Fontana Focus on (R)Evolution: Leading the Charge

Quoting from Winston Churchill, Charles Darwin, Oliver Wendell Holmes, A.P.J. Abdul Kalam, Wayne Gretsky, Peter Drucker, Steve Jobs, Henry Ford, Albert Einstein, and Walt Disney, Gregory Fontana’s presidential address presented an insightful and provocative perspective on the specialty of minimally invasive surgery and described the correlations with his concept of (R)Evolution: Leading the Charge. Dr. Fontana was generous in his gratitude to his mentors, his colleagues in practice, ISMICS leadership and management, as well as the past presidents of the organization – “a truly international cast of characters… the engine of this society; their commitment, hard work and enthusiasm are the fuel that keeps us not just running, but accelerating.”

In providing the definitions of evolution and revolution, Dr. Fontana referenced the innovations seen within the specialty over the past 20 years and applied the concepts of evolution and revolution to the world of minimally invasive surgery. He mentioned the first innovators and early adopters and noted they were called crazy and reckless…risking permanent ostracization. “ISMICS is now nearly 20 years young! In the early 1990s, those who were to become the charter members of ISMICS met great resistance. In fact, it was very difficult to get our work published in the main stream journals or presented at meetings.”

“What is Evolution Revolution? It is a phenomenon that has been described by Nobel Laureate Robert Laughlin as ‘…a transition from science of the past to the science of the future.’ That is to say, Darwin’s theory, based on ideological perspectives, has not stood the scrutiny of scientific validation. Why has Darwinism never resolved important issues in evolution, like the origin of the species? And why, after more than 150 years, do we have (at best) only a handful of examples of natural evolution?”

“I draw at least two conclusions from this fascinating shift in paradigm. First, just because it’s always been done one way, or explained, justified, taken as fact or law, we need to consider continued and careful analyses of the tenets we hold most dear. Second, evolution has direction, it can be steered, potentially accelerated, optimized! I think in large part our ability to evolve and

(continued on page 3)
Proven long-term durability for both mitral and aortic positions — setting the standard for cardiac surgery.

*Freedom from explant due to structural valve deterioration is 81.1% ± 8.1% at 17 years for Mosaic Aortic and 79.7% ± 12.7% at 16 years for Mosaic Mitral.

Presidential Address  (continued from page one)

to revolve will be contingent on our capacity to adapt to the accelerating pace of change.”

Dr. Fontana listed many of the revolutions within the specialty including video assisted thoracoscopic procedures, robotics, TAVR, percutaneous mitral valve repair and replacement, percutaneous tricuspid valve replacement, miniVADS, and the total artificial heart. “Is the holy grail no longer an elusive apparition? The new BiVvacor device pioneered by ISMICS member Billy Cohn and his mentor Bud Frazier has produced spectacular results in calves and is within months of human clinical trials. This device may require a large incision, but I would suggest far less invasive than transplantation, not to mention the potential benefit of off the shelf availability.”

Concurrent with the revolution in our specialty is the explosive advances in overall technological innovation such as 3D printing and virtual reality, which Dr. Fontana called “multiple revolutions in parallel …. will transform how we work, how we live, and finally how we treat and cure our patients …”

Using the acronym TEAM (Together Everyone Achieves More), he noted the importance of working together. “One of the most essential elements of innovation is collaboration. We must collaborate locally, nationally and globally. We must embrace the new paradigm of the ‘heart team’ - cardiac surgeons, interventional cardiologists, imaging physicians, cardiac anesthesia, nursing, perfusion, thoracic surgeons, pulmonologists, oncologists, radiologists, and the extended team of engineers, scientists, and doctors in suits.”

To remain relevant, we must continue our tradition of leadership and be vigilant in advancing the principles and the mission of the society to which we belong. We are at a critical juncture.

And of all the inspirational quotes used by Dr. Fontana, he noted “one of my favorite quotations by Walt Disney, “It’s kind of fun to do the impossible.”

Johannes Bonatti, incoming ISMICS president, introduced current president Gregory Fontana with several references to Dr. Fontana’s Italian roots and a litany of his professional achievements. “When I asked him for his success factors, he replied: passion, teamwork, focus, and go back to the lab.”

Dr. Fontana began with a heartfelt thank you to his family and especially his wife, Jeannie. He noted the “challenges of living with one of us. It requires a special kind of person to tolerate US, and an even more dedicated individual to make US better! She is an extraordinary woman, physician, scholar, mother, friend and wife.” (Shown here with his son Tony and Jeannie.)

ISMICS Members’ Annual Business Meeting

All ISMICS members are requested to attend the Members’ Business Meeting on Saturday morning, 08.30-09.00.

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Masters Day Sessions Kick off the Annual Meeting

The ISMICS Masters Day program on Wednesday, launched the 2016 Annual Meeting. The Thoracic Masters Day program kicked off with several point/counterpoint debates and included live surgeries from Shanghai Pulmonary Hospital, Centre Hospital de L’Universite de Montreal, Lenox Hill Hospital, and the University of Ottawa.

The Cardiac Masters Day featured morning sessions focused on Heart Valve, Atrial Fibrillation, and Minimally Invasive Aortic and Endovascular Therapies. The afternoon programs on Minimally Invasive & Transcatheter Aortic Valve Therapies, Minimally Invasive & Innovative Coronary Bypass Surgery, and Minimally Invasive & Robotic Mitral Valve Surgery included, How I Do It presentations, Live in a Box session, tips and tricks, panel discussions, and point/counterpoint debates.

Innovation Spotlight

Thursday’s morning program included an Innovation Spotlight on “Evolution of Catheter-Based Endovascular Surgery” by William E. Cohn, MD.

Technical Challenges: Pitfalls & Disasters

The ever-popular cardiac Technical Challenges: Pitfalls & Disasters, chaired by Valavanur Subramanian, MD and Ramachandra Reddy, MD was joined this year by a companion Thoracic session, chaired by Jens Rueckert, MD and Harmik Soukiasian, MD.

Thoracic and Cardiac Tracks

Welcome Reception in Exhibit Hall

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OVERVIEW: Cardiac surgeons believed that the structural heart arena would always be theirs. Reminiscent of coronary revascularization, percutaneous access ASD and PFO closures by interventional cardiologists heralded another new era of non-surgical therapy. With the advent of TAVR, aortic valve surgery is at a critical juncture. For cardiac surgeons to remain relevant, less invasive surgery must be developed, and quickly. Surgeons must lead or accept obsolescence. Transcatheter aortic valve interventions will replace surgery, if surgery does not become substantially better. Patients demand and deserve more convenience, less pain and better outcomes. While TAVR data are encouraging for the first few years, by five years, supportive evidence is weak and less promising. Excellent truly minimally invasive surgery must offer myriad advantages beyond optimal durability: freedom from PVLs and low gradients; low risk of permanent pacemaker; sternum, cartilage and rib sparing access; reduced CPB and cross-clamp times; extubation in the OR; low risk for transfusion; rapid transition out of intensive care and the hospital; prompt return to normal activities and home even for the morbidly obese; all with minimal discomfort and excellent cosmesis. For a revolutionary surgical advance to become broadly disseminated and accepted, it must be teachable, reproducible and minimize the need for femoral access, while providing results even better than open surgery.

In my practice at the University of Rochester Medical Center, all isolated AVR patients are booked as Mini’s. This presentation will provide insight into how we built this program, designed the operation and offer the lessons learned along the way. Video guided mini-thoracotomy AVRs are now our routine. This platform works well for other procedures, such as annular enlargement and subaortic membrane resection. Customized innovations for cardiac surgery offer even more reason for excitement, as is illustrated in our recent First-In-Man use of automated, single squeeze RAM® technology for annular suturing. The future of heart surgery is indeed bright for surgeons willing and able to provide the very best outcomes for their patients.
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Moderated Poster Competition Finalists

Congratulations to the following finalists who will be advancing to the final round, which will be delivered from the podium in LeGrand Salon today from 16.30 - 17.30. Presenters are again allowed a maximum of three minutes, followed by two minutes for audience questions and discussion.

Aortic & Endovascular Therapies
Staged Thoracic Endovascular Aortic Repair of Extensive Aortic Arch Aneurysm, Akihrio Yoshitake

Arrhythmia
Mid-term Results of Five-box Biatrial Thoracoscopic Ablation of Advanced Atrial Fibrillation on the Beating Heart, Talal Al-Atassii

Congenital & Pediatric
Percutaneous Trans-femoral Technique for Atrial Septal Defect Closure under Trans-esophageal Echocardiographic Guidance, Gan Chang Ping

Revascularization Procedures- Strategies and Outcomes
Surgical Treatment of Single Vessel Disease Increases, Francis Sutter

Thoracic 1: Oesophagus & Mediastinum
Lessons Learned: Minimally Invasive Resection of Mediastinal Pathology, Hannah Conn

Thoracic 2: Pain, Pleura and Port Approaches
Minimally-Invasive Sublobar Resection of Tiny Pulmonary Nodules with Real-Time Image Guidance in the Hybrid Theatre, Sze Yuen Yu

Valve- Minimally Invasive Approaches: Mitral
3D Imaging in Minimally Invasive Mitral Valve Surgery: An 18 Months Single Center Experience, Christoph Krapf

Valve- Minimally Invasive Approaches: Aortic
Minimally-Invasive Aortic Valve Replacement via Right Anterior Mini-thoracotomy and Central Aortic Cannulation: A 13-Year Experience, Daniel Bethencourt

Valve- Transcatheter Therapies
Reduced Ejection Fraction: Is there an improvement after Transcatheter Aortic Valve Replacement? Mahim Malik

General
Pre-Operative Eligibility for Minimally Invasive Coronary Artery Bypass Grafting: An Examination of Epicardial Adipose Using Computed Tomography, Kate Dillon

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<td>Joshua K. Wong</td>
<td>Rochester, NY</td>
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<td>Bo Xiang, MD</td>
<td>Sichuan, China</td>
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<td>Shiqiang, Yu, MD</td>
<td>Xian, China</td>
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<td>Sze Yuen Yu, MBBS</td>
<td>Hong Kong, Hong Kong</td>
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<td>Volkan Yurtman, MD</td>
<td>Almati, Kazakhstan</td>
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<td>Rong Zhao, MD</td>
<td>Xi’an, China</td>
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Want to be part of this prestigious group at next year’s annual meeting in Rome?
JOIN NOW at www.ismics.org

**LATE BREAKING NEWS SESSION**
Friday, 13.50-14.05

**Trifecta Valve Mid-Term Durability – Multicenter Trial Update**
Dr. Mark Groh, Mission Hospital

Sponsoring Company: ST. JUDE MEDICAL

Membership benefits:
• Reduced Annual Meeting registration fees
• Complimentary subscription to INNOVATIONS, the Official Journal of ISMICS
• Become a member in one of the fastest growing Minimally Invasive surgical societies
ISMICS Awards Presented on Thursday

CHITWOOD Educational Travel Award Winners

The 2016 Chitwood Educational Travel Awards were presented to (l to r) Madonna Lee, Rutgers-Robert Wood Johnson Medical Center; Amber Melvin, University of Rochester; and Christiano Spadaccio, Golden Jubilee National Hospital by Gregory Fontana, ISMICS President.

SUBRAMANIAN INNOVATION AWARD

ISMICS was pleased to make the announcement of the Subramanian Innovation Award that will provide a $5,000 grant for an member to take their innovative concept closer to reality. Criteria for the award and the requirements for submission will be available at www.ismics.org

Awards presented for the Best Manuscript Published in INNOVATIONS

Best Paper (TIE) Submitted Before/During 2015 Meeting
A Laser Assisted Anastomotic Technique: Feasibility on Human Diseased Coronary Arteries
David Stecher, Aryan Vink, Gerard Pasterkamp, Marc P. Buijsrogge. University Medical Center Utrecht, Utrecht, Netherlands

Validation of a Novel Virtual Reality Training Curriculum for Robotic Cardiac Surgery: A Randomized Trial
Matthew Valdis, Michael W.A. Chu, Christopher M. Schlachta, Bob Kiaii. University Hospital/LHSC/UWO, London, Ontario

Best Paper Submitted After 2015 Meeting
Transcatheter Mitral Valve Implantation for the Treatment of Mitral Regurgitation: Thirty days Outcomes of First-in-Man Experience with an Apically Tethered Device
Cesare Quarto FRCS PhD, Simon Davies MA FRCP, Alison Duncan PhD, Alistair Lindsay MD MBA PhD, Georg Lutter MD PhD, Lucian Lozonschi, Neil Moat FRCS, Royal Brompton Hospital, London, UK

Don’t miss the ATTENDEE RECEPTION TONIGHT at the MONTREAL MUSEUM OF FINE ARTS

ISMICS Annual Meeting attendees are invited to the Attendee Reception on Friday evening at the Montreal Museum of Fine Arts. Don’t miss the opportunity to gather with your friends and colleagues for a festive evening to celebrate the annual meeting and to enjoy the Museum’s many unique and fascinating displays, including the exceptional Pompeii Exhibit, the largest every presented in Quebec.

Soak up the splendour and opulence of Pompeii in a spectacular exhibition that features over 220 archaeological artifacts in a unique multisensorial environment. Mosaics, frescoes, bronze and marble statues, decorative art objects, as well as utensils and personal accessories.

The Montreal presentation of Pompeii is a unique multisensorial experience that immerses visitors in the daily life of this Roman town before the cataclysmic eruption of Mount Vesuvius on August 24, 79 A.D. This original exhibition design incorporates archaeological artifacts from Pompeii within the market place, the home and garden, environments that have been re-created using state-of-the-art visual effects and soundscapes. The exhibition culminates with a multimedia re-creation of the volcanic eruption that buried Pompeii under metres of ash for centuries.
ISMICS wishes to express a special Thank You to these companies for their additional support of the Society; and for their commitment to developing minimally invasive surgery techniques and technologies:

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Brief Summary: Prior to using these devices, please review the Instructions for Use for a complete listing of indications, contraindications, warnings, precautions, potential adverse events and directions for use.

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