

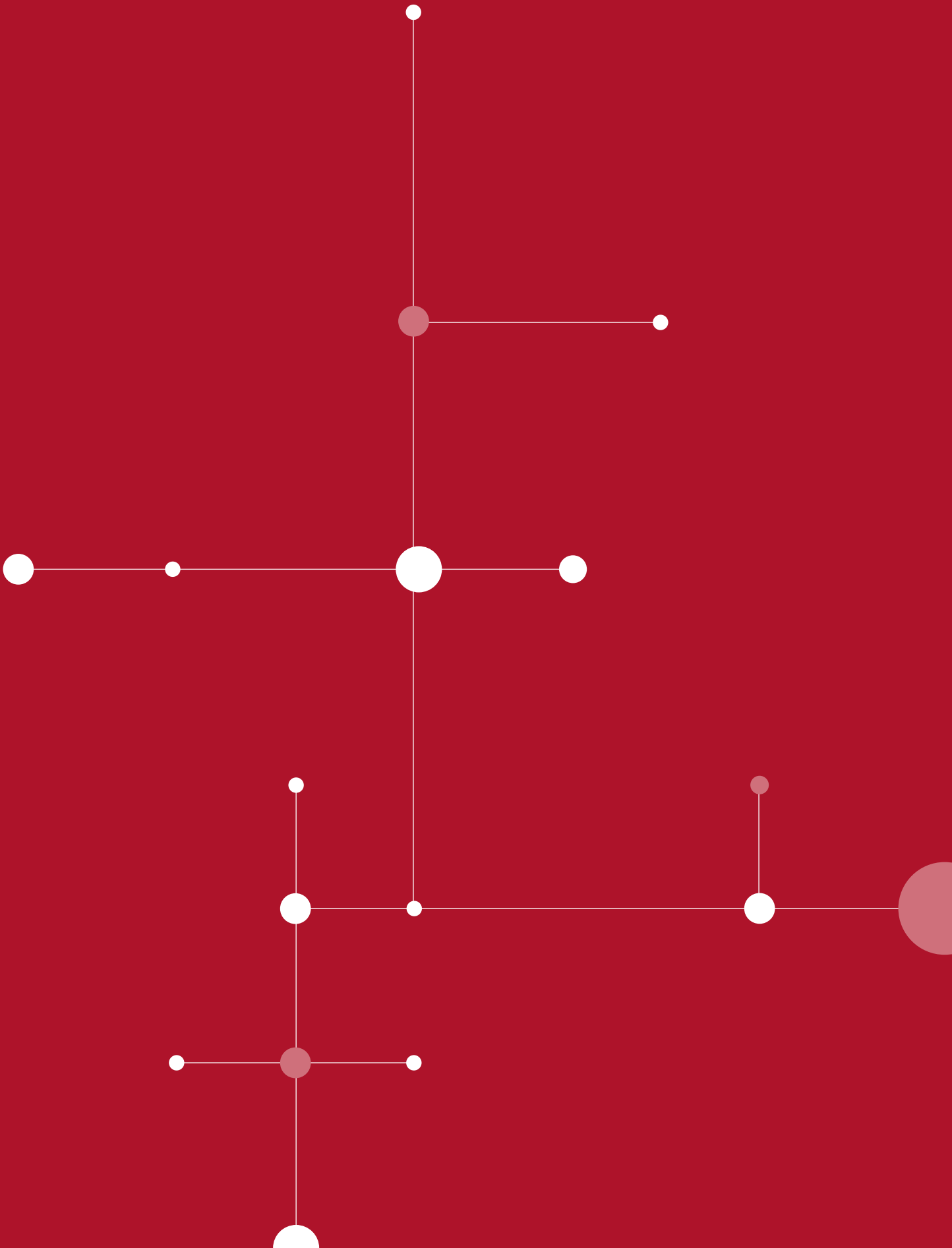


**ESC**

European Society  
of Cardiology

# Annual Report 2017

**Fiscal period 1 April 2016 - 31 March 2017**



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# President's Introduction

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The European Society of Cardiology (ESC) has become a global medical association pursuing a variety of scientific activities. None of this would be possible without the unfailing energy and commitment of the **2 000 volunteers who drive this society, the 56 National Cardiac Societies that shape it, and the 95 000 members** who inspire our work. I am proud to work alongside these groups and share what we have achieved over the last year.\*

In 2016, the ESC announced its five-year strategic plan that covers **five key focus areas: Congresses, Education, Research, Advocacy and Membership**. Over the last 12 months, a number of milestones have been reached in each of these areas.

## Membership

At ESC Congress 2016, we launched our **ESC Professional Membership programme**. It facilitates better delivery of a wide array of scientific resources, broadens our reach to healthcare professionals outside of Europe and diversifies the ESC's revenue. The programme also supports our National Cardiac Societies through co-promotion of their membership. The diversification of our revenues is critical to safeguarding the society's stability in an evermore stringent regulatory environment. In the coming months, we will expand the offer to include combined memberships with the ESC's subspecialty associations.

## Congresses

Over the last year we have seen record breaking figures for both abstract submissions and attendance across the ESC congress portfolio. Post-congress surveys confirm that delegates appreciate the **quality of the scientific programmes and their impact on practice**. In parallel, the ESC saw a major shift in congress participation. **There were more than 33 000 delegates at ESC Congress 2016 and over 100 000 people took part online - both record figures**. This online momentum is the result of our efforts to provide different formats such as improved streaming of congress sessions through ESC TV and accessing of resources through the online library, ESC Congress 365. ESC Congress 2016 in Rome was particularly special for our society as we were honoured by the presence of Pope Francis.

## Research

In 2016, the ESC launched the ESC Atlas of Cardiology, a collation of data from multiple sources, including more than 40 ESC countries, allowing us to identify inequalities and gaps in cardiovascular medicine. Atlas is one of the most important projects the ESC has mounted and is **testament to the power of ESC National Cardiac Societies and what we can achieve when we pool our knowledge and understanding of cardiovascular disease**. The increased focus on research in the ESC's strategic plan also saw the development of a new section within our website, creating a single point of access for all research related activity at the ESC, including registries, Atlas, grants and the ESC's involvement in EU-funded research projects.

## Education

The education overview in this annual report is impressive. **The ESC continues to deliver needs-driven education across a number of activities, both online and offline.** A particular highlight is the launch of the Diploma of Advanced Studies (DAS) in Cardiac Arrhythmia Management with Maastricht University and the European Heart Rhythm Association (EHRA). The programme is training 32 participants to become the leaders in arrhythmology, combining state-of-the-art cardiovascular electrophysiology, health economics and leadership coaching. This postgraduate course, along with the socioeconomic data within Atlas, illustrates the importance the ESC places on understanding healthcare models within their economic paradigms.

## Advocacy

In 2016, the ESC created an advocacy Committee to oversee our growing activities in this area. Of particular note was the publication of an extensive review and meta-analysis of evidence relating to the clinical evaluation of coronary stents by an ESC-EAPCI (European Association for Cardiovascular Percutaneous Interventions) taskforce. These documents will be used by EU regulators to revise their device-specific guidance and to identify the best process for experts to become involved within the new EU medical devices framework. This is an outstanding example of how **the ESC has earned recognition by policymakers and regulatory authorities to provide robust, independent expertise.**

We can be proud of what we have achieved together over the last year, but there is still much to do if we are to remain relevant to our members and their patients. **We are determined to expand the boundaries of scientific innovation, education and dissemination.** We need to address external challenges that shape our different environments, from evolving regulation and digital health to demographic shifts within the profession and how we communicate with the world around us. These challenges are immense, but so is the capacity of this society to adapt and unite all those who have a role in reducing the burden of cardiovascular disease.



**Jeroen Bax, FESC**  
*President for the European Society of Cardiology  
2016 - 2018*

# European Society of Cardiology Board 2016 - 2018

## Elected voting members

### **President**

Prof. Jeroen Bax, Netherlands

### **President-Elect**

Prof. Barbara Casadei, United Kingdom  
*Cardiovascular Round Table and Research*

### **Secretary/Treasurer**

Prof. Ian Graham, Ireland

### **Vice-Presidents**

Prof. Stefan Anker, Germany  
*National Cardiac Societies and Communications*  
Prof. Lina Badimon, Spain  
*Scientific Affairs (including Working Groups and Councils)*  
Prof. Bela Merkely, Hungary  
*National Cardiac Societies, Editors Network, and Cardiologists of Tomorrow*

### **Councillors**

Prof. Hector Bueno, Spain - *Advocacy*  
Prof. Sarah Clarke, United Kingdom - *e-Communications*  
Prof. Donna Fitzsimons, United Kingdom - *Grants*  
Prof. Christophe Leclercq, France - *Global Affairs*  
Prof. Cecilia Linde, Sweden - *Women in ESC*  
Prof. Franz Weidinger, Austria - *Young ESC Community*

## Ex-Officio voting members

### **Past-President**

Prof. Fausto Pinto, Portugal

### **Associations**

Prof. Maddalena Lettino, Italy - *President of ACCA*

### **Representatives**

Prof. Bogdan Popescu, Romania - *President of EACVI*  
Prof. Diederick Grobbee, Netherlands - *President of EAPC*  
Prof. Michael Haude, Germany - *President of EAPCI*  
Prof. Gerhard Hindricks, Germany - *President of EHRA*  
Prof. Frank Ruschitzka, Switzerland - *President of HFA*

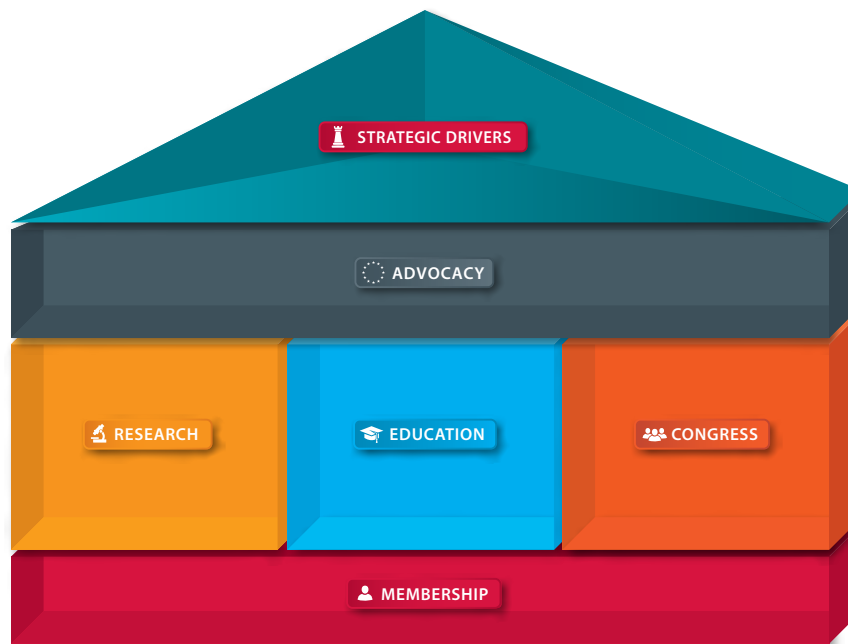


### Non-voting members

- Prof. Stephan Achenbach, Germany - Congress Programme Committee
- Mr. Nigel Clarke, United Kingdom - Advisor
- Prof. Francesco Cosentino, Sweden - Industry Relations
- Prof. Gerasimos Filippatos, Greece - Membership
- Prof. Peter Kearney, Ireland - Advocacy
- Prof. Paulus Kirchhof, United Kingdom - Education
- Prof. Steen Dalby Kristensen, Denmark - Media
- Prof. Thomas Lüscher, Switzerland - Publications
- Prof. Gunnar Olsson, Sweden - Advisor
- Prof. Alec Vahanian, France - EORP
- Prof. Stephan Windecker, Switzerland - Committee for Practice Guidelines
- Prof. Jose Zamorano, Spain - Global Affairs
- Mrs. Isabel Bardinnet, France - Chief Executive Officer
- Mrs. Nathalie Lefebvre, France - ESC Chief Financial Officer
- Mrs. Marina Ximeris, France - ESC Board Secretary

# Strategic Plan (2016 - 2020)

To support its mission to reduce the burden of cardiovascular disease, the ESC is focusing on five strategic areas.



## Congress

Bringing together the best minds and the best science in cardiovascular medicine



## Education

Delivering world-class learning and professional development



## Membership

Improving members' access to the latest science, best practices and networking



## Research

Encouraging excellence and managing innovation



## Advocacy

Leveraging our knowledge, network and influence to shape an environment favourable to cardiovascular health

## Strategic Trends

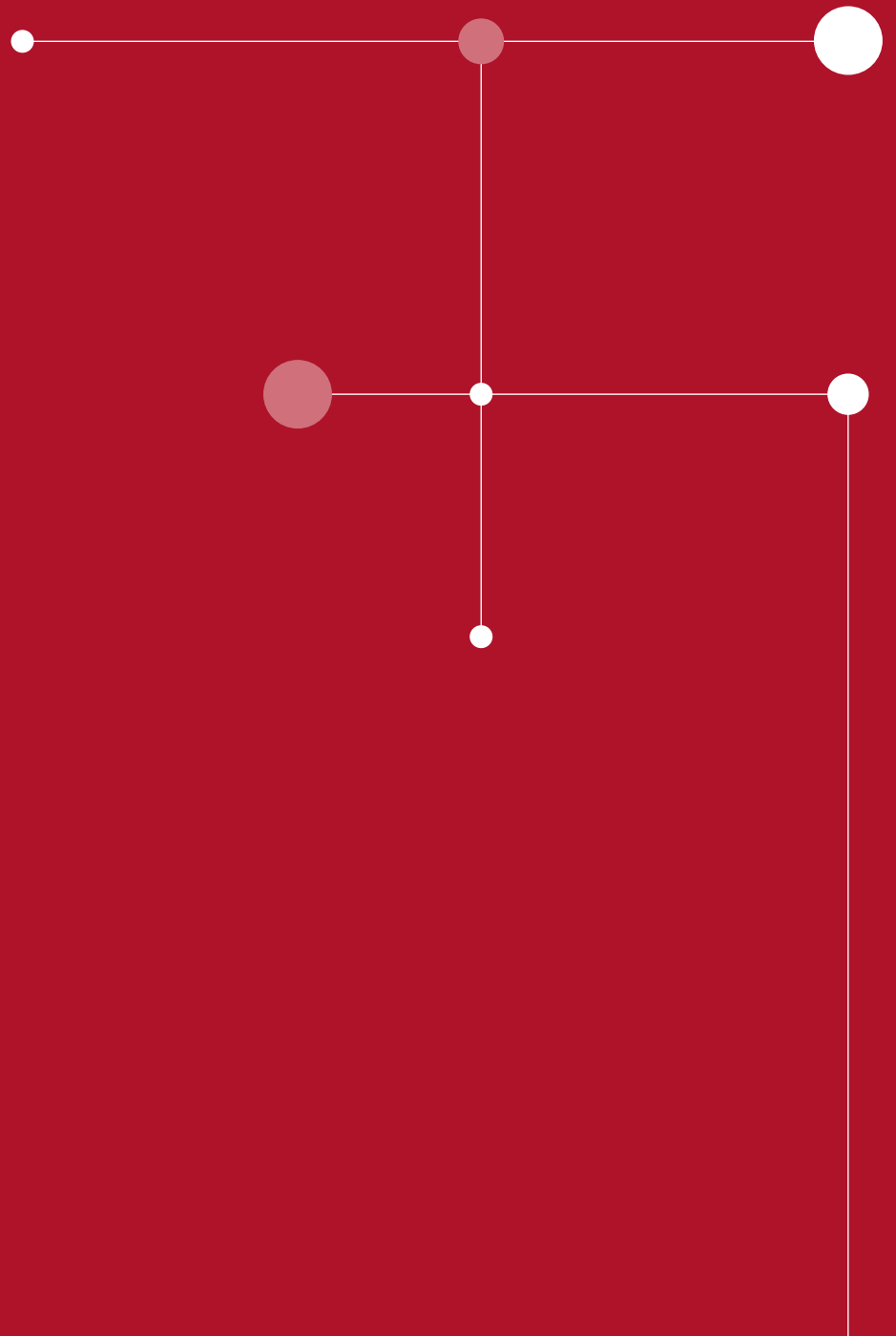
Areas of development that could affect each of these pillars include:

- Demographic shifts within the profession
- The technology revolution
- Globalisation and geographic reach
- A more stringent regulatory environment





# ESC Activity Reports



## Congresses

ESC has a strong tradition of organising major congresses to share scientific knowledge, disseminate the latest research and provide an opportunity for healthcare professionals to network. ESC continued to deliver congresses for both subspecialties and for the annual ESC Congress in Rome. The content for each congress is led by volunteers with in-depth knowledge of their subject and who are committed to ESC and its constituent bodies. This work is supported by professional event staff based at the European Heart House in France.

Together, these seven congresses attracted 45 000 participants, many of them leaders in their field of expertise. The organisation and content of each congress is reviewed to ensure that the format remains relevant, that the needs of participants are met, that world-class scientific programmes are presented, and that innovation and improved clinical practice remain key outcomes.

**45 000 cardiologists and allied professionals attended seven ESC-organised congresses in the past year**

**ESC Congress 2016:** The ESC Congress went to Rome for the first time since 1960. The 2016 congress was the biggest ever organised by the ESC with 33 130 participants from 148 countries including 34% from outside of ESC countries. The theme was 'The Heart Team', chosen to highlight the collaborative spirit of the ESC and its constituent bodies, emphasising the importance of teamwork and the interactions among professionals and specialties involved in fighting cardiovascular disease. More than 500 scientific sessions were available covering all aspects of cardiology and 4 594 abstracts were accepted from 11 000 submitted for presentation in a programme offering 27 hours of external CME credits. Industry partners took over 10 000m<sup>2</sup> of exhibition space and there were 70 satellite symposia and five hand-held tutorials. New ESC Clinical Practice Guidelines and clinical trial hotlines were presented, all affecting everyday clinical practice and patient care. In order to support both congress delegates and those unable to attend, ESC TV provided a range of content and commentary from ESC Congress, and the mobile app continued to evolve and assist interaction with delegates. The congress ended with a visit by Pope Francis, thanks to collaboration among the ESC, the Fiera di Roma venue and the Vatican. As a result, there was worldwide exposure of the ESC Congress, particularly the presentation of a stethoscope by ESC President Fausto Pinto to Pope Francis to commemorate the 200th anniversary of its invention.



## 4 594 abstracts were accepted out of 11 139 submitted for ESC Congress 2016

**EuroHeartCare 2016:** Organised by the ESC Council on Cardiovascular Nursing and Allied Professions (CCNAP) and the Hellenic Society of Cardiovascular Nursing, EuroHeartCare 2016 was held in Athens in April. The theme was 'Excellence in patient care - the heart of EuroHeartCare'. More than 460 participants attended with half of the delegates coming from Greece; 236 abstracts were accepted and presentations were delivered in 19 scientific sessions. Industry partners were involved in two satellite symposia.

**Heart Failure 2016:** The congress of the Heart Failure Association (HFA) was held in Florence in May and included the 3rd World Congress on Acute Heart Failure. Now more than 20 years old, this congress has become the world's leading Heart Failure forum. The main theme was 'Heart Failure: state of the art' and featured the release of the New ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure and the presentation of the new Joint European Guidelines on CVD Prevention 2016.

The congress attracted a record 6 000 + participants from 103 countries and a scientific programme of 108 sessions, and 1 639 abstracts were presented. The programme was accredited with 21 hours of external CME credits. Industry organised 43 more sessions, and 25 exhibitors were represented.

**EuroPrevent 2016:** The annual congress of the European Association for Cardiovascular Prevention and Rehabilitation (EACPR), scheduled for Istanbul in May, was cancelled due to security concerns and a smaller event was arranged at the European Heart House in June. The event brought together 217 participants who were offered a reduced version of the scientific programme that had been scheduled. Delegate feedback was positive given the limited time to arrange the event.

**Frontiers in CardioVascular Biology 2016:** The biennial congress of the ESC Council on Basic Cardiovascular Science (CBCS) took place in Florence in July. This fourth edition of the congress attracted more than 650 attendees from 43 countries. It brought new science to the cardiovascular arena with an emphasis on encouraging young and early stage researchers. Forty-three sessions brought together abstracts, expert presentations and Keynote Lectures. Some 446 abstracts were presented over three days, and the Industry supported the congress through educational grants.

**Acute Cardiovascular Care 2016:** The annual congress of the Acute Cardiovascular Care Association (ACCA) was held in Lisbon in October. The provision of acute cardiovascular care requires a multi-disciplinary approach, and the aim of the scientific programme was to review recent advances in acute and intensive cardiovascular care medicine. The theme was 'Innovating to improve Acute Cardiovascular Care'. More than 1 000 professionals from 69 countries attended, and 63 scientific sessions were provided, including ACCA School sessions. A total of 36 abstracts were presented in a programme accredited with 16 hours of external CME credits. The exhibition area consisted of seven stands and Industry organized four satellite symposia and supported three sessions with an unrestricted educational grant.

**EuroEcho-Imaging 2016:** The 20th annual meeting of the European Association of Cardiovascular Imaging (EACVI) was held in Leipzig in December. EuroEcho-Imaging 2016 had two themes: 'Imaging in Arrhythmias' and 'Aortic Valve Diseases'. Some 3 200 professionals from 108 countries participated in a scientific programme of 150 sessions plus 16 industry sessions. There were 719 abstracts presented in a programme accredited with 20 hours of external CME credits. The exhibition area occupied almost 570m<sup>2</sup> and was supported by 30 organisations and industry partners.



A record 6 000 participants from 103 countries attended Heart Failure 2016, with a comprehensive programme of 108 sessions, and presented 1 639 abstracts

## Research



### EURObservational Research Programme (EORP)

EORP is demonstrating its potential with the implementation of 13 European registries covering multiple cardiovascular topics across general, interventional, imaging and other specialty areas. This success is partly illustrated by the publication of more than 70 papers, 28 in the fiscal year, in peer-reviewed journals describing EORP's findings, in the field of Atrial Fibrillation, Transcatheter Valve Treatment, Pregnancy and Cardiac Disease, Heart Failure, Infective Endocarditis and Prevention.

Much effort has gone into patient enrolment and statistical analyses. During ESC Congress 2016 there were a series of EORP scientific sessions, covering Atrial Fibrillation Ablation (AFA), Peripartum Cardiomyopathy (PPCM) and European Lead Extraction ConTrolled (ELECTRa) registries.

One of the objectives of the EORP is to track the implementation of ESC Clinical Practice Guidelines across member countries by collecting 'real world' clinical data. In September 2016 the EORP Oversight Committee decided to align and synchronise the registries' programme with the new ESC Guidelines. To this end, the new VHD registry began in 2016, in line with the VHD Clinical Practice Guideline to be published at ESC Congress 2017.

In 2016 the new prevention registry, EUROASPIRE V, began its Hospital Arm. The Primary Care Arm is planned to begin in fiscal year 2017.

### 28 peer-reviewed papers published





### Atlas

At ESC Congress 2016, the ESC Atlas of Cardiology was officially launched. This unique collection contains qualitative and quantitative data from more than 40 ESC countries. Topics include socio-demographics; economic indicators; risk factors; CVD morbidity and mortality; human and capital resources in cardiology; services and interventions provided to cardiac patients; and details on the national healthcare systems and health policies. Designed to be used by numerous stakeholders, Atlas maps the status of European cardiology and provides evidence to improve decision-making.

### EU-funded projects

In the reporting period, the ESC began working on three EU-funded projects:

- **BigData@Heart:** The aim of this project is to improve patient outcomes and reduce the societal burden of heart failure, atrial fibrillation and acute coronary syndrome (ACS) in Europe. The ultimate goal is to unlock value of current and future European data sets.
- **ESCAPE:** Leading European scientific teams have created large relevant population cohorts, mostly dedicated to Sudden Cardiac Arrest (SCA) research, join forces to exploit available data towards improving SCA management. The European Heart Rhythm Association of the ESC is leading the project.
- **Papa Artis:** PAPA-ARTIS is a phase II trial to demonstrate that a staged-treatment approach for Chronic aortic aneurysms can significantly reduce paraplegia and mortality.

Other EU-funded projects, in which the ESC is a consortium partner, include CATCH ME and Beta3\_LVH.

### ESC Research Grants

ESC Research Grants enable medical graduates at any stage in their careers below consultant (and science graduates with research experience up to Assistant Professor, Lecturer or equivalent level), to gain specialized training outside their own country. In 2007, the ESC awarded four research grants to the value of €25 000 each.

### Research dissemination

In 2016, all ESC research activities were posted in one area of the ESC website.

# Education



## Education

The Education Committee continues to align its training programmes and products with proven scientific content. Specific activities in the fiscal period include:

### ESC Education Conference

This conference is the strategic driver of education at the ESC, uniting more than 40 Directors of Training from the National Cardiac Societies and the ESC Education Committee. Through interactive workshops, the ESC discerns what has succeeded at the national level, what remains a challenge, and how the ESC can best support National Cardiac Societies. This approach underlines the ESC's commitment to delivering educational programmes that are needs-driven and in line with its five-year strategic plan. The 2016 conference theme was 'assessment of knowledge and skills'. A position paper on the outcome of the 2016 Education Conference is being prepared.

### Online learning

- **ESC Webinar Series in General Cardiology:** During the fiscal year, 10 interactive sessions were delivered along with the introduction of an initiative to measure learning outcomes. Average attendance at live sessions was 500 participants, with an audience of more than 30 000 watching the recordings. Each session focused on a recently published ESC Clinical Practice Guidelines as opinion leaders delivered case-based presentations emphasizing the most clinically relevant aspects. In 2016 a pre/post test was introduced to assess participants' learning and the effectiveness of the webinar. In addition to webinars in General Cardiology, the ESC's subspecialty communities delivered 40 webinars with an average of 300 participants per live session.
- **ESC eLearning Programme:** In 2016, the ESC launched the General Cardiology online programme, containing 260 courses and 27 topics, to provide a modular platform for integration into national training programmes. The programme has been taken up by seven National Cardiac Societies: Greece, Austria, Hungary, Ireland, Malta, Portugal and Spain. Cardiologists-in-training using the programme are accompanied by their national trainer and receive a certificate of completion when they complete all modules. The ESC e-learning platform programme hosts more than 600 courses (an increase of 100 in the period) and more than 1 200 self-assessment questions (an increase of 200) covering EP, imaging, prevention, PCI, heart failure, and acute cardiac care through its subspecialty communities, as well as general cardiology. Local support is offered by the ESC through face-to-face demonstrations through ESC stand activity across the globe.
- **ESC Clinical Case Gallery:** The Clinical Case Gallery saw a significant increase in cases submitted during the period (33 cases published) bringing the number of cases to 61 at the end of the fiscal year, as well as a variety in the type of cases submitted. This increase was in part due to the hard work of the education committee to improve the submission and review process, as well as greater visibility across all communication channels. The year also saw the development of a fourth area of study with the launch of the portal for the ESC Council on Cardiovascular Nursing and Allied Professions.

- **Guidelines Into Practice Tracks:** This collation of resources aims to provide practical insights and support to both understanding and implementing the latest ESC Clinical Practice Guidelines. In 2016 four tracks were published, covering Atrial Fibrillation, the management of Dyslipidaemias, Acute and Chronic Heart Failure and Cardiovascular Prevention. There are now 20 tracks available on the ESC website, including, webcasts and slides from the most relevant sessions present at ESC Congress, webinar recordings and clinical cases.

## Face-to Face Learning

### European Heart Academy

The education of future leaders in cardiology is a key objective of the European Heart Academy. In January 2017, the Diploma of Advanced Studies (DAS) in Cardiac Arrhythmia Management was inaugurated in collaboration with Maastricht University and the European Heart Rhythm Association (EHRA). The programme is training 32 participants to become the leaders in arrhythmology, combining state-of-the-art cardiovascular electrophysiology, health economics and leadership coaching.

Other programmes included:

- Master of Sciences (MSc) in Health Economics, Outcomes and Management in Cardiovascular Sciences. The programme is training more than 80 students from 28 countries.
- Certificate of Advanced Studies (CAS) in Heart Failure, developed in collaboration with London School of Economics, University of Zurich and the ESC Heart Failure Association (HFA) with 60 participants taking part.

### ESC subspecialty courses

In addition to postgraduate courses, ESC subspecialty communities organised 24 live teaching courses.

### ESC endorsed courses

An 'ESC Live Event Policy' was validated by the ESC Board to ensure the quality of any course deployed in the period. In essence, the policy stipulates that events seeking the label of 'organised in collaboration with the ESC' must comply with the ESC Education Blueprint. This blueprint aims to raise the standards of educational events by establishing rules and procedures. Live events endorsed in 2016 included member courses in Morocco and Tunisia; an ESC update programme in Davos; a series of five ESC grand courses in Europe; as well as events held in Lithuania, Russia, Austria, Switzerland and Germany.

Diploma of Advanced Studies (DAS) in Cardiac Arrhythmia Management was inaugurated in collaboration with Maastricht University and the European Heart Rhythm Association (EHRA).



## Knowledge Assessment

**MCQ Activity:** The ESC's MCQ group supports a wide range of activities. It has extensive expertise in developing multiple-choice questions as well as supporting self-assessment in eLearning. In 2016 the European Exam in General Cardiology, a joint initiative among the ESC, the National Societies and the UEMS Cardiology section, worked with more than 350 candidates from seven countries. Thanks to this, the ESC is a member of the Council for European Specialist Medical Assessment (CESMA). The ESC also catered for subspecialty exams to more than 2 500 candidates, an increase of 900 due to the addition of subspecialty exams.

In the period, the ESC also invested in a professional management tool to improve the efficiency, security and integrity of the MCQs.

### **Evidence-based education (Mitral Regurgitation):**

After the completion of two needs-assessment initiatives, a third initiative was launched in 2015 to raise awareness on mitral regurgitation. Leveraging the expertise of eight ESC subspecialty communities, the study was completed in 2016. Two abstracts were submitted and accepted to ESC Congress 2017 and a manuscript is being drafted.

### **Council on standards of education and accreditation**

During the General Assembly at the ESC Congress 2016 in Rome, the Assembly voted for the creation of a Council for standards of education and accreditation. The Council has three sections, namely Accreditation, Certification and Recognition of Centre. The aims of the Council are to include:

- formulating recommendations for education, accreditation and assessment in cardiology
- position itself as a provider of best practices in education, accreditation and assessment to ESC and its constituent bodies and subspecialty communities and represent their interests in the field of education, accreditation and assessment
- collaborate with the relevant legitimate regulators and stakeholders of education, accreditation and assessment

Since the creation of the Council, the Accreditation section was activated, and an agreement was reached with UEMS - EACCME for the accreditation of educational programmes in cardiology.

## ESC Training Grants

In 2017 five training and one nurse training grants were awarded.



# Advocacy

The ESC is engaged in dialogue with European Union institutions, national governments, international organisations, and other stakeholders to secure a policy and regulatory environment favourable to cardiovascular health. These activities have resulted in greater recognition by policymakers and regulatory authorities of the importance to address CVD, and a stronger base of support for the pursuit of that mission.

In 2016, the ESC advanced its advocacy objectives in areas including:

## Medical Device Regulation

The ESC and the European Association of Percutaneous Cardiovascular Interventions (EAPCI) published a review and meta-analysis of evidence relating to the clinical evaluation of coronary stents, and began work on a document addressing bioresorbable scaffolds. These documents will be used by EU regulators to establish device-specific guidance and to identify the best process for experts' involvement within the new EU medical devices framework. ESC also renewed its engagement with EUnetHTA, the European Network for Health Technology Assessment (HTA), which fosters cooperation among regulators, HTA bodies and stakeholders.

## Partnerships

- **The Alliance of Biomedical Research in Europe (BioMed Alliance)\*:**  
The BioMed Alliance set up an Animal Research Task Force, led by the ESC, and published a statement on Animal Research ahead of the revision of Directive 2010/63/EU in 2017. Furthermore, a survey was conducted amongst the biomedical community on experiences with the EU's Research Framework Programme (Horizon 2020) and recommendations presented to the European Parliament at a meeting with MEP Paul Rübig in November. The BioMed Alliance has recently set up further task forces in Clinical Trials and Medical Education, with ESC being an active participant in both.
- **The European Chronic Diseases Alliance (ECDA)\*:** The ESC held the Secretariat of the Alliance in 2015 and 2016. In 2016, ECDA began the preparation of position papers on the risks associated with physical inactivity and added sugar. ECDA was invited to speak at health-related events including conferences organised by EU presidencies, NGOs and other stakeholders. In particular, the Alliance joined forces with the WHO Europe and the Non Communicable Diseases Alliance for the organisation of a high-level event 'The European Response to Chronic Diseases - the Role of Civil Society'.

ESC-EAPCI Taskforce provided expert opinion to EU policymakers for the revision of device specific standards applied for marketing approval

- **Members of the European Parliament (MEP) Heart Group\*:**

The Secretariat of the MEP Heart Group is run jointly by the ESC and the European Heart Network (EHN). In 2016, the MEP Heart Group promoted a public awareness campaign entitled '#unitedforhearthealth' on the occasion of World Heart Day on 29 September. The MEP Heart Group also organised a roundtable meeting entitled 'Europe's Unequal Burden of Cardiovascular Diseases - the actual facts', where experts presented a report - published by the European Heart Network - on the latest statistics on CVD in Europe.

- **World Health Organization (WHO):** The ESC has signed a technical agreement with WHO-Europe for collaboration in common areas of interest. This includes providing support at country and inter-country levels to implement evidence-based interventions in CVD prevention and care, and revising and re-launching the European Heart Health Charter.



In addition, the ESC continued to engage with the following organizations:

- European Medicines Agency (EMA)
- International Organization for Standardization (ISO)
- European Commission working groups on eHealth and mHealth
- European Commission working groups on medical devices
- European Network for Health Technology Assessment (EUnetHTA)

ESC is regularly invited to contribute to policy fora and in November participated in a conference on Heart Health in Europe hosted by The Economist. Debates focused on how to address heart disease in Europe, the economics of CVD control, the patients' perspective, the policy perspective and how to prioritise prevention, early detection and treatment.

In January ESC participated in an OECD Policy Forum 'People at the Centre - the Future of Health', contributing to discussions on digital technology and data for proactive, people-centred systems, caring for people with complex needs and the importance of measuring what matters to people and patients.

*\*The ESC is a founding member of the BioMed Alliance, ECDA and the MEP Heart Group.*

## ESC Cardiovascular Round Table



The Cardiovascular Round Table (CRT) is a strategic forum to facilitate dialogue between the ESC leadership and the cardiovascular industry, which is represented by 22 pharmaceutical and medical equipment manufacturers.

Vifor Pharma joined the CRT in 2016.

### **Regulatory and R&D activities:**

The CRT continues to monitor the scientific dialogue established with academia, industry and regulatory authorities on the requirements for registration in specific therapeutic areas.

Four workshops were organized during the last year:

- New medicinal products for the treatment of chronic heart failure
- Early diagnosis of acute coronary syndrome
- Lipid lowering strategies for reduction of cardiovascular risk
- Novel oral anticoagulants in atrial fibrillation



### Organised meetings:

The CRT facilitated a meeting on 'Quality healthcare: is it sustainable' in May 2016.

In October 2016, the CRT convened on eHealth, with cardiologists, health organizations, consumer and patient groups, policy makers, and pharmaceutical, medical device and information technology companies.

The aim of the meeting was to engage stakeholders in conversation and share visions, communicate successes, identify impediments, and formulate solutions for the integration of eHealth in the management of cardiovascular disease. Further to this meeting, three articles covering mHealth, Big Data and social media were published in the *European Heart Journal*; dedicated eHealth sessions and Digital Health zone are planned for ESC Congress 2017; eHealth resources have been collated on the ESC website and further events are planned to develop the ESC's strategy in this field in the coming years.

### Ongoing activities:

The CRT has developed positions on topical issues and has published, or will soon publish, articles arising from discussions at the following workshops or meetings:

- New medicinal products for chronic heart failure: advances in clinical trial design and efficacy assessment
- Improving public health by improving clinical trials
- New strategies for the development of lipid lowering therapies to reduce cardiovascular risk

**Table 2 - CRT participating companies**

Amgen	Eli Lilly	Philips
AstraZeneca	GE Healthcare	Roche Diagnostics
Bayer	GlaxoSmithKline	Sanofi
Boehringer-Ingelheim	Medtronic	Servier
Bristol-Myers Squibb	MSD	Siemens
Daiichi-Sankyo	Novartis Pharma	St Jude Medical
Edwards Lifesciences	Pfizer	Takeda
		Vifor Pharma

# Membership



As one of the five pillars of ESC's Strategic Plan, membership was a key focus for the past year. With the objectives of engaging with cardiovascular professionals and increasing membership, the following actions were achieved:

## Launch an ESC individual membership initiative at ESC Congress 2016

ESC Professional Membership was launched at ESC Congress 2016. The Professional Membership benefits are based on existing ESC activities and services and are centred on providing access to scientific resources and professional development for individual healthcare professionals. This allowed, for the first time, individuals who are not members of one of the 56 National Cardiac Societies or subspecialty communities to become direct members of the ESC. Those working in an ESC country must first be a member of a National Cardiac Society before becoming an ESC Professional Member.

The launch at ESC Congress 2016 was well received, with new members joining from around the world.

The establishment of ESC Professional Membership was supported through the ESC's Membership Management system, MemberNation. The system provides a personalised online area, allowing members to access resources, including the new member directory that facilitates networking, and manage membership payments through a self-service system.

## Establish a compelling value proposition for ESC Professional Membership

The Membership Value Proposition includes discounts on existing ESC resources, as well as access to the new online Member Directory, which was made accessible through the My ESC Member portal. The value proposition will be further developed with benefits added in the next year. If purchased separately, these benefits would be more expensive than the annual Professional Membership fee. In addition, the ESC comprehensive and inclusive membership approach will be reinforced with the ESC subspecialty associations to propose combined offers at preferential rates.

## Implement a communication plan that reaches out to potential members

The primary focus was to use existing marketing channels to promote ESC Professional Membership in the most straightforward way. The ESC database was used for targeted campaigns. Other channels included the 56 National Cardiac Societies, Affiliated Cardiac Societies (and in particular, ESC Global Scientific Activities), ESC and subspecialty congresses and other congresses at which ESC has a presence.

## ESC Congress

After the ESC Congress in 2016, work was carried out to prepare additional benefits for ESC Professional Members who will attend ESC Congress 2017. A Professional Member discount to register for ESC

The ESC Professional Membership launch at ESC Congress 2016 was well received, with new members joining from around the world.

Congress was introduced, with the discount being higher than the membership fee itself. The online registration process was adapted to include reminders of the financial benefits and this has led to increased interest in Professional Membership.

Considerable preparatory work has been completed to ensure that the on-site experience for Professional Members is positive at ESC Congress in Barcelona. This includes the introduction of a Professional Members' Lounge in the ESC Plaza, where there will be exclusive networking activities and an opportunity to relax or work in a comfortable environment.

#### New Membership Team

A dedicated team has been created at the European Heart House to support our Fellows and Professional Members. This team works on the operational aspect of membership, as well as overall membership development and engagement. This team works closely with all other divisions of ESC to improve our service to members and increase membership benefits.



## ESC Guidelines 2016

The Committee for Practice Guidelines (CPG), which is responsible for the **development of the ESC Guidelines and ensuring their quality and accuracy since 1994**, also strives to bring together the expertise of ESC subspecialties and other medical specialties, as well as National Cardiac Societies. Because of this pool of experience, ESC Guidelines have gained an enviable reputation as a trusted source of best practice.

### Published in 2016

The year saw the publication of four guidelines and a position paper at ESC Congress 2016. These guidelines covered *Acute and Chronic Heart Failure 2016*; *Atrial Fibrillation 2016*; *Dyslipidaemias 2016*; *Joint European CVD Prevention in Clinical Practice* and *Cancer treatments & Cardiovascular Toxicity* (Position Paper). These guidelines and position paper, and their derivative products, have been downloaded **several million times**.

**The ESC Pocket Guidelines Application, available at no cost on all application platforms**, had more than 100 000 users in 2016. It contained 24 titles, more than 130 interactive tools, and many new features. These included a specific folder with guidelines summary cards to bring the main recommendations to health professionals who are not cardiology experts and the inclusion of an 'Overall Treatment Manager' in the AF chapter, produced by the CATCH ME consortium\*. Over the past three years (2013 - 2016), an average of 35 ESC member National Cardiac Societies endorsed each title of the ESC Clinical Practice Guidelines.

*\*CATCH ME is an EU-funded project of which the ESC is a consortium partner.*





## ESC Publications

ESC Publications are the ideal vehicle for our Society's scientific output. The ESC Journal Family comprises **13 titles that cover the entire field of cardiovascular medicine**. The latest, *EHJ Quality of Care & Clinical Outcomes* (EHJ-QCCO) and *EHJ Cardiovascular Pharmacotherapy* (EHJ-CVP), were both accepted within MEDLINE in record time. The ESC's portfolio has evolved, so alongside updated editions of existing works, three titles were added during the last year:

- *ESC Handbook of Preventive Cardiology*
- *ESC Textbook of Vascular Biology*
- *The EHRA Book of Interventional Electrophysiology: case-based learning with multiple choice questions*

The flagship *European Heart Journal* continues to increase in stature with a significant rise in the number and quality of submissions, weekly publication schedule, a record Impact Factor rating of 19.651, and extensive subscription and readership. During 2016, more than 13.5 million full text downloads were registered across all ESC titles. The ESC's Publications Committee continues to champion a high degree of cooperation among the editorial teams of the ESC journals, through events such as the ESC Publications Committee Winter Meeting. This strategy has resulted in an effective process for transferring papers from the EHJ to subspecialty journals, resulting in more citations and excellent IF ratings across all titles.

Finally, intensive work during the last year has prepared the launch of significant publication initiatives in 2017 to further increase the value of ESC's membership proposition.



## eHealth

The ESC wants to play a leading role in all aspects of the eHealth agenda, helping to develop, assess and implement effective eHealth innovation to support cardiovascular health. Activity in the period included:

- ESC representatives were part of two expert panels on eHealth for the European Commission
  - The eHealth stakeholders group
  - The mHealth assessment guidelines working group
- Scientific sessions on eHealth were held at ESC Congress 2016 and other subspecialty congresses
- A strategic meeting through the ESC's Cardiovascular Round Table, was conducted with multiple stakeholders to develop the ESC's role in the eHealth arena.
- Participation of several ESC subspecialty communities were conducted at eHealth Congress 2016
- A section on the ESC website was created to host relevant information and provide resources to inform members [www.escardio.org/eHealth](http://www.escardio.org/eHealth)



## Women in ESC

Cardiology has seen a huge increase in the number of women in training. To better support them, the ESC has launched the Women in ESC initiative to ensure that women coming into the field are prepared for successful careers, and that the ESC is an effective advocate for them. In 2016, the ESC sponsored seven grants for ESC members to attend the Women Transforming Leadership Programme, an innovative executive education programme, established by the University of Oxford, to assist women in achieving their potential. The ESC also launched a survey to better understand the working environment and challenges facing women in cardiology today.



# Young Cardiologists

ESC undertook the following activities to support young cardiologists:

## ESC Congress 2016

- 842 cardiologists under age 36 attended ESC Congress 2016 with a free registration and free ESC Professional Membership through the ESC's Cardiologists of Tomorrow Programme. Young cardiologists are nominated by their National Cardiac Society. The ESC offers 25 free registrations to each of its 56 National Cardiac Societies and 43 Affiliated Cardiac Societies.
- A special registration fee was offered for ages 35 and under and abstract presenters age 35 and under
- Dedicated sessions for Cardiologists of Tomorrow and Scientists of Tomorrow
- Clinical Case sessions provided the opportunity to present science and network
- Six Young Investigator Award (YIA) sessions were conducted

## ESC Research and Training Grants

ESC Training Grants enable medical graduates, who have completed most of their cardiology training, but before they obtain a consultant or equivalent permanent status, to gain specialized training in Europe outside their own country. In 2016 the ESC awarded five training grants and one nursing grant of €25 000 each.

## ESC Professional Membership

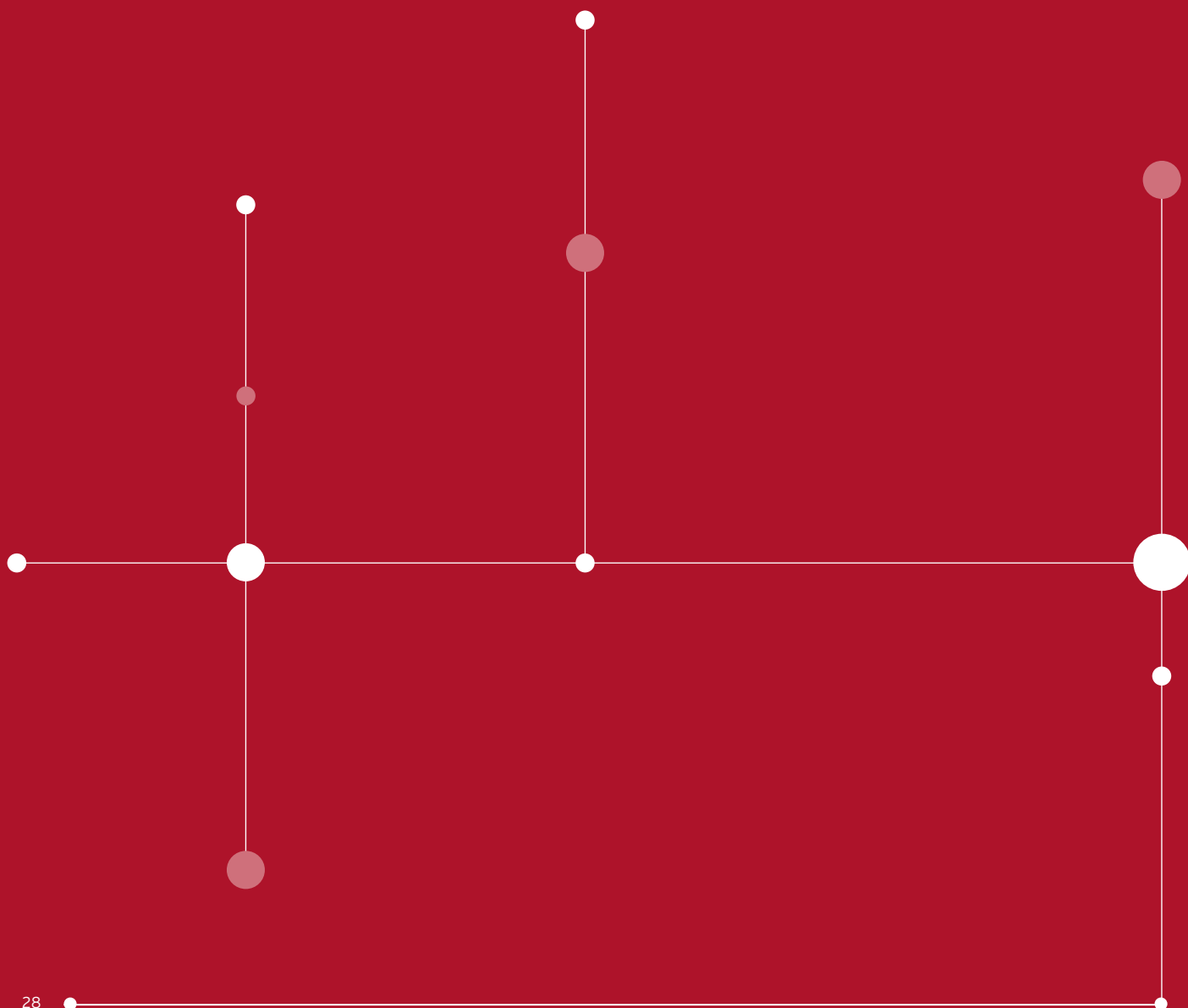
To help cardiologists in training access the best scientific resources, ESC Professional Membership became available to them with a significantly reduced fee in 2016.

## Communities across all subspecialties

Young communities continue to grow across the ESC's subspecialty Associations, Councils and Working Groups, with benefits including dedicated sessions at congresses, reduced membership fees and online networking opportunities.



# Constituent Bodies and Partner Activities



## Associations

Associations are registered branches within the ESC legal structure. Each has a leadership team elected by members to define the overall strategy with implementation and day-to-day operations management coming under the responsibility of ESC support staff. The six ESC Associations focus on major areas of cardiology that are strategically and clinically important, and their activities cover all aspects of the subspecialties including fundamental science, research and development, diagnosis, treatment, management and prevention. Associations are responsible for communications and education within their domain; they hold their own congresses and publish their own journals. The following summarises the achievements of the ESC Associations during fiscal year 2017.

### Acute Cardiovascular Care Association (ACCA)

**President:** Dr. Maddalena Lettino, FESC (2016 - 2018)

**Mission:** *To improve the quality of care and outcomes of patients with acute cardiovascular diseases.*



ACCA created its Young community (YAC3) and expanded its membership offer with an 'all inclusive' GOLD level launched in October 2016 and opened a REGULAR free level early 2017. With the three levels, ACCA reached 2 550 members between April 2016 and March 2017.

The second edition of the ACCA Clinical Decision-Making Toolkit was translated into Spanish and Portuguese, in collaboration with the National Cardiac Societies. A full Drug Toolkit is prepared for 2017.

The ACCA White Book (online edition) has been developed in collaboration with 27 National Cardiac Societies to understand the national realities regarding management of Acute Cardiovascular Care in Europe.

The online edition of the Intensive and Acute Cardiovascular Care Textbook was updated and will be on a yearly basis. The Textbook inspired the development of online educational courses, and ACCA launched its ESCeL e-learning platform in October 2016 with the publication of two topics per month (23 topics are available).

The ACCA organised eight webinars (compared to five last year). Each saw a record for live participation and views of post-webinar recordings.

Publication of the *European Heart Journal - Acute Cardiovascular Care* has increased to eight issues per year (two are online only). Many position papers were published on several topics including the organisation of chest-pain units, quality indicators for acute myocardial infarction and safe discharge of acute heart failure patients from the emergency department.

The ACCA organised the first edition of the ACCA Masterclass in the field of Acute Cardiovascular Care, a two-day gathering 120 professionals from 23 countries to discuss, exchange, and debate the current state of practice evaluation advancement and other issues.

The ACCA organised the Acute Cardiovascular Care congress in October 2016 Lisbon (Portugal) attended by 1 200 participants. The Certification examination took place in Lisbon (Portugal) during ACCA Congress 2016 and gathered 76 candidates.

ACCA also took part in the ESC Prevention of CVD Programme (still on-going) together with EAPC and CCNAP from ESC.

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## European Association of Cardiovascular Imaging (EACVI)

**President:** Professor Bogdan Alexandru Popescu, FESC (2016 - 2018)

**Mission:** *To promote excellence in clinical diagnosis, research, technical development and education in Cardiovascular Imaging in Europe.*

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The EACVI is a community of 9 000+ experts with support and contributions from more than 100 National Societies and Working Groups in Cardiovascular Imaging around the world.

The Association has become a leader in Echocardiography, Nuclear Cardiology & Cardiac Computed Tomography (Nuclear C & CCT), and Cardiovascular Magnetic Resonance (CMR).

The new EACVI Board was installed in December 2016 at the Opening Ceremony of EuroEcho-Imaging 2016 and is composed of 24 members led by Prof. B. A. Popescu.

EACVI has the patient at the heart of its activities and has defined its strategic goals to be aligned with the ESC Strategic Plan focussing on:

### **Congresses:**

In 2016 the Association held its annual congress, EuroEcho-Imaging, in Leipzig, Germany, welcoming more than 3 280 participants from more than 70 countries. More than 150 sessions were offered and the congress' 20th anniversary was celebrated. EuroCMR 2016 was also successful with more than 800 participants meeting in Italy.

### **Membership:**

In 2016 the EACVI reached a record number of 8 600 members and launched a new membership scheme including four levels (one free, three paying). This offered an extensive range of benefits and services.

The EACVI has also confirmed its desire to expand, support and train the Young Community. Its dedicated 'Heart Imagers of Tomorrow' Committee has worked in close cooperation with the other EACVI Committees and industry partners. The aim is to define special initiatives, get more young fellows involved and establish cross collaboration within the ESC subspecialties to help them becoming the future leaders of tomorrow.

### **Education:**

Certification was identified as the flagship initiative in 2016, with 1 000 registrations to the eight examinations organised by the Association. In 2017 the EACVI will work on the launch of certification processes, including Certification in Nuclear Cardiology and CMR in CHD.

The EACVI e-Learning programmes are available in Echocardiography (31 tutorials in TTE, 16 in TOE), CMR (10 tutorials), while the modules for Nuclear Cardiology & CCT will soon be prepared. Development of a new toolbox focused on Aortic Stenosis is underway. The EACVI webinar series have proved highly popular, welcoming more than 2 800 attendees during the live events.

Much effort was put into the EACVI's Scientific Publications in 2016. Our journal, the *European Heart Journal - Cardiovascular Imaging* (EHJ-CI) achieved a record Impact Factor of 5.990, while the launch of the *EACVI Echo Handbook* saw more than 1 800 copies sold in the first six months.

Two mobile apps have been developed to provide access to scientific recommendations: one for the abridged recommendations, which has about 9 000 downloads so far, and another that includes content from the CMR Pocket Guidelines.

In addition, the Association has issued the 2016 edition of its Compendium, two new abridged recommendations on multimodality imaging and hypertrophic cardiomyopathy. Seven scientific papers were published in the EHJ-CI, some of which were issued jointly with EACVI partner societies.

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## European Association of Preventive Cardiology (EAPC)

**President:** Professor Diederick E. Grobbee, FESC (2016 - 2018)

**Mission:** *To promote excellence in research, practice, education, and policy in cardiovascular health, primary and secondary prevention.*



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The European Association for Cardiovascular Prevention and Rehabilitation became the European Association of Preventive Cardiology (EAPC) in August 2016. With this change, the Association aimed to be more inclusive to the preventive cardiology community and align its name with its journal and congress, thus creating a stronger brand.

The EAPC membership programme is designed to be inclusive for the wider cardiovascular community while providing additional benefits and services. In 2016, the EAPC community grew to 6 242 healthcare professionals (5 997 Regular members, 124 Ivory members and 121 Silver members). The EAPC Young Community LinkedIn group, created in 2015, has more than 200 followers and enjoyed its first Young Community session held during EuroPrevent where networking events were also organised.

Education is key to our mission, and in 2016 we delivered a number of specific programmes including master classes on Dyslipidemia, training courses on exercise in heart failure, on cardiopulmonary exercise testing, and sports cardiology. The EAPC knowledge module on the ESC e-learning platform has been expanded and now hosts 27 eLearning courses and 11 practical cases.

The year also saw the launch of the second phase of the ESC Prevention of CVD Programme, led by EAPC in collaboration with the Acute Cardiovascular Care Association and the ESC Council on Cardiovascular Nursing and Allied Professions. This phase focused on secondary prevention, with the production of six webinars, master classes on secondary prevention and polypill, and the publication of scientific documents. A patients' survey, a journal supplement and practical tools are also in preparation.

The EAPC annual congress, EuroPrevent, is the leading congress in preventive cardiology. After the cancellation of the 2016 edition for security concerns, a EuroPrevent meeting was held in June 2016 at the European Heart House, gathering 217 participants over two days. The 2017 EuroPrevent congress was held in Malaga in April with more than 1 000 participants.

The Viviane Conraads Outstanding Achievement Award for Established Researchers was awarded to Professor Johan Sundström (Uppsala, Sweden) for his contributions in the field of cardiovascular disease prevention.

*The ESC Handbook of Preventive Cardiology*, a how-to manual for healthcare professionals, has been published (2016), and the Association is currently working on the first *ESC Textbook on Sports Cardiology*.

Ten reports presenting the achievements of national CVD prevention coordinators and National Cardiac Societies were also published last year.

The EAPC journal, the *European Journal of Preventive Cardiology*, achieved a noteworthy Impact Factor rating of 3.606 in 2016, and a number of position papers have been prepared including: Challenges in secondary prevention after acute myocardial infarction, Frailty and cardiac rehabilitation, and results from the Cardiac Rehabilitation Outcome Study (CROS). Professor Massimo Piepoli (Italy) was appointed Editor in Chief in March 2017.

To support the ESC's Advocacy agenda, we identified 15 experts to act as spokespersons for CVD Prevention, Exercise, Epidemiology and Sports Cardiology.

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## European Association of Percutaneous Cardiovascular Interventions (EAPCI)

**President:** Professor Michael Haude, FESC (2016 - 2018)

**Mission:** *To reduce the burden of cardiovascular disease through percutaneous cardiovascular interventions.*



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EAPCI membership grew to more than 7 700 members from more than 130 countries during 2016. After Poland and France, Portugal joined The 'Valve for Life' project in January 2017. The project, which shall remain our top priority, seeks to increase awareness of valvular heart disease and to allow patients with valvular heart disease to receive the guideline-recommended diagnostic and therapeutic work-up.

EAPCI members made a major contribution to the success of EuroPCR, the official EAPCI annual course with 11 500 participants from 114 countries, and also to ESC Congress 2016 in Rome.

EAPCI supported young interventional cardiologists by holding the third EAPCI Fellows course in June 2016, to prepare the next generation of EAPCI leaders. Support was also provided to the dedicated EAPCI Women's Committee, which has put significant effort into addressing gender issues in interventional cardiology.

The EAPCI supported three education and training grants and the interventional cardiology area of the ESC e-learning platform, leading to a certificate of excellence in training. Forty-eight educational courses, 450 MCQs and more than 150 procedures are available on the platform. These cover seven EAPCI core curriculum topics and the submission of four full clinical cases. The EAPCI also made significant contributions to PCR seminars and to the PCR-EAPCI Textbook in interventional cardiology.

We continue to support, through the EURObservational Research Programme, the Acute Coronary Syndrome (ACS) Registry in collaboration with the Acute Cardiovascular Care Association (ACCA).

Our monthly journal, *EuroIntervention*, has achieved an impressive Impact Factor of 5.165. In addition, the EAPCI has published a joint ESC/EAPCI report, on the evaluation of biodegradable scaffolds as well as an important consensus statement from the EAPCI, endorsed by the ESC and the EACTS, entitled 'Standardised Definitions of Structural Deterioration and Valve Failure in Assessing Long-Term Durability of Transcatheter and Surgical Bioprosthetic Valves'. It was approved for publication in the *European Heart Journal* and the *Journal of Cardiothoracic Surgery*.

Last but not least, the 'Stent for Life' initiative has expanded to become a global programme. Having achieved its objectives in most of the countries initially enrolled, this successful European Initiative came to an end in December 2016. A new global initiative 'Stent. Save a Life' was launched in May 2017 and its scientific content will be endorsed by our Association.



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## European Heart Rhythm Association (EHRA)

**President:** Professor Gerhard Hindricks, FESC (June 2015 - June 2017)

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



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The EHRA has adapted its membership scheme to the new membership strategy, offering three levels of paid membership along with a range of benefits and services.

Notable achievements during the year included the launch of the EHRA Recognised Training Centre (ERTC) programme. Initiated by the certification committee, it encourages good educational practice by providing a quality label for training excellence and efficiency. The second edition of the EHRA Inventors Award was also successful and the reach of the EHRA Key Messages continues to grow along with five new specific topics covered. We have also developed the Swedish and Portuguese versions of the EHRA website for patients, [www.afibmatters.org](http://www.afibmatters.org), in addition to the existing languages: English, French, German, Spanish and Italian.

The third joint meeting of CARDIOSTIM-EHRA EUROPACE attracted more than 5 700 participants in Nice, offering four days of scientific sessions including Young and Women in EP dedicated sessions. Our educational activities witnessed a record of 855 participants for nine courses in a range of subjects, while 362 participants took EHRA examinations covering Cardiac Pacing, Electrophysiology and Allied Professionals. The Allied Professional exams were available in English, Italian, German and Dutch. Eleven webinars were hosted, eight of which were supported by industry partners. 10 training fellowship programmes were awarded in 2016, also thanks to the support of our industry partners, eight of these were awarded to applicants from ESC member countries, while two were jointly awarded with the Asia Pacific Heart Rhythm Society (APHRs).

EHRA gathers data from 110 centres within its research network and reports on differing EP practice using the EP Wires surveys. Working with EORP, members have contributed to a number of significant clinical trial surveys on the Atrial Fibrillation Ablation Registry and the European Lead Extraction Controlled Registry (ELECTRa). Our Scientific Initiatives Committee has also undertaken the second EHRA patient survey, which covered implantable electronic devices. EHRA published the 2016 edition of the *EHRA White Book* along with its EP Supplement, and prepared a number of scientific papers in the *EP Europace Journal*, which has an impact factor of 4.530, on relevant topics including:

- **Atrial Cardiomyopathies: Definition, Characterisation and Clinical Implication:**  
A joint EHRA, HRS, APHRs, and SOLAECE document
- **Pre-participation cardiovascular evaluation for athletic participants to prevent sudden death:**  
A position paper by the EHRA and EAPC 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

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### Heart Failure Association (HFA)

**President:** Professor Frank Ruschitzka, FESC, FHFA, HFA President (2016 - 2018)

**Mission:** *To improve quality of life and longevity, through better prevention, diagnosis and treatment of heart failure, including the establishment of networks for its management, education and research.*



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The Heart Failure Congress 2016 in Florence attracted a record audience of more than 6 000 and the highest number of abstract submissions and cases submitted with more than 2 000. The HFA Board 2016 - 2018 was confirmed by the General Assembly in Florence together with a revision of the HFA Constitution including the creation of committees that cover the spectrum of heart failure. The heart failure nursing curriculum was published for use in ESC countries.

The first certification exam of the Heart Failure Association took place in Florence with more than 30 participants. The annual HFA Summit was held in Cyprus and attended by the Presidents of National Heart Failure Societies and Working Groups. We also hosted a Patient Care Workshop Management involving a cardiologist, a nurse, and a General Practitioners from 10 countries. The HFA Winter Research Meeting in Les Diablerets (Switzerland) was attended by 130 participants, and we also took part in international Heart Failure congresses, holding joint sessions in Russia, Egypt, Lithuania, Slovenia, Greece, Japan, India and the United States among others.

Our patient website, [www.heartfailurematters.org](http://www.heartfailurematters.org), has seen a significant increase in visitors and now stands at 2 500 000 a year. Heart Failure Awareness Day in May 2016 was coordinated with 25 participating countries. Twenty-seven modules are now available on the Online Heart Failure education programme on the ESC e-learning platform. The final year of the two-year certified Post Graduate Course in Heart Failure was completed. This programme provides a European Medical Certificate of the ESC and Certificate of Advanced Studies by the University of Zurich. Eighty graduates have been selected for the course in 2016 - 2017. Once research fellowships have been awarded to nurses, and two HFA scholarships have been provided for the London School of Economics *Executive MSc in Health Economics, Outcomes and Management in Cardiovascular Sciences*.

*The European Journal of Heart Failure* attained an Impact Factor of 6.968, and our open access journal, ESC Heart Failure is still being developed. A number of important scientific papers were prepared and published following international workshops. Work to support the Heart Failure Long Term Registry and Peripartum Cardiomyopathy Registry, part of the EORP, has continued.

## Councils

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There are six Councils within the ESC structure. Five of them focus on management of cardiovascular disease from the perspective of practice, research, prevention and primary care.

The sixth is dedicated to basic and translational science, the discipline that supports improvement of clinical diagnosis, treatment and prevention.

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### Council on Basic Cardiovascular Science

**Chair:** Professor Jeremy Pearson, FESC, Chairperson 2016 - 2018

**Aim:** *To enhance the importance of basic science to clinical cardiology*



Our young community, the Scientists of Tomorrow, increased its connections with other young communities both in and outside of the ESC. At ESC Congress 2016 it participated in scientific sessions, career sessions and breakfast sessions. The community has its own newsletter and LinkedIn platform (605 followers) where it disseminates basic and translational educational material as well as career opportunities. It also promotes awards and grants for young scientists.

At ESC Congress 2016 the Council participated in a new event to promote ESC grants and awards for basic scientists. During the course of 2016 the Council awarded:

- Five First Contact Initiative Grants to allow young scientists to establish contact with hosting institutions with the aim of obtaining a fellowship or research affiliate position
- Two Outstanding Achievement Awards to recognise investigators of exceptional merit
- One Basic Research Fellowship of €25 000 to enable a researcher to spend a year learning new techniques
- 99 travel awards for ESC Congress.

Basic Science is delivered at ESC Congress in its dedicated village. In 2016, the Council collected 73 proposals for ESC Congress 2017 that it refined for submission. ESC Congress is also the occasion for the Basic Science Poster Reception, an informal event where young basic scientists can discuss their abstracts with their peers and with established scientists.

'Frontiers in CardioVascular Biology' is the Council's scientific meeting held every two years. The fourth edition was held in 2016 in Florence, Italy. The scientific programme delivered by 125 speakers, chairpersons and moderators was comprised of 33 lecture sessions and 10 abstract-based sessions. The three day event attracted 658 participants from 44 countries.

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## Council on Cardiovascular Nursing and Allied Professions

**Chair:** Professor Ekaterini Lambrinou, FESC, Chairperson 2016 - 2018

**Aim:** *To promote excellence in Cardiovascular Nursing and Allied Professions through practice, education, and research.*

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In 2016 the Council (CCNAP) increased its educational tools with the introduction of a Clinical Case Gallery and its first webinar. It resumed its guidelines implementation programme for nurses: 'Be Guidelines Smart' with a three-year phase covering 2016 - 2018 that includes video scenarios on prevention and heart failure, webinars, and an educational workshop. CCNAPs Core Curriculum for the professional development of nurses in cardiovascular settings continued to be used by other groups as the basis for their own national or specialty curricula. The Council maintained its collaboration on the ESC Prevention of CVD programme leading the work package 'Patient Survey' in Phase II of the programme.

CCNAP is represented in the ESC Education Committee, Clinical Practice Guidelines Committee, and Congress Programme Committee, as well as in several ESC Associations. From April 2016 to March 2017 it participated in the writing of six ESC Guidelines as well as in the review of six ESC Guidelines and the ESC Position Paper on Cancer Treatments and Cardiovascular Toxicity. We continued to organise nursing sessions for the ESC Congress and the Saturday General Cardiology Programme for nurses and allied professionals. The Council's journal, the *European Journal of Cardiovascular Nursing* (Impact Factor of 2.763), increased to eight issues per year in 2016.

Designed on the theme 'Guidelines: care to implement,' EuroHeartCare 2016 took place in Athens. The two-day programme was composed of nine lecture sessions, eight abstract-based sessions, two satellite symposia and two workshops. There were 196 abstracts and 40 clinical cases accepted for the event that attracted 464 participants from 42 countries. A Roundtable of international nursing professionals was organised to discuss specialist post-basic and advanced specialist training for nurses working in cardiovascular care. This Roundtable picked up from the first edition held in 2015. The Council intends to produce a declaration that will support professional and political bodies in advocating for policies and their implementation.

In March 2017 our membership has risen to more than 2 600 members. We offer our members grants and awards: 10 travel grants for EuroHeartCare and 10 for ESC Congress, a post-doctoral mentoring award, an award for excellence in clinical care, as well as mentoring facilities.

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### Council for Cardiology Practice

**Chair:** Dr. Riccardo Asteggiano, FESC, Chairman 2016 - 2018

**Aim:** *To bring together practicing cardiologists with common interest in the field of cardiovascular medicine, to promote education and training of cardiologists, and to develop standards for training, continuous education, and professional conduct.*



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In 2016, the Council continued to share knowledge and good practice through its E-journal for Cardiology Practice and its newsletter. The E-journal, in its 14th year, introduced a series of articles on general cardiology topics providing the most recent findings on myocardial infarction, leadless pacing, diabetes and hyperkalemia. We also contributed to ESC Congress 2016 with symposia on aortic stenosis and syncope as well as general sessions on clinical practice and a review of general cardiology over 2015-2016 in the General Cardiology Programme for physicians, technicians and general practitioners. The Council participated in nine ESC Guidelines; tasks included reviewing seven ESC Guidelines and acting as task force members for four ESC Guidelines. In addition the Council participated in the writing of the ESC Position Paper on Cancer Treatments & Cardiovascular Toxicity.

Maintaining its collaboration with other societies, the Council was present in joint sessions in Italy, France and Greece and at EuroPCR. Within the ESC it developed a survey on the management of vascular diseases in cardiology with the ESC Working Group on Aorta & Peripheral Vascular Diseases, and was represented on the Council on Hypertension, the Committee for Practice Guidelines and the Publications Committee.

In 2016 the Council for Cardiology Practice began a review of its membership strategy and mission with participation from its 12 member countries. The outcome of this review will be known in 2017.

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### Council on Hypertension

**Chair:** Professor Bryan Williams, FESC, Chairperson 2016 - 2018

**Aim:** *The Council encourages research, teaching, communication of knowledge, and participates in education, focusing on the cardiovascular aspects of hypertension.*



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In 2016, the Council on Hypertension membership rose by more than 50% to 941 members from multiple fields and professions. Although the majority of members are from Europe, we noted interest from non-European countries with both India and Saudi Arabia in the top 15 countries. The average age of our members was 46. To further reach our members, and in particular, encourage younger members to join the Council, we decided to create three nucleus positions: a Liaison Officer, a Young Community Officer and a Communications Officer. The Council produces regular newsletters but wants to increase its communications and presence on social media platforms.

Council members have been participating in the writing and review panels of six ESC Guidelines, and the Chairman of the ESC Council is also Chairman of the joint ESC/ESH Hypertension guideline taskforce. The Council has been active in the production of position papers and consensus documents focused on providing practical clinical information, including a consensus document with EHRA on hypertension and arrhythmias. The most recent addition is a consensus statement on the management of hypertensive urgencies and emergencies, which is likely to be a useful document for practicing clinicians.

We have provided expertise via lectures in scientific programmes with the ESC Working Group on Cardiovascular Pharmacotherapy, with the Romanian Society of Hypertension and with the Italian Association of Hospital Cardiologists. The Council was heavily involved in developing the Hypertension topic programme for ESC Congress 2016, with educational sessions, joint sessions with national and international societies of hypertension, joint sessions with ESC constituent bodies and abstract sessions. We have established a permanent database for members to propose session topics, speakers and chairpersons for future hypertension sessions at ESC Congress. The Council has also been establishing links with specialist hypertension societies within and beyond Europe with hopes of encouraging wider participation in the ESC Congress and joint sessions with the ESC Council at their congresses.

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#### **Council on Cardiovascular Primary Care**

**Chair:** Professor Arno Hoes, FESC, Chairperson 2016 - 2018

**Aim:** *To strengthen and enhance cardiovascular care in primary care (general practice, family medicine) at a European level.*



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The Council has continued its work on ESC Guidelines with participation in the writing panels of five ESC Guidelines and in the reviewing panels of six ESC Guidelines. The Council's Chairperson was co-chair of the Task Force for the Joint European Guidelines on CVD Prevention in Clinical Practice.

The Council has been involved in the Global Alliance for Cardiovascular Disease Prevention in Clinical Practice activities of the World Heart Federation and the ESC, and in activities of the EAPC Prevention Implementation Committee.

It was co-organiser of the General Cardiology Programme for physicians, nurses and technicians at ESC Congress 2016 and the pan-European Patient Workshop with the Heart Failure Association in 2016 in Cyprus and local Patient Care workshops in Kazan, Russia.

Outside the ESC the Council has participated with Primary Care Sister Organisations (EPCCS, WONCA Europe, Primary Care Diabetes Group) in Clinical Masterclasses and Consensus Meetings.

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### Council on Stroke

**Chair:** Professor Petr Widimsky, FESC, Council on Stroke Chairperson 2016 - 2018

**Aim:** *To promote multidisciplinary cooperation, education and research on stroke.*



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The Council on Stroke was created at ESC General Assembly, August 2016 as a multidisciplinary constituent body to promote the interdisciplinary cooperation, education and research on stroke.

Membership soared in the first few months and by March 2017 stood at more than 1 000 members. It was composed of multidisciplinary physicians and specialists including neurologists, vascular specialists, neurosurgeons, radiologists and interventional cardiologists.

The Board of the Council includes representatives from other ESC Constituent Bodies and external societies (stroke, neurological, neurosurgical, vascular surgical, neuroradiological). It has plans to develop - with the above mentioned sister societies - an interdisciplinary roundtable focused on the role of cardiologists in acute stroke interventions. The Council on Stroke has been planning an educational workshop for January 2018 in addition to webinars.

It has joint sessions scheduled in 2017 at the European Stroke Organisation Congress, ESC Congress and the European Congress of Neurosurgery.

The Council has submitted its first position paper to the *European Heart Journal* entitled 'The role of cardiologists in stroke prevention & treatment.'



## Working Groups

The ESC has 15 Working Groups focused on the remaining subspecialty areas defined by the Cardiology Core Curriculum that are not addressed by the Associations. Working Groups provide education, share expertise and facilitate exchange of best practice and ongoing medical development. As the scientific backbone of the ESC, the Working Groups contribute to the ESC's mission by taking an active part in the ESC Congress, in organising and promoting their own symposia, courses and meetings in specific areas of expertise.

Membership of the ESC's Working Groups has risen nearly 7 000 during the last year. At least 33% of these are under 35 years old, an excellent achievement given the focus on the next generation of cardiology professionals across the ESC. Ten of the ESC Working Groups organised their annual meetings, attracting 3 500 international delegates, while many participated in international meetings with joint sessions in Europe, North and South America and Asia. Most ESC Working Groups endorse, organise and contribute to courses and educational programmes such as webinars, the clinical trials teaching courses, the HFA winter meeting, the Basic Science Summer School and Hands-on Courses.

The Working Groups prepared and published 11 scientific papers on a range of topics, and there was extensive collaboration with the EORP programme on the Pregnancy and Cardiac disease (ROPAC) registry and the Cardiomyopathy and Myocarditis registry. Other highlights included:

- The Working Group on Cardiovascular Pharmacotherapy maintained its Clinical Trial Programme and delivered teaching workshops on methodological issues on design, conduct and interpretation of clinical trials.
- The Working Group on Myocardial and Pericardial Diseases sustained its education programme using modern pedagogical approaches to improve diagnosis and treatment of heart muscles and pericardial diseases, promote understanding of the pathophysiology and disseminate the knowledge throughout Europe.
- The Working Group on e-Cardiology has joined the CompBioMed project, by becoming an Associate Partner to help steer the future of computational biomedicine.
- The Working Group on Peripheral Circulation changed its name to the Working Group on Aorta & Peripheral Vascular Diseases to be more in line with the content of this scientific commitment and expertise.
- The Working Group on Atherosclerosis and Vascular Biology has launched a textbook on Vascular Biology.
- The Working Group on Thrombosis launched an exchange grant, aiming to facilitate exchanges among the leaders of centres or laboratories involved in research into thrombosis. The grant enables Young Investigators to perform scientific research in thrombosis at a host institution of another ESC member country or ESC-affiliated country.

### The Working Groups of the ESC:

- Aorta & Peripheral Vascular Diseases
- Atherosclerosis and Vascular Biology
- Cardiac Cellular Electrophysiology
- Cardiovascular Pharmacotherapy
- Cardiovascular Surgery
- Cellular Biology of the Heart
- e-Cardiology
- Coronary Pathophysiology and Microcirculation
- Development, Anatomy and Pathology
- Grown-up Congenital Heart Disease
- Myocardial & Pericardial Diseases
- Myocardial Function
- Pulmonary Circulation & Right Ventricular Function
- Thrombosis
- Valvular Heart Disease



## ESC Member National Cardiac Societies

The relationship between the ESC and the National Cardiac Societies (NCS) of its member countries is fundamental. **Representing more than 70 000 members, NCS expertise underpins all ESC activities and services.** From supporting the ESC Congress, to reviewing Clinical Practice Guidelines, to contributing to the registries and surveys within the EORP programme, to volunteering for various duties in one of the many constituent bodies and committees, the ESC needs the NCS commitment and expertise to implement its strategy and shape the future of cardiology. At ESC Congress 2016, **40% of accepted abstracts were submitted by members of NCS and 35% of delegates were NCS members.** The scientific programme also reflected the contribution of members with 67% of chairpersons, 68% of graders and 60% of speakers coming from NCS.

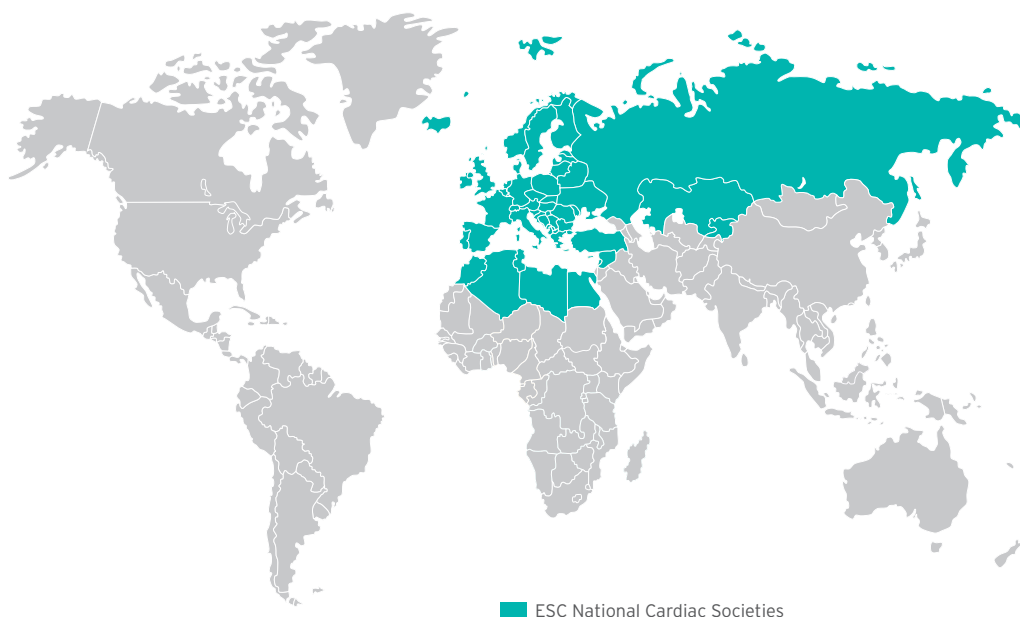
The ESC Spring Summit 2017 provided the opportunity for the ESC Board and ESC Constituent Bodies to discuss the future of Cardiology and the role of ESC in leading the way. The opportunities and challenges in the developing area of virtual cardiology and e-health were discussed in the context of today's society.

The next steps of the implementation of the ESC Strategic Plan 2015 - 2020 were also presented in the workshops based on the **five pillars of the strategy: Advocacy, Congress, Education, Membership and Research.**

Thirty-five Young Cardiologist organisations from National Cardiac Societies are collaborating through the ESC to form a professional network to help enhance learning and support career choices. Individuals can join the dedicated LinkedIn group that has more than 2 000 members. Furthermore, **664 young cardiologists from National Cardiac Societies benefited from free registration for the ESC Congress 2016** and the opportunity to attend sessions of special interest for the younger generation and meet their peers.

ESC also supports the congresses of its National Cardiac Societies. Discussions on common scientific and economic challenges have been top priorities on the agenda of leadership meetings held with NCS boards, with opportunities to strengthen collaboration. To further promote the wider implementation of the ESC Guidelines, 29 joint scientific sessions have been organised during NCS annual congresses, while the ESC welcomed members on its stand at a further 14 NCS congresses.

### ESC National Cardiac Societies



## ESC Global Affairs

### Global scope

The ESC has European roots but a global scope. These activities are built around 43 Affiliated Cardiac Societies led by the ESC Global Affairs Committee. Developing collaborative relationships with ESC Affiliated Cardiac Societies -- the main professional bodies within cardiovascular medicine that are not ESC institutional members - as well as other global partners is essential to advancing the battle against cardiovascular disease.

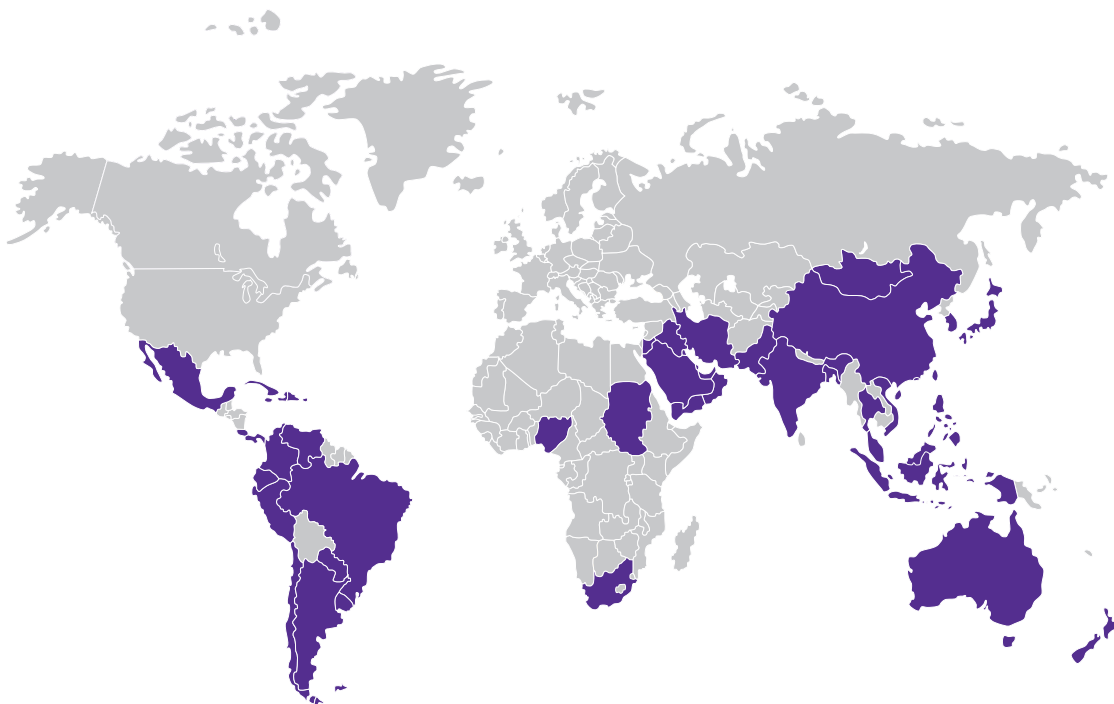
### Global Affairs Committee

The mission of the Global Affairs Committee is to:

- Coordinate educational and scientific activities of the ESC outside the geography covered by the ESC's National Cardiac Societies.
- Foster and maintain the relationship with professional societies outside the territory of the ESC National Cardiac Societies.
- Ensure all activities are aligned with and serving the ESC mission and the strategic goals of the ESC on a global scale.

One of the ESC's key strategic goals, the ESC Professional Membership scheme, is open to all healthcare professionals with an interest in cardiology. This is the first time that individuals from non-ESC member countries can benefit from a direct ESC Professional Membership status.

### ESC Affiliated Cardiac Societies



*Countries in purple are the ESC Affiliated Cardiac Societies*

The Global Affairs Committee focused on collaboration with the 43 ESC Affiliated Cardiac Societies, including the most recently joined societies: the Mongolian Society of Cardiology and the Cardiovascular Society of Mauritius. A number of projects have been undertaken in the last 12 months, including the organisation of joint scientific sessions during the annual congresses of 10 Affiliated Cardiac Societies, and continued support for the Euro-Sino College in conjunction with the Chinese Society of Cardiology. Global Affairs activities also included partnerships with the ESC Sister Societies such as the American College of Cardiology, American Heart Association, World Heart Federation, Inter-American Society of Cardiology and the Asian Pacific Society of Cardiology.

<b>September 2016</b>	<b>Location</b>
'ESC in China' at the Chinese Society of Cardiology Congress	Xi'an, China
'ESC in South Africa' at the South African Heart Association Congress	Cape Town, South Africa
'ESC in Brazil' at the Brazilian Congress of Cardiology Congress	Fortaleza, Brazil
<b>October 2016</b>	<b>Location</b>
'ESC in Argentina' at the Argentine Congress of Cardiology Congress	Buenos Aires, Argentina
'ESC in China' at the Great Wall International Congress of Cardiology	Beijing, China
'ESC in Myanmar' at the Asean Federation of Cardiology Congress	Yangon, Myanmar
<b>December 2016</b>	<b>Location</b>
'ESC in India' at the Annual Conference of the Cardiological Society of India	Kochi, India
<b>March 2017</b>	<b>Location</b>
'ESC in Arabia' at the Saudi Heart Association Congress	Riyadh, Saudi Arabia

# Financial Report

## Treasurer's Report

The activities of the European Society of Cardiology are shared between two legal entities:

- **The European Society of Cardiology**, which is the not-for-profit professional medical association and learned society including the revenue generating activities such as congresses
- **The Maison Européenne du Coeur**, a real estate property company which owns the European Heart House and surrounding land

The figures reported below are the consolidated financial statements including both entities, prepared in accordance with French GAAP (Generally Accepted Accounting Principles), certified by the Statutory Auditors and reviewed by the Audit Committee. The Treasurer report includes a three year period of the Group statement of income and expenditure together with the consolidated balance sheet, business reporting analysis and graphs on the evolution of the revenue, profit, headcount and members funds.

### ESC GROUP STATEMENT OF INCOMES AND EXPENDITURES

31 March 2017 - Euros

	31/03/2015	31/03/2016	31/03/2017
Turn over	50 700 790	45 907 604	50 783 301
Other operating income	7 034 069	6 805 392	8 168 481
Consumables	-16 548	-51 567	-41 904
Compensations and wages	-11 371 606	-12 405 528	-13 407 681
Others charges	-43 820 945	-36 573 791	-43 482 833
Fiscal Charges	-770 714	-708 692	-968 377
Depreciation and provisions	-135 757	-918 155	-198 877
<b>OPERATING PROFIT</b>	<b>1 619 288</b>	<b>2 055 264</b>	<b>852 109</b>
Financial Result	937 259	756 898	496 698
<b>RESULT BEFORE TAX</b>	<b>2 556 547</b>	<b>2 812 162</b>	<b>1 348 808</b>
Extraordinary items	-8 636	1 680	88 952
Corporate taxes	-813 508	-903 172	-352 382
<b>RESULT AFTER TAX</b>	<b>1 734 403</b>	<b>1 910 670</b>	<b>1 085 377</b>
<b>Notes :</b> Operating income and expenses include sales and purchases of hotel rooms for	<b>K Euros</b> 12 125	<b>K Euros</b> 0	<b>K Euros</b> 8 595

## ESC GROUP BALANCE SHEET CONSOLIDATED

31 March 2017 - Euros

ASSETS	31/03/15	31/03/16	31/03/17
Intangible assets	249 456	266 038	222 795
Tangible assets	4 524 075	4 349 534	4 355 870
Financial Assets	51 176	50 515	59 034
<b>TOTAL FIXED ASSETS AND INVESTMENTS</b>	<b>4 824 706</b>	<b>4 666 087</b>	<b>4 637 698</b>
Deffered taxation	40 261	113 380	150 436
Inventories and WIP	1 270 443	1 647 175	2 606 188
Accounts receivable / Suppliers downpayments	14 139 756	18 525 047	16 648 684
Fiscal and social debtors	3 385 133	1 318 391	2 173 169
Other current assets	5 175 087	6 787 696	9 748 009
Cash and cash equivalents	40 426 308	50 656 383	55 655 758
<b>TOTAL CURRENT ASSETS</b>	<b>64 436 988</b>	<b>79 048 074</b>	<b>86 982 243</b>
<b>TOTAL ASSETS</b>	<b>69 261 694</b>	<b>83 714 161</b>	<b>91 619 941</b>
<b>LIABILITIES</b>	<b>31/03/15</b>	<b>31/03/16</b>	<b>31/03/17</b>
Non refundable funds	4 849 260	4 849 260	4 849 260
Investments reserves	33 318 851	35 053 255	36 963 926
Surplus for the year	1 734 403	1 910 670	1 085 377
<b>TOTAL NET ASSETS</b>	<b>39 902 515</b>	<b>41 813 185</b>	<b>42 898 563</b>
Deffered taxation	67 751	46 791	23 841
Provisions for liabilities and charges	251 772	338 569	191 675
Financial long term debt	0	0	0
Accounts payable	4 286 344	4 564 541	9 121 368
Fiscal and social creditors	3 117 080	5 072 605	4 291 332
Other Creditors	21 636 233	31 878 469	35 093 163
<b>TOTAL LIABILITIES</b>	<b>29 359 179</b>	<b>41 900 976</b>	<b>48 721 378</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>69 261 694</b>	<b>83 714 161</b>	<b>91 619 941</b>
<b>WORKING CAPITAL</b>	<b>35 077 808</b>	<b>37 147 098</b>	<b>38 260 865</b>
<b>WORKING CAPITAL REQUIREMENTS</b>	<b>5 348 499</b>	<b>13 509 285</b>	<b>17 394 893</b>
<b>CASH AND CASH EQUIVALENTS</b>	<b>40 426 307</b>	<b>50 656 382</b>	<b>55 655 758</b>

## Commentaries on ESC group consolidated accounts:

Despite a difficult economic and regulatory environment, the results reported by the European Society of Cardiology group for the fiscal year 2016-2017 show a profit before tax of €1.3 million, which compares favourably to the budget of €-2.5 million.

Net profit after tax is € 1.1 million.

Total ESC group revenue (excluding hotel room sales) was €50.4 million. This is higher than the last comparable year with no Europace congress (FY2014-2015) €45.6 million.

### Operating result:

As mentioned in the ESC business reporting an €+852k operating result has been generated this year and can be explained by referring to the various activities of the ESC:

- **Scientific documents and Educational activities** - The ESC has continued its investments in the development of Clinical Guidelines.
  - During the year, €669k were spent on related activities and five new ESC Guidelines were approved and released
  - Education in Cardiology: the department is now focused on providing services regarding distance learning, webinars, MCQs and courses  
The ESC has continued its investment in the development of its online educational platform and produced new multiple choice questions (MCQs) and general cardiology webinars. In addition, the ESC and the subspecialties have continued to invest in the development of educational materials. The ESC has continued in cooperation with European Universities, the implementation of post-graduate courses.
- **EORP (Registries)** - The multi-registries and multi-sponsors programme (EORP) started in October 2009 and has continued its implementation. Thirteen registries are currently on-going and will provide to the scientific community a huge scientific information. Based on the signed sponsoring agreements and the ongoing discussions with potential sponsors, and also taking into account an extension of the programme scope, the project is considered as being break-even. Revenue and costs have been assessed at €2 525k during the current fiscal year for the EORP main programme and €812k for the prevention programme (Euroaspire).
- **Journals and publishing activities** - The ESC family of journals and publishing activities have generated a total contribution of €2 831k and have increased their international coverage. This year, the EHJ remains the major contributor with a €1 403k contribution. EHJ achieved an impact factor with a score of 19.651 (compare to 15.064 in 2015 and 15.203 in 2014). Regarding book publishing, sales of ESC Pocket Guidelines generated revenue of €947k.

- **Congresses** - Seven congresses were organised in 2016: the ESC Congress, Heart Failure, Euroecho, Acute Cardiac Care, EuroHeartCare, EuroPrevent and FCVB. The Rome ESC congress was a huge scientific and financial success with 11 139 abstracts submitted (acceptance rate 41%), 33 130 participants and 148 countries represented.
- **Board and Committees** - Board and committee expenses at €-1 316k  
A travel policy for volunteers' travels has been implemented together with the cost containment principles in order to adapt the association with its more and more challenging environment.
- **Associations** - The six Associations and the Working groups have continued the huge development of their activities and projects, participating to the improvement of the overall ESC position. They have generated a €1 452k contribution during 2016/17. Direct support to the Associations and Working groups has been funded by ESC Central for €602k. This amount does not include any allocation of support functions (Human Resources, Finance, IT...).
- **Financial investments** - The Board has maintained the ESC financial investment policy that is characterised by a prudent, capital conservation profile. Cash reserves are mainly invested in corporate bonds, a €-denomination fund with protected contract, short term deposits, and saving accounts in major banks.

## ESC Audit Committee

The Audit Committee reviews compliance with policies and procedures related to the conduct of the financial and business affairs of the ESC, including review of the appropriateness of financial expenditures and risks. It shall also ensure that an appropriate Declaration of Interest and an Ethical Conduct policy are implemented by the Board.

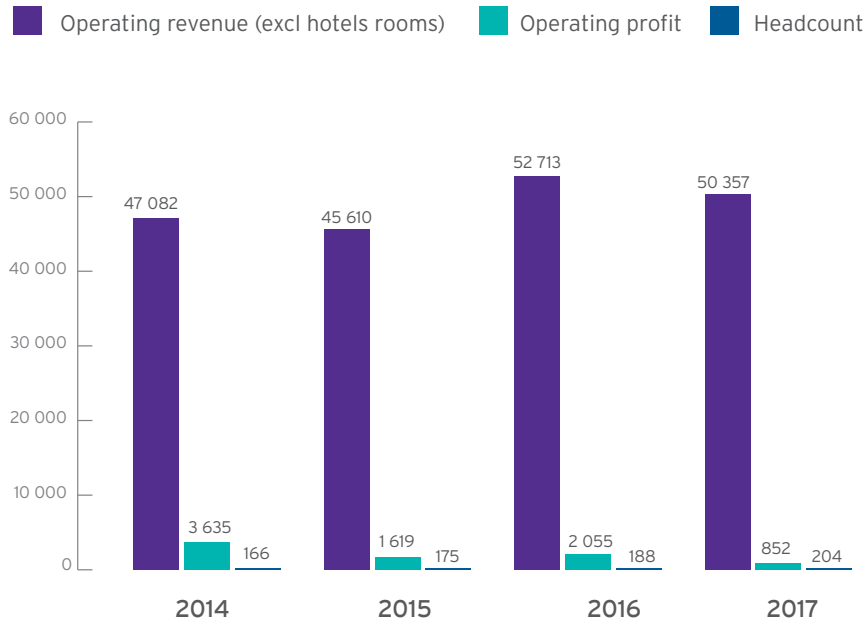
The Audit Committee consists of five members, three of them being external members with experience in business, law, financial affairs, tax, marketing and other professions. This expertise ensures that best practices are implemented and that a culture of good governance is followed throughout the ESC. The majority of the Audit Committee are ESC external advisors ensuring no prejudice or bias affect the decisions and deliberations of the Committee.

The Audit Committee reports annually to the ESC General Assembly and as such is an independent body from the Board and validates checks and balances in the governance of the ESC.

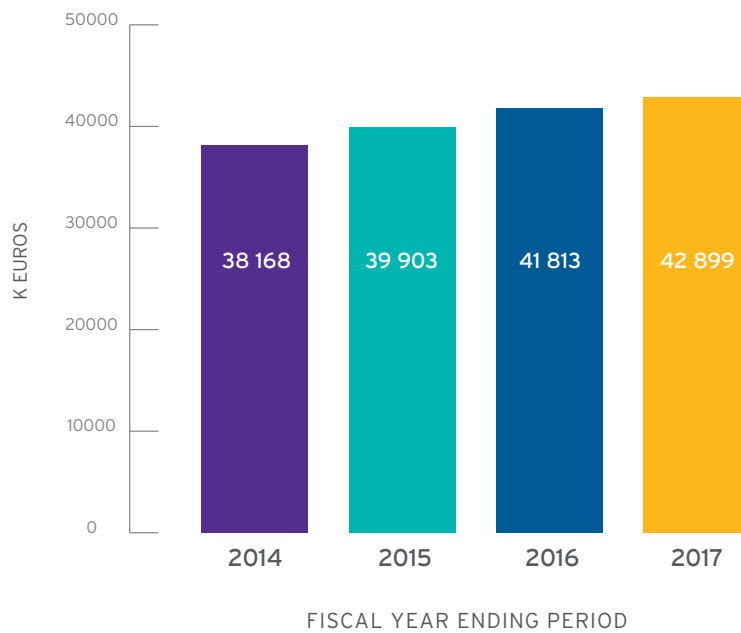
This year's report by the Audit Committee includes the recommendation to approve the 2016-2017 financial statements and the suggestion to review the overall ESC Governance to identify areas of necessary improvement and take the appropriate action.



## Growth in Group Annual Revenue, Profit and Headcount



## Growth in members funds



Based on European Medicines Agency guidelines, the overall proportion of industry and non-industry income is detailed below, taking into account the highest contribution from a single company represents 7% of the overall income.

INDUSTRY RELATED INCOME		
Name of company/funder	Amount of income - Euros	% of overall organisation's income
Congresses	30 573 909	51,9%
Others seminars	1 767 319	3,0%
Studies and registers	2 633 033	4,5%
Publications	2 063 773	3,5%
Journal royalties	4 525 730	7,7%
Miscellaneous: sponsoring for CRT, sub-specialties fellowship training...	3 948 032	6,7%
Donations	133 928	0,2%
<b>SUBTOTAL:</b>	<b>45 645 725</b>	<b>77,4%</b>

NON-INDUSTRY RELATED INCOME		
Source of funding	Amount of income - Euros	% of overall organisation's income
Congresses	8 908 465	15,1%
Membership fees	2 349 266	4,0%
Others seminars	707 266	1,2%
Publications	138 816	0,2%
Others	1 202 244	2,0%
<b>SUBTOTAL:</b>	<b>13 306 057</b>	<b>22,6%</b>
<b>TOTAL:</b>	<b>58 951 782</b>	<b>100%</b>

## ESC FINANCIAL RESULTS

### By division (ESC reporting) - Euros

Description	FY 2016-2017 ACTUAL	FY 2017-2018 BUDGET
<b>INCOME :</b>		
CONGRESS & MEETINGS	31 009 235	36 642 367
EDUCATION IN CARDIOLOGY	402 823	814 776
EUROOBSERVATIONAL RESEARCH PROG RESEARCH	2 633 033	3 300 257
PRACTICE GUIDELINES	417 318	417 318
JOURNALS & PUBLICATIONS	93 667	42 500
ADVOCACY : CRT & EU AFFAIRS	5 188 071	4 676 740
ADVOCACY : INTERNATIONAL AFFAIRS	864 085	880 000
ADVOCACY : NCS & FESC	566 601	363 797
ESC INDIVIDUAL MEMBERSHIP	238 257	227 722
EUROPEAN HEART AGENCY GENERAL & COUNCIL	1 624 339	1 448 023
EUROPEAN HEART ACADEMY	0	0
EUROPEAN HEART HEALTH INSTITUTE	86 765	297 759
EUROPEAN AFFAIRS IN BELGIUM	121 962	197 000
MARKETING	96 249	209 883
COMMUNICATION	1 000	0
OFFICES IN BELGIUM	27 200	30 000
EHH & MAINTENANCE	0	0
INDUSTRY RELATIONS	0	0
PRESS	0	0
WEB	0	0
MGT / FINANCE / HR	6 032	0
TECHNOLOGY & BUSINESS SERVICES	0	0
BOARD & COMMITTEES	0	2 000
BOARD	1 848	0
COMMITTEES	0	0
COUNCILS	58 813	423 468
WG & COUNCILS MGT	0	0
ASSOCIATIONS MGT	0	0
STENT FOR LIFE	140 000	0
<b>Total ESC CENTRAL</b>	<b>43 577 298</b>	<b>49 973 610</b>
EACVI	796 005	1 247 999
EHRA	2 630 229	2 362 668
HFA	376 348	594 466
EAPC	262 709	1 096 309
ACCA	348 722	370 080
EAPCI	744 959	955 165
WORKING GROUPS	478 985	288 200
<b>Total ASSOCIATIONS</b>	<b>5 637 957</b>	<b>6 914 887</b>
<b>OPERATING INCOME</b>	<b>49 215 255</b>	<b>56 888 497</b>

## ESC FINANCIAL RESULTS

By division (ESC reporting) - Euros

Description	FY 2016-2017 ACTUAL	FY 2017-2018 BUDGET
<b>EXPENSE :</b>		
CONGRESS & MEETINGS	-19 982 554	-25 476 924
EDUCATION IN CARDIOLOGY	-1 298 883	-1 754 221
EUROOBSERVATIONAL RESEARCH PROG RESEARCH	-1 794 450	-2 561 549
PRACTICE GUIDELINES	-561 479	-845 023
JOURNALS & PUBLICATIONS	-762 541	-1 071 492
ADVOCACY : CRT & EU AFFAIRS	-3 329 863	-3 063 577
ADVOCACY : INTERNATIONAL AFFAIRS	-854 946	-1 159 876
ADVOCACY : NCS & FESC	-860 712	-863 529
ESC INDIVIDUAL MEMBERSHIP	-226 778	-308 047
EUROPEAN HEART AGENCY GENERAL & COUNCIL	-720 387	-1 025 106
EUROPEAN HEART ACADEMY	-168 868	-272 863
EUROPEAN HEART HEALTH INSTITUTE	-408 597	-749 361
EUROPEAN AFFAIRS IN BELGIUM	-275 517	-539 060
MARKETING	-143 316	-209 883
COMMUNICATION	-621 971	-283 002
OFFICES IN BELGIUM	-1 184 504	-1 505 862
EHH & MAINTENANCE	-311 153	-312 072
INDUSTRY RELATIONS	-1 057 843	-1 075 351
PRESS	-915 549	-1 313 449
WEB	-331 329	-346 295
MGT / FINANCE / HR	-379 557	0
TECHNOLOGY & BUSINESS SERVICES	-3 338 418	-3 672 681
BOARD & COMMITTEES	-2 093 778	-3 191 823
BOARD	0	0
COMMITTEES	-1 268 860	-1 030 658
COUNCILS	-47 431	-129 810
WG & COUNCILS MGT	-501 179	-810 378
ASSOCIATIONS MGT	0	0
STENT FOR LIFE	-601 806	-334 018
<b>Total ESC CENTRAL</b>	<b>-135 375</b>	<b>0</b>
	<b>-44 177 643</b>	<b>-53 905 912</b>
EACVI	-832 078	-1 010 737
EHRA	-2 004 892	-787 971
HFA	281 345	-206 458
EAPC	-352 849	-822 747
ACCA	-283 624	-456 846
EAPCI	-579 818	-806 419
WORKING GROUPS	-413 587	-474 175
<b>Total ASSOCIATIONS</b>	<b>-4 185 502</b>	<b>-4 565 353</b>
<b>OPERATING EXPENSE</b>	<b>-48 363 145</b>	<b>-58 471 265</b>

## ESC FINANCIAL RESULTS

### By division (ESC reporting) - Euros

Description	FY 2016-2017 ACTUAL	FY 2017-2018 BUDGET
<b>RESULT :</b>		
CONGRESS & MEETINGS	11 026 680	11 165 442
EDUCATION IN CARDIOLOGY	-896 061	-939 445
EUROOBSERVATIONAL RESEARCH PROG RESEARCH	838 583	738 708
PRACTICE GUIDELINES	-144 161	-427 705
JOURNALS & PUBLICATIONS	-668 874	-1 028 992
ADVOCACY : CRT & EU AFFAIRS	1 858 208	1 613 163
ADVOCACY : INTERNATIONAL AFFAIRS	9 139	-279 876
ADVOCACY : NCS & FESC	-294 111	-499 732
ESC INDIVIDUAL MEMBERSHIP	11 479	-80 325
EUROPEAN HEART AGENCY GENERAL & COUNCIL	903 952	422 917
EUROPEAN HEART ACADEMY	-168 868	-272 863
EUROPEAN HEART HEALTH INSTITUTE	-321 832	-451 602
EUROPEAN AFFAIRS IN BELGIUM	-153 555	-342 060
MARKETING	-47 067	0
COMMUNICATION	-620 971	-283 002
OFFICES IN BELGIUM	-1 157 304	-1 475 862
EHH & MAINTENANCE	-311 153	-312 072
INDUSTRY RELATIONS	-1 057 843	-1 075 351
PRESS	-915 549	-1 313 449
WEB	-331 329	-346 295
MGT / FINANCE / HR	-379 557	0
TECHNOLOGY & BUSINESS SERVICES	-3 332 386	-3 672 681
BOARD & COMMITTEES	-2 093 778	-3 191 823
BOARD	0	2 000
COMMITTEES	-1 267 011	-1 030 658
COUNCILS	-47 431	-129 810
WG & COUNCILS MGT	-442 366	-386 910
ASSOCIATIONS MGT	0	0
STENT FOR LIFE	-601 806	-334 018
<b>Total ESC CENTRAL</b>	<b>4 625</b>	<b>0</b>
	<b>-600 345</b>	<b>-3 932 302</b>
<b>EACVI</b>	<b>-36 073</b>	<b>237 262</b>
<b>EHRA</b>	<b>625 337</b>	<b>1 574 697</b>
<b>HFA</b>	<b>657 693</b>	<b>388 008</b>
<b>EAPC</b>	<b>-90 140</b>	<b>273 562</b>
<b>ACCA</b>	<b>65 098</b>	<b>-86 766</b>
<b>EAPCI</b>	<b>165 141</b>	<b>148 746</b>
<b>WORKING GROUPS</b>	<b>65 399</b>	<b>-185 975</b>
<b>Total ASSOCIATIONS</b>	<b>1 452 455</b>	<b>2 349 534</b>
<b>OPERATING RESULT</b>	<b>852 109</b>	<b>-1 582 769</b>
<b>FINANCIAL INCOME</b>	<b>915 832</b>	<b>534 000</b>
<b>FINANCIAL EXPENSES</b>	<b>-419 134</b>	<b>-160 000</b>
<b>FINANCIAL RESULT</b>	<b>496 698</b>	<b>374 000</b>
<b>RESULT BEFORE TAX</b>	<b>1 348 808</b>	<b>-1 208 769</b>
<b>EXTRAORDINARY ITEMS</b>	<b>88 952</b>	
<b>CORPORATE TAX</b>	<b>-352 382</b>	
<b>RESULT AFTER TAX</b>	<b>1 085 377</b>	<b>-1 208 769</b>

# European Society of Cardiology E.S.C.

Year ended 31 March 2017

## Statutory auditors' report on the consolidated financial statements

To the Members,

In compliance with the assignment entrusted to us by your annual general meeting, we hereby report to you, for the year ended March 31, 2017, on:

- the audit of the accompanying consolidated financial statements of S.E.C;
- the justification of our assessments;
- the specific verification required by law.

These consolidated financial statements have been approved by the Board of Directors. Our role is to express an opinion on these consolidated financial statements based on our audit.

### I. Opinion on the consolidated financial statements

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit involves performing procedures, using sampling techniques or other methods of selection, to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group as at March 31, 2017 and of the results of its operations for the year then ended in accordance with French accounting principles.

### II. Justification of our assessments

In accordance with the requirements of Article L. 823-9 of the French Commercial Code (Code de commerce) relating to the justification of our assessments, we bring to your attention the following matters:

- *Accounting principles*

Paragraph VI.B.2 of Note 'Notes on the operating account / Explanations on the accounting of certain revenues' to the financial statements sets out the accounting standards and methods used with regard to long-term contracts. In the context of our assessment of the accounting standards and methods applied by your association, we have checked the appropriateness of the accounting methods described above and of the information given in this Note to the financial statements and we made sure of their correct implementation.

- *Accounting estimates*

Your association sets aside provisions to cover contingencies as described in paragraph V of Note 'Notes concerning liabilities / Provisions' to the financial statements. In the context of our assessment of these estimates, we have verified the reasonableness of the assumptions adopted and the resulting evaluations.

These assessments were made as part of our audit of the consolidated financial statements taken as a whole, and therefore contributed to the opinion we formed which is expressed in the first part of this report.

### III. Specific verification

As required by law we have also verified in accordance with professional standards applicable in France the information presented in the Group's management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

Nice, July 17, 2017

The statutory auditors  
ERNST & YOUNG audit  
French original signed by  
Camille de Guillebon

*This is a free translation into English of the statutory auditor's report on the consolidated financial statements issued in French and it is provided solely for the convenience of English-speaking users.*

*The statutory auditor's report includes information specifically required by French law in such reports, whether modified or not. This information is presented below the audit opinion on the consolidated financial statements and includes an explanatory paragraph discussing the auditor's assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the consolidated financial statements taken as a whole and not to provide separate assurance on individual account balances, transactions or disclosures.*

*This report also includes information relating to the specific verification of information given in the group's management report.*

*This report should be read in conjunction with and construed in accordance with French law and professional auditing standards applicable in France.*





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