International Gap Junction Conference

A Coruña, SPAIN

July 16th to 20th 2022

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#IGJC2022



Technical Secretariat:
Océano Azul Comunicación
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International Gap Junction Conference 2022

Program

SATURDAY 16th July 2022

14:00 – 18:30 **Open registration**
Palexco *Muelle de Trasatlánticos, s/n, 15003 A Coruña*

18:30 – 20:30 **Cocktail Reception Party**
Palexco *Muelle de Trasatlánticos, s/n, 15003 A Coruña*



SUNDAY 17th July 2022

08:30 Registration Open

09:15 Welcome ceremony: *María D. Mayán (INIBIC), Trond Aasen (VHIR), Arantxa Tabernero (INCYL), Luis Barrio (IRYCIS) and Henrique Girao (ICBR)*

Chairs: Arantxa Tabernero (Spain), Paula Carpintero (Spain)

09:30 - 10:15 KEYNOTE 1

From calcium to connexins: from the heart of matter to the brain of thoughts.
LUC LEYBAERT
Full Professor, Head of the Physiology Group, Dept. of Basic & Applied Medical Sciences, Faculty of Medicine & Health Sciences, Ghent University, Belgium

10:15 - 10:30 Emerging Star Award

Osteocytic connexin hemichannel regulation of adiposity through modulation of bone marrow cellular populations.
Francisca Acosta
Acosta, Francisca[(1)]; Zhang, Jingruo[(1)]; Hernández, Elizabeth[(2)]; Hua, Rui[(1)]; Brey, Eric[(2)]; Jiang, Jean[(1)]
Department of Biochemistry and Structural Biology, UT Health San Antonio, San Antonio, TX, USA[(1)] ; Department of Biomedical Engineering and Chemical Engineering, The University of Texas at San Antonio, San Antonio, TX, USA[(2)]

10:30 - 11:00 Coffee Break

11:00 – 13:00 PLENARY 1

Chairs: Brant Isakson (USA), Jean Jiang (USA)

Oscillatory shear stress augments endothelial pannexin1 by inhibiting macro-autophagy.
Filippo Molica
Hautefort, Aurélie; Ehrlich, Avigail; Idris, Tahir; Pelli, Graziano; Foglia, Bernard; Molica, Filippo; Kwak, Brenda R.
University Of Geneva, Geneva, Switzerland.

Impairment of gap junction turnover causes debilitating morphological and functional defects.
Matthias Falk
Hyland, Caitlin; Lovine, M. Kathryn; Falk, Matthias M.
Lehigh University

Regulation of the size of Cx43-based gap junctions involves the concurrent participation of multiple members of the NEDD4 family of E3 ubiquitin ligases.
Edward Leithe
Zachrisson Totland, Max; Lander Rasmussen, Nikoline; Lunder Jensen, Caroline; Basing, Sebastian; Zickfeldt Lade, Anna Amalie; Yohannes, Zeremariam; Lothe, Ragnhild; Leithe, Edward
Oslo University Hospital, Oslo, Norway

Dynamic rearrangements at the Nt domain of connexin hemichannels control atomic ion permeation.
Jorge Contreras
Gaete, Pablo[(1)]; Valdez-Capuccino, Juan[(2)]; Liu, Yu[(2)]; Harris, Andrew[(2)]; Luo, Yun[(3)]; Contreras , Jorge E. [(1)]
Department of Physiology and Membrane Biology, School of Medicine, University of California Davis[(1)]; Department of Pharmacology, Physiology, and Neuroscience, New Jersey Medical School, Rutgers University[(2)]; Department of Pharmaceutical Sciences, College of Pharmacy, Western University of Health Sciences[(3)]

Multiple connexin-linked mechanisms underpin Erythrokeratodermia variabilis et progressiva.
Sergiu Lucaciu
Lucaciu, Sergiu A.; Figliuzzi, Rhett; Shao, Qing; Barr, Kevin; Bai, Donglin; Laird, Dale W.
The University of Western Ontario

FLASH PRESENTATIONS

- The hydrophobic residues in amino terminal domains of Cx46 and Cx50 are important for their gap junction channel ion permeation and gating.
  Donglin Bai
  Jaradat, Roa'a; Stathopulos, Peter; Donglin, Bai
  Western University

- The electrical connectivity of retinal pigment epithelium depends on gap junctions and connexin hemichannels.
  Julia Fadjukov



Fadjukov, Julia[(1)]; Wienbar, Sophia[(2)]; Schwartz, Gregory[(2)]; Ihalainen, Teemu[(1)]; Nymark, Soile[(1)]
Tampere University, Tampere, Finland[(1)]; Northwestern University, Chicago, IL, USA[(2)]

- Characterization of connexin-43 and pannexin-1 activity and their involvement in purinergic signaling in a human eccrine sweat gland cell line.
Carmela Errico
Errico, Carmela[(1)]; Swanzy-Krah, Marino E.[(1)]; Garcia-Vega, Laura[(1)]; Evans, Richard L.[(2)]; Martin, Patricia E.[(1)]
Glasgow Caledonian University[(1)]; Unilever Research & Development[(2)]

- The amino terminal domain of connexin36 is involved in regulation of gap junction channels by intracellular magnesium ions.
Lina Kraujaliene
Kraujalis, Tadas; Gudaitis, Lukas; Kraujaliene, Lina; Snipas, Mindaugas; Palacios-Prado, Nicolás; Verselis, Vytas K
Lithuanian University of Health Sciences, Kaunas, Lithuania; Pontificia Universidad Católica de Chile, Santiago, Chile; Universidad de Valparaíso, Valparaíso, Chile; Albert Einstein College of Medicine, New York, NY, United States

- Gap junctions increase cell volume dynamics through solute transport.
Derek Beahm
Beahm, Derek; Bone, Alexandra; Haley, Hope
Suny Buffalo State

13:00 – 13:15 Opening ceremony: *María D. Mayán (INIBIC) and Authorities*

13:15 – 14:30 Lunch

14:30 - 15:30 PLENARY 2

Chairs: Edward Leithe (Norway), Scott Johnstone (USA)

Understanding how kinases differentially affect Cx45 and Cx43 regulation under similar cellular conditions.
Gaelle Spagnol
Spagnol, Gaelle[(1)]; Zheng, Li[(1)]; Trease, Andrew[(1)]; Beuve, Annie[(2)]; Patel, Kaushik[(1)]; Sorgen, Paul[(1)]
University Of Nebraska Medical Center[(1)]; Rutgers New Jersey Medical School[(2)]



Connexin43 enhances cellular senescence and cell death by apoptosis in BRAF-mutant tumour cells by regulating mitochondrial biogenesis and DNA damage.

Amanda Guitián Caamaño

Guitián-Caamaño, Amanda[(1)]; Varela-Vázquez, Adrián[(1)]; Carpintero-Fernández, Paula[(1)]; Carneiro-Figueira, Alexander[(1)]; Varela-Eirín, Marta[(2)]; Montes-Morado, Tania[(1)]; Bravo, Susana B.[(3)]; Concha, Ángel[(4)]; Calleja-Chuclá, Teresa[(5)]; Quindós, María[(6)]; Sánchez-Laorden, Berta[(7)]; Santamaría, David[(8)]; Fonseca, Eduardo[(1)(9)]; Gómez-Duran, Aurora[(10)]; Mayán, María D. [(1)]

CellCOM Group, INIBIC, SERGAS, UDC, A Coruña, Spain[(1)]; ERIBA. UMCG, University of Groningen, Groningen, The Netherlands [(2)]; IDIS, Proteomics Laboratory, Santiago De Compostela, Spain[(3)]; Pathology Department, CHUAC, SERGAS, A Coruña, Spain[(4)]; Pharmacy Service. CHUAC, SERGAS. UDC, A Coruña, Spain[(5)]; Oncology Service, INIBIC. CHUAC, SERGAS. UDC. A Coruña, Spain[(6)]; Instituto De Neurociencias, Consejo Superior De Investigaciones Científicas and Universidad Miguel Hernández, San Juan De Alicante, Spain[(7)]; CIC-CSIC. Salamanca, Castilla and León, Spain[(8)]; Dermatology Service, SERGAS, UDC, A Coruña, Spain[(9)]; Mitophenomics Lab. Centro De Investigaciones Biológicas Margarita Salas. (CIB-CSIC). Madrid, Spain[(10)]

Mechanistic studies of connexins in lens growth, homeostasis and cataractogenesis.

Xiaohua Gong

Gong, Xiaohua; Xia, Chun-Hong

Vision Science and Optometry, University of California, Berkeley

Heterozygous carriers of Cx26 (GJB2) mutations are susceptible to noise leading to hearing loss.

Hongbo Zhao

University Of Kentucky Medical School

15:30 – 16:00 Coffee Break

16:00 - 16:45 PLENARY 3

Chairs: Lilian Plotkin (USA), Rocio Talaverón (Spain)

Electrical synapses between interneurons in vivo are stable, yet highly plastic.

Marcel Weinreich

Weinreich, Marcel[(1)]; Koser, David Elias[(1)]; Held, Katharina[(1)]; Whittington, Miles[(2)]; Kuner, Thomas[(3)]; Knabbe, Johannes[(3)]; Monyer, Hannah[(1)]

Medical Faculty of Heidelberg University and German Cancer Research Center, Heidelberg, Germany[(1)]; Hull York Medical School, University Of York, Heslington[(2)];



Medical Faculty Of Heidelberg University and Heidelberg University Hospital, Heidelberg, Germany[3]

Respiratory disturbances in the Connexin-36 knockout mouse.

Luis C. Barrio
Pérez-Atencio, Leonel F.[1]*; Casarrubios, Ana M.*[1]*; Ibarz, José M.*[1]*; Barios, Juan A.*[2]*; Paul, David L.*[3]*; Barrio, Luis C.*[1]
Unit of Experimental Neurology, "Ramón y Cajal" Hospital (IRYCIS), Madrid, Spain[1]*; Systems Engineering and Automation Department, Miguel Hernández University, Elche, Spain*[2]*; Department of Neurobiology, Harvard Medical School, Boston, United States*[3]

Molecular basis of junctional current rectification at an electrical synapse.

Zhao-Wen wang
Shui, Yuan; Liu, Ping; Chen, Bojun; Wang, Zhao-Wen
University of Connecticut, School of Medicine

16:45 - 17:30 KEYNOTE 2

An unexpected journey: following pannexin 1 on the road to understanding the development of nerve cell connections.

LEIGH ANNE SWAYNE
Associate Professor in the Division of Medical Sciences at the University of Victoria in Victoria, British Columbia, Canada

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17:30 – 19:30 POSTER SESSION with coffee and drinks



MONDAY 18h July 2022

09:00 – 09:45 KEYNOTE 3

Chairs: Trond Aasen (Spain), Kirk Taylor (UK)

Connexin Mediated Communication: Bridging the Gap - A Gap Junction Family Perspective. In memory of Professor Howard Evans.

PATRICIA MARTIN
Reader in Cell Biology, Department of Biological and Biomedical Sciences, School of Health and Life Sciences, Glasgow Caledonian University

09:45 – 10:00 Emerging Star Award

Connexin 43-mediated neurovascular interactions regulate neurogenesis in the adult brain subventricular zone.

Nafiisha Genet
Genet, Nafiisha[(1)]; Genet, Gael[(1)]; Fang, Jennifer[(2)]; Chavkin, Nicholas[(1)]; Vasavada, Hema[(2)]; Goldberg, Josh[(2)]; Bhatt, Neha[(2)]; Baker, Kasey[(2)]; Mcdonnell, Stephanie[(1)]; Huba, Mahalia[(1)]; Ma, Gerry[(3)]; Eichmann, Anne[(2)]; Thomas, Jean-Leon[(2)]; Ffrench-Constant, Charles[(3)]; Hirschi, Karen[(1)]
University Of Virginia[(1)]; Yale University[(2)]; University Of Edinburgh[(3)]

10:00 - 10:30 Coffee Break

10:30 - 12:30 PLENARY 4

Chairs: Robert Gourdie (USA), Jade Montgomery (Switzerland)

Peptide-based targeting Cx26 complex in triple negative breast cancer inhibits cancer stem cells and suppresses tumor growth.

Ofer Reizes
Rhoades, Emily L.; Mulkearns Hurbert, Erin; Ben-Salem, Salma; Bharti, Rashmi; Johnson, Sadie; Myers, Alex; Bandyopadhyay, Samarajit; Downs-Kelly, Erinn; Lathia, Justin D.; Reizes, Ofer
Cleveland Clinic

An aerosolized Connexin43 mimetic peptide (ACT1) improves clinical metrics in animal models of acute lung injury.

Meghan Bowler
Bowler, Meghan[(1)]; James, Carissa[(1)]; Jeffers, Lauren[(2)]; Ibrahim, Yasmin[(2)]; Koval, Michael[(2)]; Grek, Christina[(1)]
Xequel Bio, Inc.[(1)]; Emory University, School Of Medicine[(2)]

A central role for gap junctions in the pathophysiology and etiology of endometriosis.

Bruce Nicholson
Nicholson, Bruce J[(1)]; Chavez, Jefferey[(1)]; Chen, Chun-Wei[(2)]; Wang, Chiou-Miin[(1)]; Kumar, Ritikaa[(1)]; Gaczynska, Maria[(1)]; Osmulski, Pawel[(1)]; Robinson, Randall D[(1)]; Kirma, Nameer B[(1)]
University of Texas Health at San Antonio, Texas, USA[(1)]; University of Massachusetts School of Medicine, Worcester, MA, USA[(2)]

Connexin 43 as a regulator of proliferation and neointimal formation in human vascular tissue.

Meghan Sedovy
Sedovy, Meghan W. [(1)]; King, D. Ryan[(2)]; Eaton, Xinyan[(1)]; Joshi, Ramya[(1)]; Malek, Arya[(1)]; Baillie, George S. [(3)]; Baker, Joseph W. [(4)]; Joseph , Mark[(4)]; Smyth, James W. [(1)]; Isakson, Brant E. [(5)]; Johnstone , Scott R. [(1)]
Fralin Biomedical Research Institute at Virginia Tech Carilion School of Medicine, Roanoke, VA, USA[(1)]; Dorothy M. Davis Heart and Lung Research Institute, College of Medicine, The Ohio State University Wexner Medical Center, USA[(2)]; Institute of Cardiovascular & Medical Sciences, University of Glasgow, Glasgow, UK[(3)]; Virginia Tech Carilion School of Medicine, Department of Surgery, Roanoke, VA, USA[(4)]; Robert M. Berne Cardiovascular Research Center At University Of Virginia School Of Medicine, Charlottesville, VA, USA[(5)]

Connexin-43 (Cx43) inhibition decreases mitochondria transfer between human mesenchymal stromal cells and articular chondrocytes.

Rebecca Irwin
Irwin, Rebecca M[(1)]; Thomas, Matthew A[(1)]; Mayán, María D[(2)]; Fahey, Megan J[(1)]; Delco, Michelle L[(1)]
Cornell University[(1)]; INIBIC[(2)]

Panx1 in lymphatic endothelium regulates tissue fluid homeostasis and absorption of dietary fats.

Avigail Ehrlich
Avigail, Ehrlich; Filippo, Molica; Brenda, Kwak
University Of Geneva



FLASH PRESENTATIONS

- Impairment of autophagic flux: another antitumor effect of TAT-Cx43266-283 in glioblastoma stem cells.
  Claudia Ollauri Ibánez
  G. Pelaz, Sara; Ollauri-Ibáñez, Claudia; Lillo, Concepción; Tabernero, Arantxa
  Neuroscience Institute of Castilla y León (INCYL), Institute of Biomedical Research of Salamanca (IBSAL), University Of Salamanca, Salamanca, Spain.

- Expression of the methylcytosine dioxygenase TET-2 and Cx43 in inflammatory bowel disease and colorectal cancer.
  Marwan E. Sabban
  El-Harakeh, Mohammad[(1)]; Saliba, Jessica[(2)]; Sharaf Aldeen, Kawthar[(1)]; Haidar, May[(1)]; El Hajjar, Layal[(1)]; Kallassy, Mireille[(3)]; Hashash, Jana[(1)]; Shirinian, Margret[(1)]; El-Sabban, Marwan[(1)]
  Faculty of Medicine, American University of Beirut, Beirut, Lebanon[(1)]; Faculty of Sciences, Lebanese University, Beirut, Lebanon[(2)]; Faculty of Science, Université Saint-Joseph De Beyrouth, Beirut, Lebanon[(3)]

- The Carboxyl-terminal alpha-connexin peptide (ACT1) exerts differential effects on the viability of benign and malignant canine mammary cell lines.
  Maria Dagli
  Mackowiak Da Fonseca, Ivone Izabel[(1)]; Nagamine, Marcia Kazumi[(1)]; Sato, Ayami[(1)]; Yeh, Elizabeth Shinmay[(2)]; Dagli , Maria Lucia Zaidan[(1)]
  University of Sao Paulo, School of Veterinary Medicine and Animal Science[(1)]; Indiana School of Medicine Department of Pharmacology and Toxicology [(2)]

- Boosting susceptibility of melanoma cells to immune cell-mediated killing by Cx43 targeting agents.
  Andres Tittarelli
  Andrés, Tittarelli; Natalia, Hassan
  Universidad Tecnológica Metropolitana

- Dietary glycemic stress impacts levels of Cx43 and Cx45 in mouse brain regions.
  Eloy Bejarano Fernandez
  Aragonès, Gemma[(1)]; Francisco, Sarah[(1)]; Smith, Kelsey[(1)]; Rowan, Sheldon[(1)]; Whitcomb, Elisabeth[(1)]; Zheng, Tong[(1)]; Shukitt-Hale, Barbara[(1)]; Taylor, Allen[(1)]; Bejarano, Eloy[(2)]
  USDA HNRCA-TUFTS[(1)]; Universidad CEU Cardenal Herrera[(2)]



12:30 - 14:00 Lunch
OPTIONAL DAY TRIP

TUESDAY 19th July 2022

09:00 – 09:45 KEYNOTE 4
Chairs: Henrique Girao (Portugal), Filippo Molica (Switzerland)

PAUL SORGEN
Professor at the Deparment of Biochemistry and Molecular Biology, College of Medicine. University of Nebraska Medical Center

09:45 - 10:00 Emerging Star Award

GJA1-20K rescues Connexin 43 trafficking and reduces arrhythmias in the demoglein 2 mutant mouse model of arrhythmogenic cardiomyopathy.
Joseph Palatinus
Palatinus, Joseph; Valdez, Steven; Taylor, Lindsey; Whisenant, Claire; Shaw, Robin
University Of Utah

10:00 - 10:30 Coffee break

10:30 – 12:30 PLENARY 5

Chairs: Michael Koval (USA), Maria Dagli (Brazil)

Channel-independent function of golgi-localized pannexin 3.
Brant Isakson
Wolpe, Abigail[(1)]; Luse, Melissa[(1)]; Johnstone, Scott[(2)]; Baryjames, Christopher[(1)]; Wakefield, Brent[(3)]; Barr, Kevin[(3)]; Frank, Beier[(3)]; Redemann, Stefanie[(1)]; Penuela, Silvia[(3)]; Columbus, Linda[(1)]; Isakson, Brant[(1)]
University of Virginia[(1)]; Carilian Institute, VT[(2)]; University of Western Ontario[(3)]

Biological function, trafficking and degradation routes of connexin43 localized at the nuclear envelope.

Tânia Martins-Marques
Martins-Marques, Tânia[(1)]; Witschas, Katja[(2)]; Leybaert, Luc[(2)]; Girao, Henrique[(1)]
University of Coimbra, Coimbra Institute for Clinical And Biomedical Research (ICBR), Faculty of Medicine, Coimbra, Portugal[(1)]; Department of Basic Medical Sciences – Physiology Group, Ghent University, Belgium[(2)]

Dynamic transcription start site USAge alters GJA1 mRNA 5'UTR composition, regulating translation initiation, and modulating gap junction formation.

Michael Zeitz
Zeitz, Michael[(1)]; Shrontz, Ellen[(2)]; González Velázquez, Airinés[(1)]; James, Carissa[(3)]; Smyth, James[(1)]
Fralin Biomedical Research Institute at Vtc, Roanoke, Virginia, USA[(1)]; Virginia Tech Carilion School of Medicine, Roanoke, Virginia, USA[(2)]; Graduate Program in Translational Biology, Medicine and Health, Virginia Tech, Blacksburg, Virginia, USA[(3)]

Extent of pannexin 1 expression in smooth muscle cells regulates sympathetic nerve induced constriction.

Michael Koval
Dunaway, Luke[(1)]; Billaud, Marie[(2)]; Macal, Edgar[(1)]; Good, Miranda[(3)]; Lorenz, Ulrike[(1)]; Ravichandran, Kodi[(4)]; Isakson, Brant[(1)]; Koval, Michael[(5)]
University of Virginia School of Medicine[(1)]; Brigham and Women's Hospital[(2)]; Tufts Medical Center[(3)]; Washington University School of Medicine[(4)]; Emory University School of Medicine[(5)]

Function and distribution of gap junction associated sodium channels in neonatal myocytes as assessed by super-resolution patch-clamp.

Robert Gourdie
Álvarez-Laviada, Anita[(1)]; Gourdie, Robert[(2)]; Gorelik, Julia[(1)]
National Heart and Lung Institute, Imperial College London, London, United Kingdom[(1)]; Fralin Biomedical Research Institute, Virginia Tech, Roanoke, VA, USA[(2)]

Panx1 as a new target in the prevention of cardiac ischemia/reperfusion injury.

Olga Rusiecka
Rusiecka, Olga; Molica, Filippo; Morel, Sandrine; Kwak, Brenda
Department of Pathology and Immunology and Dept of Cell Physiology and Metabolism, University of Geneva, Switzerland



FLASH PRESENTATIONS

- Modulation of cell to cell action potential conduction by the dynamic clamp to study the roles of gap junction and ephaptic coupling.
  Virgis Valiunas
  Valiunas, V; Cohen, Is; Brink, Pr; Mathias, Rt
  Department Of Physiology and Biophysics, Stony Brook University, Stony Brook, NY, USA

- Overexpression of endothelial pannexin1 impairs post-ischemic stroke cerebral blood flow recovery.
  Maria Tomas Gracia
  Tomas Gracia, Maria[(1)]; Duffy, Colleen K[(1)]; Shahab, Guleer[(2)]; Medina, Chris[(2)]; Ravichandran, Kodi S[(3)]; Isakson, Brant E[(2)]; Good, Miranda E[(1)]
  Tufts Medical Center[(1)]; University of Virginia[(2)]; Washington University School of Medicine[(3)]

- Outer membrane current recordings in nuclei isolated from HEK-CX43 cells demonstrate Cx43 hemichannel opening activity.
  Katja Witschas
  Witschas, Katja[(1)]; Marques, Tânia[(2)]; Leybaert, Luc[(1)]; Girao, Henrique[(2)]
  Department of Basic and Applied Medical Sciences-Physiology Group, Ghent University, Belgium[(1)]; Coimbra Institute for Clinical And Biomedical Research (ICBR), Faculty of Medicine, University of Coimbra, Portugal[(2)]

- Structure-function analysis of pannexin-1 permeability to anandamide.
  Connor Anderson Anderson
  Anderson, Connor; Thompson, Roger
  University Of Calgary

- GJA1-20K regulates inflammation in the dsg2 mutant model of arrhythmogenic cardiomyopathy.
  Steven Valdez
  Valdez, Steven; Taylor, Lindsey; Shaw, Robin; Palatinus, Joseph
  University Of Utah

12:30 - 14:00 Lunch



14:00 – 15:00 Plenary 6

Chairs: Anaclet Ngezahayo (Germany), Tânia Martins-Marques (Portugal)

Shear stress activates P2X4 receptor currents by triggering XX43 hemichannels in atrial myocytes: possible role on atrial adaptation to pressure overload.
Sun- Hee Woo
Kim, Joon-Chul; Do, Long Nh; Trinh, Tran N; Kim, Luong Phuong; Le, Qui A; Woo, Sun-Hee
Chungnam National University

Cx43 modulates reverse electron transfer in subsarcolemmal cardiac mitochondria from CX43CRE-ER(T)/FL mice independently of changes in mitochondrial membrane potential.
Marta Consegal Pérez
Consegal, Marta; Miró-Casas, Elisabet; Ruiz-Meana, Marisol; Inserte, Javier; Benito, Begoña; Rodríguez-Sinovas, Antonio
Vall D'hebron Research Institute, Cardiovascular Diseases Research Group

Adenovirus increases arrhythmia susceptibility during acute cardiac infection.
James Smyth
Padget, Rachel[(1)]; Blair, Grace[(1)]; North, Michael[(2)]; Zeitz, Michael[(3)]; Tanenbaum, Mira[(2)]; King, D. Ryan[(1)]; Hoeker, Gregory[(3)]; Swanger, Sharon[(3)]; Poelzing, Steven[(3)]; Smyth, James[(3)]
Graduate Program in Translational Biology, Medicine, and Health, Virginia Tech, Blacksburg, Virginia, USA[(1)]; Virginia Tech Carilion School of Medicine, Roanoke, Virginia, USA[(2)]; Fralin Biomedical Research Institute at Vtc, Roanoke, Virginia, USA[(3)]

Preservation of gap junction coupling suppresses arrhythmogenic discordant alternans and VT/VF during resuscitation from cardiac arrest.
Lance Wilson
Wilson, Lance[(1)]; Piktel, Joseph[(1)]; Pawlowski, Gary[(1)]; Gourdie, Robert[(2)]; Laurita, Kenneth[(1)]
Metrohealth System, Case Western Reserve University[(1)]; Fralin Biomedical Research Institute, Virginia Tech[(2)]

15:00 -15:30 Coffee break



15:30 – 17:00 PLENARY 7

Chairs: Matthias Falk (USA), Nafiisha Genet (USA)

Osteocytic connexin 43 hemichannels regulate remodeling of perilacunar/canalicular bone matrix.
Jean Jiang
Jiang, Jean[(1)]; Hua, Rui[(1)]; Truong, Vu[(2)]; Fajardo, Roberto[(2)]; Wang, Jingya[(3)]; Cheng, Hongyun[(1)]; Gu, Sumin[(1)]
University of Texas Health Science Center[(1)]; School of Osteopathic Medicine, University of The Incarnate Word[(2)]; Texas A&M College of Dentistry[(3)]

Regulation of osteocyte morphology, gene expression, and viability by Cx43 and the fragile X mental retardation1 gene FMR1.
Lilian Plotkin
Deosthale, Padmini; Marakovits, Corinn; Plotkin, Lilian
Indiana University School of Medicine

Pannexin 3 channels regulate tissue architecture, barrier function, keratinocyte adhesion, and inflammatory responses during skin aging.
Brooke O'Donnell
O'donnell, Brooke[(1)]; Sanchez-Pupo, Rafael[(1)]; Sayedyahossein, Samar[(1)]; Karimi, Mehdi[(2)]; Bahmani, Mehrnoosh[(3)]; Zhang, Christopher[(1)]; Johnston, Danielle[(1)]; Kelly, John[(1)]; Wakefield, C. Brent[(1)]; Barr, Kevin[(1)]; Dagnino, Lina[(1)]; Penuela, Silvia[(1)]
University of Western Ontario[(1)]; Illinois State University[(2)]; Ontario College of Pharmacists[(3)]

Connexin43 controls the metabolic response to obesogenic diets in mice via channel and scaffolding functions.
Roberto Civitelli
Lee, Seung-Yon; Fortunato, Manuela; Watkins, Marcus; Fontana, Francesca; Civitelli, Roberto
Washington University in St. Louis, USA

FLASH PRESENTATIONS

- The loss of gap junctions in excitable cells promotes mitochondrial stress-induced longevity in *C. elegans*.
  Daniel-Cosmin Marcu
  Busch, Karl Emanuel[(1)]; Vladis, Nathalie[(2)]; Marcu, Daniel-Cosmin[(1)]
  Hmu Health And Medical University, Potsdam[(1)]; Brandeis University[(2)]



- Panx1 dysfunction on the retinal ganglion cells during natural ageing.
  Paloma Harcha
  Harcha, Paloma[(1)]; Araya, Joaquín[(2)]; Neira, David[(1)]; Ibaceta, Cristobal[(1)]; Reyes, Pablo[(3)]; Escobar, María José[(3)]; Minozino, Jean-Gabriel[(4)]; Palacios, Adrián[(1)]
  Instituto de Neurociencias y Centro Interdisciplinario de Neurociencia de Valparaíso, Facultad de Ciencias, Universidad de Valparaíso, Valparaíso, Chile[(1)]; Escuela de Tecnología Médica, Facultad de Salud, Universidad Santo Tomás, Chile[(2)]; Departamento de Ingeniería Electrónica, Universidad Técnica Federico Santa María, Valparaíso, Chile[(3)] ;Escuela de Ingeniería Informática, Universidad de Valparaíso, Valparaíso, Chile[(4)]

- Dynamic role of connexin-45 in modulating blood brain barrier injury in cerebral amyloid angiopathy.
  Muyu Situ
  Situ, Muyu; Citalan-Madrid, Ali; Andjelkovic, Anuska
  University of Michigan, Ann Arbor, Michigan, USA

- Connexin43 expression and function in bovine milk-derived exosomes.
  Spencer Marsh
  Marsh, Spencer; Stanley, Kari; Jourdan, Jane; Gourdie, Robert
  Fralin Biomedical Research Institute

- Expression of connexins in the reticulum of bovine fetuses, newborn calves and adult bovines, and their importance for organ growth and remodeling.
  Francisco Blazquez
  Lopes Olio, Rennan[(1)]; Palma Rennó, Francisco[(2)]; Dagli, Maria Lúcia[(3)]; Hernandez-Blazquez, Francisco Javier[(4)]
  Institute of Biomedical Sciences, University of São Paulo[(1)]; Department of Animal Nutrition,School of Veterinary Medicine And Animal Science, University of Sao Paulo[(2)]; Departament of Pathology, School of Veterinary Medicine And Animal Science, University of Sao Paulo[(3)]; Departament of Surgery, School of Veterinary Medicine And Animal Science, University of Sao Paulo[(4)]

17:00 – 18:30 POSTER SESSION 2

19:00 – 20:00 MENTORING SESSION (free attendance until full capacity is reached)

Paraninfo del Rectorado, University of A Coruña (UDC).

Maestranza, 9, 15001 A Coruña. **10 min walk from Palexco (conference venue)**



Chairs: María D. Mayán (Spain), Arantxa Tabernero (Spain)

FILLING THE GAPS: TIPS AND PATHWAYS FOR CAREERS IN SCIENCE.

María Dagli. University of São Paulo, Brazil
Justin Lathia. Cleveland Clinic Lerner Research Institute, USA
Patricia Martin. Glasgow Caledonian University, UK
Robert Gourdie. Fralin Biomedical Research Institute at Virginia Tech, USA

20:00 – 20:30 Outdoor drinks and snacks



WEDNESDAY 20th July 2022

9:00 – 9:45 KEYNOTE 5
Chairs: María D. Mayán (Spain), Silvia Penuela (Canada)

Connexin cell biology in health and inherited diseases.
DALE W. LAIRD
Professor Canada Research Chair in Gap Junctions and Disease, Department of Anatomy and Cell Biology, University of Western Ontario, London, Ontario Canada

9:45 – 10:00 Emerging Star Award

Real-time assessment of inter-platelet communication and coordination of calcium signals by connexin gap junctions.
Kirk Taylor
Taylor, Kirk[(1)]; Bye, Alex[(2)]; Mitchell, Joanne[(3)]; Ray, Sabina[(1)]; Gibbins, Jonathan[(1)]
Institute for Cardiovascular and Metabolic Research, School of Biological Sciences, University of Reading, Reading, UK[(1)]; Molecular and Clinical Sciences Research Institute, St George's University, Cranmer Terrace, London, UK[(2)]; Department of Cardiovascular Sciences, University of Birmingham, Birmingham, UK[(3)]

10:00 – 10:30 Coffee break

10:30 – 12:30 PLENARY 8

Chairs: Justin Lathia (USA), James Smith (USA)

USP8 modulates Cx43 homeostasis in endothelial cells.
Teresa Ribeiro-Rodrigues
Ribeiro-Rodrigues, Teresa[(1)]; Vasconcelos-Cardoso, Maria[(1)]; Catarino, Steve[(1)]; Morel, Sandrine[(2)]; Kwak, Brenda R[(2)]; Girao, Henrique[(1)]
University of Coimbra, Coimbra Institute for Clinical and Biomedical Research (ICBR), Faculty of Medicine, Portugal[(1)]; Department of Pathology and Immunology, Faculty of Medicine, University of Geneva, Geneva, Switzerland[(2)]

Role of connexin43 interaction with microtubules in epithelial-mesenchymal transition and breast cancer metastasis.

Christina Wheeler
Wheeler, Christina; Deaver, Stacie; Sorayya, Aryo; Young, Kenneth; Zeitz, Michael; Smyth, James; Lamouille, Samy
Fralin Biomedical Research Institute at Virginia Tech Carilion, Roanoke, VA, USA

Effect of the anti-tumour peptide TAT-CX43266-283 on neural stem cells with glioma-driver mutations.

Andrea Álvarez-Vázquez
Álvarez-Vázquez, Andrea[(1)]; San-Segundo, Laura[(2)]; Cerveró-García, Pilar[(1)]; Flores-Hernández, Raquel[(1)]; Ollauri-Ibáñez, Claudia[(1)]; Segura-Collar, Berta[(3)]; Sánchez-Gómez, Pilar[(3)]; Pollard, Steven M.[(4)]; Tabernero, Arantxa[(1)]
INCYL, IBSAL, University of Salamanca, Salamanca, Spain[(1)]; Centre for Cancer Research-IBMCC (CSIC), IBSAL, Salamanca, Spain[(2)]; Neuro-Oncology Unit, Health Institute Carlos III, Madrid, Spain[(3)]; Centre for Regenerative Medicine, Institute for Regeneration and Repair, University of Edinburgh, Edinburgh, UK[(4)]

Connexin 43 drives glioblastoma cancer stem cell phenotypes through a WNK1 signaling axis.

Erin Mulkearns-Hubert
Mulkearns-Hubert, Erin E.; Hajdari, Nicole; Lathia, Justin D.
Cleveland Clinic Lerner Research Institute

Small extracellular vesicles as drug delivery systems to increase CDK4/6 inhibitors efficacy in ER+/HER2- breast cancer.

Paula Carpintero Fernández
Carpintero-Fernández[(1)], Paula; Barturen-Gómez, Marta[(1)]; García-Yuste, Alejandro[(1)]; Fontelo, Raúl[(1)]; Montes-Morado, Tania[(1)]; Santiago-Freijanes, Maria Paz[(2)]; Mosquera, Joaquin[(2)]; Acea, Benigno[(2)]; Mayan, María D[(1)]
CellCOM Research Group, INIBIC, SERGAS, UDC, A Coruña, Spain[(1)]; Breast Cancer Unit CHUAC, SERGAS. UDC, A Coruña, Spain[(2)]

Macrophages enhance the anti-tumour effect of TAT-CX43266-283 in mouse glioma models.

Rocío Talaverón
Talaverón, Rocío[(1)]; Morado-Díaz, Camilo J[(1)]; Álvarez-Vázquez, Andrea[(1)]; García-Vicente, Laura[(1)]; Flores-Hernández, Raquel[(1)]; Martín-Estebanéz, María[(2)]; Gómez-Nicola, Diego[(2)]; Tabernero, Arantxa[(1)]
Universidad de Salamanca[(1)]; University of Southampton[(2)]



Pannexin 1 expression and inhibition in patient-derived glioblastoma multiforme.
Danielle Johnston
Johnston, Danielle[(1)]; Van Kessel, Carlijn[(1)]; Kelly, John[(2)]; Sánchez-Pupo, Rafael[(1)]; O'donnell, Brooke[(1)]; Lau, Rebecca[(1)]; Herrera, Carolina[(1)]; Deweyert, Andrew[(1)]; Xu, Hu[(1)]; Ronald, John[(2)]; Hebb, Matthew[(3)]; Penuela, Silvia[(1)]
University of Western Ontario[(1)]; University of Western Ontario, Robarts Research Institute[(2)]; University of Western Ontario, London Health Sciences Centre[(3)]

12:30 – 14:00 Lunch

14:00 – 15:00 PLENARY 9

Chairs: Luis C. Barrio (Spain), Juan C. Sáez (Chile)

Role of Cx43 in invadopodia formation of human glioblastoma cells: 3D studies and analysis.
Gaboriau Aymerick
Aymerick, Gaboriau[(1)]; Sabrina, Penna[(2)]; Wun-Chey, Sin[(3)]; Christian, C. G. Naus[(3)]; Annie-Claire, Balandre[(1)]; Anne, Cantereau[(4)]; Aubin, Penna[(2)]; Marc, Mesnil[(1)]; Norah, Defamie[(1)]
Comet Laboratory, University of Poitiers[(1)]; 4cs Laboratory, University of Poitiers, France[(2)]; Department of Cellular & Physiological Sciences, The University of British Columbia, BC, Canada[(3)]; Image Up, University of Poitiers, France[(4)]

LPS increases the activity of Cx26 hemichannel in epithelial cells of the respiratory airways.
Anaclet Ngezahayo
Dierks, Anne[(1)]; Lehrich, Tina[(1)]; Schaefer, Anne-Marie[(1)]; Tamm, Stephanie[(2)]; Braubach, Peter[(3)]; Stanke, Frauke[(2)]; Ngezahayo, Anaclet[(1)]
Department of Cell Physiology And Biophysics, Institute of Cell Biology and Biophysics, Leibniz University Hannover, Hannover, Germany[(1)]; Department of Pediatric Pneumology, Neonatology and Allergology, Hannover Medical School, Hannover, Germany[(2)]; Institute for Pathology, Hannover Medical School, Germany[(3)]

Role of connexin43 in modulating cellular senescence.
Marta Varela Eirín
Varela Eirín, Marta[(1)]; Nehme, Jamil[(2)]; Mayán, María D.[(1)]; Demaria, Marco[(1) (2)]
European Research Institute for The Biology of Ageing (ERIBA), University Medical Center Groningen (UMCG), University of Groningen (RUG), Groningen, The Netherlands[(1)]; INIBIC, SERGAS, UDC. A Coruña, Spain[(2)]



The 20KDA isoform of connexin-43 (GJA1-20K) alters the transcriptome and DNA methylome of brain endothelial cells.
Chelsea Phillips
Phillips, Chelsea M.; Bonefas, Katherine M.; Iwase, Shigeki; Andjelkovic, Anuska V.
University of Michigan, Ann Arbor, Michigan, USA

15:00 – 15:30 Coffee break

Chairs: Luis C. Barrio (Spain)

15:30 – 16:15 KEYNOTE 6

Viewing connexins through a cloudy lens.
VIVIANA BERTHOUD BARRANDEGUY
Professor at Pediatrics-Hematology/Oncology department. The University of Chicago

16:15 – 16:30 FUTURE IGJC presentations

16:30 – 17:00 Prizes and closing ceremony

19:30 CONFERENCE DINNER
Restaurante Árbore da Veira Estrada Os Fortes, s/n, 15011 A Coruña



POSTER AND FLASH PRESENTATION

OUTER MEMBRANE CURRENT RECORDINGS IN NUCLEI ISOLATED FROM HEK-CX43 CELLS DEMONSTRATE CX43 HEMICHANNEL OPENING ACTIVITY.
Witschas, Katja[(1)]; Marques, Tânia[(2)]; Leybaert, Luc[(1)]; Girao, Henrique[(2)]
Department Of Basic And Applied Medical Sciences-Physiology Group, Ghent University, Belgium[(1)]; Coimbra Institute for Clinical and Biomedical Research (ICBR), Faculty of Medicine, University of Coimbra, Portugal[(2)]

STRUCTURE-FUNCTION ANALYSIS OF PANNEXIN-1 PERMEABILITY TO ANANDAMIDE.
Anderson, Connor; Thompson, Roger.
University of Calgary

GJA1-20K REGULATES INFLAMMATION IN THE DSG2 MUTANT MODEL OF ARRHYTHMOGENIC CARDIOMYOPATHY.
Valdez, Steven; Taylor, Lindsey; Shaw, Robin; Palatinus, Joseph.
University of Utah

DIETARY GLYCEMIC STRESS IMPACTS LEVELS OF CX43 AND CX45 IN MOUSE BRAIN REGIONS.
Aragonès, Gemma[(1)]; Francisco, Sarah[(1)]; Smith, Kelsey[(1)]; Rowan, Sheldon[(1)]; Whitcomb, Elisabeth[(1)]; Zheng, Tong[(1)]; Shukitt-Hale, Barbara[(1)]; Taylor, Allen[(1)]; Bejarano, Eloy [(2)]
USDA HNRCA-TUFTS[(1)]; Universidad CEU Cardenal Herrera[(2)]

EXPRESSION OF CONNEXINS IN THE RETICULUM OF BOVINE FETUSES, NEWBORN CALVES AND ADULT BOVINES, AND THEIR IMPORTANCE FOR ORGAN GROWTH AND REMODELING.
Lopes Olio, Rennan[(1)]; Palma Rennó, Francisco; Dagli, Maria Lúcia; Hernandez-Blazquez, Francisco Javier
Institute of Biomedical Sciences, University of São Paulo; Departament of Animal Nutrition,School of Veterinary Medicine And Animal Science, University of Sao Paulo; Departament of Pathology, School of Veterinary Medicine And Animal Science, University of Sao Paulo; Department of Surgery, School of Veterinary Medicine And Animal Science, University of Sao Paulo



THE HYDROPHOBIC RESIDUES IN AMINO TERMINAL DOMAINS OF CX46 AND CX50 ARE IMPORTANT FOR THEIR GAP JUNCTION CHANNEL ION PERMEATION AND GATING.

Jaradat, Roa'a; Stathopulos, Peter; Donglin, Bai.
Western University

THE ELECTRICAL CONNECTIVITY OF RETINAL PIGMENT EPITHELIUM DEPENDS ON GAP JUNCTIONS AND CONNEXIN HEMICHANNELS.

Fadjukov, Julia[1]; Wienbar, Sophia[2]; Schwartz, Gregory[2]; Ihalainen, Teemu[1]; Nymark, Soile[1]
Tampere University, Tampere, Finland[1]; Northwestern University, Chicago, IL, USA[2]

CHARACTERISATION OF CONNEXIN-43 AND PANNEXIN-1 ACTIVITY AND THEIR INVOLVEMENT IN PURINERGIC SIGNALLING IN A HUMAN ECCRINE SWEAT GLAND CELL LINE.

Errico, Carmela[1]; Swanzy-Krah, Marino E. [1]; Garcia-Vega, Laura[1]; Evans, Richard L. [2]; Martin, Patricia E. [1]
Glasgow Caledonian University[1]; Unilever Research & Development[2]

THE AMINO TERMINAL DOMAIN OF CONNEXIN36 IS INVOLVED IN REGULATION OF GAP JUNCTION CHANNELS BY INTRACELLULAR MAGNESIUM IONS.

Kraujalis, Tadas[1]; Gudaitis, Lukas[2]; Kraujaliene, Lina[1]; Snipas, Mindaugas[1]; Palacios-Prado, Nicolás[1]; Verselis, Vytas K. [2] [3] [4] [5]
Lithuanian University Of Health Sciences, Kaunas, Lithuania[1]; Kaunas University Of Technology, Kaunas, Lithuania[2]; Pontificia Universidad Católica De Chile, Santiago, Chile[3]; Universidad De Valparaíso, Valparaíso, Chile[4]; Albert Einstein College Of Medicine, New York, NY, USA[5]

GAP JUNCTIONS INCREASE CELL VOLUME DYNAMICS THROUGH SOLUTE TRANSPORT.

Beahm, Derek[1]; Bone, Alexandra[1]; Haley, Hope[1].
Suny Buffalo State[1]

IMPAIRMENT OF AUTOPHAGIC FLUX: ANOTHER ANTITUMOR EFFECT OF TAT-CX43266-283 IN GLIOBLASTOMA STEM CELLS.

G. Pelaz, Sara[1]; Ollauri-Ibáñez, Claudia[1]; Lillo, Concepción[1]; Tabernero, Arantxa[1].
Neuroscience Institute of Castilla y León (INCYL), Institute of Biomedical Research of Salamanca (IBSAL), University of Salamanca, Salamanca, Spain[1]

EXPRESSION OF THE METHYLCYTOSINE DIOXYGENASE TET-2 AND CX43 IN INFLAMMATORY BOWEL DISEASE AND COLORECTAL CANCER.

El-Harakeh, Mohammad[(1)]; Saliba, Jessica[(2)]; Sharaf Aldeen, Kawthar[(1)]; Haidar, May[(1)]; El Hajjar, Layal[(1)]; Kallassy, Mireille[(3)]; Hashash, Jana[(1)]; Shirinian, Margret[(1)]; El-Sabban, Marwan[(1)]

Faculty Of Medicine, American University Of Beirut, Beirut, Lebanon[(1)]; Faculty Of Sciences, Lebanese University, Beirut, Lebanon[(2)]; Faculty Of Science, Université Saint-Joseph De Beyrouth, Beirut, Lebanon[(3)]

THE CARBOXYL-TERMINAL ALPHA-CONNEXIN PEPTIDE (ACT1) EXERTS DIFFERENTIAL EFFECTS ON THE VIABILITY OF BENIGN AND MALIGNANT CANINE MAMMARY CELL LINES.

Mackowiak Da Fonseca, Ivone Izabel[(1)]; Nagamine, Marcia Kazumi[(1)]; Sato, Ayami[(1)]; Yeh, Elizabeth Shinmay[(2)]; Dagli , Maria Lucia Zaidan[(1)]

University Of Sao Paulo, School Of Veterinary Medicine And Animal Science[(1)]; Indiana School Of Medicine Department Of Pharmacology And Toxicology [(2)]

BOOSTING SUSCEPTIBILITY OF MELANOMA CELLS TO IMMUNE CELL-MEDIATED KILLING BY CX43 TARGETING AGENTS.

Andrés, Tittarelli; Natalia, Hassan

Universidad Tecnológica Metropolitana

MODULATION OF CELL TO CELL ACTION POTENTIAL CONDUCTION BY THE DYNAMIC CLAMP TO STUDY THE ROLES OF GAP JUNCTION AND EPHAPTIC COUPLING.

Valiunas, V; Cohen, Is; Brink, Pr; Mathias, Rt

Department Of Physiology And Biophysics, Stony Brook University, Stony Brook, NY, USA

OVEREXPRESSION OF ENDOTHELIAL PANNEXIN1 IMPAIRS POST-ISCHEMIC STROKE CEREBRAL BLOOD FLOW RECOVERY.

Tomas Gracia, Maria[(1)]; Duffy, Colleen K[(1)]; Shahab, Guleer[(2)]; Medina, Chris[(2)]; Ravichandran, Kodi S[(3)]; Isakson, Brant E[(2)]; Good, Miranda E[(1)]

Tufts Medical Center[(1)]; University Of Virginia[(2)]; Washington University School Of Medicine[(3)]

THE LOSS OF GAP JUNCTIONS IN EXCITABLE CELLS PROMOTES MITOCHONDRIAL STRESS-INDUCED LONGEVITY IN *C. ELEGANS*.

Busch, Karl Emanuel[(1)]; Vladis, Nathalie[(2)]; Marcu, Daniel-Cosmin[(1)]

Hmu Health And Medical University, Potsdam[(1)]; Brandeis University[(2)]

PANX1 DYSFUNCTION ON THE RETINAL GANGLION CELLS DURING NATURAL AGEING.

Harcha, Paloma[1]; Araya, Joaquín[2]; Neira, David[1]; Ibaceta, Cristobal[1]; Reyes, Pablo[3]; Escobar, María José[3]; Minozino, Jean-Gabriel[4]; Palacios, Adrián[1]

Instituto De Neurociencias y Centro Interdisciplinario de Neurociencia de Valparaíso, Facultad de Ciencias, Universidad de Valparaíso, Valparaíso, Chile[1]; Escuela de Tecnología Médica, Facultad de Salud, Universidad Santo Tomás, Chile[2]; Departamento de Ingeniería Electrónica, Universidad Técnica Federico Santa María, Valparaíso, Chile[3] ;Escuela de Ingeniería Informática, Universidad de Valparaíso, Valparaíso, Chile[4]

DYNAMIC ROLE OF CONNEXIN-45 IN MODULATING BLOOD BRAIN BARRIER INJURY IN CEREBRAL AMYLOID ANGIOPATHY.

Situ, Muyu; Citalan-Madrid, Ali; Andjelkovic, Anuska

University of Michigan, Ann Arbor, Michigan, USA

CONNEXIN43 EXPRESSION AND FUNCTION IN BOVINE MILK-DERIVED EXOSOMES.

Marsh, Spencer; Stanley, Kari; Jourdan, Jane; Gourdie, Robert

Fralin Biomedical Research Institute

POSTER

MATHEMATICAL-COMPUTATIONAL MODEL FOR SIMULATING KINETIC AND STEADY-STATE VOLTAGE-DEPENDENT GATING OF GAP JUNCTIONS.

Snipas, Mindaugas[1]; Kraujalis, Tadas[1]; Maciunas, Kestutis[1]; Kraujaliene, Lina[1]; Gudaitis, Lukas[1]; Verselis, Vytas K. [2]

Lithuanian University Of Health Sciences[1]; Albert Einstein College Of Medicine[2]

EFFECT OF GLOBAL BRAIN ISCHEMIA AND SYSTEMIC INFLAMMATORY RESPONSE ON CONNEXIN43 AT THE BLOOD-BRAIN BARRIER AFTER SUDDEN CARDIAC ARREST.

Piktel, Joseph[1]; Fillioe, Seth[2]; Abboud, Bisan[1]; Pawlowski, Gary[1]; Laurita, Kenneth[1]; Wilson, Lance[1]; Decker, Michael[1]

Metrohealth, Case Western Reserve University[1]; Case Western Reserve University[2]

CONNEXIN TYPE- AND PROTEIN KINASE-SPECIFIC MODULATION OF GAP JUNCTION INHIBITOR POTENCY BY PHOSPHORYLATION.
Raškevičius, Vytautas; Mickus, Rokas; Skeberdis, Vytenis Arvydas.
LSMU

AIN'T NOTHING BUT A HEARTBREAK: EFFECTS OF CHRONIC HYPOXIA ON CARDIAC ISCHEMIC INJURY RESPONSE.
Montgomery, Jade; Rusiecka, Olga; Morel, Sandrine; Brenda, Kwak.
University Of Geneva

PHOSPHORYLATION-DEPENDENT REGULATION OF CX43 GAP JUNCTION INHIBITOR POTENCY.
Mickus, Rokas; Raškevičius, Vytautas; Mikalayeva, Valeryia; Sarapiniene, Ieva; Skeberdis, Vytenis Arvydas.
Institute Of Cardiology, Lithuanian University Of Health Sciences

CONNEXINS ARE POST-TRANSLATIONALLY MODIFIED IN ACTIVATED PLATELETS; POTENTIAL ROLE OF CALPAIN.
Elgheznawy, Amro[1]; Taylor, Kirk; Parkes, Sarah[2]; Gibbins, Jonathan[2]
Medical Clinic II, Division Of Hepatology, University Hospital Würzburg[1]; Institute For Cardiovascular And Metabolic Research, School Of Biological Sciences, University Of Reading, Reading, UK[2]

EFFECT OF TAT-CX43266-283 PEPTIDE ON THE EXPRESSION AND LOCALIZATION OF CONNEXIN26, CONNEXIN30 AND CONNEXIN43 IN AN IMMUNOCOMPETENT MURINE GLIOMA MODEL.
Flores-Hernández, Raquel; García-Vicente, Laura; Álvarez-Vázquez, Andrea; Talaverón, Rocío; Tabernero, Arantxa.
University Of Salamanca

STIMULATION OF TRANSIENT RECEPTOR POTENTIAL VANILLOID 4 (TRPV4) CHANNELS OPENS CONNEXIN HEMICHANNELS.
Ek Vitorin, Jose; Shahidullah, Mohammad; Lopez Rosales, Joaquin; Delamere, Nicholas.
University Of Arizona

TARGETING CONNEXIN43 TO REVERSE RESISTANCE TO PARP INHIBITOR THERAPY AND TO ENHANCE THE ANTI-TUMOUR IMMUNE RESPONSE IN BRCA1 MUTATED TRIPLE NEGATIVE BREAST CANCER.

Rodriguez-Candela Mateos, Marina[(1)]; Roeder, Jasmin[(2)]; Wels, Winfried[(2)]; Santiago, Paz[(1)]; Calleja, Teresa[(3)]; Almenar, Eloy[(1)]; Fontelo, Raúl[(1)]; Montes, Tania[(1)]; Carneiro, Alex[(1)]; Mosquera, Joaquín[(1)]; Acea, Benigno[(1)]; Mayán, María D.[(1)]

Cellcom Research Group, INIBIC, SERGAS. A Coruña, Spain[(1)]; Institute For Tumor Biology And Experimental Therapy, Georg-Speyer-Haus, Frankfurt, Germany[(2)]; Pharmacy Service. CHUAC, SERGAS. A Coruña, Spain[(3)]

EXOSOMAL CX43 ACTIVATES P53-MEDIATED CELLULAR SENESCENCE IN PRIMARY CHONDROCYTES, SYNOVIAL AND BONE CELLS CONTRIBUTING TO THE PROGRESSION AND SPREAD OF DEGENERATIVE JOINT.

Varela-Eirín, Marta[(1)]; Carpintero-Fernández, Paula[(1)]; Guitián Caamaño, Amanda[(1)]; Varela-Vázquez, Adrián[(1)]; García-Yuste, Alejandro[(1)]; López-Díaz, Iñaki[(1)]; Sánchez-Temprano, Agustín[(1)]; Bravo-López, Susana B.[(2)]; Yañez-Cabanas, José[(3)]; Fonseca, Eduardo[(1)]; Largo, Raquel; Mobasheri, Ali[(4)]; Caeiro, José Ramón[(3)]; Mayán, María D.[(1)]

INIBIC, SERGAS, UDC. A Coruña, Spain[(1)]; IDIS, CHUS, USC. Santiago de Compostela, Spain[(2)]; CHUS, USC. Santiago de Compostela, Spain[(3)]; Faculty of Medicine, University Of Oulu. Oulu, Finland[(4)]

AN IMPACT OF THE AMINO TERMINAL DOMAIN ON VOLTAGE GATING OF CONNEXIN36 GAP JUNCTION CHANNELS.

Gudaitis, Lukas[(1)]; Snipas, Mindaugas[(1) (2)]; Kraujaliene, Lina[(1)]; Kraujalis, Tadas[(1) (3)]; Verselis, Vytautas K.[(4)]

Institute of Cardiology, Lithuanian University of Health Sciences, Kaunas, Lithuania[(1)]; Department of Applied Informatics, Kaunas University of Technology, Kaunas, Lithuania[(2)]; Department of Mathematical Modelling, Kaunas University of Technology, Kaunas, Lithuania[(3)]; Dominick P. Purpura Department of Neuroscience, Albert Einstein College Of Medicine, New York, USA[(4)]

SENOTHERAPEUTIC ACTIVITY OF CONNEXIN 43 PEPTIDES FOR THE TREATMENT OF OSTEOARTHRITIS.

López-Díaz, Iñaki[(1)]; Varela-Eirín, Marta[(1)]; Carpintero-Fernández, Paula[(1)]; García-Yuste, Alejandro[(1)]; Guitián-Caamaño, Amand[(1)]a; Varela-Vázquez, Adrián[(1)]; Montes-Morado, Tania[(1)]; Learte-Aymamí, Soraya[(2)]; Caeiro, José R.[(3)]; Pazos, Elena[(4)]; Mascareñas, José L[(2)]; Vázquez, M. Eugenio[(2)]; Mayán, María D[(1)]

INIBIC, SERGAS, UDC. A Coruña, Spain[(1)]; CIQUS, USC. Santiago de Compostela, Spain[(2)]; CHUS, USC. Santiago de Compostela, Spain[(3)]; Facultade de Ciencias and CICA, UDC. A Coruña, Spain[(4)]

SEX, DIET, AND EXERCISE AFFECT THE SIGNIFICANCE OF DELETING PANX3 IN MOUSE MODELS OF OBESITY AND OSTEOARTHRITIS.
Wakefield, Brent[1]; Lee, Vanessa[1]; Johnston, Danielle[1]; Boroumand, Parastoo[2]; Pillon, Nicolas[2]; Sayedyahossein, Samar[1]; O'donnell, Brooke[1]; Tang, Justin[1]; Sanchez-Pupo, Rafael[1]; Barr, Kevin[3]; Gros, Robert[3]; Flynn, Lauren[1]; Borradaile, Nica[3]; Klip, Amira[2]; Beier, Frank[32]; Penuela, Silvia[1].
Department Of Anatomy And Cell Biology, Schulich School Of Medicine And Dentistry, Western University[1]; Cell Biology Program, The Hospital For Sick Children[2]; Department Of Physiology And Pharmacology, Western University[3];

MOLECULAR MODELING AND SIMULATION REVEAL DYNAMIC AND STABLE PROTEIN/LIPID/WATER INTERACTIONS WITHIN THE TRANSMEMBRANE CORE OF A GAP JUNCTION CHANNEL.
Zimmerly, Andrew; Im, Wonpil; Falk, Matthias M.
Lehigh University

DYNAMICS OF THE UNSTRUCTURED C-TERMINAL PORTION OF A HYBRID CX43 GAP JUNCTION CHANNEL.
Zimmerly, Andrew; Im, Wonpil; Falk, Matthias M.
Lehigh University

IMPAIRMENT OF GAP JUNCTION TURNOVER CAUSE INFERTILITY IN ZEBRAFISH.
Gottfried, Anna; Iovine, M Katherine; Falk, Matthias M.
Lehigh University

EFFECT OF DIFFERENTIAL KERATINOCYTE CONNEXIN EXPRESSION ON THE PHENOTYPE OF CUTANEOUS SQUAMOUS CELL CARCINOMA.
Leighton, Stephanie; Barr, Kevin; Johnston, Danielle; Lucaciu, Sergiu; O'donnell, Brooke; Penuela, Silvia; Laird, Dale.
University of Western Ontario, London, ON, Canada

THE ANTIEPILEPTIC DRUG VALPROATE CAUSES THE OPENING OF CX43 HEMICHANNELS, WHICH COULD BE DETRIMENTAL TO PATIENTS BY ENHANCING NEUROINFLAMMATION.
García-Rodríguez, Claudia[1]; Duarte, Yorley[2]; Ardiles, Álvaro[1]; Sáez, Juan Carlos[1]
Departamento de Neurociencias, Centro Interdisciplinario de Neurociencias de Valparaíso, Valparaíso, Chile[1]; Center for Bioinformatics and Integrative Biology, Facultad de Ciencias de La Vida, Universidad Andrés Bello, Santiago, Chile[2]

CONNEXIN-43 (CX43) IS INVOLVED IN MESENCHYMAL STROMAL CELL (MSC) MICROVESICLE MEDIATED MITOCHONDRIAL TRANSFER TO ARTICULAR CHONDROCYTES.
Thomas, Matthew; Irwin, Rebecca; Fahey, Megan; Delco, Michelle.
Cornell University

CARDIOMYOCYTES-DERIVED EXTRACELLULAR VESICLES MODULATE TUMORIGENIC FEATURES.
Vasconcelos-Cardoso, Maria[(1)]; Aasen, Trond[(2)]; Martins-Marques, Tânia[(1)]; Girao, Henrique[(1)].
Univ Coimbra, Coimbra Institute For Clinical And Biomedical Research (ICBR), Faculty Of Medicine, Portugal[(1)]; Patologia Molecular Translacional, Vall D'hebron Institut de Recerca (VHIR), Vall D'hebron Hospital Universitari, Barcelona, Spain[(2)]

CX43 MODULATES THE SORTING OF MIRNA INTO EXTRACELLULAR VESICLES.
Girao, Henrique[(1)]; Costa, Marina[(2)]; Catarino, Steve[(1)]; Simoes, Isaura[(3)]; Enguita, Francisco[(2)]; Aasen, Trond[(4)]; Martins-Marques, Tânia[(1)].
FMUC-ICBR[(1)]; FMUL-IMM[(2)]; CIBB[(3)]; VHIR[(4)]

INTERPLAY BETWEEN THE UBIQUITIN-RELATED MODIFIER-1 AND CONNEXIN 43 IN BREAST CANCER CELL LINES.
El-Hajjar, Layal; Saliba, Jessica; Sabban, Marwan E.
Faculty Of Medicine, American University Of Beirut, Beirut, Lebanon

IDENTIFYING THE ROLE OF CONNEXIN-43 IN DOXORUBICIN MEDIATED CARDIOTOXICITY BY USING IN VITRO, EX-VIVO, AND HUMAN CARDIAC SPHEROID MODELS.
Veerman, Ben[(1)]; Martins-Marques, Tânia[(2)]; Macquaide, Niall[(1)]; Girao, Henrique[(2)]; Currie, Susan[(1)]; Cunningham, Margaret[(1)].
Strathclyde Institute Of Pharmacy And Biomedical Sciences, Glasgow, UK[(1)]; Faculty of Medicine, Coimbra, Portugal[(2)]

CARDIAC STRESS-INDUCED ARRHYTHMIAS VIA SPECIFIC GENETICALLY PHOSPHODELETED SITES IN CONNEXIN-43 CHANNELS.
Munoz, Manuel[(1)]; Nguyen, Thao[(1)]; Quan, Jonathan[(1)]; Lillo, Mauricio[(2)]; Contreras, Jorge E.[(1)]
Department Of Physiology And Membrane Biology, School of Medicine, University of California Davis[(1)]; Department Of Pharmacology, Physiology And Neuroscience, Rutgers University[(2)]

DIFFERENTIAL SUBSTRATE SPECIFICITY OF MITOGEN-ACTIVATED PROTEIN KINASES (MAPKS) TOWARD CONNEXIN 43.

Perez, Liz[(1)]; Turk, Rim[(1)]; Conage-Pough, Jason[(2)]; Cusimano, Marissa[(1)]; Vargas, Victoria[(1)]; Arora, Sonal[(1)]; Gallo, Michael[(1)]; White, Forest[(2)]; Thévenin, Anastasia[(1)].
Moravian University[(1)]; Massachusetts Institute of Technology[(2)]

THE EFFECT OF 1,8-CINEOLE ON CARDIAC CX43 IN A PULMONARY ARTERIAL HYPERTENSION MODEL.

Zuzarte, Mónica; Alves-Silva, Jorge M; Girao, Henrique.
Univ Coimbra, Coimbra Institute for Clinical and Biomedical Research (ICBR), Faculty of Medicine, Coimbra, Portugal