

Talk #	Abstract #	Time	Presenter First	Presenter Last Name	Title	
Session 1 Connexin structure and Function						
Chairs <i>Andy Harris</i> <i>Morten Schak Neilsen</i>						
Keynote 1	Sunday July 14	9:00-9:45am	Gina	Sosinsky	Multiscale imaging of gap junction channels	
1	111	9:50-10:10am	Brad	Bennett	X-ray structures of the human Cx26 gap junction channel identify Ca2+ binding sites and suggest a novel electrostatic mechanism that modulates ion selectivity	
2	122	10:10-10:30am	Helmut	Sanchez	Aberrant Cx26 hemichannels and keratitis-ichthyosis-deafness syndrome	
3	115	10:50-11:10am	Jorge	Contreras	Molecular basis for gating by Ca2+ in Cx26 hemichannels	
4	92	11:10-11:30am	Ted	Bargiello	Open and loop-gate closed state atomic models of a Cx32 chimeric hemichannel	
5	30	11:30-11:50am	Paul	Sorgen	Effects of Phosphorylation on Structure and Backbone Dynamics of the Connexin43 Carboxyl-Terminal Domain	
6	89	11:50-12:10am	Randy	Stout	New Roles for the Connexin 43 Carboxyl-Terminus in the Structure and Function of the Gap Junction Nexus Complex	
7	29	12:10-12:30pm	Jennifer	Kopanic	Structural Characterization of the Connexin45 Carboxyl-Terminal Domain and its Interactions with Molecular Partners	
Session 2 Beyond connexins						
Chairs <i>Silvia Penuela</i> <i>Roger Thompson</i>						
Keynote 2	Sunday July 14	1:45-2:30pm	Kevin	Foskett	Calcium homeostasis modulator (CALHM) channels with structural and functional relationships to connexins, innexins and pannexins	
8	15	2:30-2:50pm	Atsunori	Oshima	Structural study of C. elegans innexin-6 gap junction channels	
9	25	2:50-3:10pm	Gerhard	Dahl	Selective inhibition of Panx1 by the dye in blue M&Ms and blue Gatorade.	
10	116	3:10-3:30pm	John	Rash	Connexin29 and Kv1 form "xenotypic" junctions between axons and myelin: Possible mechanism for increasing conduction velocity	
Session 3 Channel gating and neurotransduction						
Chairs <i>Steven Poelzing</i> <i>Steffany Bennett</i>						
11	114	Sunday July 14	3:50-4:10pm	Jenny J	Yang	Regulation of connexin- mediated cell-to-extracellular and cell-to-cell communication by calmodulin
12	90	4:10-4:30pm	Feliksas	Bukauskas	Does 'deep' or 'locked' closed state of fast and slow gates of gap junctions exists and how it links voltage and chemical gating?	
13	97	4:30-4:50pm	Steffany	Bennett	Brain-specific loss of connexin 45 impairs the self-renewal of adult hippocampal type 1 neural stem cells	
14	20	4:50-5:10pm	Klaus	Willecke	Phosphorylation & stability of oligodendrocytic Cx47 protein depend on astrocytic Cx43 protein expression in mouse brain	
15	118	5:10-5:30pm	Michael	Bennett	Plasticity at electrical synapses.	
16	76	5:30-5:50pm	David	Spray	Bidirectional pannexin- and connexin-mediated glial-neuronal signaling in trigeminal ganglia: Relevance to orofacial pain	
Session 4 Vasculature and muscle						
Chairs <i>Brant Isakson</i> <i>Brenda Kwak</i>						
17	168	Monday July 15	8:00-8:20am	Juan Carlos	Saez	The de novo expression of connexin hemichannels leads to sarcolemma permeabilization and atrophy of denervated fast skeletal muscles
18	101	8:20-8:40am	Cor	de Wit	Lack of Cx40 impairs Cx37 expression in arteriolar endothelium but can be rescued by a defective Cx40	
19	73	8:40-9:00am	Petra	Kameritsch	NO inhibits specifically the spreading of Ca2+ signals via myoendothelial gap junctions.	
Keynote 3	Sunday July 14	9:00-9:45am	Steven	Segal	Intercellular Coordination of Blood Flow Control: Modulation by Aging and Neuroeffector Signaling	
20	99	9:50-10:10am	Marie	Billaud	Pannexin1 participates in phenylephrine-induced constriction but not in other agonist-induced constrictions	
21	126	10:10-10:30am	Shawn	Bearden	Connexin 43 Interacts with ZO-1 to Reduce Mobility and Stabilize Endothelium	
Session 5 Vascular development and pathology						
Chairs <i>Eric Beyer</i> <i>Ulrich Pohl</i>						
22	57	Monday July 15	10:50-11:10am	Brenda	Kwak	Cx37 affects shear stress- dependent atherosclerotic plaque composition in ApoE-deficient mice
23	71	11:10-11:30am	Tasha	Nelson	Living Life on the Edge - Survival or Death by Cx37	
24	79	11:30-11:50am	Alexander	Simon	Cx37 is required for venous valve development	
25	39	11:50-12:10am	Czyz	Jaroslaw	Cx43-independent vs. Cx43- dependent signaling in transendothelial migration of prostate cancer cells - in vitro model of metastatic niche	
26	125	12:10-12:30pm	Alexander	Lohman	TNF α -induced ATP release from endothelial cell pannexin 1 channels regulates leukocyte interactions with the venous blood vessel wall	
Session 6 Inflammation and metabolic stress						
Chairs <i>Hung-I Yeh</i> <i>Parmender Mehta</i>						
Keynote 4	Tuesday July 16	9:00-9:45am	Ravi	Ravichandran	New roles for pannexin channels in Apoptosis and Cell clearance	
27	102	9:50-10:10am	Nicholas	Weilinger	Src-mediated activation of pannexin-1 is a key perpetuator of ischemic cell death	
28	77	10:10-10:30am	Linda	Matsuuchi	The contribution of different domains of Connexin43 to cytoskeletal rearrangements in B-lymphocytes	
29	7	10:50-11:10am	Jian	Yao	PURINERGIC CONTROL OF AMPK ACTIVATION BY ATP RELEASED THROUGH CONNEXIN43 HEMICHANNELS: PIVOTAL ROLES IN HEMICHANNEL-MEDIATED DISASSEMBLY OF TIGHT JUNCTION AND CELL INJURY	
30	9	11:10-11:30am	Catheleyne	D'hondt	Distinct turnover pathways for connexin 43 gap junction channels and hemichannels in response to metabolic stress	
31	63	11:30-11:50am	Patricia	Martin	Over expression of Connexin 43 but not Pannexin 1 delays lipid accumulation during adipogenesis.	
32	4	11:50-12:10pm	Richard	Benninger	Modulating Connexin36 gap junctions in the pancreatic inlet normalizes glycemic control in a mouse model of neonatal diabetes	
33	45	12:10-12:30pm	Jean	Jiang	Cataract-causing Mutation of Human Connexin 46 Impairs Gap Junction, but Increases Hemichannel Function and Cell Death	

Session 7 Therapeutic targeting in skin disease and deafness

Chairs
Rob Gourdie
Elaina Scemes

Keynote 5	Tuesday July 16	2:45-3:30pm	Collin Green	Hemichannel roles in inflammation, vascular leak and chronic disease: So can we cure cancer?
34	113	3:30-3:50pm	Gautam	ACT1 Scene 1: Clinical Benefits of the Connexin-Based Mimetic Peptide αCT1
35	154	3:50-4:10pm	Xi	Virally-expressed connexin26 significantly restores gap junction function in the cochlea of conditional Gjb2 knockout mice
36	31	4:10-4:30pm	Hong-Bo	Gap junction mediated miRNA intercellular communication is critical for cochlear development and hearing

Session 8 Pathology in skin disease and deafness

Chairs
Patricia Bertoud
Viviana Berthoud

37	28	Tuesday July 16	4:50-5:10pm	Silvia	Penuela	Pannexin1 regulates wound healing and early events in skin development
38	69		5:10-5:30pm	Zunaira	Shuja	Functional analysis of GJB2 (Cx26) mutations causing palmoplantar keratoderma and deafness
39	18		5:30-5:50pm	Jennifer	Easton	The G45E mutation in Cx31 causes EKV and a unique associated cellular phenotype
40	65		5:50-6:10pm	John	Kelly	Mutations in Cx30, an unusually stable connexin at the cell surface, cause skin disease via two distinct mechanisms

Session 9 Quality control and post-translational regulation

Chairs
Dale Laird
Robin Shaw

41	85	Wednesday July 17	8:00-8:20am	Lydia	Matesic	The E3 Ubiquitin Ligase Wwp1 Influences Redistribution of Cx43 to the Intercalated Disc during Postnatal Cardiac Development
42	80		8:20-8:40am	Vivian	Su	CIP75 mediates the dislocation and proteasomal degradation of ER-localized Cx43 in ERAD
43	103		8:40-9:00am	Samuel	Molina	Misfolded CFTR Interferes with ERp29-mediated Cx43 Quality Control
Keynote 6			9:00-9:45am	Paul Lampe		Cx43 phosphorylation affects life as we know it
44	81		9:50-10:10am	Angela	Cone	Spatio-temporal patterns of Protein Kinase C (PKC) delta-mediated phosphorylation of Connexin43
45	21		10:10-10:30am	Georg	Zoidl	Interaction with the microtubule network facilitates plasticity of the Cx36 nexus

Session 10 Trafficking and signal transduction

Chairs
Matthias Falk
Howard Evans

46	38	Wednesday July 17	10:50-11:10am	John	Fong	Two tyrosine-based sorting signals in the Cx43 C-terminus cooperate to mediate gap junction endocytosis
47	86		11:10-11:30am	James	Smyth	A 14-3-3 mode-1 binding motif promotes gap junction internalization during acute cardiac ischemia
48	138		11:30-11:50am	Joanna	Gemel	Accelerated degradation and functional abnormalities of a Connexin40 mutant linked to atrial fibrillation
49	139		11:50-12:10am	Sharon	George	Modulation of Ephaptic Coupling in Cardiac Conduction during reduced Gap Junctional Coupling
50	34		12:10-12:30am	Rengasayee	Veeraraghavan	Experimental Evidence that the Cx43 Gap Junction Perinexus Functions as a Cardiac Ephapse

Session 11 Cardiac conduction

Chairs
Glenn Fishman
Geert Bultynck

51	135	Wednesday July 17	1:50-2:10pm	Mario	Delmar	The last five C-terminal amino acids of Cx43 are necessary for proper localization of PDZ-RhoGEF, EB-1 and glu-tubulin at the cardiac intercalated disc: A key gap junction-independent role of Cx43 in cardiac elec
52	127		2:10-2:30pm	Sabine	Huke	Ventricular Arrhythmias are Associated with Rapid Homogeneous and Heterogeneous Changes in Gap Junctions in Mice Expressing a Mutant Troponin T
53	11		2:30-2:50pm	David	Sedmera	Functional consequences of Connexin40 deletion on developing cardiac conduction
54	47		2:50-3:10pm	Donglin	Bai	Germline atrial fibrillation- linked connexin40 mutants impair gap junction function
55	129		3:10-3:30pm	Ashish	Gadicherla	Connexin-43 associated mitochondrial calcium dynamics as investigated in isolated cardiac mitochondria.

Session 12 Barrier pathology and repair

Chairs
Masanari Tachikawa
Jean Jiang

56	143	Wednesday July 17	3:50-4:10pm	James	O'Donnell	Gap Junction Protein Connexin 43 (Cx43) Exacerbates Lung Vascular Permeability
57	67		4:10-4:30pm	Marc	Chanson	GJC in the host-pathogen interaction between airway epithelial cells and P. aeruginosa
58	78		4:30-4:50pm	Viviana	Berthoud	Different consequences of human cataract-associated Cx46 and Cx50 mutants on lens components in mice
59	74		4:50-5:10pm	Emily	Ongstad	Effects of the Connexin43 CT on Cardiac Fibroblast Migration in the Injury Border Zone

Session 13 Bone/Cell growth

Chairs
Roberto Civitelli
Lydia Matesic

60	201	Thursday July 18	9:30-9:50am	Elke	Winterhager	Decidual angiogenesis is altered in mice expressing a dominant loss of function mutant of Cx43
61	100		9:50-10:10 am	Roberto	Civitelli	Multiple Functions of Connexin43 (Cx43) in Bone Modeling and Homeostasis Revealed by a Gja1 Oculodentodigital Dysplasia (ODDD) Mutation
62	13		10:10-10:30am	Joseph	Stains	Both the Connexin43-specific Channel and C-terminus Are Required for the Regulation of Runx2 Activity and Osteoblast Gene Expression
63	42		10:50-11:10am	Lillian	Plotkin	Cx37 is required for differentiation and fusion and its deletion results in increased bone mass in mice.
64	53		11:10-11:30am	Julien	Guerrero	Regulation of 3D communication between osteogenesis and angiogenesis by Connexin 43
65	22		11:30-11:50am	Justin	Lathia	Silencing stemness: targeting gap junction communication as an anti-cancer stem cell therapy for glioblastoma
66	58		11:50-12:10am	Amandine	Chepied	Connexin43 mediates the invasive properties of human glioblastoma cells
67	108		12:10-12:30am	Bruce	Nicholson	Intercellular Redistribution of cAMP Underlies Selective Suppression of Cell Growth by Connexin26