

Programme ECS2022

Sunday August 21st 2022

- 12:00-16:00 Registration Desk Open, entrance to Devere Hall, Áras na Mac Léinn
- 14:00-15:30 ECS Board Meeting (for Board Members only), Muscra Meeting Room, Áras na MacLéinn

16:00-16:20 Welcome by the Chair, Local Organisers and ECS President



16:20-17:10 O1: BBA-Molecular Cell Research Opening Lecture

Volker Gerke: "The Ca²⁺ regulated plasticity of vascular endothelial cells"

17:10-19:00 Mechanically activated Ca²⁺-permeable ion channels

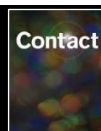
Chair: Felicity Davis



- 17:10 O2: David Beech (University of Leeds, UK): "Piezo1 force sensor in cardiovascular health and disease"
- 17:35 O3: Medha Pathak (UC Irvine, USA): "Molecular Choreography of Piezo1"
- 18:00 O4: Swetha Murthy (Vollum Institute, OHSU, Sydney, Australia): "Examining the role of TMEM63s in mechanosensation"
- 18:25 O5: Soléne Barbeau (University of Bordeaux, France): "TRPV4 channel activity in response to hypoxia is affected by cell density"
- 18:40 O6: Valeriya Gushchina (Medical University of Vienna, Austria): "The role of the calcium-sensing receptor in the activation of the intestinal prostaglandin E2 pathway"
- 18:55 O7: Geert Bultynck (KU Leuven, Belgium. Sponsored by Hamamatsu): "The FDSS μ CELL instrument for live calcium imaging in high-throughput"
- 19:00 Reception: barbeque and prosecco or soft drinks. The bar will also be open for other drinks, but these will not be free (payment by delegates). Note that Devere Hall will close at 21:30 precisely.
- 21:30 Free evening

Monday 22nd August 2022

8:30-10:15	Mitochondrial calcium signalling & cell functions <i>Chair: Paola Pizzo</i>
8:30	O8: Riccardo Filadi (Neuroscience Institute, National Research Council, CNR, Italy): "Ca ²⁺ signals as modulators of ER-mitochondria contacts in health and disease"
8:55	O9: Araceli Del Arco (Universidad Autónoma de Madrid & Universidad de Castilla-La Mancha, Spain): "Regulation by Calcium of neuronal metabolism. Role of MCU and Aralar-Malate-Aspartate Shuttle"
9:20	O10: Julio Cesar Cárdenas (Center for Integrative Biology, Universidad Mayor, Chile): "Keeping zombies alive: the reticulum-to-mitochondria Ca ²⁺ transfer in senescent cells"
9:45	O11: Arijita Ghosh (Thomas Jefferson University, USA): "Anti-apoptotic Bcl-xL controls inositol 1,4,5 triphosphate (IP ₃) receptor mediated ER-mitochondria Ca ²⁺ transfer"
10:00	O12: Fernanda Lemos (KU Leuven, Belgium): "Regulation of intracellular Ca ²⁺ signaling: a novel function for the metabolic enzyme pyruvate kinase M2 (PKM2)"
10:15-10:40	Coffee break
10:40-12:30	Lysosomal Ca²⁺ signalling <i>Chair: Sandip Patel</i>
10:40	O13: Teresa Alonso (University of Valladolid, Spain): "Endo-lysosomal Ca ²⁺ signalling: a luminal view"
11:05	O14: José-Manuel Cancela and Lora Martucci (Paris-Saclay Institute of Neuroscience, France): "Endolysosomal two-pore channels (TPC) regulate social behaviour by controlling oxytocin secretion"
11:35	O15: Diego Medina (TIGEM at Pozzuoli, Italy): "TRP Mucolipins and TFEB"
12:00	O16: Lynn McKeown (University of Leeds, UK): "The role of NAADP-dependent calcium release on Rab46 activity in endothelial cells"
12:15	O17. Volodymyr Tsvilovskyy (University of Heidelberg, Germany): "OCaR1 confers exocytotic vesicles an autoregulatory competence to prevent Ca ²⁺ release, exocytosis and pancreatic disorder"
12:30-13:45	Lunch
13:45-15:30	Ca²⁺ signalling in nanodomains at membrane contact sites Sponsored by the journal <i>Contact</i> <i>Chair: Khaled Machaca</i>
13:45	O18: Manuela Zaccolo (University of Oxford, UK): "Regulation of cardiac calcium homeostasis by nano-domain cAMP signalling"



14:10	O19: Murali Prakriya (Northwestern University, USA): "Calcium regulation in the SOCE nanodomain: new insights into calcium-dependent inactivation of Orai1 channels"
14:35	O20: Patrick Hussey (Durham University, UK): "Interactions between the cytoskeleton and membranes: building an ER-PM contact site <i>in planta</i> ."
15:00	O21: Muhammad Yasir (University of Helsinki, Finland): "Three dimensional microscopy of endoplasmic reticulum I thyroid cells by serial block face SEM and TEM"
15:15	O22: Axel Tollance (University of Geneva, Switzerland): "Ca-independent role of Orai3 in the human muscle cell activation"

15:30-15:50 Flash Symposium
Chair: Amalia Dolga

16:00-16:30 *Early Career Researchers meet the editors session*

Muscr, Bearra and Ardmore meeting rooms, along the corridor from Devere Hall

16:40-end Extended Poster Session 1 (Finger food included)
odd numbers: 16:40-17:40 / even numbers: 17:40-18:40

Tuesday 23rd August 2022

09:00-10:45 **Ca²⁺ signalling in Alzheimer's disease**
Chair: Mark Rae

09:00	O23: Ilya Bezprozvanny (University of Texas Southwestern, USA): "Sigma-1 receptor – a role in neuronal signaling and neurodegeneration"
09:25	O25: Alexej Verkhratsky (University of Manchester, UK): "Astroglial signalling in ageing and AD"
09:50	O26: Paloma Garcia-Casas (University of Padua, Italy): "ATAD3A, a novel interactor of Mfn2. Implications on Ca ²⁺ signalling in the context of Alzheimer's disease"
10:05	O27: Gaiti Hasan (NCBS, TIFR, Bengaluru 560065, India): "Septin 7 knock-outs rescue SOCE-dependent gene expression and motor learning deficits arising from mouse cerebellar Purkinje neurons"


10:20-11:10 Extended Coffee break

11:10-12:15 **Ca²⁺ signalling and organoids**
Chair: Carlos Villalobos

11:10	O28: Joris Vriens (KU Leuven, Belgium): "Endometrial organoids as a model to study fetal - maternal crosstalk"
11:35	O29: Nathalie Vergnolle (INSERM Delegation Regionale Occitanie Pyrenees, France): "Organoid cultures for pharmacology studies"

12:00	O30: Amalia Dolga (University of Groningen, The Netherlands): “Alterations in mitochondrial metabolism and calcium pathways in familial Alzheimer’s disease iPSC-derived neuronal cells and brain organoids”
12:15	Group Photo (weather permitting, in the amphitheatre immediately outside of the venue).
12:30-13:30	Lunch (a “packed lunch” to facilitate tourism)
13:30-end	Tourism. Choice of tours, to be announced at the Opening.

Wednesday 24th August 2022

08:30-10:15	Ca²⁺ signalling in evolution Chair: John Mackrill	
08:30	O31: Glen Wheeler (Marine Biological Association, Plymouth, UK): “Evolution of a novel class of voltage-gated calcium channels in marine diatoms”	
08:55	O32: Silvia Moreno (University of Georgia, USA): “Divergent calcium signalling pathways of <i>Toxoplasma gondii</i> ”	
09:20	O33: Holly Shiels (University of Manchester, UK): “Calcium cycling in the avian heart - the 'missing link' in vertebrate EC coupling”	
09:45	O34: Indu Nair (University College Cork, Ireland): “Characterization of a candidate inositol 1,4,5-trisphosphate receptor (IP ₃ R) in <i>Phytophthora infestans</i> - an oomycete pathogen causing Potato Late Blight”	
10:15	O35: Rishav Mitra (NCBS, TIFR, Bengaluru 560065, India): “SOCE shapes developmental gene expression in dopaminergic neurons of the <i>Drosophila</i> flight circuit”	
10:30-10:50	Coffee break	
10:50-11:55	Different dimensions in Ca²⁺ signalling in cancer Sponsored by the charity Breakthrough Cancer Research Chair: Gregory Monteith	
10:50	O36: Natalia Prevarskaya (University of Lille, France): “Calcium oscillations in cancer cells”	
11:15	O37: Julie Gehl (University of Copenhagen, Denmark): “How calcium can be used to treat cancer”	
11:40	O38: Flore Sneyers (KU Leuven, Belgium): “BAPTA directly inhibits PFKFB3, thereby impeding mTORC1-driven Mcl-1 translation and killing Mcl-1-addicted cancer cells”	
11:55	O39: Silke Chalmers (Aarhus University, Denmark & University of Queensland, Australia): “Uncovering the calcium conversation between breast cancer and the brain microenvironment”	
12:10	O40: Danielle Love (CoolLED, Andover, UK): “LED light sources for Calcium Imaging”	

12:15-14:15	Extended poster session 2 (Finger food included) even numbers: 12:15-13:00 / odd numbers: 13:00-14:15
14:15-16:00	Neuronal calcium sensors from physiology to disease <i>Chair: Jose Naranjo</i>
14:15	O41: Karl-Wilhelm Koch (University of Oldenburg, Germany): "Control of photoreceptor function by NCS proteins"
14:40	O42: Daniele Dell'Orco (University of Verona, Italy): "Retinal dystrophies associated with point mutations in guanylate cyclase activating proteins"
15:05	O43: Valerio Marino "Ca ²⁺ sensitivity of the prototypical Neuronal Calcium sensor recoverin is tuned by synergistic protein-protein and protein-membrane interactions."
15:20	O44: Florian Becker (University of Freiburg, Germany): "Conformational dynamics of calcineurin B homologous protein 3"
15:35	O45: Thomas Simmen (University of Alberta, Canada): "The Endoplasmic Reticulum (ER) Kinase PERK Mediates Metabolic Adaptation and Ca ²⁺ Signaling Using the Oxidoreductase Ero1"
15:50-16:00	Brief break
16:00-17:00	ECS General Assembly
17:00-17:15	Brief break
17:15-18:15	O46: Sir Michael Berridge Lecture Shmuel Muallem: "Ion Transporters and lipids at the ER/PM Junctions"
19:15-20:00	Gala Dinner, Cork City Gaol.

Delegates to make their own way to the Gaol (unless they would like to walk there with some of the organizers). On arrival, there will be a prosecco reception and music. Dining will commence at approximately 20:00. Dinner will be followed by a night of music and dance.

Thursday 25th August 2022

9:00-10:20	Ca²⁺ signalling in plants <i>Chair: Doron Shkolnik</i>
09:00	O47: Ute Vothknecht (University of Bonn, Germany): "Calcium regulation of organellar function"
09:25	O48: Alex Costa (University of Milan, Italy): " <i>In vivo</i> calcium dynamics in plant cells: a holistic view"
09:50	O49: Philip Steiner (University Linz, Austria): "Pharmacological modulation of TPC1 regulates inter-organellar Ca ²⁺ homeostasis in immune cells and plays an important role in allergic hypersensitivity"

10:05 O50. Andrea Crosino (University of Turin, Italy): “Investigating the role of clathrin-mediated endocytosis in Myc-factors perception in arbuscular mycorrhizas”

10:20-10:50 jECS session
Chair: jECS Board members

10:20 O51: Short Talk 1, to be selected at the jECS Satellite Meeting (20th August 2022)

10:35 O52: Short Talk 2, to be selected at the jECS Satellite Meeting (20th August 2022)

10:50-11:15 Coffee break

11:15-12:15 Late breaking session
Chair: Geert Bultynck

11:15 O53: Irina Serysheva (The University of Texas Health Science Center at Houston, USA): “Structural dynamics of IP₃R underlying its gating and regulation”

11:40 O54: Sandip Patel (University College London, UK): “Segregated cation flux by TPC2 biases Ca²⁺ signalling through lysosomes”

12:05 O55: Axel Methner (University Medical Center Mainz, Germany): “TMBIM5 loss of function alters mitochondrial matrix ion homeostasis and causes a skeletal myopathy”

12:30-12:45 Award ceremony and concluding remarks

12:45-14:00 Farewell lunch