



ISCE '11  
Renaissance Ross Bridge Golf Resort & Spa  
Birmingham AL USA  
20 April – 24 April 2012

Fabio Badilini, Ph.D.  
AMPS-LLC  
Montichiari ITALY  
*Conference Chair*

Kjell Nikus, M.D.  
Tampere University Hospital  
Tampere FINLAND  
*Conference Co-chair*

## PRELIMINARY PROGRAM

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### FRIDAY, 20 APRIL 2012

1530-18300

#### Pre-conference Tutorial

##### *The Fragmented QRS*

**Organizers: Kjell Nikus, Tampere University Hospital, Tampere FINLAND  
Fabio Badilini, AMPS-LLC, Montichiari ITALY**

Kjell Nikus, Tampere University Hospital, Tampere FINLAND  
*Overview*

Mithilesh K. Das, Krannert Institute of Cardiology Indianapolis IN USA  
*The Fragmented QRS: a novel marker of cardiac disease?*

Michael Ringborn, Thoracic Center, Blekingesjukhuset, Karlskrona, Sweden and Lund  
University, Lund, Sweden  
*The anatomical/electrophysiologic background*

Robert Lux, University of Utah, Salt Lake City UT USA  
*Measurement aspects*

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### SATURDAY, 21 APRIL 2012

#### Welcome & Opening Remarks

Fabio Badilini, AMPS-LLC, Montichiari ITALY

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#### Session I: Papers from submitted abstracts

Chair: Kjell Nikus, Tampere University Hospital, Tampere FINLAND

Co-chair: TBA

Kjell Nikus, Tampere University Hospital, Tampere FINLAND

*Overview*

Vincent Jacquemet, Hôpital du Sacré-Coeur de Montréal, Montréal CANADA

*Assessment of the sensitivity of drug-induced QTc changes using subject-specific rate correction*

Discussion

Georg Schmidt, Technische Universität München, München GERMANY

*Bivariate phase-rectified signal averaging for assessment of respiratory sinus arrhythmia: A novel predictor of late mortality after myocardial infarction*

Discussion

Deodato Assanelli, University of Brescia, Brescia ITALY

*T-wave axis deviation, metabolic syndrome and estimated cardiovascular risk in the MOLI-SANI project*

Discussion

Salman J. Bandeali, Baylor College of Medicine, Houston TX USA

*Comparison of segmental wall motion abnormalities on echocardiography in patients with anteroseptal versus extensive anterior wall ST segment elevation myocardial infarction*

Discussion

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### Break

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## Session II: Drug-induced changes of cardiac repolarization

Chair: Marek Malik, University of London, London ENGLAND

Co-chair: Christine Garnett, USFDA, Silver Spring MD USA

Marek Malik, University of London, London ENGLAND

*Overview*

Norman Stockbridge, USFDA Silver Spring MD USA

*Present challenges and so far unresolved problems*

Discussion

Christine Garnett, USFDA, Silver Spring MD USA

*PK/PD modeling of QTc drug influences*

Discussion

Johanne Zhang, USFDA, Silver Spring MD USA

*Statistical issues of TQT studies and baseline correction*

Discussion

Marek Malik, University of London, London ENGLAND

*Stability of QT measurement and/or QTc assessment*

Discussion

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## Poster Session 1

**PRESENTERS:** [not yet assigned to specific day]

Roger Abächerli, Schiller AG, Baar SWITZERLAND

*ST-segment deviation score in the early diagnosis of acute myocardial infarction*

Roger Abächerli, Schiller AG, Baar SWITZERLAND

*ST-segment deviation score in the risk prediction of patients with suspected acute myocardial infarction*

Saeed Babaeizadeh, Philips Healthcare, Andover MA USA

*A comparison of three ECG-derived respiration techniques during cardiac magnetic resonance image acquisition*

Raymond Bond, University of Ulster, Newtownabbey NORTHERN IRELAND

*Assessing perception of new methods that represent ST deviation*

- W. Brian Chiu, Dynacardia, Inc., Azusa CA USA  
*Spectral analysis of the resting ECG for the classification of stress-induced myocardial ischemia by vascular territory*
- W. Brian Chiu, Dynacardia, Inc., Azusa CA USA  
*Spectral analysis of JTp segment for the classification of Type-2 diabetes*
- Jean-Philippe Couderc, University of Rochester, Rochester NY USA  
*Instantaneous response of QT to RR changes identifies an impairment of repolarization adaptation to heart rate in the LQT-1 syndrome*
- Rebecca Di Maio, HeartSine Technologies Ltd., Belfast NORTHERN IRELAND  
*Does re-fibrillation occur in models with impedances greater than 94 ohms? Assessing the impact on 1<sup>st</sup> shock success of varying patient impedances*
- Rebecca Di Maio, HeartSine Technologies Ltd., Belfast NORTHERN IRELAND  
*Retrospective analysis of first shock efficacy in human cardiac arrest patients using 100 joules biphasic versus 150 joules biphasic*
- Loriano Galeotti, USFDA, Silver Spring MD USA  
*Evaluating strict and conventional left bundle branch block criteria using ECG simulations*
- Daniel Guldenring, University of Ulster, Newtownabbey NORTHERN IRELAND  
*Estimation accuracy of a reduced lead system during continuous ST monitoring*
- Eric Helfenbein, Philips Healthcare, Andover MA USA  
*ECG/EMG-derived respiration during cardiac magnetic resonance imaging*
- Timothy Huang, Johns Hopkins University, Baltimore MD USA  
*Reproducibility of automated electrocardiographic measurements*
- Robert J. Knotts, Baylor College of Medicine, Houston TX USA  
*Diffuse ST depression with ST elevation in AVR: Is this pattern specific for global ischemia due to left main coronary artery disease?*
- Oded Luria, Biological Signal Processing Ltd., Tel-Aviv ISRAEL  
*Ischemia monitoring using high-frequency QRS analysis*
- David Pickham, UCSF, San Francisco CA USA  
*Multiple RR averaging decreases variability in QT interval correction with atrial fibrillation*
- Roberto Sassi, Università degli Studi di Milano, Crema ITALY  
*T-wave alternans: lessons learned from a biophysical ECG model*
- Autumn Schumacher, Georgia Health Sciences University, Augusta GA USA  
*Age-related changes in QRS and QTc interval times observed in isolated rabbit hearts after induction of ventricular fibrillation and spontaneous conversion to sinus rhythm*
- Sanjoli Sur, Johns Hopkins University, Baltimore MD  
*Intracardiac native QRST integral decreases immediately prior to spontaneous sustained ventricular tachyarrhythmia, but not before supraventricular arrhythmia in patients with implantable cardioverter-defibrillators*
- Larisa Tereshchenko, Johns Hopkins University, Baltimore MD USA  
*Prediction of ventricular tachyarrhythmia by intracardiac QRST integral*
- Martino Vaglio, AMPS-LLC, New York City NY USA  
*C-reactive protein level is linked to T-wave axis deviation in a healthy Italian population: results from the MOLI-SANI project*

Peter van Dam, Peacs, Arnhem THE NETHERLANDS  
*New 3D patient-specific morphing tool translates ECG/VCG waveforms into cardiac MRI and CT anatomy*

Robert A. Warner, Tigard Research Institute, Tigard OR USA  
*ECG evidence of prior myocardial infarction improves the diagnostic performance of tests for left ventricular systolic dysfunction*

Fan Wang, University of Copenhagen, Copenhagen DENMARK  
*Subdivision of heart rate variability VLF band contains prognostic value of all-cause mortality after acute myocardial infarction*

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### **SESSION III: Patient monitoring alarm fatigue, management and solutions**

Chair: Barbara J. Drew, UCSF, San Francisco CA USA

Co-chair: Shawn Forrest, USFDA Silver Spring MD USA

Barbara J. Drew, UCSF, San Francisco CA USA

*Overview*

James P. Keller, ECRI Institute, Plymouth Meeting PA USA

*What is the problem and why is it #1 on ECRI's priority list for 2012?*

Discussion

Frank E. Block, Jr., Little Rock AR USA

*Why we don't have, and won't have, smarter alarms*

Discussion

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### **Break**

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Maria Cvach, Johns Hopkins Hospital, Baltimore MD USA

*New approaches and best practices for alarm management*

Discussion

Gari D. Clifford, University of Oxford, Oxford ENGLAND

*How can alarms be smarter to improve specificity?*

Discussion

Shawn Forrest, USFDA, Silver Spring MD USA

*The FDA perspective*

Discussion

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### **Poster Session 1 – Continuing Discussions**

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## **SUNDAY, 22 APRIL 2012**

### **Session IV Changing role of ECG in left ventricular hypertrophy diagnosis**

Chair: Ljuba Bacharova, University of Bratislava, Bratislava SLOVAK REPUBLIC

Co-chair: David Strauss, USFDA, Silver Spring MD USA

Ljuba Bacharova, University of Bratislava, Bratislava SLOVAK REPUBLIC

*Overview*

E. Harvey Estes, Duke University Medical Center, Durham NC USA

*ECG manifestations of left ventricular electrical remodeling*

Discussion

Giuseppe Schillaci, University of Perugia, Perugia ITALY

*Electrocardiography vs. echocardiography in the assessment of LVH: Weighing the evidence*

Discussion

Joseph A. Hill, University of Texas Southwestern Medical Center, Dallas TX USA

*Structural, functional and metabolic remodeling of myocardium in LVH*

Discussion

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Break

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Ljuba Bacharova, University of Bratislava, Bratislava SLOVAK REPUBLIC

*Computer simulation of the ECG manifestations of left ventricular electrical remodeling*

Discussion

David Strauss, USFDA, Silver Spring MD USA

*Differentiation between LBBB and LVH as decision support for resynchronization therapy*

Discussion

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## Poster Session 2

### PRESENTERS:

[SEE POSTER SESSION 1]

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## Kenichi Harumi Plenary Address

**Peter Macfarlane**

**University of Glasgow, Royal Infirmary, Glasgow SCOTLAND**

***Why, in 2012, C.A.R.E. should be more sexy and racy, yet suitable for all ages!***

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## Session V: Jos Willems Young Investigators Competition

Chair: Konrad Brockmeier, University of Köln, Köln GERMANY

Co-chair: Shen Luo, MindRay Biomedical, Mahwah NJ USA

Konrad Brockmeier, University of Köln, Köln GERMANY

*Overview*

Kathleen McDowell, Johns Hopkins University, Baltimore MD USA

*Investigating the arrhythmogenic effects of atrial fibrosis in patient-specific models*

Discussion

Javed Nasir, San Antonio Military Medical Center, San Antonio TX USA

*The effect of body mass index on surface electrocardiograms from young adults*

Discussion

Durgesh Das, Johns Hopkins University, Baltimore MD USA

*Larger degree of QT prolongation after spontaneous ventricular premature beat is associated with ventricular tachyarrhythmia in patients with structural heart*

Discussion

Loek Meijs, Catharina Hospital, Eindhoven NL

*Increased T amplitude with decreased ST elevation characterizes ischemic preconditioning: A simulation, experimental and clinical study*

Discussion

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**Poster Session 2 – Continuing Discussions**

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**MONDAY, 23 APRIL 2012**

**Session VI High-definition electrocardiology from surface to implantable cardiac devices**

Chair: Martin Burke, University of Chicago, Chicago IL USA

Co-chair: Igor Efimov, Washington University, St. Louis MO USA

Martin Burke, University of Chicago, Chicago IL USA

*Overview*

Igor Efimov, Washington University, St. Louis MO USA

*Using high definition ECG in implantable cardiac devices*

Discussion

Martin Burke, University of Chicago, Chicago IL USA

*ICD sensing algorithms: Challenges with the subcutaneous electrogram*

Discussion

Raymond Ideker, University of AL, Birmingham AL USA

*Different types of long duration ventricular fibrillation: Can they be identified by electrocardiography?*

Discussion

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**BREAK**

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Neeraj Varma, Cleveland Clinic, Cleveland OH USA

*Alternative site pacing: Accessing normal precordial activation: Is it possible?*

Discussion

Shen Luo, MindRay, Mahwah NH USA

*The bi-ventricular pacemaker body surface ECG study*

Discussion

Arthur J. Moss, University of Rochester, Rochester NY USA

*Selection of high-risk patients for device intervention with the new advances in technology*

Discussion

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**Session VII: Databases from the world with digital ECGs**

Chair: Arthur J. Moss, University of Rochester, Rochester NY USA

Co-chair: TBA

Arthur J. Moss, University of Rochester, Rochester NY USA

*Overview*

Jared Magnani, Boston University School of Medicine, Boston MA USA

*The Framingham Heart Study Digital ECG Repository*

Discussion

Jean Philippe Couderc, University of Rochester, Rochester NY USA

*The Telemetric and Holter ECG Warehouse (THEW): The first three years of development and research*

Discussion

Licia Jacoviello, Laboratory of Genetic and Environmental Epidemiology, Campobasso ITALY

*The Moli-Sani project*

Discussion

Paul Kligfield, Weill Medical College of Cornell University, New York NY USA

*The FDA warehouse experience with CRSC*

Discussion

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**Banquet**

Poster Awards

JWYI Awards

President's Remarks

Chair's Remarks

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