

## Heart failure takes centre stage

The spotlight for the Heart Failure 2015 congress 'Heart failure takes centre stage: Drugs, devices and multidisciplinary care', together with a strong line-up of 24 Late Breaking Trials and record number of abstract submission, shows heart failure has become a dominant force in cardiology.

"We'd like to welcome everyone to Heart Failure 2015, the world's leading congress on heart failure and place to come for the most up-to-date information. Our programme emphasizes heart failure is on a roll with heart failure

specialists at the helm of multidisciplinary teams providing life-saving therapies," says Frank Ruschitzka, who chairs the Congress Programme Committee together with local host Marisa Crespo Leiro.

Over the next four days the Heart Failure Association (HFA) will host 100 scientific sessions across eight simultaneous tracks. The programme, moving beyond drugs to ventricular assist devices, cardiac resynchronization, and transplantation, has attracted an expert international faculty with a record breaking number of attendees expected from over 70 countries.

Highlights of the Late Breaking clinical Trials include the STOP-HF study exploring plasmid stromal cell-derived factor-1 gene therapy in high risk chronic heart failure patients; the QUALIFY survey evaluating physician adherence to HF guidelines; the TASTE-IPD collaboration exploring which heart failure patient subgroups benefit most from self-management; and the TITRATION study examining up-titration for LCZ696 (which in the PARADIGM-HF study showed that the angiotensin receptor-neprilysin inhibitor LCZ696 is superior to inhibition of the renin-angiotensin system alone in chronic heart failure patients). "If successful the TITRATION study will provide us with further insight into the safety and tolerability of LCZ696," says Ruschitzka.

Sessions exploring the PARADIGM-HF trial include 'Novel drugs: how they work?' (24 May 14:15-15:45); and 'Results of PARADIGM-



Prof. F. Ruschitzka (Zurich, CH)  
HFA President Elect,  
Scientific Chairperson



Dr. M. Crespo Leiro (La Coruña, ES)  
Scientific Co-Chairperson

two new lectures. The Eugene Braunwald Lecture will be delivered by Eugene Braunwald himself (during the Inaugural Session today) and the Philip Poole-Wilson Lecture by Henry Dargie (as a keynote to the Young Investigator Clinical Award session). "We're honoured our first named lectures will be given by two true emperors in heart failure," says Ruschitzka.

The 2nd World Congress on Acute Heart Failure runs a special track with a complete programme including symposia, debates, and Late Breaking Trials. "The World Congress has proved so successful that in the next years we'll run it as a stand-alone meeting," says Ruschitzka.

Another first is the Heart Failure - Insuficiencia Cardiaca 2015 track, organised in collaboration with the Spanish Working Group on Heart Failure and Heart Transplantation of the Spanish Society of Cardiology, a programme aimed at a local and international Spanish speaking audience. Today there are four sessions in Spanish, with presentation of a recommendation document on heart failure organization in Spain by the Spanish Ministry of Health (8:30-10:00, Paris). "It's a fantastic opportunity for Spanish doctors and nurses to attend an international meeting on heart failure in the Spanish language in their own country," explains Crespo Leiro. There will be a further four sessions on Sunday and Tuesday in English organised with international partner societies.

HF: a closer look' (26 May 08:30-10:00). "In several sessions we'll dig into potential mechanisms for the drug LCZ696 heralded as one of the biggest breakthroughs in heart failure over the last decade and, in a highly anticipated debate discuss what it means for the future of clinical practice," says Ruschitzka (session on Monday 25 May from 16:30 - 18:30).

Innovations for HF 2015 include a new interactive Mobile App in the Focus clinical case-based sessions, allowing delegates to vote from smart phones, and the introduction of



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#### Don't miss

- **HF-IC track:** 4 sessions in Spanish today in room PARIS
- **Debate:** Controversies in acute heart failure, FLORENCE 08:30 - 10:00
- **Meet the experts:** Challenging cases in acute heart failure, MADRID 10:30 - 12:00
- **Late Breaking Trials I:** FLORENCE 10:30 - 12:00
- The European Heart Journal's / European Journal of Heart Failure's year in Cardiology, FLORENCE 14:15 - 15:45
- **HFA Focus:** Acute heart failure in the emergency room ATHENS 16:00 - 17:30

#### Abstract sessions in the AGORA

##### Rapid Fire sessions

- Acute Heart Failure 08:30 - 10:00
- The best of Basic 14:15 - 15:45

##### Clinical Case sessions

- Have you ever thought of that? Unusual causes of heart failure 10:30 - 12:00
- Thousands of reasons of a very big heart 16:00 - 17:30

#### Special events

- **Inaugural Session** in room SEVILLE from 17:00
- **Networking Reception** in the Exhibition from 19:00
- **Young Cocktail** in the AGORA from 19:00

# On the Shoulders of Giants



Prof. E. Braunwald  
(Boston, US)

During the Inaugural session today, delegates will have the unique opportunity to hear **Eugene Braunwald**, a major force in cardiology over the past 60 years, deliver the first ever Heart Failure Association (HFA) Eugene Braunwald

Lecture. "I consider it a tremendous honour that this distinguished Association has seen fit to have an annual lecture in my name and it's an additional compliment they've invited me to give the first lecture. The fact I was born in Europe makes it especially meaningful," says Braunwald, from Harvard University.

The development of LCZ696, Braunwald will explain, began in 1898 when Robert Tigerstedt reported pressor effects of rabbit renal extracts, which he named renin. Other seminal moments include the work of Harry Goldblatt, who demonstrated that partial constriction of renal arteries in the dog caused hypertension, and the work of Adolfo de Bold who showed that atrial natriuretic peptide isolated from guinea pigs lowered blood pressure. "Such work established the heart as an endocrine organ and advanced understanding of the natriuretic peptide system. This has led to an appreciation that it's beneficial to simultaneously block the renin-angiotensin system and inhibit degradation of natriuretic peptides, which can be accomplished with LCZ696," says Braunwald.

Born in 1929 to a Jewish Viennese family Braunwald's idyllic childhood abruptly changed in 1938 when the Nazis occupied Austria. The Braunwald family escaped through Switzerland, France, and England, before settling in New York in 1939, where he later studied at New York University's Medical School.

While arguably better known for work in myocardial infarction (as chairman of the Thrombolysis in Myocardial Infarction [TIMI] group he has undertaken 60 studies and most famously demonstrated improved patient survival with a patent coronary artery) Braunwald has also completed a significant body of work in HF. "HF was my first interest in cardiology, and although I

later worked on MI, I continue to have a very strong interest in HF."

In 1956 he was the first to show elevation of a biomarker in HF (demonstrating C-reactive protein in the serum of HF patients), and in 1962 was the first to measure left ventricular ejection fraction and left ventricular dp/dt in patients. But his stellar career suffered a blip in 1959 when surgical colleagues were unable to find any left ventricular obstruction when operating on a patient in whom Braunwald ascribed a pressure gradient in the left ventricular outflow tract to membranous subaortic stenosis. "I was mortified I'd gotten the measurements wrong and could be responsible for this young man's death." The patient survived, and then a few months later working with the same surgeon, Glenn Morrow, the team experienced a second patient with a high subaortic pressure gradient, who had no obstruction. In both patients they observed thickened left ventricular walls with prominent trabeculae. "We knew we were onto something real when we became aware of similar reports from Sir Russell Brock in London," says Braunwald. They named the condition idiopathic hypertrophic subaortic stenosis, which later became known as hypertrophic cardiomyopathy.

But Braunwald feels most proud of the HF work he undertook in 1962 showing that abnormalities of the sympathetic nervous system were important in the development of HF. Comparing plasma norepinephrine (NE) concentrations at rest and

during exercise in normal subjects, those with NYHA class I and II, and NYHA III and IV, they showed patients with more serious HF developed higher levels of NE. "While we certainly didn't develop  $\beta$  blockers in treatment of HF, we established the concept that neurohumoral abnormalities play a critical role in progression."

For this work Braunwald acknowledges help received from Nobel Prize winner Julius Axelrod whose technician taught his team how to measure NE. Braunwald says, "No one works in a vacuum." He likes to quote the words of Isaac Newton, 'If I have seen further, it is by standing on the shoulders of giants.' As chairman of the NIH Heart Failure Clinical Trials Network, a network of 23 academic medical centres looking at the potential of new drugs, Braunwald is currently completing a study of the effects of a glucagon like peptide-1 receptor agonist in HF. "This provides a metabolic approach to make the failing heart contract more efficiently," he says.

Braunwald's advice to young HF researchers is to identify good mentors and focus on truly important issues. "Precious time shouldn't be wasted asking trivial questions. Also, investigators shouldn't become mesmerized by a single technique but instead adapt and become skilled in whatever techniques are required to test their hypotheses," he says.

Inaugural Session - Saturday 23 May  
at 17:45 - SEVILLE

## EJHF: Leading the way in key heart failure publications



Prof. M. Metra  
(Brescia, IT),  
Editor-in-Chief of the  
European Journal of  
Heart Failure

Our understanding and management of heart failure has gone through a paradigm shift in the past year, with renewed hope of improved outcomes, a presentation of the most influential papers published in the past year will show today.

Marco Metra, from the University of Brescia in Italy and Editor-in-Chief of the

European Journal of Heart Failure (EJHF), will discuss the most-cited and most important articles published in the journal during 2014. The EJHF is now the number 1 heart failure journal, with an impact failure of 6.577, underlining both the importance of the field and also the keen interest in novel advances among clinicians.

Speaking to Heart Failure Congress News ahead of the session, Dr Metra commented: "Heart failure remains a disease with a very high prevalence that is going to increase in the next few years, largely because of the ageing population." He added: "It still has a poor prognosis, with a high mortality rate and a high rehospitalisation rate."

"Nevertheless, there have been a number of studies in the past year that offer hope of improving both our understanding of heart failure and patients outcomes, many of which have been published in the EJHF."

Among the articles that Dr Metra will discuss are two on heart failure risk stratification: one demonstrating that stratification is improved by the use of biomarkers; and the other a validation of the novel Meta-Analysis Global Group In Chronic (MAGGIC) Heart Failure risk score.

Regarding comorbidities, the results of the ESC pilot survey showing that comorbidities are common in heart failure and related to disease severity will be discussed, alongside articles on the

impact of worsening renal function and of kidney function in congestive heart failure. The role of atrial fibrillation and its impact on heart failure clinical history will also be examined.

With respect of prognostic evaluation, Dr Metra will examine a study indicating that elevated serum uric acid is associated with incident heart failure, as well as with adverse outcomes in established heart failure. This will be complemented by a paper highlighting the relationship between serum interleukin-8 levels and outcomes. On a more positive note, Rogers et al have studied the favourable impact of candesartan administration on recurrent hospitalisations in the CHARM Preserved trial. In addition, an analysis from MADIT-CRT shows that outpatient treatment of episodes of heart failure decompensation is associated with poorer outcomes, similar to hospital admission for the same cause. Both outpatient and inpatient unplanned heart failure treatment should be therefore considered as an outcome measurement in future clinical trials.

Finally, a landmark trial in 2014 was the PARADIGM-HF trial, showing that angiotensin-neprilysin inhibition significantly reduced heart failure mortality and hospitalisations versus enalapril. Dr Metra described it as "a major advance in the medical treatment of heart failure", and he will discuss the paper setting out the design and the patients' baseline characteristics in this key trial.



The European Heart Journal's / European Journal of Heart Failure's year in Cardiology - Saturday 23 May - at 14:15 - FLORENCE



Prof. D. Brutsaert  
(Kontich, BE)  
1st HFA President

# Heart Failure congress celebrates 20 years

Dirk Brutsaert, the first president of the Heart Failure Association (HFA), reflects on the first 20 years of the Heart Failure congress, exploring how the meeting has evolved hand-in-hand with the HFA. The congress and association together, he explains, have done much to shape the specialty of heart failure.



It is 20 years since the first European meeting on heart failure was launched in Amsterdam, in June 1995 with the congress evolving an innovative approach where translational research features alongside Late Breaking Clinical Trials.

“The success of the Heart Failure congress is undoubtedly the emphasis placed on patients, with the meeting covering all aspects of the condition” says Dirk Brutsaert, Past President of the HFA (2004-2006). “Over the last two decades, our congress has done much to promote the awareness for heart failure (HF) as a serious condition. Before there was a wide spread belief HF was just part of getting older.”

The first congress was the inspiration of Willem Remme, from the Netherlands, who gathered together a group of like-minded friends. “Initially, doubters within the ESC community expressed the view there was no need for a stand-alone meeting because all cardiologists treated HF. Everyone was

surprised when they achieved 1 800 delegates,” says Brutsaert.

The 1995 Amsterdam meeting, together with the next three meetings (Cologne 1996, Gothenburg 1998, and Glasgow 2000) were, though independent of the ESC, most successful. Initially the meetings, which consisted of a large assembly alternating with smaller clinical trial update meetings, were organised by local hosts who obtained private funding with support from a ‘small nucleus’. The 2002 meeting marked the start of annual large meetings and also the first fully backed ESC Heart Failure Congress and the creation of the ESC Working Group (WG) on HF, which in 2004 became the HFA. Prior to formation of the WG there had been no separate HF organisation within the ESC.

Today, the Heart Failure congress is regarded as the premier meeting on HF in the world, attracting more than 4 500 delegates from 70 different countries. It is coordinated by the HFA Board, consisting of 12 clinicians, 8 basic scientists and 3 nurses, and considered as the HFA’s principal networking activity.

Undoubtedly, the Heart Failure congress provides

an important platform to showcase new HF agents. Karl Swedberg’s presentation at the 1998 Gothenburg meeting opened the way for  $\beta$  blockers to become standard practice in HF and later comparisons were made between different  $\beta$  blockers, with carvedilol showing survival benefits. At Heart Failure 2014 the HFA launched the World Congress on Acute Heart Failure, answering an unmet need in the field. From the outset, the congress looked to integrate basic science into main sessions. “Highlighting basic science has been key since it promotes understanding of mechanisms opening the way for the development of new therapies,” explains Brutsaert.

Sessions at the congress have also done much to promote the importance of aerobic exercise training among HF patients which has helped reduce morbidity and mortality. “The HFA created a committee on exercise training in HF which produced recommendations. But it was the presence of nurses at the congress who helped get the message across to patients,” says Brutsaert.

The Heart Failure congress, says Brutsaert, has undoubtedly done much to put HF on the map. “Before our congress there was little awareness or

expertise in dealing with patients with HF, they were just mixed in with other patients. Now HF has become a speciality in its own right.”

- 1995** First ever European HF meeting organized in Amsterdam
- 2002** Heart Failure becomes annual
- 2005** Launch of Young Investigator Awards in basic and clinical science
- 2010** Launch of interactive case-based HFA Focus sessions
- 2012** Heart Failure Congress News launched
- 2013** Record breaking Lisbon meeting has 4 470 attendees and 1 510 abstracts submitted
- 2014** HFA launches World Congress on Acute Heart Failure
- 2015** Launch of Philip Poole Wilson and Eugene Braunwald Lectures



**Are you under 40 and still in training?**  
Join your peers at the **Young Cocktail - 19:00 in the AGORA** hosted by the new HFA group for young people: **Heart failure specialists Of Tomorrow (HoT)**

Download the **‘Heart Failure 2015’ Mobile App**



## Does digoxin increase mortality risk in heart failure patients?



L. Fauchier  
(Tours, FR)

The question as to whether digoxin therapy increases the risk of all-cause mortality in patients with atrial fibrillation, particularly those with underlying heart failure, will be answered today in a Late Breaking Trials session.

Ahead of his presentation, lead researcher Laurent Fauchier (Centre Hospitalier Universitaire Trousseau, Tours, France) explained to Heart Failure Congress News that there have been “many controversies” about digoxin use in atrial fibrillation patients.

He said: “There have been several observational analyses, and some of them were worrying

because they found that increased mortality was associated with the prescription of digoxin.”

However, there have been no randomised studies on the safety of digoxin use since 1997, and it is unlikely there will be another in the future. Consequently, many recent studies have been database analyses, often with conflicting results.

This paradox reached its apotheosis when two papers were published simultaneously in 2013 in the European Heart Journal on the mortality risk associated with digoxin.

“They found completely different results,” explained Professor Fauchier. “One proposed that digoxin might be associated with higher risk of mortality, while, in precisely the same patients from the same database, another analysis, which was performed differently, did not find such a negative result.”

Professor Fauchier noticed that a major limitation is that patients receiving digoxin “are very different from other patients”, not least because “you prescribe digoxin to patients with the most severe conditions and the most severe heart failure”.

He continued: “They made several adjustments – on age, on heart failure, on sometimes the fact that there are comorbidities – but there is not a really robust analysis on the severity of heart failure, which is a very important issue.”

To that end, Professor Fauchier and colleagues conducted a population-based retrospective cohort study of almost 9 000 atrial fibrillation patients admitted to a cardiology unit between 2000 and 2011. They included over 2 000 digoxin patients, of whom approximately half received 0.25 mg daily and the remainder 0.125 mg daily.

Crucially, the researchers took into account

a number of potential confounding factors, including New York Heart Association functional class, estimated glomerular filtration rate, brain natriuretic peptide levels, and, most importantly, the presence or absence of underlying heart failure.

With this morning’s results, Dr Fauchier hopes to put clinicians’ minds at rest. With the previous studies, he thinks clinicians were probably “absolutely lost” as to what to do. “Maybe my results will make them a little bit more lost,” he said, adding: “I do hope not!”

Late Breaking Trials II - Sunday 24 May - at 8:30 - SEVILLE

# Kidney protection ‘rarely needed in acute HF’

In the majority of acute heart failure patients with worsening renal function, the kidney does not require protection. That is the counterintuitive message that will be delivered to delegates on Saturday during a session dedicated to comorbidities in acute heart failure.

Titled “How to protect the kidney in AHF?”, the talk will point out that, in reality, only a minority of acute heart failure patients experience a worsening of renal function, which is characterised by a ‘bump’ in serum creatinine levels.

“In a lot of patients, this can be acceptable to some extent,” explained presenter Kevin Damman, from the University Medical Center Groningen, The Netherlands, to Heart Failure Congress News ahead of the session.

He believes that it is “very important” for clinicians to realise that, “if you can get a patient to feel better, decongest, have weight loss and do better in general, you can accept some degree of renal dysfunction occurring, and some degree in creatinine increase”.



Dr. K. Damman  
(Groningen, NT)

Nevertheless, Dr Damman emphasised that it is crucial that each patient is considered on an individual basis. He said: “It all depends, of course, on how the patient fares; it all depends on the clinical situation, and if you are able to decongest the patient.”

The issue of managing worsening renal function in acute heart failure patients will form part of a wider examination of the aetiology of renal dysfunction in acute failure, its treatment and prognosis.

Dr Damman says it is now widely accepted that there is always some degree of renal

dysfunction in acute heart failure, and that the prognosis is worse than in patients with relatively preserved renal function.

It is also established that there is a difference in the pathophysiology between chronic and acute renal dysfunction in heart failure. In the chronic situation, patients have more stable renal dysfunction related to the decrease in renal perfusion; whereas in the acute patient, the problem one of congestion, in which fluid overload further deteriorates renal function, requiring hospital admission and urgent treatment.

While these concepts have been well investigated, there is sparse data for another important topic in Dr Damman’s presentation: the interaction between changes in serum creatinine levels, or renal function, and diuretic response. This, he explained, is a balance between how much fluid is lost for a given dose of diuretics and the impact on renal function.

“I think that, if you are able to decongest the patient and you have some deterioration in renal

function, this is acceptable...even if creatinine bumps to 150% perhaps even to 200% of what you are used to for this particular patient,” he said.

However, Dr Damman pointed out that this is “purely speculative”, as there have been no trials conducted on this topic, only retrospective analyses. “It’s just a feeling we are getting more and more from all the data that’s been out there in the past five years.”

One concern of that would be that it may be possible to ‘over-treat’ acute heart failure patients and cause such severe renal dysfunction that the patient’s prognosis is worse than if one had stopped diuretic treatment.

However, Dr Damman does not believe that it is an issue. “I’m not sure if there is such a limit, but I think it’s more common sense for each physician to stop at a certain point when a patient becomes dehydrated,” he concluded.

‘Co-morbidities in acute heart failure’ -  
Saturday 23 May - at 14:15 - ATHENS

## Heart Failure 2015 Congress News

Editors: Frank Ruschitzka, Theresa McDonagh - Journalists: J. Fricker and L. Davenport - Copyright © ESC 2015 - Contact: hfsecretariat@escardio.org

Heart Failure is the annual congress of the Heart Failure Association of the ESC

## What was the last challenge you encountered with a patient with AHF?



J. Willem Brakel  
(Emmen, NL)

Twice a week I provide support to the general practitioners in a nursing home in Emmen in the Netherlands, **assisting with their patients with cardiac problems.**

A few months ago I was phoned by one of the general practitioners about a patient who had symptoms of heart failure. There was a ‘no hospital admission’ policy agreed for this patient.

I advised them to treat her in the nursing room with diuretics intravenously, morphine injections and oxygen.

Her condition stabilised and today she is doing well with oral medical treatment.



F. Aguirre  
(Guayaquil, EC)

One of the worst challenges in the emergency room might be to receive a young adult with crackles in both lungs, high cardiac Index at the X ray exam and a volume overload pattern at the EKG examination confirmed with Nt pro BNP enzymes, and near normal troponins, low ejection fraction with a global hypokinesis pattern at echo exam with normal coronary arteries which complete your nightmare.

We still have other sources of HF or, alcoholic or Chaga’s disease needing high sensitivity lab test for an early resolution.

**Evidence based medicine is required in Latin America.**



During admission for AHF, and before hospital discharge, it is often difficult to make the patient understand the severity of the problem and how changes in his/her life should be made after that. Education about heart disease, risk factors and treatment should be structured and directed to the patient and caregivers.

The main challenges in the educational process are at both the patient level (intellectual level, educational background, cognitive impairment, social support) and the healthcare professional level (especially lack of time and staff).

A **multidisciplinary team** and organisation is key. One size doesn’t fit all; therefore an individualised approach is required.

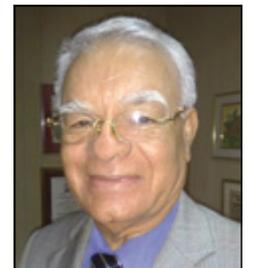
Saint Thomas Hospital is a third level nationwide medical attention in Panama; so has spectrum associated pathologies ranging from heart failure congenital, chronic, non-communicable and ACUTE.

**Patients with AHF and anaemia are our challengers**, despite having a cardiopulmonary unit from the emergency section for its management, and cardiology wards.

Although there is evidence that the use of blood transfusions may improve functional capacity and prevent their return.



C. Costa Grana  
(La Coruña, ES)



R. Blandon  
(Panama, PA)