cardiogenic Shock,*
Moriguchi J, Davis S, Jocson R, Esmailian F, Ardehali A, Laks H, Kwon M, Kittleson M, Kobashigawa J, Patel J, Marelli D, **Plunkett M**, Beygui R, and Shemin R:

Journal of Heart and Lung Transplant; 30 (10): 1143-1147, 2011.
PMID 21640618

44. *Angiojet Rheolytic Thrombectomy for Thrombotic Myocardial Injury in a 15- year old Cystic Fibrosis Patient During Lung Transplantation.*
Hayes D, Schell R, **Plunkett M**, Gurley J, and Hoopes C:
Annals of Thoracic Surgery, 94 (2), 626-628, 2012.
PMID 22579902

45. *Late-Presenting Bochdalek Hernia in a 3 Month Old Child Following Congenital Cardiac Repair.*
Chau D, Srour H, Rolf C, O'Connor W, Cumbermack K, Bezold L, Kozik D, **Plunkett M**, Murphy T, Hessel E:
World Journal of Pediaric and Congenital Heart Surgery, 4 (2): 213-6, 2013.
PMID 23799739

46. *A Practical and Less Invasive Total cavopulmonary Connection Sheep Model.*
Wang D, **Plunkett M**, Gao G, Zhou X, Ballard-Croft C, Reda H, Zwischenberger JB.
ASAIO J, 60 (2): 178-182, 2014.
PMID 24399067

47. *Management of an Associated Ventricular Septal Defect at the Time of Coarctation Repair.*
Plunkett M, Harvey B, Menk J, Kochilas L, St Louis J:
Annals of Thoracic Surgery, 98 (4):1412-8, 2014.
PMID 25149056

48. *A Paired Membrane Umbrella Double Lumen Cannula Ensures Consistent Cavopulmonary Assistance in a Fontan Sheep Model.*
Wang D, Gao G, **Plunkett M**, Zhao G, Topaz S, Ballard-Croft C, Zwischenberger, JB:
Journal of Thoracic and Cardiovascular Surgery, 148 (3) :1041-7, 2015.
PMID 24930609

Chapters and Review Articles

1. *Pulmonary Evaluation*
Plunkett M:.
The Duke Handbook of Surgical Intensive Care. Lyerly HK and Gaynor JW (Eds.), Yearbook. Mosby,1991.

2. *Pediatric Cardiac Surgery*
Ungerleider RM, **Plunkett M**, Gaynor JW:.
Surgery of Infants and Children: Scientific Principles and Practice.
Oldham KT, Colombani, and Foglia (Eds.), Lippincott-Raven, 1997.

3. *Pulmonary Stenosis and Pulmonary Atresia with Intact Ventricular Septum.*
Laks H, **Plunkett M**:

Mastery of Cardiothoracic Surgery.
Kaiser LR, Kron IL, and Spray TL (Eds.), Lippincott-Raven; 1998

4. *Ebstein's Anomaly: Surgical Perspectives*
Plunkett M, Laks H:.
e-Medicine Journal, Vol 3, No. 2, 2002.

5. *Pulmonary Artery Banding*
Plunkett M, Laks H:.
e-Medicine Journal, Vol 2, No. 4, 2002.

6. *Surgery for Adults with Congenital Heart Disease.*
Laks H, Marelli D, **Plunkett M,** Odim JK, Meyers J:
In Cohn, L (ed) Cardiac Surgery in the Adult, 2nd edition, McGraw Hill Publisher, 2003.

7. *Right Ventricular Outflow Tract Obstruction with Intact Ventricular Septum.*
Laks H, **Plunkett M**:
In Gardner TJ, Spray TL (eds) Rob and Smith's Operative Cardiac Surgery, 5th edition, London UK, Arnold Publishers, 2004.

8. *Pulmonary Stenosis and Pulmonary Atresia with Intact Ventricular Septum.*
Plunkett M, Laks H:
Mastery of Cardiothoracic Surgery. Kaiser LR, Kron IL, and Spray TL (Eds.), Lippincott-Raven, 2006.

9. *Ebstein's Anomaly: Surgical Perspectives*
Plunkett M, Laks H:.
e-Medicine Journal, updated , 2006.

10. *Pulmonary Artery Banding.*
Plunkett M, Laks H:
e-Medicine Journal, , updated 2006.

11. *Surgery for Adults with Congenital Heart Disease.*
Laks H, Marelli D, **Plunkett M,** Meyers J:
In Cohn, L (ed) Cardiac Surgery in the Adult, 3rd edition, McGraw Hill Publisher 2006.

12. *Pulmonary Stenosis and Pulmonary Atresia with Intact Ventricular Septum.*
Plunkett M, Mitropoulos F, Laks H:
In Yuh D, Vricella L, Baumgartner W (eds.) The Johns Hopkins Manual of Cardiothoracic Surgery, McGraw-Hill, NY, 2007.

13. *Pulmonary Artery Banding*
Plunkett M, Laks H, Nguyen K..
eMedicine from WebMD. Available at:
http://emedicine.medscape.com/article/905353-overview.
Updated 2008.

14. *Ebstein Malformation, Surgical Treatment*
Plunkett M, Laks H..
eMedicine from WebMD. Available at:
http://emedicine.medscape.com/article/903579-overview.
Updated 2009.

14. *Survival Patterns After Cardiac Surgery or Interventional Catheterization: A Broadening Base*
Perloff JK, **Plunkett M**:.
In Perloff JK, Child J (eds.) Congenital Heart Disease in Adults 3rd Edition, W.B. Saunders, 2009.

15. *Residua and Sequelae. A Perspective*
Perloff JK, **Plunkett M**:.
In Perloff JK, Child J (eds.) Congenital Heart Disease in Adults 3rd Edition, W.B. Saunders, 2009.

16. *Cardiac Surgery in Adults with Congenital Heart Disease: Operation and Reoperation.*
Marelli D, Laks H, Perloff JK, **Plunkett M**:
In Perloff JK, Child J (eds.) Congenital Heart Disease in Adults 3rd Edition, W.B. Saunders, 2009.

17. *Residua and Sequelae Involving Cardiac Valves*
Plunkett M, Perloff JK:.
In Perloff JK, Child J (eds.) Congenital Heart Disease in Adults 3rd Edition, W.B. Saunders, 2009.

18. *Prosthetic Materials: Selection, Use, and Long-Term Effects*
Plunkett M, Perloff JK:.
In Perloff JK, Child J (eds.) Congenital Heart Disease in Adults 3rd Edition, W.B. Saunders, 2009.

20. *Mechanical Circulatory Support.*
Kozik D, **Plunkett M**:
Organogenesis; 7 (1): 50-63, 2011.
PMID 21289482

21. *Pulmonary Stenosis and Pulmonary Atresia with Intact Ventricular Septum*
Kozik D, Lawrence C, **Plunkett, M**:.
In Yuh D, Vricella L, Baumgartner W (eds.)
The Johns Hopkins Manual of Cardiothoracic Surgery, Second Edition, McGraw-Hill, NY, 2014.

22. *Pulmonary Stenosis and Pulmonary Atresia with Intact Septum.*
Plunkett M, Kozik D:
Mastery of Cardiothoracic Surgery, Third Edition, Lippincott, Williams and Wilkins, 2014.

23. *Pediatric Heart and Lung Transplantation,*
Hyde B, Kozik D, Hoopes C, and **Plunkett M**:
A Comprehensive Approach to Congenital Heart Disease, Jaypee Brothers Medical Publishing LTD, Philadelphia, PA. 2014.

24. *Mechanical Circulatory Support Devices in Pediatric Patients.*
Plunkett M, St. Louis, J:
Handbook of Cardiac Anatomy, Physiology, and Devices. 3rd Edition, Iazzo, P (Ed), Sringer-Velig, 2015.

Abstracts

1. *Comparison of Direct Mechanicla Ventricular Actuation and Cardiopulmonary Bypass.*
Anstadt MP, Hendry PJ, **Plunkett M**, Menius JA, Lowe JE:
American Society of Artificial Internal Organs, 1989.

2. *Optimal Hypothermic Preservation for Donor Hearts.*
Hendry PJ, Anstadt MP, **Plunkett M**, Menius JA, Pacifico AD, Lowe JE:
Circulation (II) 80: II-318,
American College of Cardilogy, 1989.

3. *Mechanical Myocardial Actuation Improves Tolerance to Ischemia.*
Anstadt MP, Hendry PJ, **Plunkett M**, Menius JA, Pacifico AD, Lowe JE:
Circulation (II) 80: II-318,
American College of Cardiology, 1989.

4. *Effects of Reperfusion with Adenine Ribose and EHNA on Cardiac Metabolism and Function following Ischemia.*
Pacifico AD, **Plunkett M**, Hendry PJ, Anstadt MP, Menius JA, Lowe JE:
American College of Cardiology, 1990.

5. *Mechanical Cardiac Actuation Achieves Hemodynamics Similar to Cardiopulmonary Bypass.*
Anstadt MP, Henry PJ, **Plunkett M**, Menius JA, Pacifico AD, Lowe JE:
Society of University Surgeons, 1990.

6. *Biventicular Cardiac Assist Versus Cardiopulmonary Bypass for Resuscitation..*
Anstadt MP, Hendry PJ, **Plunkett M** , Menius JA, Taber JE, Tedder M, Lowe JE:
American Society of Artificial Internal Organs,_1991.

7. *Improved Donor Myocardial Recovery Using a New Anti-peroxidant..*
Hendry PJ, Ansdadt MP, **Plunkett M**, Amato MT, Menius JA, Lowe JE:
International Society for Heart and Lung Transplantation, 1991.

8. *First Successful Bridge to Cardiac Transplantation Using Direct Mechanical Ventricular Actuation*

Lowe JE, Anstadt MP, Van Trigt P, Smith PK, Hendry PJ, **Plunkett M**, Anstadt GL:.
Society of Thoracic Surgeons, 1991.

9. *Effects of Amrinone Versus Dobutamine on Subsequent Tolerance to Global Myocardial Ischemia..*
Amato MT, Hendry PJ, Anstadt MP, **Plunkett M** , Menius JA, Lowe JE:
American College of Surgeons (ACOS), Surgical Forum, 1991.

10. *Ischemic Preconditioning Results from Severe Global Myocardial Ischemia .*
Anstadt MP, Tedder M, Hendry PJ, **Plunkett M**, Hedge S, Lowe JE: American Society of Artificial Internal Organs (ASAIO),1992.

11. *Pulsatile Versus Nonpulsatile Flow: Hemodynamics and Organ Perfusion During Resuscitative Circulatory Support.*
Anstadt MP, Hendry PJ, **Plunkett M,** Tedder M, Tamayo A, Lowe JE: American Society of Artificial Internal Organs (ASAIO), 1992.

12. *Chronic Hypoxemia Induces Adaptive Changes in the Neonatal Myocardium.*
Plunkett M, Hendry PJ, Anstadt MP, Fontana GP, Camporesi EM, Amato MT,Lowe JE:
Association of Academic Surgeons, Hershey, PA, November, 1993.

13. *Hypertrophy Reduces Tolerance to Ischemia in Neonatal Right Ventricular Myocardium*
Plunkett M, Hendry PJ, Anstadt MP, Amato MT, St. Louis JD, Lowe JE:
Society of Thoracic Surgeons, Palm Springs, CA, January, 1995.

14. *Differential Expression of the Constitutive Form of Nitric Oxide Synthase (cNOS) in the Lung.*
St. Louis JD, Hendrickson SC, **Plunkett M**, Abdel-aleem S, Reed R, Lowe JE:
Society of Molecular and Cellular Cardiology, Chicago, IL, 1996.

15. *Cellular Metabolism During Myocyte Maturation: Role of L-Carnitine.*
St. Louis JD, Hendrickson SC, **Plunkett M**, Darwood DA, Aarouk W, Lowe JE:
Society of Molecular and Cellular Cardiology, Chicago, IL, 1996.

16. *Recent Trends in Early Outcomes of Adult Patients after Heart Transplantation: A Single Institution Review of 251 Transplants*
Tsai F, Marelli D, Bresson J, Gjertson D, Ardehali A, Esmailian F, Hamilton M, Fonarow GC, Moriguchi J, **Plunkett M**, Hage A, Tran J, Kobashigawa J, Laks H:.
American Society of Transplant Surgeons (ASTS), Chicago, IL, 1999.

17. *Short-term Bridge to Transplant Using the BVS 5000 Ventricular Assist Device.*
Marelli D, Laks H, Moriguchi, Fazio D, Hamilton M, Fonarow G, Hage A, Salehmoghaddam S, Kubak B, Meehan D, Sadeghi A, Esmailian F, Ardehali A, **Plunkett M**, Kobashigawa J:
American Society of Transplant Surgeons (ASTS), Chicago, IL, 1999.

18. *Use of Mechanical Assist to Bridge Ppediatric Ppatients with Severe End-Stage Heart Disease to Transplantation*
Marelli D, Eisenring C, Laks H, Sadeghi A, Ardehali A, **Plunkett M**, Fazio D,

Talamo M, Alejos J, Galindo A, Burch C,:.
International Society of Heart and Lung Tranplantation, Osaka, Japan, April, 2000.

19. *Mechanical Cardiac Assist Using the BVS 5000: Five-year Experience.*
Marelli D, Fazio D, Laks H, Esmailian F, Ardehali A, **Plunkett M**, Sadeghi A:
American Society of Artificial Internal Organs (ASAIO), New York, NY, June, 2000.

20. *Use of Hearts Transplanted from Donors with Atraumatic Intracranial Bleeds.*
Marelli D, Tsai F, Laks H, Houston E, Bresson J, Friend L, Gertson D, Sykes A, Ardehali A, Esmailian F, Hamilton M, Fonarrow G, Moriguchi J, **Plunkett M**, Hage A, Brown M, Mark M, Kobashigawa J:
International Society for Heart and Lung Transplantation (ISHLT), Vancouver, British Columbia, April, 2001.

21. *Seventeen Year Experience with 1083 Heart Transplants at a Single Institution.*
Marelli D, Laks H, Kobashigawa J, Bresson J, Ardehali A, Esmailian F, **Plunkett M**, Kubak B, Tsai FC, Karandikar K, Monempour S:
Society of Thoracic Surgeons (STS), Ft. Lauderdale, FL, January , 2002.

22. *Heart Transplantation in Patients with Diabetes Mellitus in the Current Era.*
Patel B, Marelli D, Patel J, Tsai F, Moriguchi J, Fonarow G, Hamilton M, Ardehali A, Esmailian F, **Plunkett M**, Hage A, Kobashigawa J, Laks H:
International Society for Heart and Lung Transplantation (ISHLT), Washington, DC, April, 2002.

23. *Use of Donor Hearts with Coronary Artery Disease.*
Laks H, Marelli D, Bresson J, Ardehali A, Esmailian F, **Plunkett M**, Moriguchi J, Kobashigawa J:
International Society for Heart and Lung Transplantation (ISHLT), Washington, DC, April, 2002.

24. *Octreotide for management of chylothorax following pediatric cardiac surgery.*
Sim J, Mitropoulos F, Gurvitz M, **Plunkett M**, Laks H, Drant S:
California Chapter, American College of Cardiology (ACC), Anaheim, CA, September, 2002

25. *Successful Management of Patients with Pulmonary Atresia with Intact Ventricular Septum Using a Three-Tier Grading System for Right Ventricular Hypoplasia.*
Tung T, Odim J, **Plunkett M**, Drinkwater D, Alikhani A, Laks H:
American Heart Association (AHA), Chicago, IL, November, 2002.

26. *Altered Collagen Subpopulations and the Matrix Mettalloproteinase Regulation in the Development of Atrial Fibrillation in Atrial Dysfunction.*
Xu J, Cui G, Esmailian F, **Plunkett M**, Marelli D, Ardehali A, Odim J, Laks, H Sen L:
American College of Cardiology (ACC), Chicago, IL, March, 2003.

27. *Outcome of Orthotopic Heart Transplantation for the Failing Univentricular Hear*
Odim J, Alikhani A, Alejos J, Burch C, **Plunkett M,** Laks H:
American Transplant Congress (ATC), May, 2003:

28. *Outcomes-Based Analysis of Atrioventricular Canal Repair.*
Bahrami S, Laks H, Alejos J, Myers J, **Plunkett M**:
Annual Scientific Meeting of the Southern California Chapter, American College of Surgeons (ACOS), Santa Barbara, CA, January, 2003.

29. *Thymopoeisis and peripheral T-cell populations in children after surgery for congenital heart disease: Effects of thymectomy in infancy.*
Halnon N; **Plunkett M**; Jamieson B; Belzer M; Church J; Krogstad P:
American Academy of Pediatric (AAP) Research, April, 2003.

30. *Orthotopic heart transplantation in patients with Fontan circulation*
Mitropoulos F, Laks H, Neelankavil J, Odim J, AlejosJ, Kobashigawa J, and **Plunkett M**:.
Society of Thoracic Surgeons (STS), San Antonio, TX, January, 2004.

31. *Failing Fontan Circulation Necessitating Transplantation: A Clinicopathologic Correlation.*
Mitropoulos F, Laks H, Neelankavil J, Alejos J, Child J,Allada V, Drant S, Kobashigawa J, Odim J, Fishbein M, **Plunkett M**:
American College of Cardiology (ACC), New Orleans, LA, March, 2004.

32. *Early graft failure after orthotopic heart transplantation in children.*
Odim J, Laks H, Kunitake H, Banerji A, Mukherjee K, Alikani A, **Plunkett M**, Burch C, and Alejos J:
International Society for Heart and Lung Transplantation (ISHLT), San Francisco, CA, 2004.

33. *Use of Donor Hearts with Left Ventricular Ejection Fraction Less then 50 % For Transplantation*
Mitropoulos F, Laks H, Kermani R, Marelli D, Ardehali A, **Plunkett M**, Esmailian F, Odim J, Moriguchi J, Hamilton L, Patel J, and Kobashigawa J:.
American Transplant Congress (ATC), Boston, MA, May, 2004.

34. *Outcome of Hearts with Cold Ischemia greater than 300 minutes: A Case Matched Study.*
Mitropoulos F, Laks H, Kermani R, Marelli D, Ardehali A, **Plunkett M**, Esmailian F, Odim J, Moriguchi J, Hamilton L, Patel J, and Kobashigawa J:
European Association of Cardiothoracic Surgery (EACS), October, 2004.

35. *Matrix Metalloproteinase Deficiency in Aortic Dissection.*
Chang-Cheng Chen, Guanggen Cui, Latha Polavaram **Plunkett M**, Fardad Emailian, Hillel Laks, Luyi Sen:
American Heart Association (AHA), November, 2004.

36. *Alterations of matrix metalloproteinase expression and activation in dissecting aortic wall from patients with and without Marfan's syndrome.*
Cui, G, Chen CC, Laks H, Perloff, J, **Plunkett M**, Esmailian F, , Polavaram L , Sen L.
American College of Cardiology (ACC), 2005.

37. *Transformine growth factor-1 expression upregulates membrane type-B1 matrix metalloproteinase in dissecting aortic wall*
Cui G, Chen CC, **Plunkett M**, Esmailian F, Beygui RE, Laks H, Sen L.
American College of Cardiology (ACC), 2005.

38. *Intraoperative Pulmonary Artery Stenting. An Alternative Technique for the Management of Congenital Pulmonary Artery Stenosis in Adjunct with Surgical Repairs.*
Mitropoulos F, Laks H, Kapadia N, Gurvitz M, Odim J, Moore J, **Plunkett M**:
Society of Thoracic Surgeons (STS), Tampa, FL, January, 2005.

39. *Long-term outcome with Bioprosthetic Pulmonary Valve Replacement.*
Mitropoulos F, Laks H, Kapadia Neel, **Plunkett M**:
Society of Thoracic Surgeons (STS) Chicago, IL, January, 2006.

40. *Repair of Aortic Pseudoaneurysm Following Heart Transplantation.*
Bahrami S, Alejos J, Leong F, **Plunkett M:**
Southern California Chapter, American College of Surgeons (ACOS), Santa Barbara, CA, January, 2007.

41. *Neonatal ECMO with an Absent Right Superior Vena Cava.*
Brenner M, Riskin D, Shew S, **Plunkett M:**
Southern California Chapter, American College of Surgeons (ACOS), Santa Barbara, CA, January, 2007.

42. *Alteration of Metalloproteinase Expression Profile in Proximal Pulmonary Arterial Wall from Patients with Fallot's Tetralogy.*
Cui G,Perloff J, **Plunkett M**, Laks H, Sen L:
American Heart Association (AHA), Orlando, FL, November, 2007.

43. *Up-Regulated Transforming Growth Factor-B1 Co-Localized with Elastin Lamella in Aortic Wall Contributes to Thoracic Aortic Dissection*
Yang S, Cui G, Beygui R, Esmailian F, Ardehali A, **Plunkett M**, Laks H, Sen L:.
American Heart Association (AHA), Orlando, FL, November, 2007.

44. *Comparison of Transforming Growth Factor-B1 Expression in Aortic Wall of Thoracic Aortic Aneurysm Versus Dissection.*
Yang S, Cui G, Beygui R, Esmailian F, Ardehali A, Tang J, **Plunkett M**, Laks H, Sen L:
American Heart Association (AHA), Orlando, Fl, November, 2007.

45. *Clinical Outcomes in Pediatric Heart Transplantation: Cyclosporin A versus Tacrolimus in the UCLA Experience.*
Springer J, Williams R, Alejos J, **Plunkett M**:
Southern California Chapter, American College of Surgeons (ACOS), Santa Barbara, CA, January, 2008.

46. *Truncal Valve Repair in Neonates Using Pericardial Leaflet Extension.*
Bahrami S, Mitropoulos F, Leong F, Laks H, **Plunkett M**:
Southern California Chapter, American College of Surgeons (ACOS), Santa Barbara, CA, January, 2008.

47. *Impact of Age on Outcome of Ventricular Assist Devices Utilized as Bridge to Cardiac Transplantation*
Kwon M, Moriguchi J, **Plunkett M**, Ardehali A, Beygui R, Marelli D, Laks H, Shemin R, Esmailian F:.
International Society for Heart and Lung Transplantation (ISHLT), Boston, MA, April, 2008.

48. *Tricuspid Valve Regurgitation After Heart Transplantation Using Bicaval Anastomosis Technique*
Marelli D, Kobashigawa J, Beygui R, Esmailian F, Laks H, **Plunkett M**, Ardehali A:.
International Society for Heart and Lung Transplantation (ISHLT)_Boston, MA, April, 2008.

49. *ECMO to Salvage Severe Cardiogenic Shock in Advanced Heart Failure and Transplantation.*
Marelli D, Kobashigawa J, Moriguchi J, Shuvayev I, Wong S, Khan T, Patel J, Beygui R, Esmailian F, Laks H, **Plunkett M**, Ardehali A:.
International Society for Heart and Lung Transplantation (ISHLT), Boston, MA, April, 2008.

50. *Long Term Outcome of Heart Transplant in the Elderly.*
Marelli D, Kobashigawa J, Hamilton M, Noguchi E, Moriguchi J, Patel J, Laks H, Esmailian F, Beygui R, **Plunkett M,** Ardehali A*:*
International Society for Heart and Lung Transplantation (ISHLT), Boston, MA, April, 2008.

51. *Upregulated Transforming Growth Factor B-1 Expression and Distribution in Coronary Arterial Wall from Patients with Cardiac Allograft Vasculopathy Versus Ischemic Cardiomyopathy*
Tang J, Cui G, Laks H, Yang S, Ardehali A, Esmailian F, **Plunkett M**, Beygui R, Marelli D, Sen L:.
International Society for Heart and Lung Transplantation (ISHLT), Boston,MA, April, 2008.

52. *Overexpression of Transforming Growth Factor B-1 in Left Ventricle and Coronary Artery Is Associated with the Development of Cardiac Allograft Vasculopathy in Patients After Heart Transplantation*
Tang J, Cui G, Laks H, Yang S, Ardehali A, Esmailian F, **Plunkett M**, Beygui R, Marelli D, Sen L:.
American College of Cardiology (ACC), Chicago, IL, March, 2008.

53. *Improved Clinical Outcomes Using Bi-Ventricular Assist Devices as Bridges to Transplant in Critically Ill Patients.*
Moriguchi J, Kown M, **Plunkett M**, Esmailian F, Jocson R, Laks H, Marelli D, Beygui R, Davis S, Ardehali A, Patel J, Kobashigawa J:
International Society for Heart and Lung Transplantation (ISHLT), Boston, MA, 2008.

54. *Improvement in Tricuspid Regurgitation and Right Ventriuclar Function in a Patient with Continuous Flow LVAD Following Pharmacologic Augmentation of LV Afterload*

Bonnell M, Banuelos S, **Plunkett M**, Campbell C, Booth D, Hatton K:.
American Society of Artificial Internal Organs (ASAIO), Dallas, TX, May, 2009.

55. *A New Failing Fontan Sheep Model,*
Wang D, **Plunkett M**, Zhou X, Reda H, Thomas J, and Zwischen berger J:
American Society of Artificial Internal Organs (ASAIO), Baltimore, MD, May, 2010.

56. *Percutaneous Cavopulmonary Assist System for Failing Fontan Circulation*
Wang D, **Plunkett M**, Zhou X, Reda H, Thomas J, and Zwischen berger J:,
American Society of Artificial Internal Organs (ASAIO), Baltimore, MD, May, 2010.

57. *Surgical Treatment of Coronary Artery Anomalies.*
Plunkett M, Lawrence C, Kozik D:
International College of Angiology, Lexington, KY, October, 2010.

58. *Double Lumen Cannula (DLC) Leads to Total Cavopulmonary Assistance (CPA) in a Failing Fontan Sheep Model,*
Plunkett M, Wang D, Lynch J, Zhou X, Zwischenberger J:
Southern Thoracic Surgery Association (STSA), Orlando, FL, November, 2010.

59. *Development of a Percutaneous Double Lumen Cannula for Ambulatory Right Heart Support.*
Wang D, **Plunkett M**, Zhou X, Rosenstein K, Jones C, Bachette M, Zwischenberger J:
American Society of Artificial Internal Organs (ASAIO), Washington DC, June, 2011.

60. *A Percutaneous Oxy RVAD for Lung and Right Heart Support*
Wang D, **Plunkett M**, Croft C, Zhou X, Rosenstein K, Jones C, Zwischenberger J:.
American Society of Artificial Internal Organs (ASAIO), San Fransisco, CA, June, 2012.

61. *Dual lumen catheter for Cavopulmonary support.*
Wang D, **Plunkett M**, Croft C, Zwischenberger J:
American Society of Artificial Internal Organs (ASAIO), Chicago Il, 2013.

62. *Apical dual lumen catheter for left ventricular support in a lamb model.*
Wang D, **Plunkett M**, Croft C, Zwischenberger:
American Society of Artificial Internal Organs (ASAIO), Chicago, IL, June, 2013.

63. *Management of Coarctation of the Aorta with Associated Ventricular Septal Defect.*
St Louis J, Harvey B, Lazaros, **Plunkett M**:
Southern Thoracic Surgical Association (STSA), Scottsdale AZ, Nov, 2014.

Invited Lectures and Presentations

1. *Early Versus Late Repair of Tetralogy of Fallot.*
   UCLA Division of Cardiothoracic Surgery Grand Rounds. Los Angeles, CA, March, 1996.

2. *Surgical Approaches to Tetralogy of Fallot*
   University of Illinois College of Medicine, Department of Pediatrics Grand Rounds. Peoria, IL, October, 1996.

3. *Management of Acute Aortic Dissection*
   University of Illinois College of Medicine, Dept of General Surgery Grand Rounds. Peoria, IL, October, 1996.

4. *Cardiac Surgery: New Frontiers*
   American Heart Association (AHA), Illinois Local Chapter. Peoria, IL, October, 1997.

5. *Advancements in Cardiac Surgery*
   University of Illinois College of Medicine, Dept of General Surgery Grand Rounds. Peoria, IL, December, 1997.

6. *Transpostion of the Great Arteries*
   University of Illinois College of Medicine, Department of Pediatrics Grand Rounds. Peoria, IL, March, 1998.

7. *Surgical Treatment of Congenital Heart Disease*
   University of Illinois College of Medicine, Division of Neonatology Grand Rounds. Peoria, IL. May, 1999.

8. *Minimizing Complications in Patients with Ventricular Assist Devices: Paracorporeal vs, Implantable Devices*
   LA Thoratec Symposium. Los Angeles, CA. September, 1999

9. *Advancements in Mitral Valve Repair*
   UCLA Primary Care Update.
   Las Vegas, NV. April, 2000

10. *Bacterial Endocarditis: The Heart Surgeon's Approach*
    Department of Medicine Grand Rounds, Kern Medical Center, , Bakersfield, CA. June, 2000.

11. *Congenital Heart Surgery: Past, Present, and Future*
    Division of Neonatology Grand Rounds, UCLA Harbor Medical Center, Torrance, CA. June, 2000.

12. *Use of ECMO in Pediatric Heart Surgery*
    UCLA ECMO Symposium, UCLA Medical Center, Los Angeles, CA, July, 2000.

13. *Congenital Heart Surgery: What the Adult Cardiologist Needs to Know*
UCLA Division of Cardiology Grand Rounds, UCLA Medical Center, 'Los Angeles, CA. July, 2000.

14. *Advances in Pediatric Cardiac Surgery*
Association of Operating Room Nurses (AORN) , Torrance Memorial Hospital, Torrance, CA. February, 2001.

15. *Advances in Pediatric Heart Valve Surgery*
American Heart Association (AHA) Congenital Heart Disease Symposium, Universal City, CA, May, 2001.

16. *ECMO for Pediatric Cardiac Support*
UCLA ECMO Symposium, UCLA Medical Center, Los Angeles, CA, July, 2001.

17. *Advances in Pediatric Cardiac Transplantation*
UCLA Pediatric ICU Course, UCLA Medical Center, Los Angeles, CA, August, 2001.

18. *Pediatric Heart Transplantation: The UCLA Experience*
Division of Pediatric Cardiology Grand Rounds, UT Southwestern School of Medicine, Children's Medical Center of Dallas, TX, October, 2002.

19. *Surgical Management in Adults with Congenital Heart Disease*
Symposium on CHD in Adults:Diagnostic and Therapeutic Strategies, Santa Monica, CA, April, 2002.

20. *Frontiers* in Congenital Heart Disease Surgery
American Heart Association (AHA) Congenital Heart Disease Symposium, Universal City, CA, May, 2002.

21. *Heart Transplantation* 2002 *Update*
Division of Cardiology Grand Rounds, Saint Francis Medical Center Lynwood, CA, May, 2002.

22. *Update on ECMO for Cardiac Support*
UCLA Neonatal ECMO Symposium, UCLA Medical Center, Los Angeles, CA, July, 2002.

23. *SubAortic Stenosis: Complexities of a Simple Cardiac Defect*
Department of Pediatrics Grand Rounds, Harbor UCLA Medical Center, Torrance, CA, January, 2003.

24. *Progress in Valve Surgery for Congenital Heart Disease*
Hearts Around the World Program, Edwards Life Sciences, Irvine, CA, February, 2003.

25. *Congenital Cardiac Surgery: The First Fifty Years*
Ahmanson/UCLA Adult Congenital Heart Disease Symposium, Marina Del Rey, CA, April, 2003.

26. *Atrial Septal Defects: Surgical Strategies and Outcome:*
Ahmanson/UCLA Adult Congenital Heart Disease Symposium, Marina Del Rey, CA, April, 2003.

27. *Arterial Switch Operation: Coming of Age:*
Ahmanson/UCLA Adult Congenital Heart Disease Symposium, Marina Del Rey, CA, April, 2003.

28. *New Technologies in Pediatric Heart Valve Surgery*
American Heart Association (AHA) Congenital Heart Disease Symposium, Universal City, CA, May, 2003.

29. *ECMO in Pediatric Cardiac Surgery*
UCLA Neonatal and Pediatric ECMO Symposium, UCLA Medical Center, Los Angeles, CA, July, 2003.

30. *Advances in Surgical Treatment of Cardiomyopathy and Congestive Heart Failure*
Cutting Edge Therapy in Heart Failure : Newest Concepts and Therapies. Las Vegas, Nevada, February, 2004.

31. *Advances in Pediatric Heart Transplantation*
Department of Pediatrics Grand Rounds, Fountain Valley Medical Center, Fountain Valley, CA, June 2004.

32. *Advances in Surgical Treatment of Cardiomyopathy and Congestive Heart Failure*
Cutting Edge Therapy in Heart Failure : Newest Concepts and Therapies. Newport Beach, CA, October, 2004.

33. *The Evolution of Cardiac Surgery: 50 years of Progress*
Great Moments in Medicine Lecture Series. David Geffen School of Medicine at UCLA. Los Angeles, CA, February, 2005.

34. *Advances in Heart Valve Surgery*
Departments of Medicine Grand Rounds, Saddleback Memorial Hospital Laguna Hills, California. Septamber, 2005.

35. *Advances in Valvular Heart Surgery* "Mending Hearts"
Division of Cardiology Conference. Bakersfield, California. October, 2005.

36. *Historical Landmarks in Congenital Heart Surgery*
Adult Congenital Heart Association (ACHA), Southwestern Chapter Conference. Manhattan Beach, California. October, 2005.

37. *Cardiac Transplantation for Congenital Heart Disease*
Adult Congenital Heart Association (ACHA), Southwestern Chapter Conference. Manhattan Beach, California. October, 2005.

38. *Surgical Approach to Pericardial Disease*
Division of Cardiology Grand Rounds. Fountain Valley Medical Center, Fountain Valley, California. August, 2006.

39. *Ventricular Assist Devices and the Artificial Heart*
Division of Cardiology Grand Rounds. Good Samaritan Hospital, Los Angeles. California. September, 2006.

40. *Timing of Valvular Heart Surgery for Aortic Regurgitation and Mitral Regurgitation*
Cardiac and Vascular Symposium. Glendale Adventist Medical Center Program, La Canada, California, October, 2006.

41. *Surgical Therapy for Congenital Heart Disease*
Nursing Cardiovascular Symposium. UCLA School of Nursing. Los Angeles, California, February, 2007.

42. *Pediatric Cardiac Surgery: Past, Present, and Future.*
Department of Pediatrics Grand Rounds, White Memorial Medical Center, Los Angeles, California, April, 2007.

43. *Brave New World of Cardiac Surgery*
Congenital Heart Disease Symposium, Universal City, CA, May, 2007.

44. *Surgical Therapy for Congenital Hear Disease*
Department of Pediatrics Grand Rounds. Marshall University, Joan C. Edwards School of Medicine, Cabell Huntington Hospital, Huntington, W Va, January, 2008.

45. *Congenital Heart Disease: What you need to Know*
Pediatric Update Symposium, Department of Pediatrics, UK College of Medicine, Lexington, KY, April, 2008.

46. *Arterial Switch Operation: Milestone of Congenital Heart Surgery*
Department of Surgery Grand Rounds, University of Kentucky College of Medicine, UK Chandler Medical Center, Lexington, KY, May, 2008.

47. *Congenital Heart Surgery: Past, Present, and Future*
Association of Operating Room Nurses (AORN) Symposium. University of Kentucky, UK Chandler Medical Center, Lexington, KY, October, 2008.

48. *Atrioventricular Canal Defect: Modified Single Patch Technique.* "My Favorite *Operation"*
Postgraduate Course, Congenital Session, Southern Thoracic Surgical Association (STSA) 55th Annual Meeting, Austin, Texas, November, 2008.

49. *Late Pulmonary Valve Replacement in Tetralogy of Fallot: Indications, Timing Surgical Techniques, and Choice of Valve Replacement.*
Congenital Heart Surgery Symposium, Society of Thoracic Surgeons (STS), San Fransisco, CA, January, 2009

50. *Congenital Heart Surgery: Past, Present, and Future*
Dept of Pediatrics Grand Rounds, University of Kentucky College of Medicine, UK Chandler Medical Center, Lexington, KY, February, 2009.

51. *Pediatric Cardiac Mechanical Support*
University of Minnesota, Design of Medical Devices (DMD) Conference University of Minnesota College of Medicine Minneapolis, MN, April, 2009.

52. *Surgical Approach to Adults with Congenital Heart Disease*
Symposium *"Congenital Heart Disease: From Fetus to Adult"*, Hazard, KY, March, 2009.

53. *Surgical Treatment of Adults with Congenital Heart Disease*
Dept of Cardiovascular Medicine Grand Rounds, University of Kentucky College of Medicine, UK Chandler Medical Center, Lexington, KY, May, 2009.

54. *The Expanding Use of VADs in Congenital Heart Disease.* T
Thoratec Corporation Clinincal Ventricular Assist Device Conference
Chicago, Illinois, June, 2009.

55. *Prosthetic Valve Options and Thromboembolism Prophylaxis.*
Dept of Cardiolovascular Medicine Grand Rounds,
University of Kentucky College of Medicine, UK Chandler Medical center,
Lexington, KY, September, 2009.

64. *Ventricular Assist Devices in the Pediatric Population.*
University of Minnesota College of Medicine, 3rd Annual Earl Bakken Symposium, Minneapolis, Minnesota, December, 2009.

65. *Surgical Treatment of Coronary Artery Anomalies*
Department of Cardiovascular Medicine Grand Rounds, University of Kentucky College of Medicine, UK Chandler Medical Center, Lexington, KY, March, 2011.

66. *Mechanical Support for the Failing Fontan*
University of Minnesota, Design of Medical Devices (DMD) Conference, University of Minnesota College of Medicine Minneapolis, Minnesota, April, 2011.

67. *Pediatric Cardiac Mechanical Support*
University of Minnesota College of Medicine, 4th Annual Earl Bakken Symposium, Minneapolis, Minnesota, August, 2012.

68. *Pediatric Heart Transplantation: Past, Present, and Future*
Department of Surgery Grand Rounds,
University of Minnesota College of Medicine,
Minneapolis, Minnesota, April, 2013.

69. *Cannulation and Bypass Techniques in Neonatal Heart Surgery: Optimization of Neurodevelopmental Outcomes*
University of Minnesota College of Medicine, 5th Annual Earl Bakken Symposium, Minneapolis, Minnesota, August, 2013.

70. *Surgical Options for the Failing Single Ventricle Fontan Patients*
Design of Medical Devices Conference (DMD),
University of Minnesota College of Medicine,
Minneapolis, Minnesota, April, 2014.

71. *Cannulation Strategies for ECMO Support*
Symposium for ECMO Training and Education,
University of Illinois College of Medicine,
Peoria, IL, October, 2015.

72. *The New Era of Congenital Heart Surgery*
Department of Pediatrics Grand Rounds, OSF St Mary's Medical Center,
Galesburg, IL, April, 2016

73. *Pediatric Cardiac Surgery at CHOI: The New Era.* The Newborn Sympsium, OSF Children's Hospital of Illinois, Jump Simulation Center,
University of Illinois College of Medicine
Peoria, Il, June, 2016.

74. *Whats New in Congenital Heart Surgery*
OSF Children's Hospital of Illinois Foundation Council Meeting
Peoria, IL, May, 2016.

75. *The New Era of Congenital Heart Surgery*
TOUCH Annual Symposium, Congenital Heart Defect Awareness
Jump Simulation Center at OSF Medical Center
Peoria, IL, February 11, 2017.

76. *Surgical Strategies for Single Ventricle Congenital Heart Defects*
PICU Critical Care Conference, Children's Hospital of Illinois
University of Illinois college of Medicine
Peoria, IL, February 13, 2017.

77. *The New Era of Neonatal Heart Surgery*
Neonatology Symposium: 50 years of Progress,
University of Illinois College of Medicine
Peoria, IL, June, 2017.

78. *What's New in Pediatric Heart Surgery?*
TOUCH Annual Symposium, Congenital Heart Defect Awareness
Jump Simulation Center at OSF Medical Center
Peoria, IL, February, 2018.

79. *Current Outcomes in Neonatal Heart Surgery*
Regional Neonatology Symposium
OSF Children's Hospital of Illinois
Peoria, Il, August, 2018.

80. *Single Ventricle Congenital Heart Disease: Progress and Challenges.*
Department of Pediatrics Grand Rounds
University of Illinois College of Medicine
Peoria, IL, September, 2018.

OSF
HEALTHCARE SYSTEM

October 17, 2018

Ms. Courtney R. Avery, Administrator
Illinois Health Facilities and Services Review Board
525 West Jefferson Street, 2nd Floor
Springfield IL 62761

Re: OSF Saint Francis Medical Center
Heart Transplant Program Re-establishment
Selected Organ Transplantation Category of Service (Criterion 1110.240)

Dear Ms. Avery:

This CON Permit Application proposes to re-establish the OSF Saint Francis Medical Center Heart Transplantation Program which was suspended in 2006 after functioning successfully for over 19 years. In fact, the first 1987 heart transplant recipient is now 86 years old and returns to OSF Saint Francis Medical Center twice a year for check-ups.

The proposed program re-establishment at OSF Saint Francis Medical Center will complement the already existing comprehensive cardiovascular program OSF Healthcare System has developed. As well, the proposed program re-establishment at OSF Saint Francis Medical Center has received support from a variety of stakeholders, including existing Illinois heart transplant programs.

There are no capitalized project costs for the program. OSF Saint Francis Medical Center has the existing capacity for its re-establishment.

Enclosed is our check in the amount of $2,500.00 for the application processing fee.
If there are any questions, please contact me either by phone at my direct line 309-308-9656 or by email at mark.e.hohulin@osfhealthcare.org.

Sincerely,

Mark Hohulin

Mark E. Hohulin
Senior Vice President, Healthcare Analytics
OSF HealthCare System

c: Mike Constantino, Supervisor, Project Review Section
Edwin W. Parkhurst, PRISM Healthcare Consulting