

Scripps Clinic and Scripps Green Hospital



2012 Fellowship Training Program

Welcome

Dear Colleague:

Thank you for your interest in the Cardiovascular Medicine Fellowship Program at Scripps Clinic and Scripps Green Hospital. Our mission is to train top candidates to become excellent cardiovascular scientists who, upon graduation, are prepared to excel in clinical cardiology, research, and translational medicine. Here you will find detailed information about our program.

Sincerely,



Guy Curtis, MD, PhD

About Scripps

The mission of the Division of Cardiovascular Disease fellowship is to develop clinical and research leaders who have mastered all components of general cardiology and to provide them with the opportunity to develop a personal emphasis that suits each individual.

Scripps Clinic takes great pride in the close relationship between attending physicians and fellows. It is the priority of the cardiology staff to teach and mentor. This attitude on which the fellowship is based fosters collegial and collaborative interactions between fellows and clinical faculty.

Scripps Clinic

The Scripps Clinic main campus is located in La Jolla, California, on the Torrey Pines mesa and includes Scripps Green Hospital, an acute care hospital with 173 beds; the Anderson Outpatient Pavilion, housing the majority of our 410 physician multispecialty group; the Scripps Research Institute; Scripps Translational Science Institute; the Scripps Center for Genomic Medicine; the West Wireless Medicine Institute; and the Scripps Center for Integrative Medicine and Early Detection.

Scripps Green Hospital is strictly a medical and surgical facility providing acute care services for adults. Obstetric and psychiatric care is provided at other facilities within the Scripps Health system.

Within the hospital complex are the Dobbins Heart Lung Vascular Center, the Blood and Marrow Transplant Center, the Solid Organ Transplant Center and the Scripps Cancer Center. Scripps Clinic is one of the nation's 43 recognized Clinical Translational Science Award Centers, recognized by the National Institutes of Health as being among the premier academic medical centers in the U.S.

Highlights

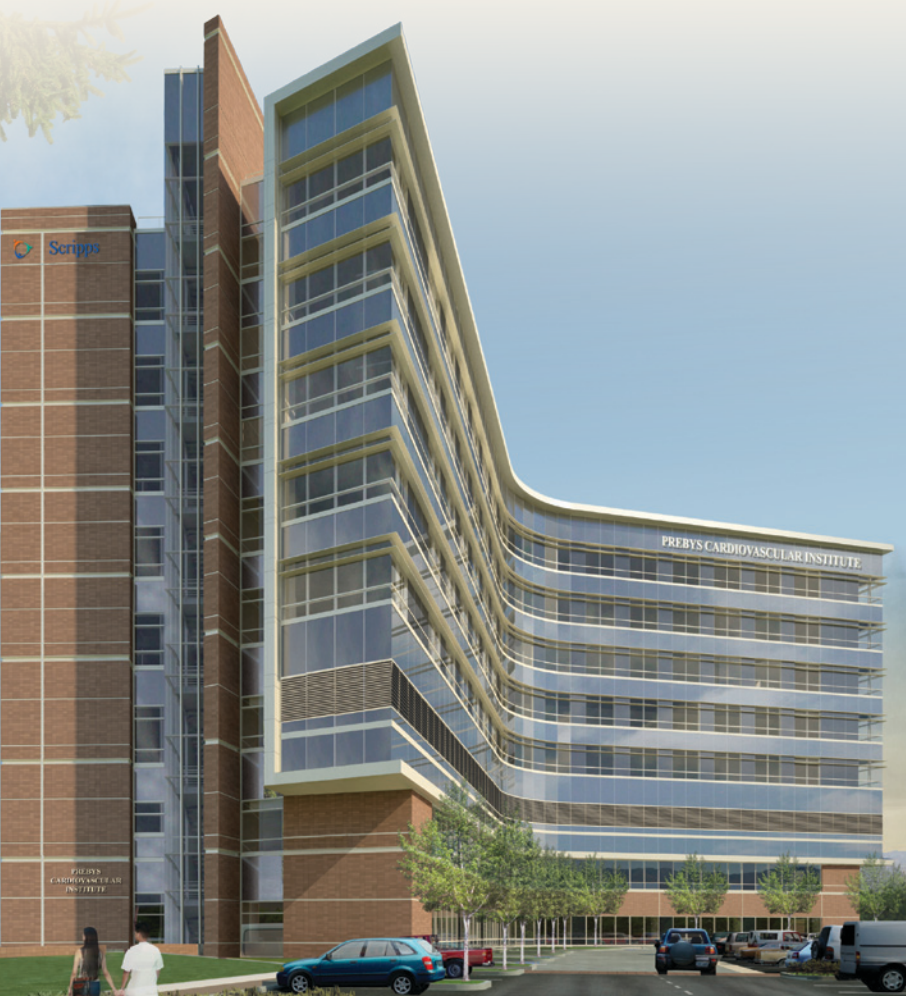
Scripps physicians have pioneered many cardiovascular firsts, including:

- Genetic testing to determine treatment effectiveness
- Vscan™ technology for wireless monitoring and diagnosis
- Percutaneous cardiac valve replacement
- World's first vascular radiation therapy procedures
- One of the first stents (Palmaz-Schatz) co-invented by a Scripps cardiologist
- First Rotablator procedure in the United States to break up plaque in the coronary arteries
- First HeartPOD™ in the Western United States
- First to appreciate symptomatic decrease in left atrial compliance for some patients after a-fib ablation
- First to appreciate role of left atrial compliance in CHF patients

Prebys Cardiovascular Institute

Prebys Cardiovascular Institute will combine the best of innovation and technology to offer the most advanced heart care available. The facility is the cornerstone of a comprehensive master plan that will transform the Scripps Memorial Hospital La Jolla campus and redefine health care in San Diego for the 21st century.

As part of its 25-year master plan for the La Jolla campus, Scripps Health is building Prebys Cardiovascular Institute.



This seven-story, 383,000-square-foot building will cost \$456 million and is scheduled to open for patient care in 2015. **The tower will feature:**

- 108 inpatient beds in private rooms
- 60 intensive care unit beds
- Four operating rooms
- Two hybrid operating rooms
- Four cardiac catheterization labs
- Centralized cardiovascular research labs

Prebys Cardiovascular Institute will serve as a destination for heart patients and will be home to top physicians, researchers and staff who are experts in their fields. It will also make the most of health care resources for the community by bringing together the renowned heart programs throughout the Scripps system into one central location.

The People

Faculty

Guy P. Curtis, MD, PhD

Director, Cardiovascular Fellowship Program

Director, Cardiac Electrophysiology

Robert Russo, MD, PhD

Director, Cardiac MRI Program

Director, Intravascular Ultrasound

Allen Johnson, MD

Senior Consultant, Cardiovascular Disease

Director, Adult Congenital Disease
Chairman Emeritus, Division of Cardiovascular Diseases

David Rubenson, MD

Director, Non-Invasive Laboratory/
Echocardiography

J. Thomas Heywood, MD

Director, Heart Failure Research and Recovery

Michael Smith, MD

Division of Cardiovascular Diseases,
Heart Failure Research and Recovery

Eric Topol, MD

Senior Consultant, Division of Cardiovascular Diseases

Chief Academic Officer,
Scripps Health

Director, Scripps Translational Science Institute

Mimi Guarneri, MD

Founder and Medical Director,
Scripps Center for Integrative Medicine

Division of Interventional Cardiology

Paul Teirstein, MD

Matthew Price, MD

Richard Schatz, MD

Curtiss Stinis, MD

Eric Topol, MD

Division of Electrophysiology

Guy P. Curtis, MD, PhD

Douglas Gibson, MD

John Rogers, MD

Thomas Ahern, MD

John Burkhardt, MD

Andrea Natale, MD

Division of Heart Failure, Recovery, Research, and LVAD Program

J. Thomas Heywood, MD

Michael Smith, MD

Division of Integrative Cardiology

Mimi Guarneri, MD

Christopher Suhar, MD

Elizabeth Kaback, MD

Douglas Triffon, MD

Division of Cardiovascular Diseases

Anil Patel, MD

Malhar Patel, MD

Stephen Hu, MD

Peder Shea, MD

Douglas Brown, MD

Todd Hitchcock, MD

Robert Russo, MD

David Rubenson, MD

Allen Johnson, MD

Division of Cardiothoracic Surgery

J. Jeffery Tyner, MD

James Hemp, MD

Allen Johnson, MD

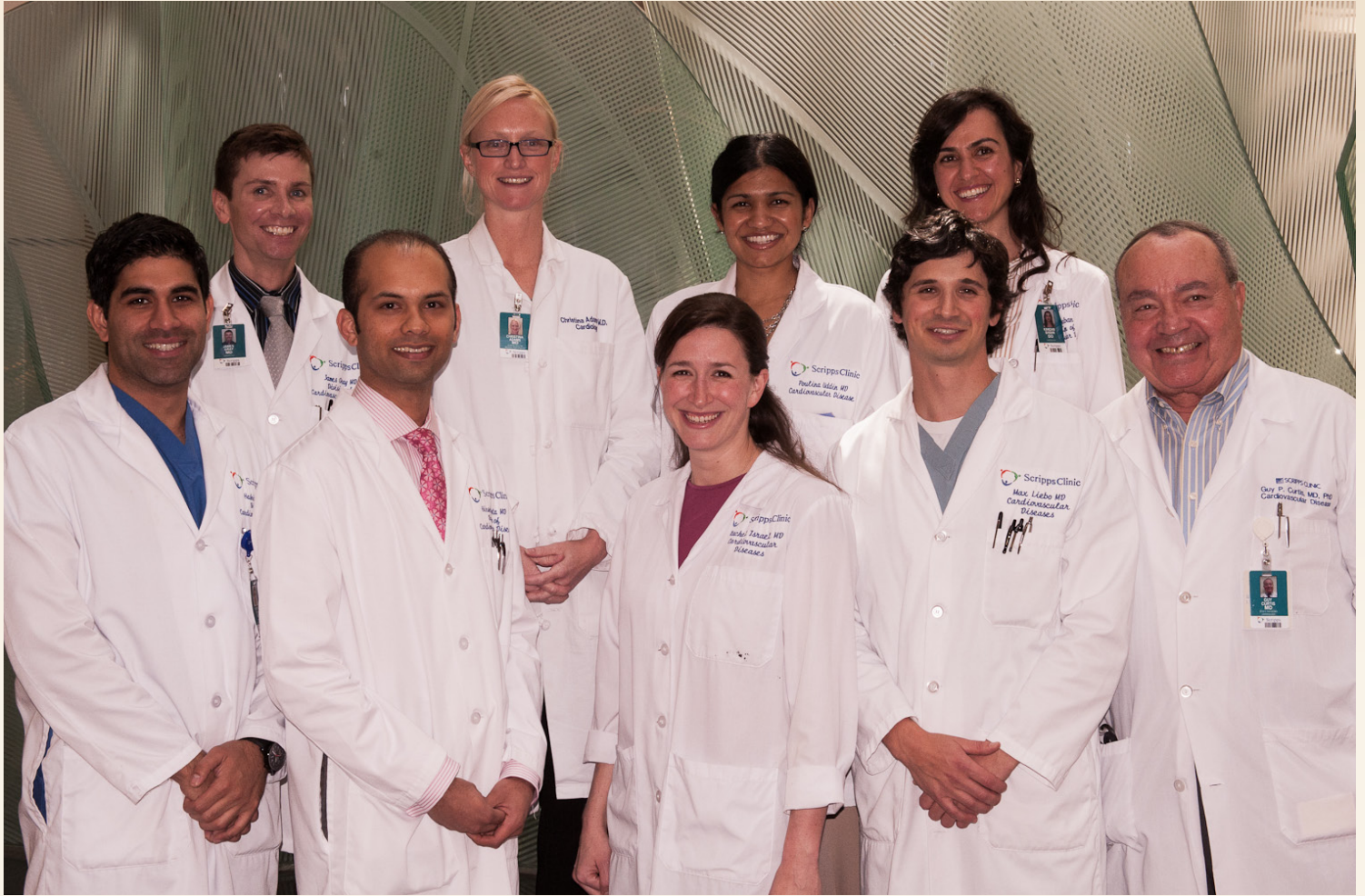
Division of Vascular Surgery

Ralph Dilley, MD

David Frankel, MD



The People



Fellows

Current Fellows

2014

James Gray, MD

Medical School: University of California, Irvine

Residency: Yale University

Kandan Baban, DO

Medical School: Kirksville College

Residency: Scripps Clinic

2013

Hashim Khan, MD

Medical School: Northwestern University

Residency: Northwestern University

Hirsch Mehta, MD

Medical School: MCP Hahnemann/
Drexel University

Residency: Scripps Clinic

Poulina Uddin, MD

Medical School: SUNY Upstate
(Syracuse)

Residency: Cedars-Sinai

Chief Resident: Cedars-Sinai

2012

Christina Adams, MD

Medical School:
University of Colorado

Residency:

University of Colorado

Chief Resident:

University of Colorado

Rachel Israel MD

Medical School: UT San Antonio

Residency: Scripps Clinic

Interventional Cardiology Fellowship:
Scripps Clinic

Max Liebo MD

Medical School: Chicago Medical
School

Residency: Scripps Clinic

Transplant Cardiology Fellowship:
Cleveland Clinic

The Program

Curriculum Overview

Year One:

- Scripps Green Hospital inpatient service/CCU: 3 months
- Echocardiography: 2 months
- ECG/Stress Lab: 1 month
- Shorts: 0.5 month
- Electrophysiology: 1 month
- Cardiac Surgery: 0.5 month
- Nuclear Cardiology: 1 month
- UCSD CCU: 1 month
- Inpatient/outpatient CHF service: 2 months

Year Two:

- Scripps Green Hospital inpatient service/CCU: 1 month
- Cath Lab: 4 months
- Echocardiography/TEE: 2 months
- Nuclear Cardiology: 1 month
- Inpatient/outpatient CHF service: 1 month
- Electrophysiology: 1 month
- Shorts: 1 month
- Research: 1 month

Year Three:

- TEE/advanced imaging (CT/MRI): 3 months
- Research: 9 months



Inpatient Cardiology/CCU

The inpatient rotation at Scripps Green Hospital is one of the most integral components of training, allowing for a tremendous amount of autonomy and responsibility. The inpatient fellow works closely with the attending cardiologist to manage all patients under the cardiology service, including caring for patients in the 24-bed ICU. Responsibilities include: running morning rounds, managing patients on the general cardiology service, fielding calls for consults, admissions and transfers from outside Scripps-affiliated hospitals. Procedures performed include central line placement, Swan-Ganz catheter insertion and monitoring, direct current cardioversions, temporary pacemaker placement, dialysis catheter placement and bedside hand-held echo evaluation.



Heart Failure and LVAD Program

The Heart Failure and Recovery Program is one of the busiest and most gratifying rotations at Scripps Clinic. The CHF fellow works directly with heart failure program director, Tom Heywood, MD, and co-director, Michael Smith, MD, to manage both inpatients and outpatients. The scope of patients is diverse and includes systolic, diastolic, ischemic and nonischemic heart failure, pulmonary arterial hypertension and various cardiomyopathies. The fellow is responsible for managing all heart failure patients on the wards and the ICU, as well as seeing patients in outpatient clinic. The fellow is directly involved in all facets of patient care, including admissions, consults, heart catheterization procedures, and general heart failure evaluations. Fellows have the unique opportunity to continue to follow patients from the inpatient setting to the outpatient clinic, providing continuity of care and close follow up. In addition, each Tuesday the fellow participates in multidisciplinary clinic evaluating Percutaneous AVR patients with CT surgeons, interventional cardiologists, and the heart failure team. The CHF fellow is also responsible for presenting one noon lecture during the month on a topic related to heart failure. Additionally, in 2012, Scripps launched the LVAD Program for Advanced Heart Failure.



The Program

Cath Lab

Scripps Clinic is internationally recognized for its interventional cardiology team and high-risk PCI interventions, performing more than 2,000 diagnostic catheters each year. The general cardiology fellows participate in four formal months of cath lab training during the second year of fellowship. Responsibilities include performing all diagnostic left and right catheterizations with general invasive cardiologists and working closely with the interventional fellows and attendings. During the cath lab month, the cath fellow performs approximately 75 catheters per month. In addition, the general fellows are able to be involved in highly specialized procedures with interventional attendings. The cath fellow organizes a weekly angiography conference with Richard Schatz, MD, and a weekly divisionwide cath conference.



Echocardiography/TEE

The Scripps Clinic ECHO lab is a fully accredited lab performing more than 20,000 echos each year. During this rotation, the fellow participates in the performance and interpretation of transthoracic echos at Scripps Clinic; developing a strong understanding of instrumentation, physics, pathophysiology and anatomy associated with echo, as well as the indications, strengths, and limitations of 2-D and Doppler. The fellow presents a weekly lecture covering the ECHO core curriculum. Senior fellows are given separate TEE months to master this procedure independently. Approximately 500 transesophageal echos are performed each year, and fellows on the TEE rotation are responsible for determining appropriateness of the procedure, screening patients, performing imaging and interpreting reports. Fellows are an integral part of the weekly complex valve

conference, presenting challenging cases to cardiology and cardiothoracic surgery staff on appropriateness of valve repair versus replacement and surgical approach.

EKG/Stress Lab

During the first year of fellowship, fellows are assigned EKGs daily for interpretation, which are then reviewed by attendings. Responsibilities include monitoring the stress lab while exercise, pharmacological stress tests and stress echos are performed. While on the "shorts" rotation, fellows are responsible for interpreting exercise treadmill tests with the oversight of an attending. First-year fellows present a weekly conference at noon, which is a teaching conference for internal medicine house staff.

Cardiac MRI Nuclear Cardiac CT

Fellows are assigned two to three advanced imaging rotations where they are responsible for interpreting nuclear tests, MRI and cardiac CT. Cardiac MR and CT are interpreted with cardiology staff, and nuclear scans are read in conjunction with radiology and cardiology attendings. The advanced imaging fellow presents a weekly conference covering basic concepts of nuclear imaging, as well as summarizing scans and correlating the clinical findings, angiography outcomes and outcomes of patients with positive nuclear stress tests. Cardiac MR lectures are given by Robert Russo, MD, as well as the advanced cardiac MR fellow.

The Program



Electrophysiology

Two months are dedicated to EP rotations. Fellows on the EP service work directly with Douglas Gibson, MD; Andrea Natale, MD; and John Burkhardt, MD. The EP fellow performs inpatient consults, attends outpatient EP clinic and participates in ablations and EP studies. Dr. Gibson runs a weekly EP conference. Fellows who are interested in pursuing EP as a subspecialty may elect to have additional EP months in their schedule and devote their third year of fellowship to gaining more experience in the EP lab.

Adult Congenital Heart Disease

Under the direct guidance of Allen Johnson, MD, fellows gain the unique experience of working with patients with ACHD. Friday afternoons are dedicated clinic time for the evaluation of patients. Fellows become trained in evaluation of the unique echo, EKG, CXR and physical exam findings of these patients and participate in right heart catheterizations to evaluate complex hemodynamics.



Integrative Medicine/Preventative Cardiology/Advanced Lipid Clinic

The Scripps Center for Integrative Medicine is a nationally recognized center for providing complementary healing modalities with conventional care for cardiovascular disease. All general fellows rotate through the numerous components of the center, under the direction of Center Founder and Director Mimi Guarneri, MD. In addition to performing consults with an emphasis on primary and secondary prevention, fellows rotate through the advanced lipid clinic, cardiac rehabilitation and lifestyle change programs. Fellows gain exposure to acupuncture, healing touch and Chinese Medicine. Fellows learn the benefits of cardiac rehab and nutrition counseling, how to write an exercise prescription for patients with a wide range of cardiovascular compromise and interpret advanced testing, such as the VAP and Berkley panels, genetic screening, and Spectrocell analysis.

Continuity Clinic

Each fellow is assigned one morning per week of continuity clinic under the guidance of a clinic mentor. Fellows have the opportunity to see new consults, as well as follow up with patients they cared for during their inpatient months.

Research

All first-year fellows are required to submit at least one case report for publication. Fellows are responsible for developing a research project for the duration of their fellowship that is a novel research question or participation in an ongoing study. This is presented at Grand Rounds during the third year. Fellows who wish to pursue a dedicated research track receive protected time during the third year of the fellowship.



The Program

Pacer/ICD Clinic

During the “Shorts Rotation” the assigned fellow participates in pacer/ICD clinic, working directly with EP attendings and device representatives to analyze, interpret and program pacemakers, ICDs, and CRT devices. Fellows who wish to develop advanced skills in device implantation are given the opportunity to learn pacemaker implantation under the direct supervision of device attendings and are required to implant 100 devices (including generator changes) by completion of the third year of fellowship.

Interventional and Peripheral Cardiology

Scripps Clinic is a nationally recognized leader in the field of interventional cardiology. The interventional cardiac catheterization laboratory at Scripps Clinic performs more than 2,000 catheter-based interventional procedures annually, specializing in high-risk PCI procedures, peripheral vascular procedures, interventional treatment of congenital heart defects and trans-catheter aortic valve replacement.

Scripps Translational Science Institute

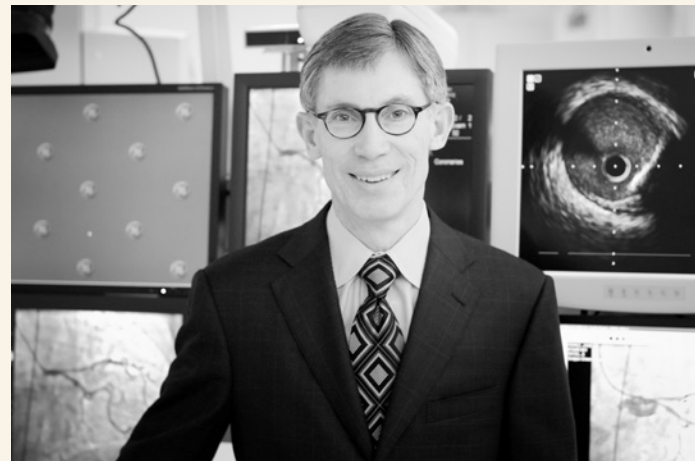
The mission of the Scripps Translational Science Institute (STSI) is to innovate, transform and fully integrate clinical and translational research. Serving as a bridge between The Scripps Research Institute and Scripps Health, the institute brings new treatments from the lab to the patient.

Specific areas of scientific investigation, in addition to cardiovascular disease, include immunology, molecular and cellular biology, chemistry, neurosciences, autoimmune diseases, virology, and synthetic vaccine development.

Cardiac MRI

Robert Russo, MD, PhD, director of the CMR program and the Intravascular Imaging Program at Scripps Clinic, is dedicated to clinical excellence, physician and fellowship education, and clinical and basic science research. Residents in internal medicine and fellows in cardiovascular diseases at Scripps Clinic, as well as other institutions, participate in clinical CMR education. A fellowship in advanced cardiac imaging was initiated in 1999 and continues the commitment to fellowship education. The position is funded in part by The Hewitt Medical Research Foundation. The fellowship is 18-24 months, and includes research and clinical experience leading to Level 3 certification.

The cardiac MR imaging program at Scripps Clinic is committed to a leadership role in MR research and clinical education and to serving as a regional referral center for clinical cardiac magnetic resonance imaging.



Schedules

Example: Three-year Rotation Schedule

Month	1	2	3	4	5	6	7	8	9	10	11	12
Year 1	Stress lab	Nuc/ MRI /CT	CHF	INPT	SHORTS	ECHO	EP	INPT	UCSD	ECHO	INPT	CHF
Year 2	Cath lab	INPT	Cath lab	ECHO	EP	CHF	NUC/CT / MRI	Cath lab	Inpt	Cath lab	Shorts	Vascular
Year 3	TEE	Research	TEE	Research	TEE	Research	Research	Research	Research	Research	Research	Research

Call Schedule

Weekday call begins at 7 p.m. If possible, the on-call fellow should try to relieve the inpatient fellow as early as 5 p.m. Call ends at 7 a.m. the following morning.

Saturday call begins at 1 p.m. and continues until 7 a.m. the following morning.

Sunday call is 24 hours long from 7 a.m. until 7 a.m. the following morning.

Holiday call is 24 hours and is similar to Sunday call. First-year fellows are responsible for two holiday calls per year, while second-year fellows are responsible for one holiday call per year. Third-year fellows do not participate in holiday call.

First year: six to seven calls a month

First-year fellows are responsible for all Friday and Sunday call.

Second year: four to five calls a month

Second year fellows are responsible for all Saturday call.

Third year: two to three calls a month

Third year fellows have no weekend or holiday responsibilities.



Conferences

Conference Schedule

Conferences are mandatory, and all fellows are excused from clinical responsibilities to attend conference.

Monday	Tuesday	Wednesday	Thursday	Friday
7:00–9:00 a.m.	7:30–8:30 a.m.	7:30–8:30 a.m.	7:30–8:30 a.m.	7:30–8:30 a.m.
Vascular Conference	Cath Conference	Complex Valve Conference	Board Review	EP Conference
Noon	Noon	Noon	Noon	Noon
Echo Conference	EKG Instruction with Housestaff	Hemodynamics CHF MRI lecture series	Journal Club	Core Curriculum Lecture Series

Vascular Conference (Drs. Dilley, Frankel and Stinis)

Fellows are expected to participate in this conference to gain basic skills in diagnosis and management of patients with extracardiac vascular disease and obtain basic knowledge of vascular imaging and ultrasound.

Echocardiography Conference (Drs. Rubenson and Smith)

The echocardiography fellow prepares four conferences per month, consisting of didactic and case presentations. During the academic year, a full echocardiography curriculum is reviewed. At the end of three years, this curriculum serves as a platform to study for the echocardiography board exam.

Departmental Cath Conference

This conference is attended by the division of cardiology and cardiac surgery. The cath lab fellow is responsible for preparing challenging case presentations for management, as well as providing data and topic reviews pertinent to cases presented. This conference includes morbidity and mortality, as well as cardiology Grand Rounds once a month.

EKG Conference (Drs. Curtis and Johnson)

First-year fellows oversee teaching EKG interpretation to the internal medicine house staff. Throughout the academic year, this conference occurs on average twice monthly and is a lecture series. The remaining monthly sessions are dedicated to a “fellows only” conference, in which advanced EKG interpretation (including board preparation and ABIM coding) and intracardiac and pacemaker-ICD interpretation is reviewed.



Imaging Conference (Drs. Johnson, Russo, Smith and Hu)

The imaging conference consists of rotating topics relating to multimodality cardiovascular imaging. Included is a dedicated nuclear cardiology curriculum, interpretation of cardiac hemodynamics, topics in cardiac MRI, as well as cardiac CT. Lectures consist of both fellow and attending presentations comprising lectures and case presentations.

Conferences

Conference Schedule

Conferences are mandatory, and all fellows are excused from clinical responsibilities to attend conference.

Complex Valve Conference (Drs. Smith, Rubenson, Tyner and Hemp)

This multidisciplinary conference between core echo staff and CT surgery is held weekly to discuss complex clinical cases surrounding need for valve repair or replacement, and perioperative management. Cases are presented by a senior fellow.



Angiography Conference (Dr. Schatz)

This weekly conference, led by Dr. Schatz, reviews angiographic films from interesting cases. All aspects of coronary anatomy are provided, including history, procedural techniques, management decisions and the use of equipment needed for fixing obstructive lesions. As a pioneer in this field, Dr. Schatz provides valuable insight.

Board Review (Drs. Curtis and Smith)

The internal board review is based on the Mayo Clinic Cardiovascular Board Review Course and Mayo Clinic Echocardiography Board Review Course. Two weekly sessions incorporate lectures from the Mayo series, supplemented by ABIM board review-style questions and supplementary lectures from clinical faculty.

Journal Club (Drs. Russo and Topol)

Journal Club is a flagship fellows' conference at Scripps Clinic. Traditionally run by Drs. Russo and Topol, fellows present a thorough critique of recent peer-reviewed articles. Insights provided by staff physicians foster spirited discussion, which frequently leads to the composition of letters to the editors of prominent scientific journals.



Core Curriculum (Dr. Curtis)

This weekly lecture is prepared by faculty and covers a broad spectrum of topics to coincide with the ABIM core curriculum in cardiovascular diseases. Topics range from basic concepts to advanced congenital heart disease, heart failure and transplant. Division members and visiting professors from outside facilities present in an intimate learning environment.

Board Pass Rate

Scripps Clinic graduates have a 100-percent pass rate for cardiology board exams.

Salaries and Benefits

Scripps Health provides a competitive compensation program.

- Twenty paid vacation days are allotted per fellow per academic year.
- Fellows receive a total of \$3,000 per year in educational support, which can be used for travel to scientific meetings, learning materials, and/or licensure and dues.
- All fellows receive access to the complete online and print resources from Scripps Green Hospital, as well as the Kresge Library of The Scripps Research Institute.
- Up to 12 sick days are allotted, as needed, during each year of training.
- Family and medical leave of absences are allotted as required in accordance with current Scripps policy.
- Medical liability up to \$5 million is provided per claim for all fellows within the scope of their training at Scripps Clinic.
- Scripps Clinic provides hospital, medical and dental coverage to all fellows. Eligible dependents may be included for coverage at group rates through payroll deduction.
- Life insurance and long-term disability options are available based on a contributory basis.
- Confidential counseling and psychological services are available for all fellows upon request.
- Each fellow will receive four lab coats, which are laundered free of charge on site.
- Covered parking is available adjacent to the hospital for all fellows.

How to Apply

Scripps Clinic accepts three fellowship positions per year and participates in the ERAS, Electronic Residency Application System.

Interested applicants must submit all of the following documents no later than August 31st, 2012 through ERAS at <https://www.aamc.org/students/medstudents/eras/>

- ERAS application
- CV
- Personal statement
- USMLE transcripts
- Three letters of recommendation
- Photo
- Valid ECFMG certificate (foreign medical graduates only)

Interviews will be held in September 2012.



Contacts

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Cardiology Fellowship Administrator
858-554-8018
Kopp.Theresa@scrippshealth.org

Research

Scripps Clinic has a long tradition of groundbreaking research. Current Scripps Clinic research studies include:

1. Amorcyte PRE: Infarct-related artery infusion of CD34+ enriched bone marrow cells for post MI patients.
2. Baxter CMI: Phase III autologous CD34+ stem cells to increase exercise capacity in chronic myocardial ischemia.
3. BioCor: Long term safety and effectiveness of Biocor valve for aortic and mitral valve insufficiency.
4. BRADYCARE: Observational study for diagnostics in patients with St. Jude Medical pacemakers.
5. Canopy: Prospective study of carotid stenting.
6. CHAMPION: Pulmonary artery pressure management via implantable wireless monitor.
7. Champion Phoenix: Compare efficacy and safety of cangrelor to standard of care in patients with PCI
8. CHOICE: Comparison of exercise tolerance with bi-ventricular vs. right ventricular pacing for patients with heart failure.
9. CONFIRM: Comparison of conventional ablation with or without Focal Impulse and Rotor Modulation for atrial fibrillation.
10. Cypress: Dual antiplatelet therapy with Cypher stenting.
11. Defeat HF: Feasibility of neuromodulation for treatment of chronic heart failure
12. Envision: Examination of echocardiography vs traditional LV lead placement
13. EVOLVE: Evaluation of cinecalcet on cardiovascular events and death in chronic kidney disease
14. GRAVITAS: Tailored antiplatelet therapy via P2Y12 assay for reduction of major adverse cardiovascular events with DES therapy
15. GIFT: Assessment of genes that influence residual platelet activity
16. Homeostasis: HeartPOD monitoring for tailoring diuretic therapy in heart failure
17. ImPact SFA II: Comparison of primary patency and stent fracture between different nitinol stents in femoropopliteal lesions.
18. JOMED Jostent: Multicenter feasibility trial for balloon expandable stent graft for renal and iliac artery lesions
19. LAPTOP-HF: Demonstration of LA pressure and physician management to reduce HF hospitalizations and episodes
20. LARIAT: Left atrial appendage occlusion via epicardial approach.
21. Left Main IVUS Registry: Registry of UP LMCA stenting
22. MagnaSafe MRI Registry: Safety of non-cardiac MRI in patients with implantable pacemakers and defibrillators.
23. Optivol Care: Comparison of monthly versus quarterly review of Cardiac Compass trends for initiation of clinical action in patients with HF.
24. PAH QuERI: Improvement of management of patients with PAH studied by functional class
25. PARTNER I: Determine safety and efficacy of device and delivery systems of Edwards SAPIEN transcatheter aortic valves in patients in high risk, non operable symptomatic patients with severe AS.
26. PARTNER II: Determine safety and efficacy of Edwards SAPIEN XT transcatheter heart valve and delivery symptoms in patients with severe AS
27. PREVAIL: Evaluation of Watchman LAA Closure Device in patients with atrial fibrillation versus long term warfarin therapy.
28. QUADRIPOLAR PAS: Post approval study for evaluation of acute and chronic performance of Quadripolar CRT-D device system in a patient population indicated for cardiac resynchronization.
29. READMIT- HF: Collect and assess physiologic data in patients for up to 12 weeks following hospitalization for heart failure.
30. SCRIPPS V: Prospective study of for intracoronary brachytherapy for recurrent drug eluting stent restenosis.
31. SEASIDE: Long-term safety and efficacy of Endeavor stenting in patients with truncated dual anti-platelet therapy.
32. SYMPPLICITY: Catheter based renal artery denervation for patients with multi-drug refractory hypertension.
33. VIBER (IVUS): Assessment of angiographic outcomes of drug-eluting balloon angioplasty assisted by VIBE catheter.
34. Zen: Zotarolimus drug eluting stent for erectile dysfunction.

For list of additional publications [click here. \(link to full list\)](#)