



ESC

Working Group

Cardiac Cellular

Electrophysiology

42nd EWGCCCE Meeting

June 15th-17th, 2018

Essen, Germany



University Hospital Essen

Dear Colleagues,

On behalf of the Organising Committee it is my great pleasure to invite you to attend the 42th Meeting of the European Working Group on Cardiac Cellular Electrophysiology to be held in June 15th-17th, 2018 in Germany.

Looking forward to meeting you in Essen,



Dobromir Dobrev

President of the Organising Committee



Useful Information

Registration

Registration open date : May 1st, 2018

Registration close date : June 13th, 2018

Registration at the venue from 12:00

This meeting is restricted to members of the ESC Working Groups on Cardiac Cellular Electrophysiology.

Not a member yet ? Join today and register then.

Fees cover registration for the 3 day meeting including Welcome Reception on Friday June 15th, traditional Gala Dinner on Saturday June 16th, lunch and coffee breaks.

Venue

University Hospital Essen (Universitätsklinikum Essen)
Hufelandstrasse 55
D-45147 Essen, DE

Deichmann Auditorium at the Lehr- und Lernzentrum
Virchowstrasse 163 a
D-45147 Essen, DE

For directions see location
plan on page 4.



U17 – from Hauptbahnhof Essen (central train station) to metro station
« Holsterhauser Platz »



Transfer from Airport Düsseldorf International: with Taxi or Train (S1, RE1, RE6, RE11) to Essen Hauptbahnhof (central train station), then U17 to metro station « Holsterhauser Platz »

Wardrobe and luggage deposit will be available. The organizer assumes no responsibility for lost valuables or the wardrobe at the venue.

Welcome Reception

Date : Friday June 15th, from 19:00

Location : Lehr- und Lernzentrum

The Welcome Reception organized by the committee of the 42nd EWGCCE, is restricted to Working Group Members and EWGCCE participants only.

Gala Dinner

Date : Saturday June 16th from 19:00

Location: « Markthalle », Deilbachbrücke 4, 45257 Essen

A shuttle service from the Lehr- und Lernzentrum to the dinner venue will be provided at 18:30. Return shuttle transfers, with stops at Essen Hauptbahnhof/Hotel Atlantic/Essen University Hospital will depart the dinner venue at 23:00 pm, 00:00 am and 01:00 am.

The Gala Dinner organized by the committee of the 42nd EWGCCE, is restricted to Working Group Members and EWGCCE participants only.

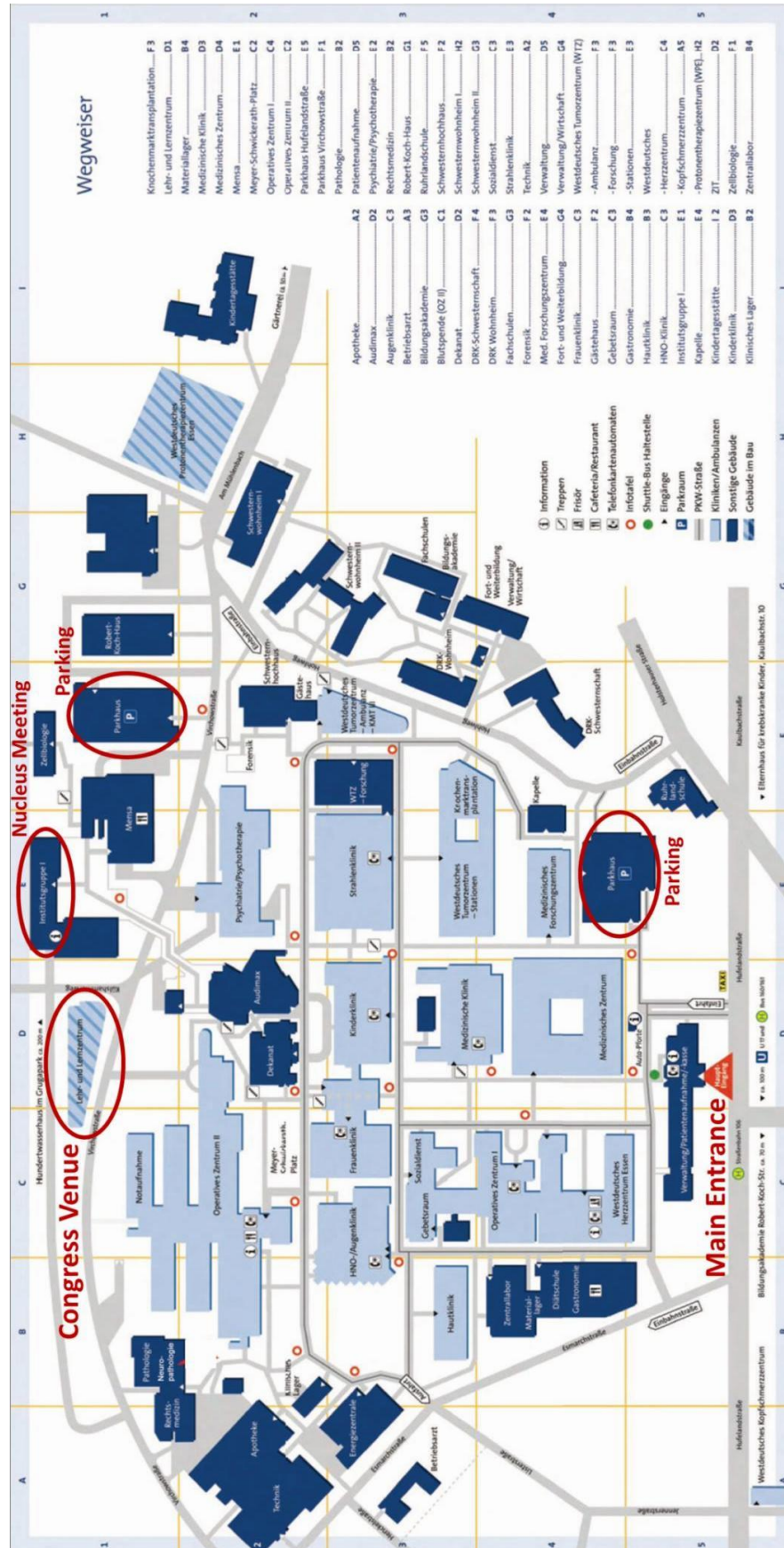
Nucleus Meeting – Only for Nucleus Members

Date : Sunday June 17th from 14:00 – 18:00

Location: Institute of Pharmacology, Institutsgruppe 1 (IG1), Virchowstrasse 171, 45147 Essen

The Nucleus Meeting organized by the committee of the 42nd EWGCCE, is restricted to **Nucleus Members of the Working Group only.**

Location Plan



Scientific Programme

Friday, June 15th, 2018

12:00-13:45- Registration and lunch

13:45-14:00- Opening

14:00-15:30-Session 1: Novel roles of Na⁺ and K⁺ channels in cardiac arrhythmias

Chairs: Flavien Charpentier (Nantes, France) and Milan Stengl (Pilsen, Czech Republic)

Keynote lecture: Microdomain-specific trafficking and function of Nav1.5 in cardiomyocytes

Speaker: **Carol-Ann Remme** (Amsterdam, Netherlands), 40+5mins

Oral presentations: 3 x (10+5 mins)

- The first Belgian SCN5A founder mutation: establishment of an iPSC-cardiomyocyte model to identify genetic modifiers. **Maike Alaerts** (Antwerp, Belgium)
- CaMKII modulates the cardiac transient outward K⁺ current through their association in non-caveolar membrane rafts. **Oscar Casis** (Vitoria-Gasteiz, Spain)
- Specific modulation of GIRK currents by alpha1- and ET-1 receptors. **Andreas Rinne** (Bochum, Germany)

15:30-16:00- Coffee break

16:00-18:00 – Poster session 1

19:00- Welcome reception

Saturday, June 16th, 2018

08:30-10:00- Session 2: Excitation-contraction coupling in health and disease

Chairs: Gudrun Antoons (Maastricht, Netherlands) and Ana-Maria Gomez (Paris, France)

Keynote lecture: Atrial calcium handling in health and disease

Speaker: **Katrine Dibb** (Manchester, UK), 40+5mins

Oral presentations: 3 x (10+5mins)

- SERCA stimulation as a promising therapeutic approach for diabetic diastolic dysfunction treatment. **Eleonora Torre** (Milan, Italy)
- Development and validation of high-throughput processing and analysis software platform for cardiac optical mapping. **Christopher O'Shea** (Birmingham, UK)
- + PEG - Use of ligand grafted on nanoparticles to study L-type calcium channels and β -adrenergic receptors function on surface and T-tubule membranes. **Marion Barthe** (Châtenay-Malabry, France)

10:00-10:30 - Coffee break

10:30-12:00- Session 3: Technological advances in cardiac cellular electrophysiology

Chairs: Jordi Heijman (Maastricht, Netherlands) and Godfrey Smith (Glasgow, UK)

Keynote lecture: Optogenetic dissection of atrial arrhythmias

Speaker: **Daniel A. Pijnappels** (Leiden, Netherlands), 40+5mins

Oral presentations: 3 x (10+5mins)

- Real-time optical manipulation of cardiac conduction in intact hearts. **Marina Scardigli** (Florence, Italy)
- Non-contact mapping of ventricular fibrillation during acute myocardial infarction in a porcine model. **Stefan M. Sattler** (Copenhagen, Denmark)
- Controlling action potential firing by light in iPSC-CMs using channelrhodopsin-2. **Birgit Goversen** (Utrecht, Netherlands)

12:30-13:30-Lunch *Switch of posters*

13:30-15:30-Poster session2

15:30-16:00- Coffee break

16:00-17:30 – Keynote CCW Lecture

Chair: Dobromir Dobrev (Essen, Germany)

Title: Anti-arrhythmic targets in ischemic cardiomyopathy

Speaker: **Karin R. Sipido** (Leuven, Belgium)

19:00- Conference Gala Dinner at « Markthalle » Deilbachbrücke 4, 45257 Essen

Sunday, June 17th, 2018

08:30-10:00 - Session 4: Mechanisms of ventricular arrhythmias

Chairs: Dierk Thomas (Heidelberg, Germany) & Frank Heinzel (Berlin, Germany)

Keynote lecture: Cellular and molecular mechanisms of electrical storm

Speaker: **Yukiomi Tsuji** (Nagasaki, Japan) 40+5mins

Oral presentations: 3 x (10+5mins)

- Identification and functional characterization of the first variants in the SLC8A1 gene responsible for idiopathic ventricular fibrillation. **Franck Chizelle** (Nantes, France)
- Arrhythmia development during negative allosteric modulation of small-conductance calcium-activated potassium channels in a porcine model of acute myocardial infarction. **Anniek Frederike Lubberding** (Copenhagen, Denmark)
- Novel insights into the structure and (mechano)electrical function of resident cardiac macrophages. **Ana Simon Chica** (Freiburg im Breisgau, Germany)

10:00-10:30 – Coffee break

10:30-12:00 - Session 5: Mechanisms and therapy of atrial arrhythmias

Chairs: Ursula Ravens (Freiburg, Germany) & Cristina E. Molina (Hamburg, Germany)

Keynote lecture: Mechanisms of atrial fibrillation: therapeutic opportunities and translational challenges

Speaker: **Stanley Nattel** (Montreal, Canada) 40+5mins

Oral presentations: 3 x (10+5mins)

- Stretch-induced alterations in atrial Ca²⁺ handling: a potential trigger for arrhythmias. **Patrick Schönleitner** (Maastricht, Netherlands)
- Impact of PDE3 and PDE4 on microdomain-specific modulation of G-protein coupled receptor activation of cAMP in atrial fibrillation. **Bernado Dolce** (Hamburg, Germany)
- Pharmacological and gene therapeutical suppression of atrial fibrillation by a specific TASK-1 channel blockade in a large animal model. **Constanze Schmidt** (Heidelberg, Germany)

12:00-13:00 - General assembly

14:00-18:00 – Nucleus meeting – Only for Nucleus Members

Carmeliet-Coraboeuf-Weidmann Lecture

Karin R. Sipido



Karin Sipido is Professor of Medicine and Head of Experimental Cardiology at the KU Leuven, the University of Leuven, Belgium. She holds an MD degree from the university of Antwerp with training in Internal Medicine and Cardiology. She holds a PhD in Physiology, obtained under guidance of Prof. Edward Carmeliet, at KU Leuven. She did postdoctoral research at the University of Maryland and at Johns Hopkins University, Baltimore. She has worked as a clinical consultant in Leuven. She was visiting professor at the University of Maastricht, NL, and UMC Utrecht, NL.

Her academic research is focused on cellular mechanisms of heart failure and arrhythmias. She is particularly interested in the role of altered $[Ca^{2+}]_i$ regulation in arrhythmogenesis and the role of cellular microdomains. Studies in human heart tissue and animal models for ischemic heart disease have stimulated work on T-tubule re-organization and alterations in calcium microdomains around ryanodine receptors. With collaborators in cardiac imaging and clinical electrophysiology, the data are put in a broader clinical perspective.

She is editorial board member of several leading cardiovascular journals; she was Associate Editor of the *European Heart Journal* and Editor-in-Chief of *Cardiovascular Research* 2013-2017.

She is elected member of the Academia Europaea, Fellow of the European Society of Cardiology, Fellow of the American Heart Association and of the International Society for Heart Research.

She was chair of the ESC Working Group Cardiac Cellular Electrophysiology 2000-2002 and the cluster Cardiac Biology 2002-2003. She has served on the board of the European Society of Cardiology 2004-2006, and was chair of the Council Basic Cardiovascular Sciences 2006-2008. She was founding member and President of the Alliance for Biomedical Research Europe 2013-2015. Currently she chairs the Scientific Panel for Health under the provision of the European Commission H2020 program.



Edward **C**armeliet



Edouard **C**oraboeuf



Silvio **W**eidmann

The CCW lecture has been established to celebrate the contributions that Edward Carmeliet, Edouard Coraboeuf and Silvio Weidmann have made to cardiac cellular electrophysiology. It also recognizes their roles in establishing the Working Group in Cardiac Cellular Electrophysiology, which later became part of the European Society of Cardiology.

With the kind permission of Edward Carmeliet and the families of Edouard Coraboeuf and Silvio Weidmann, the lectureship is awarded annually to an outstanding European Cardiac Cellular Electrophysiologist. The story begins with Silvio Weidmann (1921-2005). After studying medicine at the University of Bern, in 1948 he went to the University of Cambridge to work with Alan Hodgkin and Andrew Huxley who were at that time well on their way to elucidating the properties of the nerve action potential. In Cambridge, Silvio was joined by Edouard Coraboeuf (1926- 1998). Together, in 1949, they published the first intracellular recording of a cardiac action potential. Edward Carmeliet also worked with Silvio Weidmann, in his case in Bern, where he carried out his PhD with pioneering studies on the potassium and chloride permeability of the heart. All three continued to make outstanding contributions to cardiac electrophysiology. Silvio Weidmann demonstrated the low conductance of the plateau of the action potential and the voltage dependence of the sodium channel as well as its sensitivity to local anesthetics. He also demonstrated the diffusion of potassium between cells. Edouard Coraboeuf went on to identify early afterdepolarizations, which lead to torsades-de-pointes arrhythmias. He subsequently pioneered cellular studies on the human heart as well as characterizing the maintained component of the sodium current and its contribution to the plateau of the action potential. As mentioned above, Edouard and Edward had both worked with Silvio. Subsequently the two collaborated on work characterizing the chloride current. Edward Carmeliet (1930-) also pioneered studies of the control of the action potential duration; in particular the effects of heart rate and metabolism. He published seminal papers on virtually every cardiac potassium

channel and on the mechanisms of action of antiarrhythmic agents. He also demonstrated the interaction of ionic gradients with channels and transporters.

As well as their own scientific contributions, all three have established their own schools of research as represented by countless successful careers of younger scientists worldwide.

Our Working Group owes much to this trio. Edward Carmeliet organized the first meeting in Leuven in 1977. The next year Edouard Coraboeuf organized a meeting in Orsay and, in 1980, the Working Group met in Bern at the invitation of Silvio Weidmann.

Past CCW Lecturers:

- 2012: Ursula Ravens (36th EGWCCE Meeting, Nantes, FR)
- 2013: David Eisner (37th EGWCCE Meeting, Athens, GR)
- 2014: András Varró (38th EWGCCE Meeting, Maastricht, NL)
- 2015: Barbara Casadei (39th EWGCCE Meeting, Milan, IT)
- 2016: Denis Noble (40th EWGCCE Meeting, Glasgow, UK)
- 2017: Dario DiFrancesco (41th EWGCCE Meeting, Vienna, AUT)

Poster session 1, Friday June 15th (16:00 – 18:00)

Emerging players and pathways (Seminarraum 1.005, 1. Floor)

Posters 1-20

1. Enhanced receptor-independent NDPK mediated G-Protein signaling in atrial fibrillation. M. Schäfer, L. Becker, R. Kerßenboom, I. Abu-Taha, X.Y. Qi, P. Naud, V. Gundlach, J. Heijman, M. Kamler, T. Wieland, S. Nattel, D. Dobrev (Essen, Germany)
2. Atrial fibrillation upregulation of nucleoside diphosphate kinase induces proarrhythmic sarcoplasmic reticulum calcium leak in canine atria. I. Abu-Taha, M. Schäfer, X.Y. Qi, P. Naud, V. Gundlach, M. Kamler, J. Heijman, T. Wieland, S. Nattel, D. Dobrev (Essen, Germany)
3. The role of NDPK-B in the regulation of IK_{ACh} channels. L. Yang, M. Wiedemann, I. Abu-Taha, D. Dobrev (Essen, Germany)
4. The role of the inflammasome in atrial fibrillation. T. Veleva, I. Abu-Taha, C. Schmidt, M. Kamler, X. Wehrens, J. Heijman, S. Nattel, N. Li, D. Dobrev (Essen, Germany)
5. Regulation of NLRP3 inflammasome in HL-1 cells. C. Gersiek, I. Abu-Taha, T. Veleva, D. Dobrev (Essen, Germany)
6. Thrombin receptor PAR4 - what role in cardiac inflammasome signaling? K. Leineweber, A.C. Fender, T. Veleva, A. Javaid, D. Dobrev (Essen, Germany)
7. Effects of FGF23 on sinoatrial node activity. A. Bucchi, G. Bertoli, E. Micelli, R. Milanesi, C. Bazzini, P. Benzoni, A. Barbuti, M. Baruscotti, D. DiFrancesco (Milan, Italy)
8. Role of calcium/calmodulin-dependent protein kinase II activation in beta-adrenergic stimulation of potassium currents in canine ventricular cardiomyocytes under action potential clamp conditions. R. Veress, D. Kiss, B. Kurtán, D. Baranyai, C. Dienes, L. Yongjin, J. Magyar, N. Szentandrassy, B. Horváth, T. Bányász (Debrecen, Hungary)
9. Microdomain-specific beta-adrenergic regulation of calcium signaling in tachycardia-induced atrial fibrillation. A. Cuyppers, P. Schönleitner, M. Kuiper, U. Schotten, G. Antoons (Maastricht, Netherlands)
10. Regulation of catecholamine effects in hiPSC-CM: Microdomain specific impact of PDE3 and PDE4. Z. Iqbal, D. Ismaili, U. Saleem, B. Dolce, A. Ulzan, A. Hansen, T. Eschenhagen, V. Nikolaev, C. Molina, T. Christ (Hamburg, Germany)
11. AP prolongation, β -adrenergic stimulation and angiotensin II as co-factors in SR instability. C. Ronchi, B. Badone, J. Bernardi, A. Zaza (Milan, Italy)
12. Endomysial fibrosis affects the relative contributions of the sodium and calcium current to transverse propagation between strands of atrial myocytes. J. Zhao, U. Schotten, B. Smaill, S. Verheule (Maastricht, Netherlands)
13. Differential effects of nNOS-derived NO on human right and left atrial electrical characteristics: Implications for atrial fibrillation. X. Liu, A. Muszkiewicz, S. Reilly, A. Bueno-Orovio, C. Sanchez, J.F. Rodriguez, M. Norris, R. Sayeed, G. Krasopoulos, B. Rodriguez, B. Casadei (Oxford, UK)
14. Carnitine and its metabolites exert beneficial QT-/APD-prolonging effects in transgenic short-QT syndrome rabbits. L. Mettke, K. Michaelides, I. Bodi, S. Perez-Feliz, I. El-Battrawy, M. Borggrefe, M. Brunner, C. Bode, K.E. Odening (Freiburg, Germany)

15. Role of Annexin A4 in cardiac remodeling. Characterization of the response to acute and chronic beta-adrenergic receptor stimulation in ventricular myocytes of Annexin A4 deficient mice. F. Pluteanu, A. Heinick, C. Rolfes, M. Domnik, A. Klemme, F.U. Müller (Münster, Germany)
16. The electrophysiological effect of adenosine-1 receptor in the human atrium. L. Soattin, T. Christ, T. Jespersen (Copenhagen, Denmark)
17. The microtubule (+) end tracking protein network: A new druggable pathway to restore cardiac conduction. V. Portero, S. Podliesna, G.A. Marchal, C. Veerman, N. Yu, A.O. Verkerk, M. Klerk, E.M. Lodder, I. Mengarelli, S. Casini, N. Galjart, C.R. Bezzina, C.A. Remme (Amsterdam, Netherlands)
18. Molecular regulation of the transcription factor NFATc3. J. Schmidt, A. Rinne (Bochum, Germany)
19. Induction of ICER protects from electrical remodeling in response to short-term β -adrenergic stimulation. J.S. Schulte, J. Obergassel, K. Grimm, A. Sternberg, F. Pluteanu, M.D. Seidl, F.U. Müller (Münster, Germany)
20. HCN isoform expression is changed in atrial fibrillation. S. Scheruebel, C. Koyani, E. Bernhart, P. Lang, K. Zorn-Pauly, B. Pelzmann (Graz, Austria)

New approaches to control cardiac rhythm (Foyer, 1. Floor)

Posters 21-31

21. Next-generation optogenetic tools for cardiac inhibition. R.A. Kopton, P. Kohl, F. Schneider-Warme (Freiburg, Germany)
22. Functional characterization of light-sensitive ion transporters in cardiomyocytes for tailored optogenetic control of cardiac rhythm. L. Volkers, I. Feola, A. Teplenin, D.L. Ypey, A.A.F. de Vries, D.A. Pijnappels (Leiden, Netherlands)
23. Antiarrhythmic manipulation of atrial and ventricular characteristics. S. Dobi, A. Workman, G. Smith (Glasgow, Scotland)
24. Remodeling of nuclear calcium signaling in atrial fibrillation. D. Hoffmann, I. Abu-Taha, X.Y. Qi, S. Nattel, D. Dobrev (Essen, Germany)
25. Desympathization potentiates the ectopic automaticity in caval vein myocardial tissue. A.D. Ivanova, V.S. Kuzmin (Moscow, Russia)
26. Hybrid thoracoscopic approach is effective for the treatment of long-standing persistent lone atrial fibrillation: 3-Year clinical update of the HISTORIC-AF trial. C. Muneretto, G. Polvani, R. Krakor, G. Bisleri, F. Rosati, A. Curnis, J. Bejko, A. Repossini, L. Di Bacco, C. Tondo (Brescia, Italy)
27. Istaroxime accelerates calcium transient decay in human induced pluripotent stem cell-derived cardiomyocytes. B. Badone, C. Altrocchi, R.L. Spätjens, P.G.A. Volders, A. Zaza (Milan, Italy)
28. Effects of the IK_{ACh}-blocker XAF-1407 on rat atrium in vivo and in vitro. A. Horváth, S. Elyagon, A. Piasecki, M. Murninkas, R. Gillis, T. Eschenhagen, Y. Etzion, T. Christ (Hamburg, Germany)

29. Antiarrhythmic effect of AP14145, a potent SK channel blocker on late sodium current. K.M. Muthukumarasamy, U.S. Sørensen, M. Grunnet, T. Jespersen, B.H. Bentzen (Copenhagen, Denmark)
30. Acute effect of sildenafil on inward rectifier potassium current in rat ventricular cardiomyocytes. M. Macháček, M. Bébarová (Brno, Czech Republic)
31. Mechanisms underlying interactions between low-frequency oscillations and beat-to-beat repolarization variability in the human ventricles under sympathetic provocation. D.A. Sampedro-Puente, J. Fernandez-Bes, B. Porter, S. Van Duijvenboden, P. Taggart, E. Pueyo (Zaragoza, Spain)

Genomics of cardiac rhythm and arrhythmia (Deichmann Auditorium)

Posters 32-38

32. Functional analysis of T309I and R562S mutations associated with long QT syndrome type 1. M. Bébarová, O. Švecová, L. Baiazitova, J. Hošek, T. Novotný (Brno, Czech Republic)
33. Functional characterization of a LQT3 mutation located in the PY motif of the cardiac sodium channel associated with altered channel ubiquitylation. S. Casini, V. Portero, J.S. Rougier, M. Albesa, G.A. Marchal, W.K. Chung, C.R. Bezzina, H. Abriel, C.A. Remme (Amsterdam, Netherlands; Bern, Switzerland; New York, USA)
34. Electrophysiological study of a novel SCN5A mutation found in Brugada Syndrome patient. A. Frosio, P. Marchese, C. Piantoni, D. Molla, G. Bertoli, M. Arici, R. Milanese, C. Bazzini, A. Barbuti, M. Baruscotti, D. DiFrancesco, A. Bucchi (Milan, Italy)
35. Compound heterozygous SCN5A mutations in a severe Brugada syndrome case. A. Nijak, M. Alaerts, A. Labro, E. Sieliwończyk, E. Van Craenenbroeck, J. Saenen, B. Loeys (Antwerp, Belgium)
36. Characterization of human induced pluripotent stem cell-derived cardiomyocytes carrying CPVTR420Q mutation of ryanodine receptor 2. L. Yin, R. Perrier, P. Gerbaud, J.-P. Bénéth, P. Joanne, A.-M. Gomez (Châtenay-Malabry, France)
37. Characterization of the spontaneous beating activity of iPS-derived cardiomyocytes from a 25-year-old patient with paroxysmal atrial fibrillation carrying a mutation in PITX2 gene. S. Landi, F. Giannetti, P. Benzoni, G. Pavano, A. Bucchi, M. Baruscotti, D. DiFrancesco, P. Dell'Era, M.S. Olesen, A. Barbuti (Milan, Italy; Brescia, Italy; Copenhagen, Denmark)
38. Low and high cardiac FKBP12.6 overexpression are associated with distinct phenotypes. M. Gandon-Renard, F. Lefebvre, P. Gerbaud, P. Rouet-Benzineb, A.M. Gomez, J.-J. Mercadier (Châtenay-Malabry, France)

Poster session 2, Saturday June 16th (13:30 – 15:30)

Ion channel physiology and pharmacology (Deichmann Auditorium)

Posters 39-45

39. Ion-channel physiology, pharmacology and calcium handling in Pluricyte® cardiac ventricular myocytes. C. Altrocchi, R.L. Späthjens, J. Bernardi, S. Seyen, P.G. Volders (Maastricht, Netherlands)
40. Purinergic regulation of transient calcium-dependent chloride current Ito2 in rat ventricular myocardium. T.S. Filatova, D.V. Abramochkin (Moscow, Russia)
41. Slow delayed rectifier potassium current (IKs) of the zebrafish (*Danio rerio*) heart. D.V. Abramochkin, M. Hassinen, M. Vornanen (Moscow, Russia)
42. Synergistic effects of combined calcium-activated small-conductance and inward-rectifier potassium currents block in atrial cardiomyocyte models. G. Gatta, A. van Hunnik, S. Verheule, U. Schotten, J. Heijman (Maastricht, Netherlands)
43. Contribution of late sodium current to the electrophysiological characteristics of canine left ventricular cardiomyocytes. D.Z. Kiss, C.B. Dienes, R. Veress, D. Baranyai, B. Kurtán, N. Szentandrassy, T. Bányász, J. Magyar, P.P. Nánási, B. Horváth (Debrecen, Hungary)
44. Altered late sodium current in a mouse model of Rett Syndrome. H. Cheng, I. Charles, A.F. James, A.P. Abdala, J.C. Hancox (Bristol, UK)
45. Late sodium current density increases during the progression from paroxysmal to persistent human atrial fibrillation. G.A. Marchal, F.A. Nariswari, M. Kawasaki, J. Neefs, N. van den Berg, R. Wesselink, A.O. Verkerk, J.R. de Groot, S. Casini, C.A. Remme (Amsterdam, Netherlands)

Experimental models – *in vivo* and *in vitro* (Foyer, 1. Floor)

Posters 46-58

46. QT interval and ventricular refractory period measurements indicate absence of typical rate-dependence in conscious freely moving rodents. W. Mulla, R. Gillis, M. Murninkas, H. Klapper-Goldstein, H. Gabay, M. Mor, S. Elyagon, N. Liel-Cohen, O. Bernus, Y. Etzion (Beer-Sheva, Israel)
47. Atrial fibrillation substrate analysis in freely moving rodents. H. Klapper-Goldstein, E. Sigal, M. Michael, G. Roni, W. Mulla, Y. Etzion (Beer-Sheva, Israel)
48. Effects of vagus nerve stimulation on heart electrophysiology and contractility in endotoxemic rat. D. Jarkovska, J. Sviglerova, E. Mistrova, L. Nalos, M. Stengl (Pilsen, Czech Republic)
49. Immunomodulation by PAP-1 improves insulin resistance and reduces risk of arrhythmia in a type 2 diabetic animal model. J. Zayas-Arrabal, A. Alquiza, J.M. Rodriguez-Robledo, O. Casis, M. Gallego (Vitoria-Gasteiz, Spain)
50. Arrhythmogenic mechanisms in ageing: Insights from murine models of arrhythmia. K. Jeevaratnam, K.R. Chadda, S. Ahmad, H. Valli, C.E. Edling, S. Salvage, A. Grace, C.L.H. Huang (Guildford, UK; Cambridge, UK)

51. Fructose-fat feeding prevents normal postnatal development of conduction velocity in rats. C. Funch Jensen, L. Skibsbye, E.D. Bartels, R. Noorzae, M.T. Lund, L.B. Nielsen, N.-H. Holstein-Rathlou, T. Jespersen, L. Nygaard Axelsen, M.S. Nielsen (Copenhagen, Denmark)
52. Interspecies differences in the late sodium current measured under the ventricular action potential. B. Horváth, D. Baranyai, R. Veress, C. Dienes, D. Kiss, B. Kurtán, Y. Lee, K. Kistamás, N. Szentandrassy, P.P. Nánási (Debrecen, Hungary)
53. Does the progression of surgically induced heart failure in mice depend on the time of the surgery: 6am or 6pm? S. Mistretta, M.B. Thomsen (Copenhagen, Denmark)
54. Effects of vagus nerve stimulation on myocardial depression in porcine progressive septic shock. L. Nalos, J. Horak, J. Benes, M. Markova, D. Jarkovska, L. Vistejnova, J. Svirglerova, J. Kuncova, M. Matejovic, M. Stengl (Pilsen, Czech Republic)
55. Regional heterogeneity during β -adrenergic stimulation underlie ventricular arrhythmia triggers and substrate after myocardial infarction. M. Amoni, E. Dries, B. Vandenberg, G. Gilbert, P. Holemans, H.L. Roderick, P. Claus, R. Willems, K.R. Sipido (Leuven, Netherlands)
56. Age-dependent changes in cholinergic regulation of mammalian heart. S. Tapilina, D. Abramochkin (Moscow, Russia)
57. Enhanced PP2A activity and reduction of proarrhythmic events in CREM knockout mice after chronic β -adrenergic stimulation. M.A. Tekook, J.S. Schulte, E. Fehrmann, M.D. Seidl, P. Boknik, F.U. Müller (Münster, Germany; Essen, Germany)
58. Structural immaturity of human iPSC-derived cardiomyocytes: In silico investigation of effects on function and disease modelling. J.T. Koivumäki, N. Naumenko, T. Tuomainen, J. Takalo, M. Oksanen, K.A. Puttonen, J. Kuusisto, M. Laakso, J. Koistinaho, P. Tavi (Tampere, Finland)

New techniques in electrophysiology (Seminarraum 1.005, 1. Floor)

Posters 59-73

59. Adding data to the Cardiac Electrophysiology Web Lab: Challenges and opportunities. M. Clerx, A.C. Daly, A.U. Tamuri, H. Sherwood-Taylor, D.J. Gavaghan, G.R. Mirams, J. Cooper (Oxford, UK)
60. Pharmacological profiling of the sodium current in hiPSC-CM compared to heterologous expression models. D. Van de Sande, I. Kopljar, A. Teisman, D.J. Gallacher, D.J. Snyders, H.R. Lu, A.J. Labro (Antwerp, Belgium)
61. Current density as quantity which is not always independent on membrane capacitance. R. Kula, M. Bébarová, P. Matejovič, J. Šimurda, M. Pásek (Brno, Czech Republic)
62. Reconstructing the three-dimensional organization of cardiac tissue at the mesoscale level. E. Lazzeri, I. Costantini, G. Vitale, F. Giardini, G. Mazzamuto, C. Crocini, C. Ferrantini, C. Poggesi, F.S. Pavone, L. Sacconi (Florence, Italy)
63. Optimised protocols for high-throughput systems reveal variability in hERG kinetics. C.L. Lei, M. Clerx, D. Gavaghan, L. Polonchuk, G. Mirams, K. Wang (Oxford, UK)
64. Optimisation and characterisation of Langendorff-free method for isolation of cardiomyocytes from the adult and neonatal mouse hearts. D. Pavlovic, M. Ackers-Johnson, T.D. Luu, Y. Li, A.P. Holmes, S.M. O'Brien, C. Helpburn, L. Fabritz, P. Kirchhof, R.S. Foo (Birmingham, UK)

65. Simultaneous recordings of action potentials and calcium transients from human induced pluripotent stem cell derived cardiomyocytes. C. Prajapatia, R.P. Pölonena, K. Aalto-Setälä (Tampere, Finland)
66. Evaluation of contraction strength as measure for beat to beat variability. S. Scheruebel, H. Ahammer, R. Arnold, P. Lang, B. Pelzmann, K. Zorn-Pauly (Graz, Austria)
67. Action potential duration restitution kinetics during atrial fibrillation in optical mapping recordings of perfused goat hearts. V. Sobota, S. Zeemering, A. van Hunnik, P. Podziemski, U. Schotten, S. Verheule (Maastricht, Netherlands)
68. Novel method for estimation of capacitance of tubular membrane in cardiomyocytes: benefits and limitations. O. Švecová, M. Bébarová, M. Šimurdová, J. Šimurda. (Brno, Czech Republic)
69. CAPA: A Powerful Tool for Automatic Cardiac Action Potential Analysis. R. Thieleczek, E. Wettwer (Essen, Germany)
70. Towards processing high-throughput confocal imaging outputs using deep convolutional networks A. Zahradnikova jr., P. Skrabanek (Bratislava, Slovenia)
71. Functional evaluation of freshly-isolated and cryopreserved hPSC-derived CMs. L. van den Brink, K. Brandao, M. Mol, C. Mummery, A. Verkerk, R. Davis (Leiden and Amsterdam, Netherlands)
72. Optogenetic hyperpolarization of cardiomyocytes to terminate ventricular arrhythmia. M. Funken, P. Sasse, T. Bruegmann (Bonn, Germany)
73. A novel ex vivo approach to study local Ca²⁺-induced triggered activities in ventricular arrhythmias using living adult cardiac slices. E. Dries, I. Bardi, S. Watson, F. Perbellini, C. Terracciano (London, UK)

Thank you for attending the 42nd Meeting of the European Working Group on Cardiac Cellular Electrophysiology 2018 in Essen, Germany and we hope to see you at our next EWGCCE Meeting in conjunction with EHRA March 17th-19th, 2019 in Lisbon.



Quelle: Wikipedia, Thomas Robbin