

# EHRA

EUROPEAN HEART RHYTHM ASSOCIATION

## 2016

### Activity Report

[www.escardio.org/EHRA](http://www.escardio.org/EHRA)



# JOIN EHRA

EUROPEAN HEART RHYTHM ASSOCIATION



Be part of the leading network of  
**European Cardiac Rhythm Management,**  
connect with EHRA and access all 2017 benefits:

- **Up to €220 discount for EHRA EUROPACE-CARDIOSTIM 2017 registration**
  - Reduced fee for the EP Europace Journal
  - Discounted fee for EHRA educational courses
  - Exclusivity to EHRA Training Fellowship Programmes
  - EHRA monthly webinars
  - ESC eLearning platform
  - EHRA quarterly e-newsletter
  - Voting rights\*
  - and more...

\* Reserved for members of ESC National Cardiac Societies.

I'm an EHRA member. We are the ESC

WE  
ARE THE  
ESC

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## EHRA mission

*To improve the quality of life of the population by reducing the impact of cardiac rhythm disturbances and reduce sudden cardiac death.*



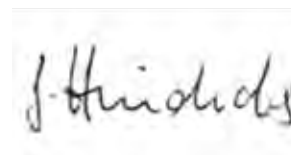
I am delighted to introduce the 2016 Activity Report covering our collective achievements over the last year. The European Heart Rhythm Association (EHRA) continues to extend its reach and influence, and we are globally recognised as a leading heart rhythm network and a major contributor to scientific advancement in our field – something of which we should all be very proud. The tireless effort and commitment of so many people, volunteers and staff alike, is why the EHRA has maintained its progress and I would like to acknowledge their contribution during 2016 and thank them for their enthusiasm and dedication to the EHRA's cause.

This report contains a short summary of our work during 2016 along with an update on progress of long-term, ongoing programmes and initiatives. Anyone reading this report will inevitably be impressed at the breadth of activities which the EHRA engages with in pursuit of its mission. But without a steady flow of expert volunteers to fill positions or undertake roles, we will not be able to deliver our strategic goals. I therefore hope that one of the key impacts of this report will be to encourage more members to offer expertise to one of the many projects or committees aligned with their specific areas of interest.

In the short space available to me in this introduction, I can only highlight a few of our many achievements. Notable to me have been:

- The EP Europace Journal setting a record with its highest-ever Impact Factor
- Publication of four new scientific documents with extensive collaboration with sister societies and four new titles on EHRA Key Messages app
- Delivering live educational courses to over 800 cardiologists and members
- Introducing certification exam for Allied Professionals in German on top of existing English, Dutch and Italian
- Publication of the EHRA White Book's ninth edition
- Launch of the EHRA Recognised Training Centres Programme
- Successful CARDIOSTIM – EHRA EUROPACE congress held in Nice
- And many more, of course..

I do hope you take the time to read through this Activity Report and appreciate how much your Association is doing to help improve patient outcomes for those with cardiac rhythm and pacing conditions. This is my final year as President of the EHRA, and I would like to express my sincere gratitude for all the support I have received from everyone. In June at the EHRA EUROPACE - CARDIOSTIM 2017 congress, I will hand over the President role to Professor John A. Camm who is, as you all know, a highly distinguished and respected leader in cardiovascular medicine and arrhythmia research and currently Editor-in-Chief of the EP Europace Journal. I am confident that the EHRA will be in very safe hands for the future.



**Gerhard Hindricks,**  
EHRA President, 2015-2017

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## EP EUROPACE JOURNAL

EP Europace is the official journal of the European Heart Rhythm Association, the ESC Working Group on Cardiac Cellular Electrophysiology, and the ESC Working Group on e-Cardiology. Ranked as the fourth best electrophysiology journal in the world, EP Europace achieved an impressive **Impact Factor of 4.021** in 2015, establishing a new record. Prof. A.J. Camm will remain the editor-in-chief until June 2017, and as of July 2017 he will be replaced by Prof. G. Hindricks.



## EHRA SCIENTIFIC DOCUMENTS

The EHRA Scientific Documents Committee **facilitates, develops, and publishes scientific content** relevant to the physicians and cardiologists of the field:

- **Atrial Cardiomyopathies: Definition, Characterisation and Clinical Implication:** A joint EHRA, HRS<sup>I</sup>, APHRS<sup>II</sup>, and SOLAECE<sup>III</sup> document
- **Pre-participation cardiovascular evaluation for athletic participants to prevent sudden death:** A position paper by the EHRA and EAPC<sup>IV</sup> endorsed by the HRS, SOLAECE, and APHRS
- **How to Prevent Atrial Fibrillation:** A position paper by the EHRA and EAPC endorsed by the HRS and APHRS
- **Management of supraventricular arrhythmias:** A consensus document by the EHRA endorsed by the HRS, APHRS, and SOLAECE

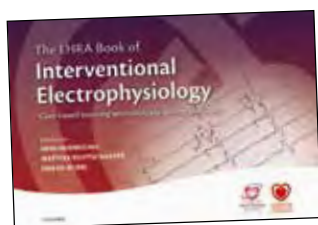
<sup>I</sup> HRS : Heart Rhythm Society

<sup>II</sup> APHRS : Asia Pacific Heart Rhythm Society

<sup>III</sup> SOLAECE: Sociedad Latinoamericana de Estimulación Cardíaca y Electrofisiología

<sup>IV</sup> EAPC: European Association of Preventive Cardiology

## 2017 Objective – EHRA Book of Interventional EP



*Prof. H. Heidbüchel, Prof. M. Duytschaver, and Prof. H. Burri have developed the EHRA Book of Interventional EP. This all-new book covers case-based learning with multiple choice questions, and will be available in 2017.*

The reach of the **EHRA Key Messages** initiative continues to grow along with the specific topics covered, these Key Messages are the abridged versions of some of the EHRA full scientific papers. A free app is available at the EHRA website, iTunes and Google play stores which allow Key Messages content to be downloaded to mobile devices such as smartphones and tablets. This complements the original focus on printed documents and slide sets. Recent titles in the series include: Antithrombotic management in patients, How to prevent Atrial Fibrillation, Management of patients with SVT and Chronic Kidney Disease.



**EHRA Key Messages**  
available on tablets and smartphones



## EDUCATION

The EHRA Education Committee designs educational training programmes to help maintain a **high standard of professional excellence** among cardiologists specialising in pacing and arrhythmias.

### LIVE COURSES

During 2016, the EHRA delivered the following courses:

Date	Topic	Location	Course Director(s)	Attendees
January*	EHRA Educational mini course - Rhythm: From Diagnosis to Therapy	Dubai	Prof. Burri	30
February	Advanced EP with focus on AF ablation course	Lisbon	Prof. Duytschaever	90
March	Cardiac Pacing, ICD, and Cardiac Resynchronisation	Vienna	Dr. Lunati	231
April	Interventional Electrophysiology and examination preparatory	Madrid	Prof. Merino / Dr. Arribas	91
May	Lead management and extraction	Budapest	Prof. Bongiorni / Dr. Rao	66
June / July**	Paediatric and Congenital Heart Disease Electrophysiology	Hamburg	Dr. Ernst	37
Sept. / Oct.	Advanced EP with focus on VT ablation course	Copenhagen	Prof. de Chillou	91
November***	EHRA EP exam preparatory mini course	Buenos Aires	Prof. Merino	95
November****	Educational Course on Interventional Electrophysiology	Moscow	Prof. Merino / Prof. Pokushalov	124

\* In collaboration with the Gulf EP Live.

\*\* In collaboration with the ESC WG on Grown-up Congenital Heart Disease (GUCH) and the Association for European Paediatric and Congenital Cardiology (AEPC).

\*\*\* In collaboration with the 6° to Congreso Argentino de Arritmias.

\*\*\*\* In collaboration with the Russian Society of Cardiology, Russian Scientific Society of Clinical Electrophysiology, Arrhythmology and Cardiac Pacing.

### ESC eLEARNING PLATFORM (ESCeL)

The EHRA strongly supports the ESC's eLearning platform, ESCeL. This powerful tool delivers a series of training modules and aims to harmonise cardiovascular training for the various cardiology sub-specialties. EHRA content is organised in two tracks:

- Fellows CP track (containing 16 individual modules)
- Fellows EP track (containing 43 individual modules which includes **18 modules** dedicated to lead management and extraction)



Individual modules normally comprise an on-demand slideshow with audio, while learning outcome is assessed by multiple choice questions.

### CERTIFICATION

The role of the EHRA Certification Committee is to **assess knowledge, skills, and competencies in both individuals and institutions**. In doing this, it provides assurance of, and confidence in, the levels of arrhythmia healthcare. The committee has improved the certification process for Allied Professionals (APs) to help spread best practice between member countries. Accordingly, the number of APs taking certification examinations had more than doubled since the 2011 launch, and the certification examination is now available in the Dutch and Italian languages too.



The committee has also launched the **EHRA Recognised Training Centre (ERTC)** programme, this initiative encourages good educational practice by providing a quality label for training excellence and efficiency. ERTC is open to all EP laboratories and training centres.



## WEBINARS

A total of **11 webinars** were held during 2016 as shown in the table below. These included three webinars dedicated to EHRA members only and a series of **eight Open Access webinars** available to everyone. The recordings are available on the dedicated section of EHRA webpage.

Date	Topic	Presenter(s)	Moderator
January	<b>Strengths and limitations of single shot devices: cryo-balloon, laser balloon, or multiphase RF (EHRA members only)</b>	Dr. Schmidt	Dr. Arribas
February	Periprocedural anticoagulation during AF ablation: can I use a NOAC?	Prof. Schilling / Prof. Sticherling	Prof. Sommer
March	Pulmonary vein isolation (PVI) in AF ablation – optimising an effective and reproducible treatment	Dr. Piorkowski / Dr. Anselmino	Prof. Hindricks
April	<b>LAA occlusion: when and how (EHRA members only)</b>	Prof. Sievert	Prof. Lip
May	New development in Cardiac Resynchronisation Therapy	Prof. Auricchio / Dr. Lunati	Dr. Didenko
June	Practical issues around stroke prevention using NOACs. Once daily or twice daily...it's simple, isn't it?	Prof. Vrijens / Prof. Diener	Prof. Heidbüchel
July	<b>Ablation and devices in paediatric practice (EHRA members only)</b>	Dr. Kriebel	Dr. Bloom
September	New mapping technologies - The improved approach to complex arrhythmias	Prof. Jaïs / Prof. Hindricks	Prof. Antz
October	Management of procedural-related bleeding in patients taking oral anticoagulants: preventative measures and when to use reversal strategies?	Prof. Antz / Dr. De Potter	Prof. Duytschaever
November	Devices for detecting cardiac arrhythmias	Prof. Püerferfeller / Dr. Rao	Prof. Israel
December	Benefit or CRT optimisation: Fiction or reality?	Prof. Leclercq / Dr. Lunati	Prof. Auricchio

## TRAINING FELLOWSHIPS

EHRA Training Fellowships give physicians the opportunity to **undertake specialist training in clinical cardiac EP at approved facilities** in an ESC member country. Thanks to the support of our industry partners, 10 grants were awarded in 2016, of which eight were awarded to applicants from ESC member countries, while two were jointly awarded with the APHRS. The committee also selected three candidates for the Proctor programme which aims to foster innovation and facilitate knowledge sharing where it is most needed.



## 2017 Objective – Observational Training Programme

*The EHRA Training Fellowship Committee is proud to announce that its new Observational Training Programme will be launched in early 2017, and accordingly will replace the EHRA Proctor Programme. This programme consists of two to four weeks of EP/CP clinical shadowing and learning by participants in quality labeled facilities belonging to EHRA Recognised Training Centres (ERTC).*



## RELATIONS

### NATIONAL CARDIAC SOCIETIES

The National Cardiac Societies Committee has three main objectives which shape its strategy and activities. It aims to **improve relations between the EHRA and EP National Cardiac Societies (NCS)** and **EP Working Groups (WG)** of the ESC; it **monitors the expectations of EP NCS/WG** and **facilitates their collaboration with the EHRA**.

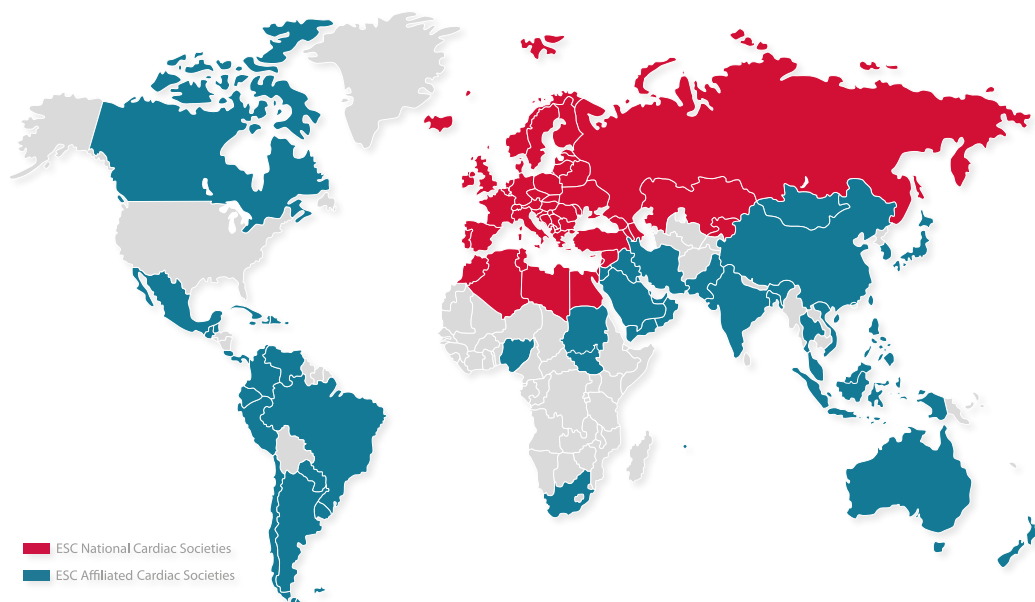
Three major activities were undertaken during 2016:

- The **2016 EHRA Summit** was held in April in Sophia Antipolis, around the topic *'Education: a joint venture with, and for, our stakeholders'*. The meeting brought together the EHRA and representatives from EP NCS and EP WG from 33 countries and industry partners, gathering 96 participants.
- 2016 saw the publication of the ninth edition of the **EHRA White Book**. ▶  
This contains a unique set of demographic and statistical data from all fields of electrophysiology, containing information from 50 out of 56 ESC member countries. Following the release of the White Book, the comparative analysis of the EHRA White Book data (2011-2015) was published in the EP Supplement of the EP Europace Journal.
- During 2016, a partnership referred to as **"EHRA in Russia"** has been developed between the EHRA and representatives from the Russian cardiology community. This project aims at enhancing EHRA's visibility amongst Russian Heart Rhythm physicians, mostly through membership and education oriented activities. Within this framework a first collaborative education course was held in Moscow in November.



### INTERNATIONAL AFFAIRS

The EHRA International Affairs Coordinator is responsible for extending **the excellent relationships and deep cooperation which the EHRA enjoys with sister societies** outside the ESC member countries. Face-to-face meetings were organised at Board level to discuss topics of mutual interest and to ensure ongoing collaboration in a number of areas. These societies included APHRS (Asia Pacific), SOLAECE (Latin America), HRS (US), CASSA<sup>®</sup> (South Africa). These initiatives were rewarded with a significant increase in the number of scientific documents jointly developed with these sister societies, in addition to their participation in joint sessions during CARDIOSTIM - EHRA EUROPACE 2016 congress, which will continue for EHRA EUROPACE – CARDIOSTIM 2017 in Vienna, Austria.





## SCIENTIFIC INITIATIVES

The Scientific Initiatives Committee (SIC) undertakes research within EHRA's Scientific Research Network of EP centres.

This research provides insight into how consistently arrhythmia treatment is applied across ESC member countries and also monitors the implementation of ESC Clinical Practice Guidelines to identify whether there are any barriers to their adoption. In order to do so, the Committee conducts:

- Regular EP wire surveys: to determine practice on specific EP topics every two months which are distributed across the 110 European centres.
- European Patient Survey: the last one, covered implantable electronic devices aiming at capturing the knowledge and preferences of those fitted with such devices. By identifying the education and concerns of patients in Europe, this survey aimed at highlighting the gaps between current recommendations and clinical practice, and emphasising any areas of uncertainty.

Results of both EP Wire surveys and European Patient Survey are published in the EP Europace Journal and on the EHRA website.



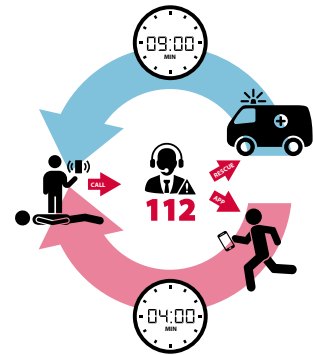
A number of important registries and trials are ongoing under the **European Observational Research Programme (EORP)** of the ESC, where EHRA is represented by the Chair of the Scientific Initiatives Committee. These registries and trials enable a timely assessment of the uptake of ESC Guidelines, monitor implementation and determine the adherence to these Guidelines. Notable amongst these are:

- **Atrial Fibrillation Ablation Registry** aims at describing the clinical epidemiology of patients undergoing an Atrial Fibrillation Ablation (AFA) procedure, and the diagnostic and/or therapeutic processes applied. The registry tracks new anti-thrombotic drugs and new anti-arrhythmic agents, and determines the outcomes as they relate to AF Guideline adherence. The main results including one-year outcomes are about to be published in the European Heart Journal.
- **Atrial Fibrillation General Long-term Registry** was launched in 2014. The long-term phase has completed recruitment with more than 13 000 patients currently enrolled. The main results are planned to be published in 2017.
- **ELECTRa (European Lead Extraction CONTRolled) Registry** is a large prospective, multi-centre, European controlled registry of consecutive patients undergoing TLE procedures in European countries including a one-year follow-up phase. Recruitment terminated some time ago with more than 3 500 patients and the main results will be published in 2017.
- **Epicardial/Hybrid Atrial Fibrillation Ablation Registry (EHAFAR)** has been recently set up to describe the diagnostic and therapeutic approaches used in routine practice when performing Epicardial Hybrid Atrial Fibrillation Ablation (EHAFAR) procedures. This registry aims to enroll 750 patients in at least 30 centres.

	EORP	#Countries	#Centres	#Patients	Status
Atrial Fibrillation Ablation	Pilot phase	10	72	1 410	Closed
	Long-term phase	27	115	3 670	Closed
Atrial Fibrillation General	Pilot phase	9	70	3 229	Closed
	Long-term phase	32	355	13 000	Closed
ELECTRA		19	73	3 555	Closed
EHAFAR		5	9	750	Open

## HEALTH ECONOMICS

The major activity in 2016 was to set up a project **to assist emergency first responders dealing with a patient needing CPR**. Based on GPS tracking technology, the EHRA First Responder app is a tool to locate and call the nearest CPR-qualified person who may be able to get to the patient before the arrival of the emergency services. The graphic below shows how the app acts as an 'add-on' to the traditional emergency response. Through the use of the system, qualified responders can be located and sent to assist patients with suspected out-of-hospital cardiac arrest. The development not only included the technical and software implementation, but also a major data security, medico-legal, and insurance environment which will greatly help the roll-out of the app in other countries. A proof-of-concept demonstration has been undertaken in Lübeck, Germany. This showed, over four months, that the First Responder app reduced the time to CPR by more than three minutes in 30% of the incidents.



## 2017 Objective – EHRA First Responder app

*EHRA will roll out its new First Responder app across Germany and believes it could save up to 50 000 lives each year.*



## EHRA WEBSITE & COMMUNICATION

In 2016, EHRA's patient-focused website [www.afibmatters.org](http://www.afibmatters.org) content was significantly updated. New sections were added containing information on topics such as catheter ablation of atrial fibrillation (including radio-frequency and cryoballoon ablation) and left atrial appendage occluders. In addition, all other sections were reviewed, while enhanced **illustrations and graphics were included to improve readability**. EHRA's innovative patient-focused website is now available in seven languages following the recent launch of Portuguese and Swedish versions.

## 2017 Objective – [www.afibmatters.org](http://www.afibmatters.org)

Testimonials in which AF patients discuss their experiences of diagnosis and therapy will be added to the website. A Russian version of the website will also be launched.





## YOUNG EP

The Young EP Committee continues its important work aiming at enhancing and accelerating the career development of young electrophysiologists. 150 Young EPs have now joined the network and updated their profile, while 350 are connected via the dedicated LinkedIn group. 2016 was a busy and successful year. Two sessions were organised at the CARDIOSTIM - EHRA EUROPACE Congress; 'Case-based discussion with experts', and 'Research by young electrophysiologists'. Travel grants were awarded to the individuals who submitted the best abstracts for these sessions. The first Young EP Summit took place at the European Heart House from 13-14 April 2016, fostering relations between National YEP ambassadors and setting directions for international YEP community development. An article was published in the EP Europace Journal titled 'European Heart Rhythm Association Young Electrophysiology Community: the future is just ahead'.

### 2017 Objectives – Young EP Committee

*During the next 12 months, the Young EP Committee will focus on three main activities; organising the second EHRA Young National Ambassadors Summit in March, organising the Young EP Poster Session at EHRA EUROPACE – CARDIOSTIM 2017, and preparing for its speed mentoring role at that Congress.*



## INNOVATION

The Innovation Committee was very pleased to receive 13 applications during 2016 in response to initiatives aimed at **encouraging electrophysiologists and related researchers to innovate** and to translate that innovation into new products. Three candidates were shortlisted and invited to attend CARDIOSTIM - EHRA EUROPACE 2016 at which they presented their proposals during the Inventors Award session. In addition, two dedicated innovation sessions were included in the congress programme. Another major event of 2016 was the first EHRA Innovation Summit which debated innovation outside of the narrow world of cardiology and cardiologists, and involved all stakeholders including regulators, hospitals, insurers/payers, strategists, technologists, and industry. A paper was submitted to the EP Europace Journal to highlight the outcomes of the summit.

### 2017 Objectives – Innovation Committee

*Key activities during 2017 include: running the third edition of the EHRA Inventors Award, collaborating with the Education Committee to develop and present a webinar on innovation, and the organisation of four sessions at EHRA EUROPACE – CARDIOSTIM 2017 which will also include a 'Meet & Greet' activity to bring together inventors and industry partners.*



## WOMEN IN EP

To address the under-representation of females in senior positions across the EHRA, the **Women in EP Committee** has been working hard to establish a **strong scientific network** leading to a database of 170 female EP experts. Together with the Young EP committee, an EHRA/HRS consensus document was prepared covering occupational radiation exposure in the EP laboratory for relevant personnel. In this respect, Young cardiologists and EP professionals of child-bearing age are rightly concerned about the risk of radiation exposure before or during pregnancy. Dedicated Women in EP sessions were successfully organised at the CARDIOSTIM - EHRA EUROPACE 2016 Congress and, for the first time, a joint session was held with the HRS at its annual meeting in San Francisco, USA.

### 2017 Objectives – Women in EP Committee

*The committee will develop a Consensus statement on gender differences in cardiac arrhythmias and seek more female experts to populate the WEP scientific database.*



## CONGRESSES AND MEETINGS

### CONGRESSES AND MEETINGS

The **CARDIOSTIM – EHRA EUROPACE 2016** Congress was held between June 8-11 in Nice, France. This meeting proved to be a great success, with **over 200 Scientific Sessions and 20 Industry Symposia on the latest developments** in the EP and pacing fields and **5 740 delegates** who attended this year. Among the featured topics were leadless cardiac pacing and the subcutaneous defibrillator, the benefits of quadripolar leads in cardiac resynchronisation, imaging for cardiac EP mapping, and ablation of ventricular arrhythmias. Technology was much in evidence among the 60 exhibitors which showcased some of the most innovative products helping to modernise practice and improve patient care.

### 2017 Objective: EHRA EUROPACE - CARDIOSTIM 2017

*The beautiful city of Vienna, Austria is the venue for this year's EHRA EUROPACE – CARDIOSTIM 2017 Congress. It is expected to greet more than 5 000 heart rhythm professionals over the four days of the meeting which offers 120 sessions – some live – as well as new educational sessions, and late breaking trials. 14 oral abstract sessions as well as many poster presentations are anticipated. The Scientific Programme Committee has developed a compelling programme designed to provide attendees with the latest in science and education in the field of cardiac rhythm disorders and therapies. Delegates will also have the chance to learn about new research, listen to and meet world-renowned experts, and hold discussions with colleagues and peers. Dedicated sessions for Allied Professionals, Young Electrophysiologists, and Women in EP will be delivered and once again, the congress will be joined by colleagues from the ESC Working Groups on e-Cardiology and on Grown-up Congenital Heart Disease as well as the 41st Annual Meeting on Cardiac Cellular Electrophysiology.*

*Looking forward to welcoming you to Vienna, Austria on June 18–21.*





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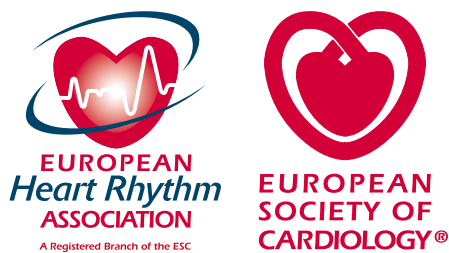
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