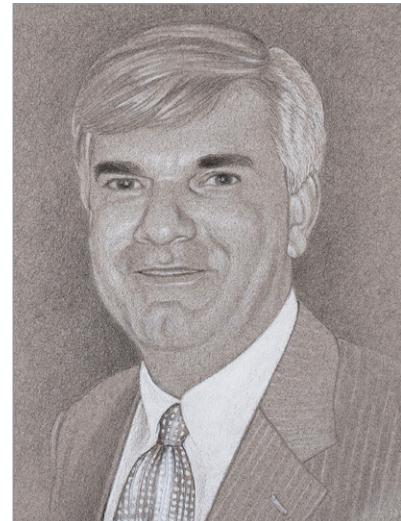


# Texas Heart Institute Medal and the Ray C. Fish Award for Scientific Achievement in Cardiovascular Diseases

**R**ay C. Fish (1902–1962) was a leading figure in Houston’s natural gas industry and a philanthropist. He believed in the American dream of “opportunity for success.” The Ray C. Fish Foundation was established so that others might be encouraged to broaden man’s self-knowledge and to keep the American dream alive. After its founder’s death from heart disease, the Fish Foundation granted \$5 million to make the Texas Heart Institute a reality. For this reason, the Institute’s highest professional award is given in honor of this extraordinary man. The award recognizes those whose innovations have made significant contributions to cardiovascular medicine and surgery.

The first Texas Heart Institute Medal and Ray C. Fish Award for Scientific Achievement in Cardiovascular Diseases were presented in 1972 to Dr. Norman Shumway. Since 1972, 38 other highly deserving recipients have been so honored by the Institute. The complete Roll of Recipients appears on the next page.



Emerson C. Perin, MD, PhD

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The 2019 Fish Award recipient is Emerson C. Perin, MD, PhD. Ranked in the top 1% of interventional cardiologists in the United States, Dr. Perin has pioneered and refined the clinical application of regenerative medicine for patients with cardiovascular disease. He has developed robust procedures for mapping and injecting stem cells in transendocardial fashion with use of the NOGA® XP Cardiac Navigation System, a 3-dimensional electromechanical catheter apparatus. Most techniques used today in the transendocardial delivery of stem cells have arisen from his expertise and leadership.

Dr. Perin earned his medical degree from the Federal University of Rio Grande do Sul in Brazil and completed his training at the Jackson Memorial Hospital/University of Miami Internal Medicine Program. He then graduated as the outstanding cardiology fellow of his class at the Texas Heart Institute (THI). For nearly 30 years at THI, he has conducted pioneering research, mentored junior investigators, and provided medical leadership, notably through his appointment as Medical Director of THI in 2018. He also serves as Director of Clinical Research and Director of Interventional Cardiology at THI, and Medical Director of the Cardiac Catheterization Laboratories at Baylor–St. Luke’s Medical Center.

In 2001, Dr. Perin performed the first stem cell injection in a patient with heart failure, and he later published the results of the first clinical trial to evaluate cell therapy in this patient population. He has collaborated extensively in research projects

and multisite clinical trials. Since 2007, he has served as a principal investigator (PI) for the prestigious Cardiovascular Cell Therapy Research Network, a 7-site consortium funded by the National Heart, Lung, and Blood Institute to advance the use of cell therapy to treat cardiovascular disease. As part of this group, Dr. Perin has designed and conducted clinical trials of cell therapy for treating heart failure, peripheral arterial disease, and acute myocardial infarction. Currently, Dr. Perin is the PI of 6 active clinical trials and co-PI of 2 others. Notably, these trials include the first use of an immunoselected cell type and the first use of allogeneic cells. Under his leadership, enrollment has been completed in the first large phase-3 clinical trial in the U.S. of cell therapy for heart failure.

Dr. Perin founded the THI Stem Cell Center and oversees its successful program of preclinical research. These studies, which have formed the basis of many of his clinical trials, led to his being named THI's Robert

McNair Scholar in 2013. As a McNair scholar, he has studied the role of stem cell therapy in the early detection and treatment of aortic aneurysms.

Dr. Perin has published more than 130 scientific papers and book chapters. He is a member of the Transnational Alliance for Regenerative Therapies in Cardiovascular Syndromes and a clinical reviewer for the California Institute for Regenerative Medicine, and he serves on 7 advisory boards. In collaboration with the Duke Cardiac Safety Research Consortium and the U.S. Food and Drug Administration, he founded the annual THI International Symposium on Cardiovascular Regenerative Medicine. From this conference came an outline for gaining regulatory approval for regenerative therapies before their clinical use. In summary, Dr. Perin's substantial expertise and body of work have accelerated the pace of discovery in the emerging field of regenerative medicine and facilitated the clinical application of these innovative therapies.

## ROLL OF RECIPIENTS

*of the Texas Heart Institute Medal and the Ray C. Fish Award  
for Scientific Achievement in Cardiovascular Diseases*

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|------|--|------|---|
| 1972 | <b>Norman E. Shumway</b><br>Cardiovascular Surgery ( <i>Heart Transplantation</i> )  | 1984 | <b>Hein J.J. Wellens</b> and <b>Douglas P. Zipes</b><br>(co-recipients)<br>Cardiology ( <i>Diagnosis and Management of Pediatric Cardiac Arrhythmias</i> )          |
| 1973 | <b>F. Mason Sones, Jr.</b><br>Cardiology ( <i>Coronary Angiography</i> )   | 1985 | <b>Denton A. Cooley</b><br>Cardiovascular Surgery ( <i>Surgery for Congenital Heart Disease, Aneurysms of the Aorta, and Implantation of the Artificial Heart</i> ) |
| 1974 | <b>Eugene E. Braunwald</b><br>Physiology ( <i>Myocardial Preservation</i> )  | 1986 | <b>William J. Rashkind</b><br>Pediatric Cardiology ( <i>Nonsurgical Treatment of Congenital Heart Disease</i> )   |
| 1975 | <b>Willem J. Kolff</b><br>Cardiovascular Surgery ( <i>Artificial Organs</i> )  | 1987 | <b>Dwight E. Harken</b><br>Cardiovascular Surgery ( <i>Intracardiac Surgery</i> )   |
| 1976 | <b>Harvey Feigenbaum</b><br>Cardiology ( <i>Echocardiography</i> )   | 1988 | <b>J. Willis Hurst</b><br>Cardiology ( <i>Writing and Teaching</i> )  |
| 1977 | <b>John W. Kirklin</b><br>Cardiovascular Surgery ( <i>Heart-Lung Machines</i> )  | 1989 | <b>Robert J. Hall</b><br>Cardiology ( <i>Clinical Practice and Teaching</i> )   |
| 1978 | <b>Bernard Lown</b><br>Cardiology ( <i>Cardiac Arrhythmias</i> )   | 1990 | <b>Sol Sherry</b><br>Cardiology ( <i>Thrombolytic Therapy</i> )   |
| 1979 | <b>John J. Gallagher</b> and <b>William C. Sealy</b><br>(co-recipients)<br>Cardiology and Cardiovascular Surgery ( <i>Surgery for Pre-Excitation</i> ) | 1992 | <b>Arthur S. Keats</b><br>Cardiovascular Anesthesiology   |
| 1980 | <b>W. Proctor Harvey</b><br>Cardiology ( <i>Clinical Practice and Teaching</i> )   | 1997 | <b>Aldo R. Castañeda</b><br>Pediatric Cardiovascular Surgery  |
| 1981 | <b>Paul M. Zoll</b><br>Cardiology ( <i>Pacemaking</i> )  | 1997 | <b>Julio C. Palmaz</b><br>Radiology ( <i>Endovascular Stents</i> )  |
| 1983 | <b>Andreas R. Grüntzig</b><br>Cardiology ( <i>Percutaneous Transluminal Coronary Angioplasty</i> )   |      |   |

- 1998 **Magdi Yacoub**  
Cardiovascular Surgery (*Heart-Lung Transplantation*)
- 1999 **Thomas J. Fogarty**  
Cardiovascular Surgery (*Medical and Surgical Devices*)
- 2004 **James L. Cox**  
Cardiovascular Surgery (*Surgery for Atrial Fibrillation*)
- 2004 **Stephen Westaby**  
Cardiovascular Surgery (*First Clinical Trial of Axial-Flow Devices for Destination Therapy and Significant Contributions to the Surgical Literature*)
- 2007 **Charles E. Mullins**  
Pediatric Cardiology (*Teaching and Pioneering Work in Interventional Techniques for Congenital Heart Disease*)
- 2008 **O.H. Frazier**  
Cardiovascular Surgery (*Heart Transplantation and Research and Development of the Left Ventricular Assist Device*)
- 2009 **James T. Willerson**  
Cardiology (*Pioneering Work in Unstable Atherosclerotic Plaques, Acute Coronary Syndromes, and Cardiac Stem Cells*)
- 2010 **Charles D. Fraser, Jr.**  
Cardiovascular Surgery (*Development of a Program Known for Its Effectiveness in Correcting Congenital Cardiovascular Disease in Children*)
- 2011 **Patrick W. Serruys**  
Interventional Cardiology (*Major Contributions to Interventional Cardiology, Including Those to the Development of Both Bare-Metal and Drug-Eluting Stents*)
- 2012 **George J. Reul**  
Cardiac and Vascular Surgery (*Development of an Accredited Vascular Lab at SLEH; Leader in Quality Measures*)
- 2013 **Alain G. Cribier**  
Interventional Cardiology (*First Balloon Dilation of Aortic Valve for Calcific Aortic Stenosis, 1985; and First Implantation of a Prosthetic Aortic Valve via Cardiac Catheterization, 2002*)
- 2014 **Terence English**  
Cardiovascular Surgery (*Establishing Heart Transplantation Program in England*)
- 2015 **Delos M. Cosgrove**  
Cardiovascular Surgery (*Significant Contributions to Cardiac Valve Repair*)
- 2016 **David A. Ott**  
Cardiovascular Surgery (*Knowledge of and Exceptional Technical Expertise in Cardiovascular Surgery*)
- 2018 **Joseph S. Coselli**  
Cardiovascular Surgery (*Knowledge of and Exceptional Technical Expertise in Thoracoabdominal Aortic Aneurysm Repair*)
- 2019 **Emerson C. Perin**  
Interventional Cardiology (*Research in Regenerative Medicine and Stem Cells, and Development of Novel Stem Cell Treatments for Patients*)