

**Pediatric Cardiology**  
**Fellowship Training Program**  
**Congenital Heart Center at UF**

**Program Description**

## **A. PROGRAM DEMOGRAPHICS**

University of Florida College of Medicine at Shands Children's Hospital  
Congenital Heart Center, Cardiology Fellowship Training Program  
1600 SW Archer Road, Room: HD 303  
Gainesville, FL 32610-0296  
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Program Director: F. Jay Fricker, M.D.  
Co-Director: Arwa Saidi, MB, Bch, FACC  
Program Coordinator: Deborah L. Floyd, CPC

## **B. INTRODUCTION**

### 1. History

The Division of Pediatric Cardiology Fellowship Training Program began in the late 1960s. The original program was that of apprenticeship instead of official fellowship training. The first actual certifying examination was administered in 1964-1965. There have been approximately twenty-four individuals who have completed the training program since its inception.

### 2. Duration

The sub-specialty program in Pediatric Cardiology is three years in duration (PGY IV through PGY VI).

### 3. Prerequisite Training/Selection Criteria

The objective of the program is to train candidates for careers in academic pediatric cardiology. A minimum training period of three years is required for the American Academy of Pediatrics Sub-board of Pediatric Cardiology. Additional training is available for those undertaking a supported research program. The basic curriculum includes: A first-year, mainly clinically oriented with a survey of possible research areas. The second year is divided between more clinical responsibility and the beginning of a fellow-chosen research project. The third year has major emphasis on research, but with a continuing focus on clinical responsibilities. The candidates must be medical graduates who have completed their PL-3 year of an accredited pediatrics residency program.

#### 4. Fellowship Training

Individuals engaged in training beyond the core program are expected to be competent in the skills learned in the core residency. Therefore, they should be focused on becoming proficient in the skills defined by the subspecialty they are pursuing. As they progress through the training program, fellows are given progressive responsibility in the skills that make up the information content of the subspecialty at the discretion of the faculty.

The Combined Programs in Pediatric Cardiology at the University of Florida College of Medicine have developed from a long-standing collaboration between the Gainesville and Jacksonville campuses. The program in Gainesville was the first of its kind in the south and has been a major center for teaching and training.

#### 5. Program Certification

The Program is certified in post-graduate education by the Accreditation Council for Graduate Medical Education (ACGME).

### C. RESOURCES

#### 1. Teaching Staff

**Faris M. Al-Mousily, M.D.**, Assistant Professor, Pediatric Cardiology

Dr. Al-Mousily maintains an active interest in cardiac magnetic resonance imaging (MRI). Also, Dr. Al-Mousily has ongoing research projects.

**Mark S. Bleiweis, M.D.**, Associate Professor, Surgery and Pediatrics; Director, Congenital Heart Center at UF.

Dr. Bleiweis is a pediatric cardiothoracic surgeon who specializes in surgical intervention of infants, children, adolescents and adults with congenital heart disease. He also has a research interest in “Cell Therapy for RV Failure in Tetralogy of Fallot”

**Randall M. Bryant, M.D.**, Associate Professor, Pediatric Cardiology; Director, Pediatric Electrophysiology Service

Dr. Bryant is Director of the Pediatric Electrophysiology Program. He directs all invasive pediatric electrophysiology studies including radiofrequency ablation and pacemaker implantation. Dr. Bryant is also involved in Didactic Fellowship Training and supervises Pediatric Cardiology Fellows in the fundamentals of pediatric electrophysiology principles, practices and procedures.

**Barry J. Byrne, M.D., Ph.D.**, Professor, Pediatrics (Cardiology) and Molecular Genetics and Microbiology; Medical Director, Congenital Heart Center at UF; Director, Powell Gene Therapy Center.

Dr. Byrne's major focus is in work and research in cardiomyopathy, transplantation and gene therapy. He has a major role in fellow/resident and post-doctoral student education.

**Eric Ceithaml, M.D.**, Associate Professor, Pediatric Cardiothoracic Surgery, Jacksonville Campus

**Arun Chandran, M.D.**, Assistant Professor, Pediatric Cardiology

Dr. Chandran's main focus is on pediatric echocardiography and transesophageal echocardiography (TEE), and all aspects of imaging in patients with congenital heart disease.

**Shelley Collins, M.D.**, Assistant Professor, Pediatrics

Dr. Collins coordinates patient care and resident education for the Congenital Heart Center.

**Curt G. DeGross, M.D.**, Associate Professor and Director, Non-Invasive Imaging, Congenital Heart Center

Dr. DeGross has clinical research interests encompassing pediatric cardiology, pediatric echocardiography, and fetal echocardiography. Other research interests include using computational fluid dynamics in congenital and acquired heart disease; and, digital signal analysis and artificial neural networks to improve therapeutic and diagnostic techniques in pediatric cardiology.

**Nicole Dobija, M.D., DDS**, Assistant Professor, Anesthesiology and Pediatrics

Dr. Dobija provides anesthesia and critical care support for infants, children, adolescents and adults with congenital heart disease for the cardiovascular surgical program in the Congenital Heart Center.

**Robert English, M.D.**, Assistant Professor, Pediatric Cardiology, Jacksonville Campus

Dr. English interests include interventional cardiology, cardiac involvement in systemic diseases and medical education.

**Jose A. Ettedgui, M.D.**, Professor and Chief, Pediatric Cardiology, Jacksonville Campus  
Director, Interventional Catheterization, Jacksonville Campus

Dr. Ettedgui is involved in supervising all aspects of clinical care involving interventional cardiac catheterization, echocardiography and patient care on the Jacksonville campus. He is also the primary education director at Wolfson Children's Hospital in Jacksonville.

**F. Jay Fricker, M.D.**, Professor and Chief; Director, Fellowship Training Program,  
Pediatric Cardiology

Dr. Fricker monitors clinical and educational activities in the Congenital Heart Center with faculty support. He is responsible for the supervision and evaluation of the clinical, educational and research activities of Pediatric Cardiology Fellows along with their Mentoring Committee. Major clinical and research interests are in heart failure, heart transplantation, and pulmonary hypertension.

**Ira H. Gessner, M.D.**, Adjunct Professor Emeritus, Pediatric Cardiology

Dr. Gessner is involved in our ambulatory care program, as well as the College of Medicine administration.

**Tomislav Ivsic, M.D.**, Assistant Professor, Pediatric Cardiology

Dr. Ivsic's clinical focus is in pediatric and fetal echocardiography. Interests also include exercise physiology in congenital heart disease, cardiomyopathy, and didactic teaching. He has ongoing research interests in ischemic preconditioning to improve postoperative outcomes in patients with congenital heart disease; metabolic exercise testing in patients with congenital heart disease as a tool for risk-stratification and heart failure-induced and age-dependent alteration of calcium-cycling proteins.

**Stephanie Lacey, D.O.**, Assistant Professor, Pediatric Cardiology, Jacksonville Campus

Dr. Lacey's focus is in echocardiography and fetal echocardiography.

**Donald Marangi, M.D.**, Clinical Assistant Professor, Pediatric Cardiology; Director,  
Clinical Electrophysiology. Jacksonville Campus

Dr. Marangi's focus is in pediatric electrophysiology, including chest pain and autonomic dysfunction.

**William Marvin, M.D.**, Associate Professor, Pediatric Cardiology. Jacksonville Campus

Dr. Marvin is primarily involved in the ambulatory care program and didactic fellowship course.

**Joseph A. Paolillo, M.D.**, Assistant Professor, Pediatric Cardiology; Director, Interventional Cardiac Catheterization Laboratory. Gainesville Campus

Dr. Paolillo is involved with directing and supervising residents in fundamentals of pediatric interventional procedures.

**Arwa Saidi, MB, Bch, FACC**, Associate Professor, Pediatric Cardiology; Director, Adult Congenital Heart Disease Clinic

Dr. Saidi's focus is on adults with congenital heart disease. She is active in the inpatient and outpatient settings of our Congenital Heart Center.

**Gerold L. Schiebler, M.D.**, Distinguished Service Professor Emeritus  
Pediatric Cardiology

Currently serves as State-wide Consultant to Children's Medical Services for the State of Florida.

**Lodewyk H.S. Van Mierop, M.D.**, Adjunct Professor Emeritus, Pediatric Cardiology

Dr. Van Mierop provides didactic teaching sessions with Fellows and Residents in the areas of congenital heart disease, embryology, and pathology.

**Benjamin E. Victorica, M.D.**, Adjunct Professor Emeritus, Pediatric Cardiology

Dr. Victorica focuses on ambulatory pediatric cardiology patient care and resident education.

**Mark Wesley, M.D.**, Assistant Professor, Anesthesiology and Pediatrics

Dr. Wesley provides anesthesia and critical care support for infants, children, adolescents and adults with congenital heart disease for the cardiovascular surgical program in the Congenital Heart Center.

## 2. Faculty Research Descriptions

Dr. F. Jay Fricker is the Chief of Pediatric Cardiology. He joined the University of Florida College of Medicine in October 1995. His pediatric and cardiology training as well as initial academic appointments were at the University of Pittsburgh and Children's Hospital  
*The Foundation for The Gator Nation*

of Pittsburgh. His clinical and research interests are focused on heart and heart/lung transplantation in children. Dr. Fricker has a particular interest in pediatric patients with pulmonary hypertension.

Dr. Fricker also has a keen interest in mentoring pediatric residents and cardiology trainees and is the Program Director of the Pediatric Cardiology Fellowship Training Program. He has been a part of over 150 publications with focuses on treatment of congenital heart disease, heart transplantation, pulmonary hypertension, and other cardiac-related research.

Dr. Barry J. Byrne is a member of the Graduate Faculty, the Department of Molecular and Genetics and Microbiology and Gene Therapy Center; and is Medical Director of the Congenital Heart Center. Dr. Byrne is actively involved in laboratory research. His laboratory is involved in developing new genetic therapies for cardiovascular disease. In the area of cardiomyopathy, Dr. Byrne is studying gene replacement in an autosomal recessive form of fatal cardiomyopathy in children. The disease is the prototype of lysosomal storage disorders leading to skeletal and cardiac muscle weakness. Dr. Byrne's team has used AAV vectors to achieve sustained correction of the gene deficiency and correction of the phenotype in natural and transgenic mouse models of the disease.

The current therapy is being proposed for human clinical trials. Similar therapies are being used to combat cardiac transplantation rejection. Secondly, his team is investigating the ability of mesenchymal stem cells to undergo myocardial specification for the purpose of tissue repair in the heart. Finally, several projects are focused on the use of AAV vectors injected into striated muscle to achieve sustained release of therapeutic proteins including thrombolytic factors and coagulation factors. These projects are funded through the NIH, AHA, and foundation grants.

Dr. Joseph A. Paolillo is an Assistant Professor of Pediatrics and Director of the Pediatric Cardiac Catheterization Laboratory at the University of Florida, Gainesville. His clinical interests include transcatheter treatment of congenital heart disease including device closures, valvotomy, angioplasty, and stent placement. Dr. Paolillo's research interests include development of new interventional cardiology techniques for congenital heart disease.

Arwa Saidi, MB, Bch is the Director of the Adult Congenital Heart Disease Program at the University of Florida. Her residency training was in Internal Medicine and Pediatrics followed by a Pediatric Cardiology Fellowship at Baylor College of Medicine, in Houston, Texas. She is a member of the faculty at the University of Florida as an Associate Professor, with joint appointments in the Department of Pediatrics and Internal Medicine. She works with both pediatric and adult patients with congenital heart disease.

Dr. Mark S. Bleiweis has been involved with research and submission of publications on topics related to pediatric cardiovascular procedures and postoperative care. He has an ongoing research project that is sponsored by The Thoracic Surgery Foundation for Research and Education (TSFRE).

Dr. Faris Al-Mousily is a former fellow in Pediatric Cardiology, University of Florida College of Medicine. He joined our faculty in 2006. Dr. Al-Mousily has a clinical focus within Pediatric Cardiology in the evaluation and treatment of infants, children, adolescents and adults with congenital heart disease. He also is Director of the pediatric Magnetic Resonance Imaging Program.

### 3. Facilities

The Congenital Heart Center, University of Florida College of Medicine, is part of the Shands Children's Hospital, a 200-bed pediatric facility. The Center has offices, teaching and laboratory space within the University of Florida Health Science Center and Academic Research Building (ARB), which is located on the University of Florida campus in Gainesville, Florida.

Our Center operates in collaboration with the Neonatal and Pediatric Intensive Care Units at Shands Hospital. The clinical outpatient areas are located in the Medical Plaza and offers a full range of outpatient services and state-of-the-art echocardiography laboratories. Similar facilities are available at the Wolfson Children's Hospital and the UF Children's Heart Center outpatient facilities in Jacksonville.

### D. EDUCATIONAL PROGRAM – BASIC CURRICULUM

#### Inpatient Clinical Service

The Fellow is responsible, together with an attending, for the provision of clinical consultative services for all inpatients, surgical patients, and emergencies during three one-month blocks per year. Teaching of students and residents is expected of Fellows as part of this rotation.

Fellows also are responsible for organizing the presentation materials (echocardiography clips, patient medical history, etc) for the weekly Congenital Heart Center (CHC) Surgery Conference held by Dr. Mark Bleiweis. Fellows have an active role in presenting patients with the oversight of our attending cardiologists and participating in case management decisions with the faculty.

### Outpatient Experience

Fellows gain experience in the outpatient management of pediatric cardiology patients and provision of cardiology consultations throughout their Fellowship. This is accomplished by seeing patients along with an attending faculty member during a weekly “Fellow Continuity Patient Management Clinic.” This also allows the trainee to follow selected patients with continuity. The outpatient clinic also provides an opportunity to participate in specialty clinics focused on Adult Congenital Heart Disease, Transplantation, Cardiomyopathy and Heart Failure, and Electrophysiology.

Data has also been collected from some of our Fellows’ Clinics to support research analysis in their individual research projects.

### Cardiac Postoperative Care

While on the inpatient clinical rotation, trainees will spend time in the Neonatal and Pediatric Intensive Care Units at Shands Hospital. Fellows share in the management of postoperative patients and acutely ill neonatal cardiac patients.

Shands Hospital at the University of Florida contains a recently renovated state-of-the-art NICU and our own postoperative patients dominate the census of the PICU in Shands Hospital. Fellows are encouraged during their inpatient blocks to participate in morning rounds in these units alongside the attending pediatric cardiologist and the pediatric cardiac surgery team. Fellows are encouraged to participate in the case management of continuity patients followed in their own clinics while these patients are ‘in-house’.

### Electrophysiology

A minimum of two rotations on the Electrophysiology Service (Jacksonville Campus) for one month each in the first and second years takes place in conjunction with the Electrophysiology Program, under the Direction of Dr. Randall M. Bryant, based in Jacksonville. This includes training in both invasive and non-invasive electrophysiology.

### Pathology

Dr. Van Mierop maintains his own ‘heart library’ where our Fellows can literally get ‘hands on’ experience in the history, embryology, and pathology of congenital heart disease through didactic sessions, specimen review and autopsy report review.

### Non-Invasive Testing

#### Echocardiography, Holter Monitoring, Exercise Stress Testing, Tilt-Table Testing

A recently constructed, fully equipped, ICAEL-certified (International Commission for the Accreditation of Echocardiography Laboratories) Heart Station is the site for training Fellows in the interpretation of the electrocardiograms and of two-dimensional Doppler and color Doppler echocardiography, the cornerstone of modern pediatric cardiology diagnoses. The Fellow is trained not only to interpret, but to perform high-quality studies using this equipment. Fetal echocardiography and transesophageal echocardiography are also performed. Echocardiography Conference is held bi-monthly. The laboratory performs approximately 9600 echocardiograms annually. Holter monitoring, exercise stress testing, and tilt-table tests are also performed through the Pediatric Heart Station Laboratory.

#### Magnetic Resonance Imaging (MRI)

Magnetic Resonance Imaging is performed under the Direction of Dr. Faris Al-Mousily in conjunction with the Department of Radiology at the University of Florida College of Medicine. Fellows are exposed to the techniques used in MRI acquisition as well as research opportunities in cardiac MRI.

#### Pediatric Cardiac Catheterization Laboratory

Training in cardiac catheterization techniques, angiography, and interventional cardiology is a major part of the Pediatric Cardiology Fellowship Training Program. The Fellow is expected to become first proficient, and eventually expert, in the area of cardiac catheterization and data collection, the subsequent interpretation and its significance. The Fellow will be exposed to a variety of interventional techniques such as pulmonary and aortic balloon valvuloplasty, atrial Septostomy, stent and coil placement and endomyocardial biopsy. The training in the cardiac catheterization laboratory is enhanced by pre-catheterization and post-catheterization conferences and weekly patient management conferences.

### Training Sessions

1. Core Curriculum
2. Recurring Conferences

CONFERENCE	OCCURENCE
Didactic Teaching Conferences	Weekly
Echocardiography Conferences	Bi-monthly
Fellows' Lecture Series	Weekly

Journal Clubs	Monthly
Magnetic Resonance Imaging Conferences	Bi-monthly
Morbidity and Mortality Conference	Quarterly
Patient Management Conference	Weekly
Pediatric Grand Rounds	Weekly
Pre-/Post-Catheterization Conference	Weekly
Research Conferences	Monthly
Surgery Conference	Weekly
Teleconference (Gainesville/Jacksonville)	Bi-monthly
Ward Rounds	Daily

Research

The areas of research available include both basic and clinical projects. Trainees are encouraged to seek out beyond the Center into other Divisions or the Basic Sciences Departments of the Medical School for research endeavors and to identify suitable research mentors. Research currently ongoing in many areas include, but are not limited to:

<b>RESEARCH TOPICS</b>
Cardiac Gene Therapy in Transplantation and Cardiomyopathy
Collaboration with Biomedical Engineering & Veterinary Medicine College
Electrophysiology and Radiofrequency Ablation
Epidemiology and Inheritance of Congenital Heart Defects
Fetal Echocardiography
Genetics of Congenital Heart Disease
Interventional Techniques in the Treatment of Congenital Heart Disease
Magnetic Resonance Imaging
Management of Pediatric Heart Failure
Morphology of Congenital Heart Disease (Van Mierop Heart Museum)
Pompe Disease Clinical Trials
Pulmonary Hypertension
Regulation of Pulmonary Blood Flow and Nitric Oxide Therapy

### Course Work

Course work is available within the Health Sciences Center at the University of Florida College of Medicine as well as within the Graduate Programs at the University of Florida.

If the program is more than twelve months in duration, please describe the progression in responsibility by PGY level.

At each level of training there is a set of competencies that the Fellow/Resident is expected to master. As these are learned, greater independence is granted the Fellow/Resident in the routine care of the patient at the discretion of the faculty who, at all times, remain responsible for all aspects of individual patient care.

### E. EVALUATION

Trainees are evaluated by the housestaff office on a semi-annual basis using a web-based evaluation system. They also undergo an annual '360 Evaluation' by all administrative and clinical staff, physician extenders, and other individuals who have Fellow interaction.

Fellows are evaluated by the faculty and given a formal written evaluation by the Program Director on a semi-annual basis. Copies of these evaluations are sent to the ACGME office, records are maintained in the Fellow(s) files in the office of the Congenital Heart Center (CHC) as well as the College of Medicine GME office. Fellows are evaluated on each of the core competencies of our Program as set forth by the ACGME and receive feedback from faculty members and the Program Director on each of these.



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