University of Minnesota Department of Surgery Presents
The Second Annual Bakken Surgical Device Symposium

Cardiac Valves: Past, Present and Future
Early Innovations, Current Practice and Future Developments in Cardiac Valve Design and Technique

December 8 & 9, 2008
8:00 am - 5:00 pm

Mayo Memorial Auditorium
University of Minnesota

University of Minnesota
Medical School

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ACCREDITATION

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The University of Minnesota designates this educational activity for a maximum of 11.25 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Educational Objectives

Upon completion of this activity, the participant should be able to:

• Develop insights into the current clinical practices associated with the given medical devices (i.e., cardiac valves and placement techniques)
• Apply current practice guidelines for clinical use of the medical device as well as current outcomes
• Evaluate the future direction in medical device research and clinical trials
• Develop an awareness of novel prototype medical devices
Monday, December 8, 2008

8:00 am - Breakfast

8:30 am - Welcome
Selwyn M. Vickers, M.D, FACS Jay Phillips Professor and Chair, Department of Surgery, University of Minnesota

8:45 am – Welcome
Frank B. Cerra, M.D. Senior Vice President for Health Sciences Academic Health Center, University of Minnesota

9:00 am

“History of Cardiac Valve Development at the University of Minnesota”
Richard W. Bianco, Program Director Experimental Surgical Services, Associate Professor of Surgery, University of Minnesota

9:30 am

“Progress Toward a Tissue Engineered Heart Valve.”
John E. Mayer Jr., M.D., Professor of Surgery, Harvard Medical School Senior Associate in Cardiac Surgery, Children’s Hospital, Boston

Discussion

10:30 am – Coffee Break

11:00 am – Session I: Mechanical Heart Valves
Herbert B. Ward, M.D., PhD. - Moderator

“New Strategies for Improving Outcomes of Prosthetic Cardiac Valve Replacement”
Hartzell Schaff, M.D., Chair, Division of Cardiac Surgery, Stuart W. Harrington Professor of Surgery, Mayo Clinic

“Evolution of Carbon Heart Valve Replacements”
Jack Bokros, Ph.D., Founder and Sr. Technology Advisor, On-X Life Technologies, Inc.

“Anticoagulation for Mechanical Heart Valves.”
Robert Emery Jr., M.D., Director of Cardiac Surgery St. Joseph’s Hospital, Editor- Journal of Heart Valve Disease

“Mechanical Valves – Current Indications and Future Devices”
Rob Gallegos, MD, PhD, Associate Surgeon, Division of Cardiac Surgery, Brigham and Women’s Hospital and Harvard Medical School

Discussion

12:45 pm – Lunch
1:45 pm - Session II: Tissue Heart Valves
   Sara Shumway, M.D. - Moderator

“Tissue Heart Valve Design - The Pre-eminence of Function over Form”
   James L. Cox, M.D., Emeritus Evarts A. Graham Professor of Surgery; Emeritus Chief, Division of Cardiothoracic Surgery, Washington University School of Medicine St. Louis, MO, Medical Director, ATS Medical, Inc. Minneapolis, MN

“Improved Decision-Making on Valve Replacement Devices - Evidence Based upon Long-Term Performance of Bioprostheses and Mechanical Prostheses.”
   W R Eric Jamieson, MD, Professor of Surgery, Director of Clinical Cardiac Surgery Research, Division of Cardiovascular Surgery, University of British Columbia

“Reconstruction of the Right Ventricular Outflow Track in Adults with Congenital Heart Disease: The Quest for the Ideal Valve”
   James St. Louis, M.D., Associate Professor, Division of Cardiothoracic Surgery, University of Minnesota Aldo Castañeda Professorship in Congenital Heart Surgery

“Early Porcine Bioprosthetic Calcification in Humans”
   Kenneth Liao, M.D, Assistant Professor, Division of Cardiothoracic Surgery, University of Minnesota; Surgical Director of Heart Transplantation Program; Head, Robotic & Minimally Invasive Cardiac Surgery Program, CMIS

“Options for Aortic Valve Pathology in 2008- Homografts, Autographs and Stentless Tissue Valves”
   James H. Oury, MD, Chief, Cardiac Surgery, Rapid City Regional Hospital, South Dakota

Discussion

3:45 - Coffee Break

4:00 pm – Session III: Device Development: From Bench to Bedside
   Lyle Joyce, M.D., PhD. Moderator

“Cardiac Valve Biology and BioMechanics”
   Frederick J. Schoen, M.D., PhD., Professor of Pathology and Health Sciences and Technology, Harvard Medical School, Executive Vice Chairman, Department of Pathology, Brigham & Women’s Hospital

“Calcific Failure of Bioprosthetic Heart Valves: Pathogenesis and Prevention”
   Robert J. Levy, M.D., William J. Rashkind Endowed Chair in Pediatric Cardiology, Children’s Hospital of Philadelphia;

Discussion
Tuesday December 9, 2008

8:00 am - Breakfast

8:30 am – Welcome
Earl Bakken, M.D., Hon C.
Co-Founder, Medtronic, Inc.

8:45 am – Session III: Device Development: From Bench to Bedside
Rosemary Kelly, M.D. Moderator

“The Triflo Tri-leaflet Mechanical Heart Valve: Design and In Vitro Performance”
Ulrich Steinseifer, Ph.D, Head of Cardiovascular Engineering; Applied Medical Engineering, Helmholtz Institute, RWTH Aachen University, Aachen, Germany

“Developing International Standards for the Next Generation of Heart Valve Replacement and Repair Devices”
Ajit Yoganathan, Ph.D Regents’ Professor; Associate Chair for Research; The Wallace H. Coulter Distinguished Faculty Chair in Biomedical Engineering, Georgia Institute of Technology

“Novel Views of Valvular Function: Employing Visible Heart® Technology”
Paul Iaizzo, Ph.D Professor of Surgery, Integrative Biology and Physiology, and Carlson School of Management. Associate Director for Education of the Institute for Engineering in Medicine, University of Minnesota

“Tissue Engineered Heart Valves: Application of Novel Stretch Controlled BioReactor”
Zeeshan Syedain Graduate Student, Robert T. Tranquillo Lab

Discussion

10:30 am – Coffee Break

11:00 am – Session IV: Looking to the Future – Techniques and Technology
Daniel J. Garry, M.D., Ph.D Moderator

“Aortic Valve Replacement in the Modern Era: Transcatheter Approach”
Robert Wilson, M.D.,Professor of Medicine, Director, Interventional Cardiology, University of Minnesota. Director, Cardiac Catheterization Laboratory, Fairview University Medical Center

“Status of Percutaneous Aortic Valve Replacement”
Raoul Bonan, M.D., Associate Professor of Medicine, Montreal Heart Institute

“Valve Replacement in the High Risk Patient”
Ranjit John, M.D., Assistant Professor Cardiovascular Surgery, University of Minnesota
Session IV: Looking to the Future – Techniques and Technology,
Daniel J. Garry, M.D., Ph.D Moderator

“Minimally Invasive Aortic and Mitral Valve Surgery in 2009 – Thorascopic, Robotic and Transapical Approaches”
Rakesh M. Suri, M.D., PhD., Assistant Professor of Surgery, Mayo Clinic

Discussion

12:45 pm - Lunch

2:00 pm – 4:15 PM – Closing Plenary

“Cardiac Surgeons and Cardiologists on Future Directions in Cardiac Valve Replacement.”
Moderated by Richard Bianco, Associate Professor of Surgery, University of Minnesota

Plenary Speakers;

James L. Cox, M.D.
Emeritus Evarts A. Graham Professor of Surgery; Emeritus Chief, Division of Cardiothoracic Surgery, Washington University School of Medicine St. Louis, MO, Medical Director, ATS Medical, Inc. Minneapolis, MN

John E. Mayer Jr., M.D.
Professor of Surgery, Harvard Medical School
Senior Associate in Cardiac Surgery, Children’s Hospital, Boston

Raoul Bonan, M.D.
Associate Professor of Medicine, Montreal Heart Institute

Robert Wilson, M.D.
Professor of Medicine, Director, Interventional Cardiology, University of Minnesota. Director, Cardiac Catheterization Laboratory, Fairview University Medical Center

Robert F. Schwartz, M.D.,FACC
Cardiologist, Minneapolis Heart Institute, Minneapolis MN

Robert Emery Jr., M.D.,
Cardiac Surgical Associates, Editor- Journal of Heart Valve Disease
Experimental Surgical Services at the University of Minnesota is more than just a contract research organization. From discovery to regulatory strategy to submission we are the industry leader in researching and testing pre-clinical medical devices and surgical techniques.
The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status or sexual orientation.

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