Further Fellowship Program Information

Fellowship Completion - One Year

Clinical training/ Surgical Procedures-

- Core cardiac procedures: Diverse case mix including off pump CABG, robotic valve replacements, TAVR and Mitraclips, LVADs and Transplants. (Aside from routine cardiac surgery)
- Specialized expertise in the perioperative evaluation and management of Chronic Thromboembolic Pulmonary Hypertension (CTEPH) and Pulmonary Thrombo-endarterectomy.
- EP: Comprehensive evaluation, diagnosis and management of cardiac arrhythmias, latest electro-physiologic techniques, and cardiac implanted electronic device (CIED) implantation. UCSD is a renowned center for Transvenous Lead extraction and Lariat/Watchmen procedures.
- Perfusion: Training is provided in the management of cardiopulmonary bypass during cardiac surgery, with input from our perfusionists.
- Research: Ability to participate in clinical, basic science or translational research with NIH funded mentors. Each fellow is required to undertake a scholarly project before graduation. This traditionally leads to a publication/s depending on individual career goals.

Transesophageal Echocardiography Education-

- Monthly didactic TEE lecture series, available to view remotely and online
- Echo weekly review Sessions – 1-2 hrs.
- Echocardiography sessions beginning with a brief mini-lecture/discussion on specific echo related topic followed by a review of TEEs with emphasis on the daily topic.
- Availability of digital case reviews, CD-ROMS, and TEE textbooks, new echocardiographic material, including 3D reconstruction.
- State of the art TTE/TEE simulator, accessible to fellows.

Cardiac Anesthesia Education-

- Monthly case conference session with fellows and faculty.
- Monthly cardiac lecture series with faculty from other disciplines.
- Opportunity to participate in departmental workshops at the UCSD Update Conference in San Diego and the Perioperative Transesophageal Echocardiography Review Course.
- Perfusion workshops with hands on training on the bypass machine.
- Dedicated non-clinical time for scholarly activities.
- Quarterly Journal Club for faculty and fellows.
• Exposure to multidisciplinary conferences and meetings within the health system.

**Paid Conferences and Cardiac Textbooks**-

- Dedicated time and paid fees for the Annual Comprehensive TEE Review Course in San Diego
- Each Fellow is provided the following Cardiac Anesthesia textbooks.
  - Kaplan's Cardiac Anesthesia
  - Perrino's Practical Approach to Transesophageal Echocardiography
  - PTE Masters Echo Review

**Cardiovascular Physiology Research Laboratory**-

The cardiovascular physiology research laboratory at UCSD/VA San Diego Medical Center performs novel basic science inquiry into mechanisms of myocardial ischemia-reperfusion injury, cardiac remodeling and heart failure. A focus of the laboratory involves the study of volatile and opioid anesthetics as they relate to ischemia-reperfusion injury. The laboratory uses state of the art physiological monitoring, molecular biology, primary cell culture, transgenic animals, gene therapy, immunohistochemistry and electron microscopy to address novel mechanisms for cardiac injury and remodeling. Our team consists of David M. Roth, Ph.D., M.D., Piyush M. Patel, M.D., Hemal H. Patel, Ph.D. and Yasuo Tsutsumi, M.D., Ph.D. The laboratory and its investigators are funded by the National Institutes of Health, The Veterans Administration and the American Heart Association.