



EHRA
European Heart
Rhythm Association

EHRA

THE EUROPEAN HEART RHYTHM ASSOCIATION

2017

Activity Report

www.escardio.org/EHRA



ESC

European Society
of Cardiology



EHRA
European Heart
Rhythm Association

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ESC
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President's Introduction

I am pleased to introduce the 2017 Activity Report of the European Heart Rhythm Association (EHRA), an overview of the collective achievements during the last year.

The leadership of EHRA recognises its responsibility to the millions of patients around the world suffering from arrhythmias. EHRA continues to expand its reach and influence. We are recognised around the world as a leading heart rhythm network and a major contributor to scientific advancement in our field. The tireless effort and commitment of so many volunteers and staff, is why EHRA continues to grow and I would like to acknowledge their contribution during 2017 and thank them for their commitment to our cause.

The new EHRA Board 2017- 2018 began its work in June and is now organised into the five pillars to align with the strategic plan of the European Society of Cardiology (ESC) of which we are a constituent body: advocacy, education, the congress, membership and research.

The following report will offer greater detail, but here are just a few highlights from the past 12 months:

- The *EP Europace Journal* set a new record with its highest ever Impact Factor
- We have refined our mission statement. The same words, different order, greater impact: "Improving the quality of life and reducing sudden cardiac death by limiting the impact of heart rhythm disturbances".
- We have **19** centres that joined the EHRA Recognised Training Centres Programme
- We have **197** female experts in the leading scientific network of Women in EP
- We delivered live training courses to more than **700** cardiologists and EHRA members
- We published the 10th edition of the EHRA White Book
- We had a record breaking number of attendees for our congress in Vienna
- We published eight new scientific documents with extensive collaboration of sister societies
- And much more.

I hope you take the time to read through this report and appreciate how much your Association is doing to help improve patient outcomes for those with cardiac rhythm and pacing disturbances.

The year 2018 is important for EHRA. We will host our first annual congress in March in Barcelona. We have a splendid congress programme of education and science with interactive facilities in every location. We hope to see you there!

Thank you for being part of this global effort.

With my very best wishes,

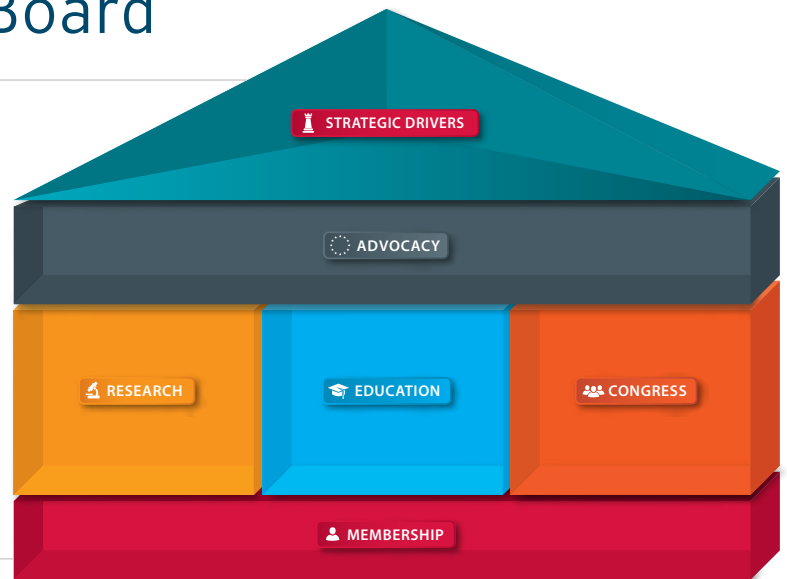
A. John Camm, FEHRA, FESC
EHRA President 2017 - 2018



EHRA 2017-2018 Board

From the outside, any large organisation can seem difficult to understand. Who does what and how do the pieces fit together?

In order to align with the ESC's strategic plan and tackle challenges of the new environment, EHRA's board, which began in June 2017, decided to adapt this new structure.



Executive Board Members



President
FESC, FEHRA
Prof. A. John Camm



President Elect
FESC, FEHRA
Prof. Hein Heidbuchel



Past President
FESC, FEHRA
Prof. Gerhard Hindricks



Treasurer
FESC
Prof. Cecilia Linde



Secretary
FESC
Prof. Robert Hatala

Appointed Members

and Working Group Representative




Representative of the
WG of E-Cardiology
FESC, FEHRA
Prof. Goran Krstacic



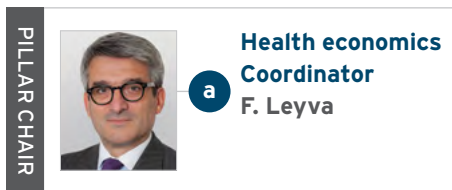
Representative of the
WG of Cardiac Cellular
Electropysiology
Prof. Dr. Dobromir Dobrev



Representative of the WG of
Grown-up Congenital Heart Disease,
FESC
Prof. Gerhard Diller

ADVOCACY 	EDUCATION 	CONGRESS 	MEMBERSHIP 	RESEARCH 
F. Leyva	P. Kirchhof, FESC, FEHRA J. Cosedis Nielsen, FESC, FEHRA J. L. Merino, FEHRA	C. Leclercq <i>FESC, FEHRA</i>	I. van Gelder <i>FESC, FEHRA</i>	G. Y. H. Lip <i>FESC, FEHRA</i>
Women Coordinator S. Ernst, FESC	Certification Committee J. Cosedis Nielsen <i>FESC, FEHRA</i>	Congress Scientific programme Committee C. Leclercq <i>FESC, FEHRA</i>	National Cardiac Societies Committee I. van Gelder <i>FESC, FEHRA</i>	Scientific Documents Committee G. Y. H. Lip <i>FESC, FEHRA</i>
E-communications Committee C. Elner	Education Committee J. L. Merino, FEHRA		International Affairs Coordinator L. Mont, FESC, FEHRA	Scientific Initiatives Committee N. Dagues <i>FEHRA</i>
Health economics Coordinator F. Leyva	Selection Committee (incl. Trg fellowship) P. Kirchhof, FESC, FEHRA		Young EP Committee V. Kutiyfa, FESC	

Advocacy



Women in EP

We are working to better understand the unique aspects of women with cardiac arrhythmias and the female health care professionals working in electrophysiology. We address the under representation of females in senior positions across the EP community and the ESC. In the past couple of years, we established a strong scientific network leading to a database of **197** female EP experts, including 152 interested in actively participating in EHRA congresses and other scientific meetings as chair or speaker.



E-communications

We continue to update our dedicated website for patients - www.afibmatters.org. In 2017, we added testimonials from AF patients who shared their personal experiences about their diagnosis and treatment. In an effort to expand our reach, all content on the website is now available in eight languages. Russian is the latest to be added.



Health economics

We launched the EHRA First Responder App project in 2016 and there are already 20,000 "App Rescuers" identified. The rollout of the app is proceeding quickly in Germany. The EHRA First Responder App is supported by the EP German National Cardiac Society.





Education

PILLAR CHAIRS

**a**

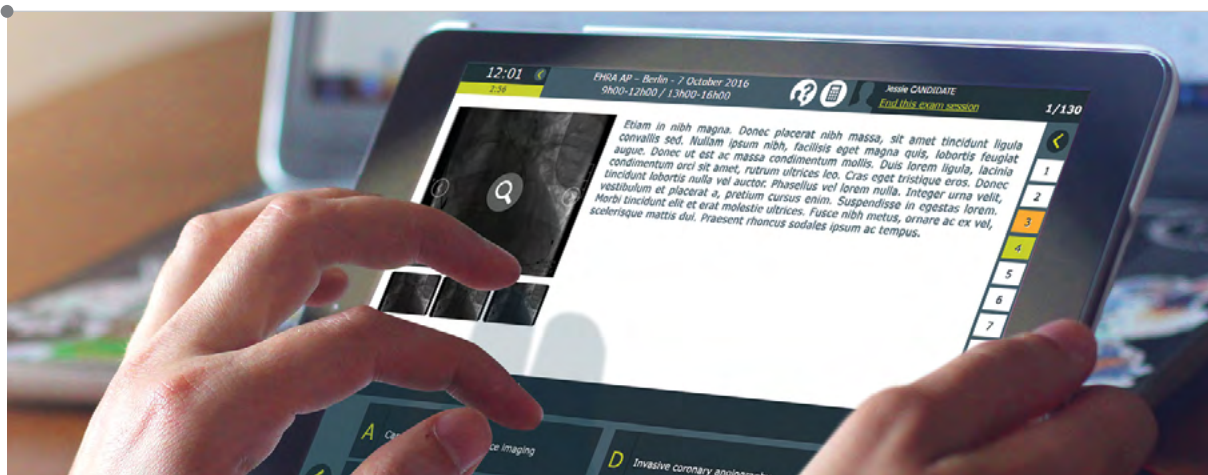
Certification Committee
J. Cosedis Nielsen
FESC, FEHRA

**b**

Education Committee
J.L. Merino
FEHRA

**c**

Selection Committee
(incl. Trg fellowship)
P. Kirchhof
FESC, FEHRA



Certification

Over the past 14 years, we have been helping to assess the knowledge, skills and competencies of both individuals and institutions focused on arrhythmias. We have established the first European Certification of Professional Excellence in the field of Invasive Cardiac Electrophysiology and Cardiac Pacing & Implantable Cardioverter Defibrillators. We also improved the certification process for Allied Professionals (APs) to help spread best practices among ESC member countries. That exam is also available in Dutch and Italian.

The number of cardiologists taking the certification examinations has more than doubled since the programme began in 2003. A total of **347** sat for the exams in 2017.

The EHRA Recognised Training Centre (ERTC) Programme Initiative encourages good educational practices by providing a quality label for training excellence and efficiency. 19 centres have gone through the selection process and are now enrolled to the programme.

Selection

Further to the implementation of the new MedTech Regulation, the EHRA Selection Committee is in charge of selecting candidates to attend EHRA Annual Congress.

The Committee continues the Training Fellowship activities which promote the development of academic medicine in the field of cardiac rhythm disorders in ESC area (ESC member countries as well as affiliated countries) in order to reduce differences in the clinical practice and improve cardiac electrophysiological culture.

The fellowship activities cover:

- EHRA International Training Fellowships, in partnership with Asia Pacific Heart Rhythm Society (APHRS), give physicians from the Asian Pacific zone the opportunity to undertake training in clinical cardiac EP, for one year, at approved facilities of ESC member countries.
- EHRA Observational Training Programme gives applicants the chance to attend two to four weeks of clinical shadowing and learning in electrophysiology and cardiac pacing at one of the EHRA Recognised Training Centres (ERTC).

In 2017, one international training fellowship was granted, while **16** EHRA Observational Training Programme grants were awarded to physicians from across Europe.



Education

Education

Every year, we design and provide the latest educational training programmes to help maintain professional excellence among cardiologists specialising in pacing and arrhythmias. During 2017, EHRA delivered the following courses:

Date	Topic	Location	Course Director	Attendees
Mar	Cardiac Pacing, ICD, and Cardiac Resynchronisation	Vienna	Maurizio Lunati Jan Steffel	236
Apr	Interventional Electrophysiology and exam preparatory	Prague	Jose Luis Merino Fernando Arribas	86
May	Lead management and extraction	Berlin	Maria-Grazia Bongiorni Archana Rao	47
Sep	Advanced EP with focus on VT ablation course	Warsaw	Christian de Chillou Jose Luis Merino	95
Oct*	Clinical cardiac electrophysiology and interventional treatment of tachyarrhythmias	St Petersburg	Gerhard Hindricks Maxim Didenko	73
Nov	Advanced EP with focus on AF ablation course	Sophia Antipolis	Mattias Duytschaever Matthias Antz	90
Dec	Cardiac Pacing, ICD, and Cardiac Resynchronisation	Vienna	Jan Steffel Jean-Claude Deharo	113

* In partnership with the Russian Scientific Society of Clinical Electrophysiology, Arrhythmology and Cardiac Pacing (RSSA).

The aim of "EHRA in Russia" is to enhance EHRA's visibility through three key actions:

- Increasing EHRA membership among Russian heart rhythm physicians and allied professionals interested in or involved in the field of EP and CP
- Co-developing EP educational courses in the Russian language
- Helping Young EPs in Russia by providing them with tailored educational programmes

EHRA-Affiliated Courses

We affiliated industry organised training courses that met EHRA objectives, providing high-level scientific content. Both «clinical» and «basic research oriented» courses were considered for affiliation. The affiliated courses were part of the EHRA Educational Framework, comprising two tracks of training, a Device Track and an Invasive EP Track. Both tracks were centred on EHRA Educational Courses. Together, they provided an extended and multifaceted training experience for young and senior electrophysiologists.

2017 marked the end of this activity, Medtronic, Cook Medical and Biotronik have requested EHRA affiliation.



Education

ESC eLearning Platform (ESCeL)

This platform delivers a series of training modules and aims to coordinate cardiovascular training for the various subspecialties. EHRA content is organised in two tracks and is only accessible to EHRA members:

- 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 consist of an on-demand slideshow with accompanying audio. Learning outcomes are assessed by multiple-choice questions.

Webinars

We organised a total of **12** EHRA webinars during 2017, as shown in the table below. These included four webinars for EHRA members and a series of nine open access webinars available to everyone. The on-demand webinars can be found on the dedicated section of the EHRA webpage. Red topics are exclusively accessible to EHRA members.



Date	Topic	Presenter(s)	Moderator
Jan	Transseptal puncture tips and tricks in 2017	Josef Kautzner	Jose Luis Merino
Feb	New data in anticoagulation for patients with AF and PCI	Freek Verheugt Esteban Lopez	Natasja De Groot
Mar	Are NOACs safe in AF Ablation?	Richard Schilling Christian de Chillou	Jose Luis Merino
Apr	How to prepare and successfully pass the EHRA exam	Jen Cosedis Nielsen	Fernando Arribas
May	Contact sensing for ablation: What have we learned and how to use it?	Dippen Shah Roland Tiltz	Richard Schilling
Jun	Lessons from the RE-CIRCUIT: when to choose Direct Oral Anticoagulation drug or Warfarin for atrial fibrillation ablation?	Stefan Hohnloser Ricardo Cappato	Jan Steffel
Jul	Patents and Patenting	Miguel Herrera	Malcolm Finlay
	New mapping tools for VT ablation	Petr Peichl Tom Wong	Christian de Chillou
Sep	Entrainment: all you have always wanted to know and never asked	Jose Luis Merino	Fernando Arribas
Oct	Which patients are at highest risk of CIED infection and how to prevent it?	Mauro Biffi Jay Wright	Jean-Claude Deharo
Nov	Innovations in Pst AF mapping and ablation	Tom De Potter Julien Seitz	Isabel Deisenhofer
Dec	Use of oral anticoagulants in AF patients undergoing cardioversion	Hein Heidbuchel Tatjana Potpara	Stefan Hohnloser

Congress

PILLAR CHAIR



a **Congress Scientific Programme Committee
for EHRA 2018 Congress**
C. Leclercq
FESC, FEHRA

EHRA Congress

A record number of heart rhythm specialists from around the world, a total of **6,200**, attended the 2017 EHRA EUROPACE-CARDIOSTIM Congress in Vienna.

More than **250** sessions were held and 1,200 abstracts submitted, offering delegates from **90** countries the latest educational sessions and late breaking trials on cardiac rhythm disorders and therapies and the results of some of most recent clinical trials.

EHRA Congress proves to be a fundamental platform for cardiac rhythm scientific exchange and professional networking. Delegates have the chance to learn about new research and meet world-renowned experts.

In 2018 EUROPACE becomes EHRA Congress. The 2018 event will be our first annual EHRA congress, held on March 18-20 in Barcelona, Spain. New patient-oriented, interactive sessions will be added. The focus for 2018 is: "The essentials for your everyday practice: from simple to complex arrhythmia; from atrial fibrillation to stroke."



Membership

PILLAR CHAIR



a

National Cardiac Societies
I. van Gelder
FESC, FEHRA



b

International Affairs Coordinator
L. Mont
FESC, FEHRA



c

Young EP Committee
V. Kutiyfa
FESC

National Cardiac Societies

Four main objectives shape our activities within this National Cardiac Societies Committee

- **To improve** relations between EHRA and EP National Cardiac Societies (NCS) and EP Working Groups (WG) of the ESC
- **To monitor** the expectations of EP NCS/WG and facilitate their collaboration with EHRA
- **To encourage** individual members to join EHRA and become more involved in the association
- **To implement** actions and procedures which lead to better networking

Three major activities undertaken in 2017:

- The EHRA Summit was held in April in Palma de Mallorca, Spain. The topic: 'Working together to reach out to policy makers'. It brought together EHRA representatives from EP NCS and EP WG. A total of 109 participants from 34 countries attended.
- The 10th and last edition of the EHRA White Book was published in the past year. It includes important data from 53 of the 56 member countries of the European Society of Cardiology (ESC), updated information on each country's demographics, and national healthcare and education programmes. It also describes possible obstacles to implementation of ESC guidelines in each nation. On top of the EP supplement "A decade of information on the use of Cardiac Implantable Electronic Devices and Interventional Electrophysiological Procedures in the ESC Countries," an interactive website was also launched at the time of publication to display individual country data and allow customised country-by-country comparisons. www.ehra-whitebook-analysis.com



International Affairs

Our International Affairs Coordinator is responsible for extending the valuable relationships and deep cooperation between EHRA and its sister societies. Face-to-face meetings were organised at the board level to discuss topics of mutual interest and ongoing collaboration, including scientific documents and joint sessions. These sister societies included APHRS (Asia Pacific), LAHRS (Latin America), HRS (USA).



Membership

Young EP

Our efforts paid off handsomely in 2017.

- More than **430** young electrophysiologists joined the network through a dedicated LinkedIn group, and **60** young electrophysiologists joined the EHRA Directory
- The first speed-mentoring edition encouraged young EHRA members to interact with the leaders of their subspecialty during 20 minute interviews at the congress
- Cases and research sessions held during the congress
- The second Young EP summit took place in April, in Palma de Mallorca. It fostered relations between National YEP ambassadors and set the direction for international YEP community development
- An article on "European Heart Rhythm Association Young Electrophysiology Community: introducing our National Ambassadors of Italy, Turkey, and Poland" was published



Research

PILLAR CHAIR



a

Scientific Documents Committee

G. Y. H. Lip
FESC, FEHRA



b

Scientific Initiatives Committee

N. Dagres
FEHRA

Scientific Initiatives

We continue to undertake research within EHRA's Scientific Research Network of EP centres, which provides insight into how consistently arrhythmia treatment is applied across ESC member countries. It also monitors the implementation of ESC Clinical Practice Guidelines to identify barriers to adoption.

EP Surveys

Information gathering and sharing is an important part of what we do. That's why we routinely conduct online surveys involving European centres which are part of the EHRA Scientific Research Network. More than 150 centres make up this Network. These surveys, typically 12 to 15 questions, help us determine how cardiologists are adopting our guidelines, their use of, and access to devices or ablation procedures, their use of diagnostic tools, and their treatment of patients with various arrhythmias. The results of these findings are published in the *EP Europace Journal* in the EP wire section and on the EHRA website.

A snapshot survey was also conducted from April to June on: Subcutaneous Implantable Cardioverter Defibrillator Implantation (ESSS-SICDI). It evaluated data and short-term outcomes of implantable cardioverter defibrillators (ICD), and, more particularly, the subgroup of those patients implanted with subcutaneous devices (S-ICD). The survey led to the publication of two manuscripts in the *EP Europace Journal* and on the EHRA website.





Research

Registries and Trials

We are represented by the Committee Chair within the European Observational Research Programme (EORP) for a number of important registries and trials. 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 (AFA) aims at describing the clinical epidemiology of patients undergoing an Atrial Fibrillation Ablation 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 were published in the European Heart Journal in May 2017.

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 were published in September 2017 in the EP Europace Journal.

European Lead Extraction ConTrolled Registry (ELECTRa) 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 were published in October 2017 in the European Heart Journal.

Epicardial/Hybrid Atrial Fibrillation Ablation Registry (EHAFAR) aims to describe the diagnostic and therapeutic approaches used in routine practice when performing Epicardial Hybrid Atrial Fibrillation Ablation (EHAFA) procedures. This registry aims to enrol **350** patients in **30** centres. Enrolment ends 31 March 2018.

	EORP	#Countries	#Centres	#Patients	Registry Status	Publication Status
Atrial Fibrillation Ablation	Pilot phase	10	72	1,410	Registry Completed	Publication in progress
	Long-term phase	27	115	3,670	Registry Completed	Publication in progress
Atrial Fibrillation General	Pilot phase	9	70	3,229	Registry Completed	Publication in progress
	Long-term phase	35	427	17,766	Follow-Up ongoing	Publication in progress
	Long-term Sub-study				Enrolment in progress	-
Atrial Fibrillation Phase III		-	-	-	Enrolment starting soon	-
ELECTRa		19	73	3,555	Registry Completed	Publication in progress
EHAFAR		12	27	350	Enrolment in progress	-



EAST Trial

Early Comprehensive Atrial Fibrillation Stroke Prevention Trial (East) is a European, investigator-initiated study jointly conducted by AFNET and EHRA. The trial is supported by a unique partnership including Sanofi Aventis and St Jude Medical, receiving further funding from the German Ministry of Education and Research (BMBF) through the German Centre for Cardiovascular Research (DZHK)

Its aims are to determine whether early, comprehensive, rhythm control intervention can help prevent adverse cardiovascular outcomes associated with atrial fibrillation, including stroke and death, compared to usual care. At the end of 2016, recruitment was completed and **2,789** patients were enrolled in 11 European countries. Since January 2017 the follow-up is ongoing in this long-term endpoint-driven study.

EU funded Projects

Together with the ESC, we are involved in a number of EU-funded research projects, often as a dissemination partner. Our role is fundamental to ensure that the very latest best practices are shared with as many cardiovascular practitioners, researchers and institutions as possible.

European Sudden Cardiac Arrest network: towards Prevention, Education, New Effective Treatment. (ESCAPE-NET): Together with large international scientific societies/associations and European Resuscitation Council (ERC), we are involved in order to translate the outcomes into European clinical practice for the prevention of SCA, and European infrastructures to improve survival after Sudden Cardiac Arrest. This is a Horizon 2020 funded project.

Scientific Documents

We facilitate, develop, and publish relevant scientific content. Recent articles published in *EP Europace Journal* include:

- **EHRA consensus document on:**
Device-detected subclinical atrial tachyarrhythmias definition, implications and management, endorsed by HRS, APHRS and SOLAECE
- **EHRA/HRS consensus document on:**
Occupational radiation exposure in the electrophysiology laboratory with a focus on personnel with reproductive potential and during pregnancy endorsed by HRS
- **EHRA consensus document on:**
Screening for atrial fibrillation, endorsed by HRS, APHRS and SOLAECE
- **EHRA/ESC Working Group on cardiovascular pharmacology consensus document on:**
Antiarrhythmic drugs clinical use and clinical decision making, endorsed by the HRS APHRS and ISCP
- **EHRA/ESC Working Group on thrombosis joint consensus document on:**
Antithrombotic therapy in atrial fibrillation associated with valvular heart disease, endorsed by the ESC Working Group on Valvular Heart Disease, CASSA, HRS, APHRS, SA Heart and SOLAECE
- **EHRA/ESC Council on hypertension consensus document on:**
Hypertension and cardiac arrhythmias endorsed by HRS, APHRS and SOLAECE
- **EHRA/AEPC/ESC Working Group on Grown-up Congenital heart disease position paper on:**
Arrhythmias in congenital heart disease, endorsed by HRS, PACES, APHRS and SOLAECE
- **HRS/EHRA/ECAS/APHRS/SOLAECE expert consensus statement on:**
Catheter and surgical ablation of atrial fibrillation



Research

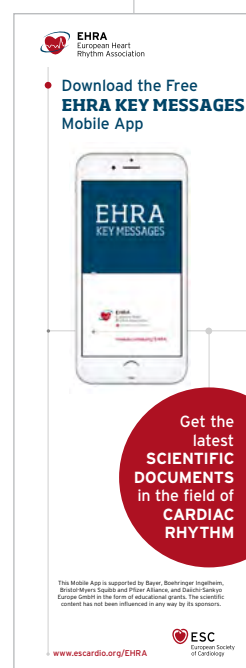
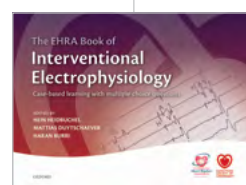
HRS:	Heart Rhythm Society
APHRS:	Asia Pacific Heart Rhythm Society
ISCP:	International Society of Cardiovascular Pharmacotherapy
CASSA:	Cardiac Arrhythmia Society of Southern Africa
SA Heart:	South African Heart Association
SOLAECE:	Sociedad Latino Americana de Estimulación Cardíaca y Electrofisiología
PACES:	Pediatric & Congenital Electrophysiology Society
ECAS:	European Cardiac Arrhythmia Society

The second official textbook of the association, *The EHRA Book of Interventional EP*, provides case-based learning and includes multiple-choice questions for the EHRA certification exam in electrophysiology, with tracings covering supra-ventricular and ventricular arrhythmias, an essential companion for electrophysiologists and trainees alike.

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 on the EHRA website and both iOS and Android stores, which allow the content to be downloaded to 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, and Management of Patients with SVT and Chronic Kidney Disease.

EP EUROPACE JOURNAL

EP Europace is our official journal, together with the ESC Working Groups on Cardiac Cellular Electrophysiology and e-Cardiology. Ranked as the fourth best electrophysiology journal in the world, our EP Europace achieved an impressive Impact Factor of **4.530** in 2016, a new record. In addition, last year saw the appointment of Professor Gerhard Hindricks as editor-in-chief.





EHRA
European Heart
Rhythm Association

 European Society of Cardiology

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