President’s Introduction

On behalf of the EHRA Board 2020-2022, I am very pleased to present the 2020 Activity Report of the European Heart Rhythm Association. We are very grateful to Hein Heidbuchel and the previous Board for their very active investment in the different projects of EHRA during the last two years. We are also grateful to our volunteers who invest so much time and energy on behalf of EHRA.

EHRA is a strong community of electrophysiologists and allied professionals from Europe and beyond. Due to the pandemic situation, 2020 was a particular and unique year. We had to adapt very quickly to this unforeseen situation to keep on fulfilling our mission to improve the quality of life and to reduce sudden cardiac death by limiting the impact of heart rhythm disturbances.

Unfortunately, our annual congress, a wonderful event where friends and colleagues meet to improve their knowledge and to be updated on the latest research in EP, had to be cancelled at the last minute in March. Nevertheless, we created EHRA Essentials 4 You, a comprehensive collection of valuable and carefully selected resources that provides the main updates on research in electrophysiology and device therapy. Our educational portfolio also had to be adapted to the restrictions on travel and meetings. To ensure the same level of education as usual, we moved courses to an online format with a new programme. In the same way, our recognised certification exams for cardiac pacing and EP were rapidly redesigned to an online format with high success.

The level of scientific documents and scientific initiatives of EHRA was impressive with more than a dozen manuscripts produced and published and with more focus on practical guidance. We were very pleased to collaborate on some documents with sister societies and other constituent bodies of the ESC. 2020 was a very productive year in research with a new EU H2020-funded research project on integrated care of patients with atrial fibrillation – the EHRA-PATHS coordinated by EHRA-ESC being accepted.

The promotion of new health care developments like digital health has been reinforced with the creation of a digital committee as part of the EHRA Board 2020-2022.

The AF website for patients, Afibmatters.org, has been redesigned for optimal service to patients.

All these activities – and it is not possible to cite all of them here – were possible only with the engagement and wonderful work of volunteers and Board members. We have also to thank our staff members at the European Heart House for their valuable commitments and the ESC leadership for its support to EHRA.

With the newcomers and veterans who joined our new Board in September 2020, we can ensure the continuation of active programmes and the creation of new projects.

I hope you will appreciate the results of these contributions and that this report will reinforce your willingness to be an EHRA contributor or to become an active member – if you are not already involved in these activities. Feel free to contact me, the EHRA Board and EHRA staff. We need all of you, Young EPs, as well as more senior EPs, with your energy and your projects. Join the EHRA family.

I hope that the situation will rapidly improve and that we will have the opportunity to meet each other in person soon.

Stay safe!
EHRA is yours!

Prof. Christophe Leclercq
President
• Highlights that made our hearts beat in 2020

Our mission:
“Improving the quality of life and reducing sudden cardiac death by limiting the impact of heart rhythm disturbances.”
EHRA Board 2020-2022

EXECUTIVE BOARD MEMBERS

President
Prof. Christophe Leclercq
FESC, FEHRA

Past-President
Prof. Hein Heidbuchel
FESC, FEHRA

President-Elect
Prof. Jose Luis Merino
FEHRA

Treasurer
Prof. Haran Burri
FEHRA

Secretary
Prof. Kristina Hermann Haugaa
FESC, FEHRA

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Editor-in-Chief of EP Europace Journal
FESC, FEHRA

Prof. Michael Gatzoulis
Rep. of the ESC WG on Adult Congenital Heart Disease
FESC

Dr. Polychronis Dilaveris
Rep. of the ESC Working Group on e-Cardiology
FESC

Assoc. Prof. Carol Ann Remme
Rep. of the ESC Working Group on Cardiac Cellular Electrophysiology
FESC

Prof. Elijah Behr
Rep. of the European Cardiac Arrhythmia Genetic Group
FESC
## CONGRESS

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Congress Scientific Programme Committee  
Prof. Isabelle C. van Gelder  
FESC, FEHRA

## EDUCATION

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Certification Committee  
Dr. Stylianos Tzeis  
FEHRA

**Education Committee**  
Prof. Jan Steffel  
FESC, FEHRA

**Selection Committee**  
Dr. Giovanni Luca Botto  
FESC, FEHRA

## ADVOCACY

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Digital Committee  
Dr. Emma Svennberg  
FESC

**mHealth, Health Economics and PROM Coordinator**  
Prof. Giuseppe Boriani  
FESC, FEHRA

**Patient Coordinator**  
Prof. Jean-Claude Deharo  
FESC

**e-Communication Committee**  
Dr. David Duncker  
FESC, FEHRA

## RESEARCH

**Pillar Chairperson**  
Scientific Documents Committee  
Dr. Nikolaos Dagres  
FEHRA

**Scientific Initiatives Committee**  
Assoc. Prof. Serge Boveda  
FESC, FEHRA

## MEMBERSHIP

**Pillar Chairperson**  
International Affairs Coordinator  
Prof. Helmut Pürerfellner  
FESC

**National Cardiac Societies Committee**  
Assist. Prof. Sime Manola  
FESC

**Young EP Committee**  
Dr. Kasia Malaczynska-Rajpold
Congress

EHRA congress is the annual highlight of the association. It is also the leading European EP conference, providing participants with the latest in science and education in the field of cardiac rhythm disorders.

Following the global COVID-19 crisis, which led to the cancellation of EHRA 2020 in Vienna, EHRA managed to quickly establish EHRA Essentials 4 You platform, providing access to scientific resources (publications, slides, e-abstracts). The content was freely available to all during three months and then exclusive to EHRA Members.

Prof. Hein Heidbuchel, EHRA Immediate Past President

When COVID-19 hit, EHRA showed how much we are a vibrant society, able to respond quickly and effectively. Of course, we deplored the cancellation of our great yearly gathering, but we managed to create a virtual feeling of unity and innovation. Especially the Global Webinar Series was a warm-hearted highlight of worldwide solidarity.

Prof. Hein Heidbuchel, EHRA Immediate Past President

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Facts and Figures

- EHRA Essentials 4 You: 11,554 visitors, 23,414 views
- Visitors from 108 countries
- 12,677 resource consultations
- 411 scientific resources
- 7 industry essentials

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EHRA 2021

23-25 April

No matter where you are in the world, you will be able to join EHRA 2021 - Online Congress.

‘Making connections to overcome arrhythmia’
Global Webinar Series

EHRA teamed up with all its sister societies to carry out the traditional joint sessions as webinars and to develop the Global Webinar Series. Experts from all over the world presented their insights into different aspects of EP care, to educate colleagues for the benefit of patients worldwide.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Speakers &amp; Hosts</th>
<th>Date &amp; Time</th>
<th>Stat</th>
</tr>
</thead>
</table>
| The tough stuff: mapping and ablation of complex idiopathic ventricular tachycardia - Joint webinar with the Asia Pacific Heart Rhythm Society (APHRS) | Speaker EHRA: K.H. Kuck  
Speaker APHRS: R. Pathak | Saturday 20 June from 10:00 until 11:00 CEST | 734 Registered participants / 284 attendees  
Conversion rate: 38,7%                                                                 |
| Mapping and ablation of difficult supraventricular tachycardia - Joint webinar with Sociedade Brasileira de Arritmias Cardíacas (SOBRAC) | Speaker EHRA: S. Willems  
Speaker SOBRAC: E. Sternick | Saturday 04 July from 16:00 until 17:00 CEST | 848 Registered participants / 341 attendees  
Conversion rate: 40%                                                                 |
| Management of arrhythmia in asymptomatic patient - Joint webinar with Latin America Heart Rhythm Society (LAHRS) | Speaker EHRA: E. Behr  
Speaker LAHRS: M. Figueiredo | Saturday 18 July from 16:00 until 17:00 CEST | 1230 Registered participants / 423 attendees  
Conversion rate: 34,4%                                                                   |
| Digital devices for atrial fibrillation screening and future perspectives - Joint webinar with Heart Rhythm Society (HRS) | Speaker EHRA: J. Eckstein  
Speaker HRS: C. Albert | Saturday 22 August from 17:00 until 18:00 CEST | 813 Registered participants / 284 attendees  
Conversion rate: 35%                                                                     |
| Arrhythmia management in critically ill and post surgery patients - Joint webinar with Cardiac Arrhythmia Society of Southern Africa (CASSA) | Speaker EHRA: C. Israel  
Speaker CASSA: A. Thornton | Saturday 19 September from 17:00 until 18:00 CEST | 1392 Registered participants / 524 attendees  
Conversion rate: 37,6%                                                                   |
| Beyond His bundle pacing: targeting the left-sided Purkinje network - Joint webinar with Chinese Society of Pacing and Electrophysiology (CSPE) | Speaker EHRA: K. Vernooy  
Speaker CSPE: W. Huang | Saturday 03 October from 10:00 until 11:00 CEST | 782 Registered participant / 324 attendees  
Conversion rate: 41%                                                                     |
| Arrhythmia burden in atrial fibrillation - Joint webinar with Japanese Heart Rhythm Society (JHRS) | Speaker EHRA: A.J. Camm  
Speaker JHRS: K. Senoo | Saturday 17 October from 10:00 until 11:00 CEST | 1210 Registered participant / 438 attendees  
Conversion rate: 36%                                                                     |
With high-quality educational courses and webinars year-round, as well as certification and professional training, education remains the most attractive benefit of being an EHRA Member. EHRA is very active in maintaining a strong connection within the community and adapted the 3 EHRA courses to an online format at the end of the year. As certification is a key mission for EHRA, the exams were also held online.

**ESC e-Learning Platform**

The platform delivers a series of training modules and coordinates cardiovascular training for the various subspecialties. EHRA content is organised in 2 tracks and is only accessible to EHRA Members. Individual modules normally consist of an on-demand slideshow with accompanying audio. Learning outcomes are assessed with multiple-choice questions.

In 2020, the content was further updated. 54 online courses are available, of which 51 allow you to obtain 1 European CME Credit (ECMEC) upon successful completion (MCQ test).

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**PILLAR CHAIRPERSONS**

<table>
<thead>
<tr>
<th>Committee</th>
<th>Chairperson</th>
<th>Until/August 2020</th>
<th>From/September 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education Committee</strong></td>
<td>Prof. Jan Steffel</td>
<td>Until August 2020</td>
<td>From September 2020</td>
</tr>
<tr>
<td><strong>Certification Committee</strong></td>
<td>Dr. Stylianos Tzeis</td>
<td>Until August 2020</td>
<td>From September 2020</td>
</tr>
<tr>
<td><strong>Selection Committee</strong></td>
<td>Dr. Giovanni Luca Botto</td>
<td>Until August 2020</td>
<td>From September 2020</td>
</tr>
<tr>
<td><strong>Selection Committee</strong></td>
<td>Prof. Isabel Deisenhofer</td>
<td>Until August 2020</td>
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</tbody>
</table>
**Education**

**EHRA Key Reference Library**

The Key Reference Library is based on EHRA Core Curriculum for the heart rhythm specialist and provides a guide for the ones who plan to sit EHRA Certification Exams. It includes more than 400 references.

The Key Reference Library is a dynamic online document in that EHRA Members may suggest correcting, adding or replacing references and/or descriptions.

**Courses**

Every year, EHRA designs and provides the latest educational training programmes to help maintain professional excellence among cardiologists specialising in pacing and arrhythmias. EHRA delivered one onsite and for the first time, 3 online courses.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Location</th>
<th>Course Director</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb.</td>
<td>EHRA Interventional EP and Examination Preparatory Course (EPC)</td>
<td>Paris</td>
<td>J. Steffel M. Earley</td>
<td>62</td>
</tr>
<tr>
<td>Oct.</td>
<td>EHRA Course on Cardiac Pacing, ICD and Cardiac Resynchronisation</td>
<td>Online</td>
<td>T. Deneke C. Steinwender</td>
<td>196</td>
</tr>
<tr>
<td>Nov.</td>
<td>EHRA Course on Advanced EP, with Focus on AF Ablation</td>
<td>Online</td>
<td>M. Duytschaever P. Sommer</td>
<td>72</td>
</tr>
<tr>
<td>Dec.</td>
<td>EHRA Course on Advanced EP, with Focus on VT Ablation</td>
<td>Online</td>
<td>K. Zeppenfeld M. de Riva Silva</td>
<td>96</td>
</tr>
</tbody>
</table>
**EHRA in Russia**

EHRA has renewed its support to Russian colleagues through the ‘EHRA in Russia’ programme, which:

- Helps young EPs in Russia by providing them with tailored educational programmes;
- Increases EHRA Membership among Russian heart rhythm physicians and Allied Professionals interested in or involved in the field of EP and CP; and
- Co-develops 2 EP educational courses per year in Russian.

Due to the COVID-19 pandemic, only one ‘EHRA in Russia’ course took place in 2020.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Location</th>
<th>Course Director</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept.</td>
<td>Clinical electrophysiology, catheter ablation of tachycardias and</td>
<td>Moscow</td>
<td>S. Manola E. Pokushalov M. Didenko</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>implantable devices for treatment of cardiac rhythm disorders for</td>
<td></td>
<td>A. Romanov</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cardiologists</td>
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</table>

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

**EHRA Educational Slides**

EHRA Educational Slides offer is a new initiative enabling local representatives from EP National Cardiac Societies / EP Working Groups to benefit from EHRA courses’ slides to organise courses locally in their language.

The first country to benefit from this new opportunity was Egypt with EHRA Course in Cardiac Pacing, ICD and Cardiac Resynchronisation Therapy in Cairo from 25 to 27 February 2020.

The course attracted 147 attendees over 3 days.
EHRA organised a total of 11 webinars, as shown in the following table and decided to focus on its community during the pandemic, providing most webinars to its members. As a result, 10 webinars for EHRA Members and one open-access webinar are available to everyone. The recordings are available here.

**EHRA HIGHLIGHTS**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Presenter</th>
<th>Moderator</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>*Cardiac resynchronization therapy: LV lead placement or His pacing?</td>
<td>Z. Whinnett</td>
<td>C. Leclercq</td>
<td>256</td>
</tr>
<tr>
<td>Jun.</td>
<td>*Making the right choice between single and dual chamber ICD and optimal device programming</td>
<td>M. Hemels</td>
<td>M. Meine</td>
<td>212</td>
</tr>
<tr>
<td>July</td>
<td>*European long-term registries: EURObservational Research Programme on Atrial Fibrillation (EORP-AF)</td>
<td>T. Potpara</td>
<td>H. Heidbuchel</td>
<td>62</td>
</tr>
<tr>
<td>Nov.</td>
<td>*Catheter ablation plus left atrial appendage occlusion in AF: a combination therapy solution</td>
<td>D. Gupta</td>
<td>G. Hindricks</td>
<td>90</td>
</tr>
<tr>
<td>Dec.</td>
<td>*Sinus node disease: concepts and controversies</td>
<td>L. Fauchier</td>
<td>C. Linde</td>
<td>221</td>
</tr>
</tbody>
</table>

* Exclusive access for EHRA Members.
**STEEER-AF**

Stroke prevention & rhythm control Therapy: Evaluation of an Educational programme of the European society of cardiology in an unblinded cluster-Randomised controlled trial in patients with Atrial Fibrillation (STEEER-AF) is a two-armed, parallel-design, international multicentre trial.

In 2014, EHRA, together with the ESC and the ESC Council on Stroke, performed a needs assessment (Phase 1) to understand the educational needs of cardiologists, neurologists and GPs/FPs in six countries in the following areas:

1. Current treatment and management of AF;
2. Utilisation of optimal stroke prevention strategies with AF patients; and
3. Other potential issues and barriers in the management of AF.

This study identified that gaps in knowledge and skills of physicians is a major factor in poor adherence to guidelines.

This needs assessment supported the development of evidence-based educational interventions to be deployed in Germany, France, Italy, Spain, UK and Poland, including the design and the deployment of educational activities (Phase 2).

A quantitative study using a pragmatic cluster-randomised trial will be conducted in those 6 ESC countries and will be led by investigators from those 6 countries, with 10 to 12 sites per country. The primary objective of the trial will be to determine whether a comprehensive education programme for healthcare professionals who treat patients with AF will improve guideline-adherent treatment for stroke prevention and rhythm control, compared with no structured education. (Note: the start has been delayed due to the current coronavirus pandemic.)

Recruitment of patients aims to start in 2021.

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**Certification**

Designed to certify both practical experience and expertise in cardiac devices and electrophysiology, EHRA Certification was launched in 2005. In recent years, success rates have improved, which may in part be due to the exam preparatory courses organised by EHRA Education Committee.

The exam consists of a rigorous test of knowledge with pass marks set by the standard-setting committee using validated statistical methods. EHRA certification process assesses the competence, knowledge and skills of physicians and allied professionals. Success in the exam provides a 10-year certification at level 1, but for physicians, an additional logbook is needed to achieve the full level 2 certification.

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**The proportion of candidates sitting the online exam in 2020**

- **Electrophysiology**
  - 90 candidates

- **Cardiac Devices**
  - 148 candidates

- **Allied Professionals**
  - 90 candidates (Dutch + English)
Education

EHRA Recognised Training Centres (ERTC)
EHRA Certification Committee is also in charge of EHRA Recognised Training Centres (ERTC), an initiative that encourages good educational practices by providing a quality label for training excellence and efficiency. 33 centres from 18 countries have gone through the selection process and are now enrolled in the programme.

Selection
EHRA Selection Committee continues to manage training fellowship activities which promote the development of academic medicine in the field of cardiac rhythm disorders.

EHRA Observational Training Programme (EOTP) gives applicants the chance to attend two to four weeks of clinical shadowing and learning in electrophysiology and cardiac pacing at one of EHRA Recognised Training Centres (ERTC).

In 2020, 14 EHRA Observational Training Programme (EOTP) Grants were awarded to physicians from across Europe.

The selection committee also reviewed the applications of the Fellow of EHRA (FEHRA) candidates. In 2020, EHRA welcomed 20 FEHRA members.

The Selection committee is committed to guaranteeing the access rule to EHRA Meeting Grants.

Electrophysiology center at University medical center Ljubljana is the largest EP center in the country. We are a tertiary-care and national referral center for the complex arrhythmia management and CIED implantations. In 2 EP labs, we perform over 600 catheter ablations yearly. In addition, approximately 700 CIED implantations are performed annually, including CRTs, leadless PMs, and His bundle pacing. We are proud to receive accreditation as EHRA Recognized Training Centre, which certifies implementation of high professional, and educational standards in our practices. With ERCT acknowledgement, we hope to broaden the recognition of our center and, possibly, attract fellows from wider region.

Testimonial from University Medical Centre Ljubljana - ERTC since 1 February 2020
Horizon 2020: EU-Funded Projects

EHRA, involved in several EU-funded projects, is recognised as an important partner to disseminate the results within the cardiovascular community (practitioners, researchers and institutions) ensuring a large audience is aware of the latest and best practices to improve the patients’ outcomes.

- **European Sudden Cardiac Arrest Prevention Education Network (ESCAPE-NET)**. Together with large international scientific societies/associations and the European Resuscitation Council (ERC), EHRA is involved in disseminating and translating outcomes into European clinical practices to prevent sudden cardiac arrest (SCA) and to improve survival after SCA.

- **AFFECT-EU** involves 14 EU countries. Its major goal is to develop an accurate, risk-based and ready-for-implementation AF screening algorithm using digital devices for early detection and reduction of AF-related health inequities, morbidity and mortality in Europe.

- **PROFID** will develop a clinical decision support tool (risk score) to predict the sudden cardiac death risk and identify those post-MI patients who will optimally benefit from an implantable cardioverter-defibrillator (ICD).

**EHRA is also involved in a new EU call:**

- **EHRA-PATHS** which addresses multimorbidity in elderly atrial fibrillation patients through interdisciplinary, patient-centred, systematic care pathways. This project aims at transforming and improving clinical practice in the field of AF to holistic, inclusive and personalised treatment strategies. EHRA/ESC will be the coordinator on this project.

These projects have received funding from the European Union’s Horizon 2020 research and innovation programme under Grant Agreements No. 733381, No. 847770, No. 847999 and No. 945260.
Advocacy

2020 has proved that digital and m-health have become key and EHRA is ready

In order to ease transition into digital care, one major focus is to provide educational activities for EHRA Members on digital topics. The planned Digital Arrhythmia Day during EHRA 2020 could not take place due to COVID-19; instead digital solutions including webinars were offered to EHRA Members. The webinars, aiming at providing insight into digital arrhythmia care, were titled ‘Mobile Health as Diagnostic or Screening Tool for Arrhythmias: Solution or a Threat?’ and ‘Digital Devices for Atrial Fibrillation Screening and Future Perspectives’. In addition, EHRA Summit 2020 was focused on digital cardiology, providing keynote lectures on that subject and on artificial intelligence.

To reach out and assess the Young EP community knowledge and practical use of digital technologies, the survey wEHRAbles I was launched with the Young EP Committee and its results published in Clinical Cardiology. Collaboration with the young EP Community was also strengthened by lectures such as the ‘Digital Trialist’ during EHRA Young Summit.

To provide EHRA Members with up-to-date scientific information, consensus papers on wearable devices and mobile health have been recently published.

Collaboration with EHRA sister societies (HRS) and the ESC Digital Health Committee permits to further strengthen the care for our arrhythmia patients within the field of digital cardiology.

The COVID-19 pandemic accelerated the transition into digital care for many of our members and patients. To meet this need and to strengthen EHRA’s position in digital medicine, a new committee was formed – EHRA Digital Committee. The new committee will focus on connecting our members with digital technologies through educational activities, collaborative efforts, and scientific updates.

Patient engagement is key in the partnership between healthcare professionals and patients, and to further strengthen this link, EHRA decided to create a new role – the patient coordinator role.

Dr. Emma Svennberg, EHRA Digital Committee Chair
Advocacy

afibmatters.org

“*The AFibmatters.org is a great tool to help physicians improve their communication with patients suffering from atrial fibrillation.*”

To come
- Patients’ testimonials
- Mini videos to explain procedures

Women in EP

**Mission:** To highlight the unique aspects of female gender in patients with cardiac arrhythmias and better represent the female healthcare professionals working in electrophysiology. To facilitate interaction and experience exchange between female electrophysiologists and the women starting their careers in this field.

Moreover, in 2020 other activities involved collaboration with EHRA Young EP and EHRA Scientific Initiatives Committees with a survey regarding the use of X-rays in invasive electrophysiology.

From September 2020, the Women in EP activities have been integrated into EHRA Young EP Committee.

NEW! Women in EP LinkedIn Group!

11 languages:
EHRA website for patients is translated into 11 languages (new Dutch and Chinese).

Over 340 female EP experts constitute the Women in EP Scientific Network

More than 250 of these contacts are willing to actively participate in EHRA congresses and other scientific meetings as chairperson or speaker

100 members have already joined facilitating the professional connection among women working in this field.
Advocacy

e-Communication
EHRA continues to increase its presence on social media through its Presidential account on Twitter which now gathers more than 700 followers @EHRAPresident. Make sure you follow the trend and keep up to date with the latest news from your association. ‘#EHRA_ESC’. Stay in contact with your community.

Get EHRA News on Twitter
From EHRA President and EHRA e-Communication committee

Prof. Christophe Leclercq
@EHRAPresident

Dr. David Duncker
@DavidDuncker

Dr. Rodrigue Garcia
@RodrigueGarcia4

Dr. Barbara Kommata
@KommataVarvara

Assoc. Prof. Federico Guerra
@GuerraCardio

Assoc. Prof. Dominik Linz
@Dominik_Linz

#EHRA_ESC
Research

PILLAR CHAIRPERSON

Scientific Documents Committee
Dr. Nikolaos Dagres
Until August 2020
From September 2020

Scientific Initiatives Committee
Dr. Serge Boveda
From September 2020

Scientific Initiatives Committee
Assoc. Prof. Tatjana Potpara
Until August 2020

Scientific Documents

The committee facilitates, develops and publishes relevant scientific content. Recent articles published in EP Europace Journal include:

- **EHRA/HRS/APHRS/LAHRS** consensus document on risk assessment in cardiac arrhythmias: Use the right tool for the right outcome, in the right population
- **EHRA position document** on quality indicators for the care and outcome in adults with atrial fibrillation. Developed in collaboration with the Heart Rhythm Society (HRS), the Asia Pacific Heart Rhythm Society (APHRS) and the Latin-American Heart Rhythm Society (LAHRS)
- **EHRA/ EAPC update of the recommendations for participation** in leisure-time physical activity and competitive sports in patients with arrhythmias and potentially arrhythmogenic conditions

**“EHRA Key Messages App”**

Free app containing the main messages of published scientific documents in a concise format and providing highlights in an accessible format.

**EP Europace**

EHRA’s official journal, as well as that of the ESC Working Groups on Cardiac Cellular Electrophysiology and e-Cardiology

In 2020, over 9,500 Key Messages were downloaded by over 1,400 users from 112 countries

Ranked as one of the best electrophysiology journals in the world, EP Europace’s Impact Factor is **4.045** in 2019!
Scientific Initiatives
The Scientific Initiatives Committee (SIC) undertakes research providing a picture of daily EP practice and insight into how consistently arrhythmia treatment is applied across ESC member countries.

The committee conducts several types of surveys including centre-based (addressing EHRA Scientific Research Network), physician-based (addressing EHRA members) and patient-based, together with new initiatives (systematic reviews and meta-analysis) such as the recently published manuscript on Mobile Health Applications in the Management of AF.

Particular focus is put on the implementation of current arrhythmia related to ESC Clinical Practice Guidelines, such as the manuscript published on Contemporary Management of Patients with Syncope in Clinical Practice.

To carry out its centre-based surveys, the SIC can count on the collaboration of more than 160 EP centres that form EHRA Scientific Research Network.

Over the past year, EHRA has increased its collaboration with external contributors through its initiative ‘Work with EHRA’, as well as with other ESC constituent bodies, resulting in the following publications:

- Utilisation and perception of the same-day discharge in electrophysiology procedures and device implantations, carried out with EHRA Young Electrophysiologists;
- Diagnosis, family screening, and treatment of inherited arrhythmogenic diseases in Europe, carried out with EHRA European Cardiac Arrhythmia Genetics Focus Group (ECoGen) and the European Reference Network for Rare and Low Prevalence Complex Diseases of the Heart (ERN GUARD-Heart);
- Antithrombotic therapy for stroke prevention in patients with atrial fibrillation who survive an intracerebral haemorrhage: carried out with the ESC Council on Stroke
- The interpretation of CHA2DS2-VASc score components in clinical practice, carried out with EHRA Young Electrophysiologists, the Association of Cardiovascular Nursing and Allied Professionals (ACNAP) and the European Society of Cardiology Council on Stroke.

Lastly, two papers were published in early 2020 following the European Snapshot Survey on Leadless Pacemaker Implantation (ESSS-LLPM):

- Peri-procedural management, implantation feasibility, and short-term outcomes in patients undergoing implantation of leadless pacemakers: European Snapshot Survey;
- Factors influencing the use of leadless or transvenous pacemakers.

All survey results are published in EP Europace and on EHRA/ESC website.
Main objectives for 2020-2022
In order to improve the rationalisation and scientific value of research themes at the European level, the SIC has set a strategic plan for the next 2 years which will mainly focus on:

1. Primary prevention of SCD;
2. AF management; and
3. Health economics and communication: arrhythmia management during the COVID-19 era.

The methodology of this clinical research focuses on 3 stages: inventory; identification and correction of potential deficiencies; mid-term reevaluation.
Research

Registries and Trials
EHRA is represented within the European Observational Research Programme (EORP) for a number of important registries. These registries enable a timely assessment of the ESC Clinical Practice Guidelines, monitoring their implementation and adherence.

- **Atrial Fibrillation Phase III** was launched in July 2018 in adherence to the new ESC Atrial Fibrillation Guidelines published in 2016. Enrolment has been completed and patients are in the follow-up period. Some 228 sites from 31 countries enrolled 8,683 patients. The statistical report was delivered in December 2019 and the publication is now in process. New atrial fibrillation guidelines were published in 2020 including results of the AF III Registry.

- **The Epicardial Hybrid Atrial Fibrillation Ablation Registry (EHAFAR)** describes the diagnostic and therapeutic approaches used in routine practice when performing epicardial hybrid atrial fibrillation ablation (EHAF) procedures. The database was locked in January 2020. Analysis of the database is in progress.

**EAST-AFNET 4 Trial**
The EAST-AFNET 4 (Early Comprehensive Atrial Fibrillation Stroke Prevention), a European investigator-initiated study jointly conducted by AFNET and EHRA, has been completed. After more than a decade of successful teamwork, the main results were finally reported in August 2020. The study is intended to determine whether early comprehensive rhythm control intervention can help to prevent adverse cardiovascular outcomes associated with atrial fibrillation, including stroke and death. A total of 2,789 patients were enrolled and followed up for more than 5 years.

The results of EAST-AFNET 4 were presented at ESC Congress 2020 in a Hot Line Session as a Late-Breaking Clinical Trial and simultaneously published in the New England Journal of Medicine (NEJM). The main finding of EAST-AFNET 4 is that patients with newly diagnosed atrial fibrillation benefit from systematic early rhythm control therapy with antiarrhythmic drugs and/or AF ablation compared to usual care. This has the potential to completely change clinical practice towards rhythm control therapy early after the diagnosis of atrial fibrillation, changing the role of rhythm control therapy from symptomatic improvement to prevention of adverse outcomes.

The EAST-AFNET 4 results were among the top news of ESC Congress 2020 while the paper was viewed over 80,000 times on the NEJM website and has been discussed and presented at many major meetings since the initial presentation. Further publications on sub analyses are in preparation.
Membership

2020 main achievements of the membership pillar

**Young EP Insight**
Launch of the Young EP Insight Programme that provides one-to-two weeks hands-off observational training with an expert electrophysiologist.

**EHRA Bulk Membership**
Introduction of a new bulk membership offer: 15% discount if 50 or more members enrolled.

**EHRA Joint Sessions**
EHRA adapted to the virtual context and collaborated with EP NCS/WG and sister societies on several joint sessions throughout the year, which mostly took place online.
## EHRA Joint Sessions

<table>
<thead>
<tr>
<th>Date</th>
<th>Local Organiser</th>
<th>Event</th>
<th>Topic of joint session</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 Sept.</td>
<td>Arrhythmia Alliance (AA)</td>
<td>HRC 2020 Virtual Meeting</td>
<td>The Ventricular Premature Contraction</td>
<td>E. Behr, J. Camm, A. Grace, K.-H. Kuck, J. L. Merino, A. Slade</td>
</tr>
<tr>
<td>4 Dec.</td>
<td>Turkish Society of Cardiology (TSC)</td>
<td>TSC 2020 Digital Virtual Meeting</td>
<td>TSC-ACVC-EHRA Joint Session: Current Approach to Atrial Fibrillation</td>
<td>B. Gorenæk, S. Kose, B. Ozin, D. Scherr</td>
</tr>
</tbody>
</table>
National Cardiac Societies

Three main objectives shape the activities of the National Cardiac Societies Committee:

- Improve relations between EHRA and EP National Cardiac Societies (NCS)/ Working Groups (WG) as well as monitor their expectations to facilitate collaboration
- Encourage individual members to join EHRA and become more involved in the association
- Implement actions and procedures which lead to better networking, such as EHRA Summit, and joint sessions on EPNCS/WG events

EHRA Summit

The event was held virtually on 18 June.
More than 60 EP Working Group representatives from 34 countries joined this online edition.
The programme tackled ‘Education and Digital Health’.

EHRA Bulk Membership Offer

In addition to the already existing bulk membership (10% discount for 15 or more members enrolled), with the objective of strengthening collaboration with EP NCS/WG, EHRA has improved its offer with a discount providing 15% if 50 or more members subscribe.

Improving Collaboration with Our Partners

- **EP Working Group of the moment**
  This initiative showcases a new EP National Cardiac Society (NCS) or EP Working Group (WG) of EHRA network quarterly.
  It highlights the efforts and activities these partner organisations are undertaking and promotes the interaction between the various EP NCS/WG and EHRA.
  Countries showcased in 2020: Portugal, Georgia, Kazakhstan and Austria.

- **Regular EP NCS/WG-EHRA meetings**
  EHRA makes a point of maintaining strong relationships with its counterparts in Europe and holds regular meetings to always improve collaboration.
  This year, despite the COVID-19 context and the impossibility to hold physical meetings, EHRA held a virtual meeting with all EP NCS/WG chairpersons and their Young Ambassadors in December during which topics such as membership, certification and collaboration in research were discussed.
Membership

International Affairs

EHRA International Affairs Coordinator is responsible for extending the valuable relationships and deep cooperation between EHRA and its sister societies. Virtual meetings were organised at board level to discuss topics of mutual interest and ongoing collaboration, including scientific documents, education and joint sessions.

These sister societies included:

- **Asia Pacific Heart Rhythm Society** (APHRS)
- **Latin American Heart Rhythm Society** (LAHRS)
- **Heart Rhythm Society** (HRS)

EHRA Young Electrophysiologists (Young EP)

**Research:**

The Young EP published several papers, collaborated with the Scientific Initiatives Committee and helped many members of EHRA Young EP Community to successfully launch their projects, such as the wEHRAbles or reprocessing surveys.

**Young network:**

- Over 850 people from 70 countries form the Young EP Network.
- Young EP news is sent out monthly to the Young EP Network.

**EHRA Young EP** also contributed significantly in setting up EHRA Key Reference Library with EHRA Education Committee.

**EHRA Young Summit:**

- Young EP from 29 countries attended the 5th edition of the Young EP Summit, held online on 17 June.

**Career development:**

- Launch of the EP Insight Programme with a network of 55 participating centres from 13 countries.
- EHRA speed mentoring: first online sessions were held in June.
- EHRA Young EP panelists list gives maximum visibility to Young EP members during EHRA annual congress, providing them with the opportunity to participate in the Congress Scientific Programme.
**Membership**

**Fellowship**
Recognising excellence through the Fellowship of EHRA
Annual call for applications
1 August - 15 October

**2020**
3,632 members

**EP Europace Journal**
Print copy

**SILVER benefits**
- Discount on EHRA congress and educational courses
- Unlimited access to EHRA congress resources on ESC 365, monthly webinars and ESC e-Learning platform
- Access to EHRA grants, fellowships and training programmes
- Discount on EHRA books, ESC textbooks & handbooks, and OUP publications
- Voting rights*
- Access to EHRA Member Directory

**IVORY benefits**
- EP Europace Journal online access

<table>
<thead>
<tr>
<th>Role</th>
<th>2018 Membership</th>
<th>2020 Membership</th>
<th>2020 Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician or Cardiologist</td>
<td>€72</td>
<td>€134</td>
<td>€242</td>
</tr>
<tr>
<td>Under 40 or in training</td>
<td>€30</td>
<td>€104</td>
<td>€224</td>
</tr>
<tr>
<td>Nurse, Scientist, Technician</td>
<td>€60</td>
<td>€104</td>
<td>€224</td>
</tr>
</tbody>
</table>

*reserved to ESC member countries

EHRA Silver Membership can be combined with ESC Professional Membership or another Subspecialty Association Silver Membership.
More information: [www.escardio.org/EHRA-membership](http://www.escardio.org/EHRA-membership)