

Number	Symposium Titles Presentation titles (Presentations picked up from general abstracts are colored in light blue.)	Chairpersons Speakers	Country
Commission I Locomotion			
RS- -1	Physiological relevance of lactate	George A. Brooks Takeshi Hashimoto	USA Japan
	1 Evidence for Cell-Cell and Intracellular lactate Shuttles	George A. Brooks	USA
	2 LACTATE AS A FUEL FOR EXERCISE	Hideo Hatta	Japan
	3 Signaling effects of lactate in cultured L6 skeletal muscle cells	Takeshi Hashimoto	Japan
	4 Fuelling cerebral activity in humans	Niels Henry Secher	Denmark
	5 Developmental Changes in MCTs and PGC-1 alpha in Thoroughbreds	Yu Kitaoka	Japan
6 EXERCISE-MODULATED TRANSCRIPTS IN THE SKELETAL MUSCLE AND THE RELATIONSHIP WITH METABOLIC SYNDROME, AGING AND MUSCLE ATROPHY	Mayumi Yoshioka	Canada	
RS- -2	Challenges in the Integration of Multi-scale Biomechanical Systems	Elliot L. Elson Tetsuro Wakatsuki	USA USA
	1 MATRIX METALLOPROTEINASES REMODELING EXTRACELLULAR MATRICES OF TISSUE CONSTRUCTS	Elliot L. Elson	USA
	2 HIGH-SPEED ATOMIC FORCE MICROSCOPY FOR VISUALIZING DYNAMIC BIOMOLECULAR PROCESSES	Toshio Ando	Japan
	3 TRANSLATING MULTI-SCALE CARDIAC MODELLING INTO THE CLINIC	Steven Alexander Niederer	UK
	4 THE MOLECULAR MECHANISM OF CARDIOMYOPATHY CAUSED BY MUTANT TROPONIN: A MOLECULAR DYNAMICS STUDY TESTED BY AN X-RAY DIFFRACTION EXPERIMENT	Maki Yamaguchi	Japan
	5 Integrating analysis of cell and tissue mechanics for developing an equivalent of heart muscle in vitro	Tetsuro Wakatsuki	USA
6 Coupling computational models across scales and physics in the Heart	Nicolas Peter Smith	UK	
RS- -3	Energy sensing metabolic signalling in skeletal muscle	Erik A. Richter David Grahame Hardie	Denmark UK
	1 Sensing of energy availability by the AMP-activated protein kinase	David Grahame Hardie	UK
	2 ENERGY BALANCE IN REGULATION OF INSULIN SENSITIVITY IN MUSCLE: GENDER ASPECTS	Bente Kiens	Denmark
	3 Metabolic signaling in muscle insulin resistance; implications of AMPK	Sebastian Beck Jorgensen	Denmark
	4 Cross-talk between Ca ²⁺ signalling and AMPK in skeletal muscle	Erik A. Richter	Denmark
	5 CONTROL OF MUSCLE PROTEIN DEGRADATION INDUCED BY STARVATION VIA THE PROTEASOME AND LYSOSOME PATHWAYS	Stefano Schiaffino	Italy
RS- -4	Neuromuscular plasticity with use and disuse	Marco Narici Michael Rennie	UK UK
	1 Mechanisms underlying age and immobility associated human muscle wasting	Michael John Rennie	UK
	2 MUSCLE AND TENDON PLASTICITY TO LOADING, UNLOADING AND AGEING	Marco Vincenzo Narici	UK
	3 THE EXTRACELLULAR MATRIX AND ITS ADAPTATIONS TO CHANGE IN CHRONIC LOADING	Michael Kjaer	Denmark
	4 Use it or lose it: does activity mitigate neuromuscular synaptic degeneration?	Richard R Ribchester	UK
	5 Exercise and histone modifications in human skeletal muscle	Mark Hargreaves	Australia
6 TOWARDS A MOLECULAR MECHANISM FOR CALCIUM-DEPENDENT EXCITATION-TRANSCRIPTION COUPLING IN SKELETAL MUSCLE	Enrique Jaimovich	Chile	

Commission II Circulation & Respiration

RS- -5	Regulation of vascular function by Ion Channels	Yuji Imaizumi Jason X.-J. Yuan	Japan USA
	1 Possible integrating mechanism for activation of cardiovascular Ca ²⁺ entry TRPC6 channel by lipid mediators and phosphorylation	Ryuji Inoue	Japan
	2 MOLECULAR IMAGING ANALYSES OF CA ²⁺ SIGNALING UNITS REGULATING THE EXCITABILITY AND TONE OF VASCULAR SMOOTH MUSCLE CELLS	Yuji Imaizumi	Japan
	3 Pathogenic Role of Ion Channels in Pulmonary Hypertension	Jason X.-J. Yuan	USA
	4 A KEY ROLE FOR KCNQ (KV7) POTASSIUM CHANNELS IN THE PULMONARY CIRCULATION	Alison M Gurney David John Beech	UK UK
	5 Non-selective cationic channels of vascular disease		
RS- -6	Neurogenic Hypertension	Julian FR Paton Eric Lazartigues	UK USA
	1 THE HYPERTENSIVE BRAINSTEM	Julian F.R. Paton	UK
	2 Role of the Sympathetic Nervous System	Guido Grassi	Italy
	3 The "SYMPATHETIC SIGNATURE" OF ANGIO-SALT HYPERTENSION	John W. Osborn	USA
	4 Selective Renal Sympathetic Ablation in Resistant Hypertension with a Renal Artery Radiofrequency Catheter	Murray David Esler Eric Lazartigues	Australia USA
	6 TRACTUS SOLITARIUS (TS) EVOKED NEUROTRANSMISSION IN SECOND- BUT NOT IN HIGHER-ORDER NTS NEURONS IS DEPRESSED BY INTERMITTENT HYPOXIA IN RATS	Carlos Eduardo Lopes Almeida	Brazil
RS- -7	Cross bridge cycle kinetics	Yasutake Saeki Pieter de Tombe	Japan USA
	1 The role of regulatory proteins in the cross-bridge cycle in thin-filament reconstituted systems	Masataka Kawai	USA
	2 THE REGULATION OF THIN-FILAMENT ACTIVATION AND CROSS-BRIDGE CYCLE KINETICS BY THE PHOSPHORYLATION OF MYOFILAMENT PROTEINS	Yasutake Saeki	Japan
	3 The regulation of cross-bridge kinetics by sarcomere length	Pieter P de Tombe	USA
	4 Molecular mechanisms of myofilament dysfunction in heart failure	Ger Stienen	Netherlands
	5 THE REGULATION OF CROSS-BRIDGE ACTIVATION-RELAXATION KINETICS BY CALCIUM	Corrado Poggesi	Italy
6 The importance of interfilament spacing in the regulation of cross-bridge kinetics in the <i>in situ</i> heart	James Todd Pearson	Australia	
RS- -8	Pacemaker mechanism	David Eisner Denis Noble	UK UK
	1 FUNNY CHANNEL-BASED PACEMAKING: FROM CONCEPT TO CLINICAL APPLICATIONS	Dario DiFrancesco	Italy
	2 Novel perspectives on cardiac pacemaker regulation based on numerical modeling of coupled subcellular Ca and membrane voltage oscillators	Victor A Maltsev	USA
	3 Ion channel expression and pacemaker activity in the sinoatrial and atrioventricular nodes	Mark R. Boyett	UK
	4 Abnormal impulse generation in canine Purkinje cells that have survived in the infarcted heart	Penelope BOYDEN	USA
	5 CONSTITUTIVE SUMOYLATION OF TRPM4 CHANNEL ASSOCIATED WITH CARDIAC CONDUCTION DISEASE	Olaf Pongs	Germany
6 SR CA ²⁺ OSCILLATIONS ARE REQUIRED FOR DIFFERENTIATION OF EMBRYONIC MOUSE	Sandra Lynn Hanninen	Finland	

RS- -9	Electro - mechanical Coupling in Normal and Diseased Heart	Peter Kohl Keiji Naruse	UK Japan
	1 Cardiac Tissue-A Heterogenous Substrate for Electro-Mechanical Coupling 2 ELECTRICAL INTEGRATION OF ENGINEERED HEART TISSUE 3 Effects of Pulsatile Stretch on Cell-to-Cell Coupling in Cardiomyocytes <i>in vitro</i> 4 MECHANICAL MODULATION OF CARDIAC CALCIUM HANDLING 5 Stretch and arrhythmia	Troy Baudino Wolfram Hubertus Zimmermann Andre G Kleber Gentaro Iribe Peter Kohl	USA Germany Switzerland Japan UK
RS- -10	Chemical Control of Breathing: Molecular and Systemic Mechanisms and Effects	Tomoyuki Kuwaki Constancio Gonzalez	Japan Spain
	1 CELLULAR AND MOLECULAR MECHANISMS OF PERIPHERAL CHEMORECEPTORS 2 IDENTIFICATION OF SUBDOMAINS IN NADPH OXIDASE-4 (NOX-4) CRITICAL FOR THE OXYGEN-DEPENDENT REGULATION OF TASK-1 K ⁺ CHANNELS 3 Peripheral Chemoreceptor Reflex Responses 4 LOCALIZATION AND MECHANISMS OF CENTRAL CHEMORECEPTION 5 HYPOTHALAMIC CONTROL OF BREATHING 6 CENTRAL CHEMORECEPTION IN HEALTH AND DISEASE	Constancio Gonzalez Sung Joon Kim Prem Kumar Yasumasa Okada Tomoyuki Kuwaki Ronald M. Harper	Spain Korea UK Japan Japan USA
Commission III Endocrine, Reproduction & Development			
RS- -11	Epigenetic and Developmental origins of cardiovascular and metabolic health and disease	Abigail L. Fowden Kent Thornburg	UK USA
	1 IMPRINTED GENES AND PLACENTAL DEVELOPMENT 2 EARLY PATTERNS OF NUTRITION, GROWTH AND METABOLIC HEALTH 3 EPIGENETIC COMPONENTS OF PRE- AND POSTNATAL MISMATCH 4 SUPPRESSION OF FETAL CARDIOMYOCYTE PROLIFERATION 5 INTERACTIONS BETWEEN PRE AND POSTNATAL NUTRITION AND THE EARLY ORIGINS OF OBESITY RELATED DISEASE	Abigail Lesley Fowden Caroline McMillen Mark Hanson Kent L. Thornburg Michael Symonds	UK Australia UK USA UK
RS- -12	Insulin Resistance through the Life Course	Susan Ozanne Lucilla Poston	UK UK
	1 MOLECULAR MECHANISMS UNDERLYING THE EARLY ORIGINS OF INSULIN RESISTANCE 2 INTERGENERATIONAL TRANSMISSION OF INSULIN RESISTANCE 3 MEAL-INDUCED INSULIN SENSITIZATION: ROLE IN THE PATHOPHYSIOLOGY AND PREVENTION OF DIABETES 4 Role of the renal insulin receptor in blood pressure control 5 EFFECTS OF INHIBITING NONPROTEOLYTIC ACTIVATION OF INSULIN RESISTANCE IN FRUCTOSE-FED RATS 6 GLYCATION OF AKT1 BY METHYLGLYOXAL AND PROLIFERATION OF VASCULAR SMOOTH MUSCLE CELLS	Susan Ozanne Lucilla Poston W. Wayne Lutt Carolyn Mary Ecelbarger Daisuke Nakano Lingyun Wu	UK UK Canada USA Japan Canada

RS- -13	Development of the Gonads	Outi Hovatta Takeo Kishimoto	Sweden Japan
	1 PRIMORDIAL GERM CELLS CONTAIN SUBPOPULATIONS THAT HAVE GREATER ABILITY TO DEVELOP INTO PLURIPOTENTIAL STEM CELLS	Yasuhisa Matsui	Japan
	2 CELLULAR MECHANISMS OF REPRODUCTIVE ORGAN FORMATION	Richard R Behringer	USA
	3 MOLECULAR PATHWAYS REGULATING GONADAL DEVELOPMENT IN MICE	Peter Koopman	Australia
	4 Role of capillary blood vessels and macrophages in follicular development	Eimei Sato	Japan
	5 Maturation of human ovarian follicles in vitro	Outi Hovatta	Sweden
	6 Heritable imprinting defect caused by fetal male germ cell culture in mice	Takashi Shinohara	Japan
Commission IV Neurobiology			
RS- -14	Modulation of brain development by paracrine activation of Cl⁻ conductances	Atsuo Fukuda Heiko Luhmann	Japan Germany
	1 IONOTROPIC GABA RECEPTORS CONTROL NEURONAL MIGRATION IN NEONATAL RAT CEREBRAL CORTEX	Heiko J. Luhmann	Germany
	2 Cl ⁻ ION MEDIATED GABA RELEASE FROM BERGMANN GLIA IN DEVELOPING CEREBELLAR CORTEX	Sachiko Yoshida	Japan
	3 Maternal oxytocin triggers inhibitory switch in fetal neurons during the birth	Rustem Khazipov	France
	4 KCC2 a synchronizing factor in synaptic maturation	Claudio Rivera	Finland
	5 Physiological significance of taurine-mediated Cl ⁻ conductances during corticogenesis	Atsuo Fukuda	Japan
RS- -15	Purinergic signaling in the neuron and non-neuron communication	Kazuhide Inoue Fusao Kato	Japan Japan
	1 Characterization of P2X receptors in spinal (trigeminal) microglia and macrophages	Seog Bae Oh	Korea
	2 Purinergic signalling and microglia	Helmut Kettenmann	Germany
	3 Neuron-microglia interaction mediated by multiple P2Y receptors	Schuichi Koizumi	Japan
	4 Microglial purinoceptors in the spinal cord and pathological pain	Makoto Tsuda	Japan
	5 Purinoceptors in microglia-neuron signaling in neuropathic pain	Michael Salter	Canada
	6 NOVEL MECHANISMS OF CENTRAL CHEMOSENSITIVITY	Nicholas Dale	UK
	7 Presynaptic P2X receptors as astrocyte-neuron interface	Fusao Kato	Japan
	8 Astrocyte calcium transients: neuronal effects, diversity and compartmentalization	Baljit Khakh	USA
RS- -16	Intercellular communications in the brain	Tomoaki Shirao Peter Penzes	Japan USA
	1 ROLE OF SYNAPTIC ACTIVITY IN SPINE MORPHOGENESIS	Tomoaki Shirao	Japan
	2 A NOVEL NEUROTRANSMITTER PHENOTYPIC PLASTICITY INDUCED BY ALTERED POSTSYNAPTIC ORGANIZATION	Gong Chen	USA
	3 LOCAL TRANSLATIONAL CONTROL IN NEURONS AND ITS IMPLICATION FOR NEURAL PLASTICITY	Nobuyuki Takei	Japan
	4 ATP (P2X1-3) and α 3 β 2 nicotinic acetylcholine receptors interact physically and functionally in hippocampal terminals	Rodrigo A Cunha	Portugal
	5 Drebrin-mediated establishment of cell-cell contacts by neuronal connexins	Irina Majoul	Germany
	6 Molecular mechanisms of synaptic structural plasticity and pathology	Peter Penzes	USA

RS- -17	The orexin system - central and peripheral functions	Karl-Heinz Herzig Takeshi Sakurai	Finland Japan
	<ul style="list-style-type: none"> 1 A decade of research on orexin 2 SIGNAL COUPLING OF THE OX₁ OREXIN/HYPOCRETIN RECEPTOR 3 The orexin/hypocretin system as a nutrient sensor 4 Effect of orexins on duodenal bicarbonate secretion and its regulation 5 THE NEUROBIOLOGY OF OREXINS (HYPOCRETINS) AND NARCOLEPSY 6 IMPLICATION OF OREXIN (HYPOCRETIN) SYNAPTIC TRANSMISSION ON SLEEP-WAKE CYCLES: A COMPUTATIONAL STUDY 	<ul style="list-style-type: none"> Takeshi Sakurai Jyrki P. Kukkonen Denis Burdakov Gunnar Flemstrom Seiji Nishino Svetlana Postnova 	<ul style="list-style-type: none"> Japan Finland UK Sweden USA Germany
RS- -18	The hair cell as a sensory receptor and amplifier for audition and balance: from its function to pathophysiological relevance	Pascal Martin Stefan Heller	France USA
	<ul style="list-style-type: none"> 1 Synaptic physiology of cochlear hair cells 2 Localizing hair cell mechanotransducer channels using high speed calcium imaging 3 TEAMING UP TO BOOST THE HAIR BUNDLE AMPLIFIER IN SENSORY HAIR CELLS 4 Linking deafness genes to hair-bundle development and physiology: the role of hair-bundle links and associated proteins 5 Mammalian auditory hair cell regeneration and cochlear repair 6 The molecular assembly of the tip-link filaments in sensory hair cells 	<ul style="list-style-type: none"> Paul Albert Fuchs Anthony John Ricci Pascal Martin Christine Petit Stefan Heller Hirofumi Sakaguchi 	<ul style="list-style-type: none"> USA USA France France USA Japan
RS- -19	Mechanisms of dendritic signaling	Yoshiyuki Kubota Jackie Schiller	Japan Israel
	<ul style="list-style-type: none"> 1 Mechanisms of dendritic peptide release 2 DENDRITIC SYNAPTIC CALCIUM SIGNALS IN THE AXONLESS OLFACTORY BULB GRANULE CELLS 3 DENDRITIC LOCATION AFFECTS SYNAPTIC INTEGRATION AND PLASTICITY VIA MULTIPLE MECHANISMS IN HIPPOCAMPAL CA1 PYRAMIDAL NEURONS 4 Properties of tuft dendrites from layer 5 pyramidal neurons 5 Dendritic morphology and signal conduction property of cortical nonpyramidal cells 6 IMAGING DENDRITIC EXCITATION OF NEOCORTICAL PYRAMIDAL CELL DENDRITES IN VIVO 	<ul style="list-style-type: none"> Mike Ludwig Veronica Egger Nelson Spruston Jackie Schiller Yoshiyuki Kubota Fritjof Helmchen 	<ul style="list-style-type: none"> UK Germany USA Israel Japan Switzerland
RS- -20	Voltage-gated Ion Channels and Synaptic Plasticity	Tomoyuki Takahashi Ian D. Forsythe	Japan UK
	<ul style="list-style-type: none"> 1 Calcium Channel Regulation and Short-term Synaptic Plasticity 2 Modulation of Presynaptic Calcium Channels at the Calyx of Held 3 ACTIVITY-DEPENDENT REGULATION OF VOLTAGE-GATED POTASSIUM CHANNELS BY NITRIC OXIDE 4 Postsynaptic Regulation of IH and IA in Long Term Plasticity 5 Regulation of neuronal responsiveness by axonal initial segment KCNQ channels 	<ul style="list-style-type: none"> William A. Catterall Tomoyuki Takahashi Ian D Forsythe Daniel Johnston Edward C. Cooper 	<ul style="list-style-type: none"> USA Japan UK USA USA

RS- -21	Stereopsis: computation and neural correlates of conscious perception	Andrew J. Parker Ichiro Fujita	UK Japan
	1 Contribution of the ventral visual pathway to stereopsis	Ichiro Fujita	Japan
	2 How the brain handles vertical disparity	Jenny C. A. Read	UK
	3 HOW CORTICAL NEURONS REPRESENT NATURALLY OCCURRING DISPARITIES	Bruce Gordon Cumming	USA
	4 Organization of 3-d binocular receptive fields of neurons in the early visual cortex	Izumi Ohzawa	Japan
	5 Neurons in visual area V5/MT in the awake rhesus monkey are selective for the relative disparity between two transparent planes	Kristine Krug	UK
6 Binocular Vision and the Cerebral Cortex	Andrew J Parker	UK	

Commission V Secretion & Absorption

RS- -22	Parietal cell biology: New aspects on secretion protein trafficking differentiation and survival	Curtis Okamoto Akira Sawaguchi	USA Japan
	1 Evidence for CIC-2 Cl ⁻ Channels in Acid Secretion	John Cuppoletti	USA
	2 K ⁺ channels in parietal cells	Richard Warth	Germany
	3 GASTRIC KNCQ1 CHANNELS PROVIDE LUMINAL K ⁺ TO THE H ⁺ K ⁺ ATPASE, WHEREAS KIR 4.1 CHANNELS ARE INVOLVED IN SECRETORY MEMBRANE RECYCLING	Ursula Seidler	Germany
	4 PHOSPHO-REGULATED ACAP4-EZRIN INTERACTION IN GASTRIC PARIETAL CELL ACTIVATION	Xuebiao Yao	China
	5 PARIETAL CELL FUNCTION AND GASTRIC EPITHELIAL CELL HOMEOSTASIS	Linda C Samuelson	USA
	6 Exfoliation of parietal cells at gastric pits associated with acid secretion in vitro	Akira Sawaguchi	Japan
7 Sulforaphane Modulates on Gastric Oxyntic Cell Functions by Increasing Production of Reactive Oxygen Species	Akinori Yanaka	Japan	
RS- -23	Molecular basis of pancreatitis	Irene Schulz Ole H. Petersen	Germany UK
	1 Cellular mechanisms of alcoholic pancreatitis induced by non-oxidative ethanol metabolites	Robert Sutton	UK
	2 AUTOPHAGY IN PANCREATITIS	Anna Gukovskaya	USA
	3 PANCREATIC PROTEASE ACTIVATION BY ALCOHOL METABOLITE DEPENDS ON CA ²⁺ RELEASE VIA ACID STORE IP ₃ RECEPTORS	Julia Gerasimenko	UK
	4 GASTROINTESTINAL LIPOLYSIS IN CHRONIC PANCREATITIS	Frederic Carriere	France
	5 CHARACTERISATION OF PH DEPENDENT ATP UPTAKE INTO ISOLATED PANCREATIC ZYMOGEN GRANULES	Kristian Agmund Haanes	Denmark
6 Intracellular alkalization causes pain sensation through activation of TRPA1	Fumitaka Fujita	Japan	
RS- -24	Physiology and pathophysiology of K⁺ balance: A view from the GI tract and kidney	Jens G. Leipziger Paul A. Welling	Denmark USA
	1 The molecular physiology of flow-stimulated K secretion in the distal nephron	Lisa Michelle Satlin	USA
	2 Src family Protein tyrosine kinase(PTK) modulates the effect of SGK1 and WNK4 on ROMK channels	Wen-Hui Wang	USA
	3 Molecular Mechanisms of ROMK Channel Trafficking in the Kidney	Paul A. Welling	USA
	4 Role of Maxi-K and IK Channels in Salivary Gland Fluid and Potassium Secretion	James Edward Melvin	USA
	5 THE ESSENTIAL ROLE OF LUMINAL BK CHANNELS IN DISTAL COLONIC K ⁺ SECRETION	Jens G. Leipziger	Denmark
6 Colonic K ⁺ channels in health & disease	Malcolm Hunter	UK	

RS- -25	Exocrine ion transport in health and disease	Masataka Murakami Mike A. Gray	Japan UK
	1 Regulation of epithelial sodium channels in pathological and physiological states	David Ian Cook	Australia
	2 THE EPITHELIAL SODIUM CHANNEL (ENaC) AS A MOLECULAR TARGET FOR BLOOD PRESSURE CONTROL	Christoph Korbmayer	Germany
	3 The physiological roles of subcellular aquaporins	Kenichi Ishibashi	Japan
	4 PROCESSING AND TRAFFICKING OF MUTANT CFTR AND SLC 26 TRANSPORTERS	Min Goo LEE	Korea
	5 Pancreatic ductal bicarbonate secretion	Toan D Nguyen	USA
	6 NEW INSIGHTS INTO BICARBONATE SECRETION BY THE HUMAN AIRWAY CELL LINE CALU-3	John William Hanrahan	Canada
RS- -26	Epithelial amino acid and peptide transport - man models and molecules	Stefan Broer Carsten A. Wagner	Australia Switzerland
	1 Heteromeric Amino acid Transporters: Pathology and Structure	Manuel Palacin	Spain
	2 Amino acid transport across cellular barriers	Francois Verrey	Switzerland
	3 Towards the systems level of peptide transporter physiology	Hannelore Daniel	Germany
	4 Glutamine transport and ammoniogenesis	Carsten Alexander Wagner	Switzerland
	5 Dual role of the Na ⁺ /H ⁺ exchanger isoform 3 for PEPT1-mediated H ⁺ /dipeptide cotransport in native murine intestine	Mingmin Chen	Germany
	6 MOLECULAR ONTOLOGY OF ESSENTIAL AMINO ACID TRANSPORT	Dmitri Y Boudko	USA
RS- -27	Recent advances in the physiology and pathophysiology of the renin-angiotensin - aldosterone system	Armin Kurtz Akira Nishiyama	Germany Japan
	1 AT1 angiotensin receptors in the kidney: A key to blood pressure control	Thomas M Coffman	USA
	2 CELL TO CELL COMMUNICATION IN RENIN SECRETION	Armin Kurtz	Germany
	3 Role of aldosterone in the pathogenesis of renal injury	Akira Nishiyama	Japan
	4 THE (PRO)RENIN RECEPTOR:FACTS AND MYTHS	Genevieve NGUYEN	France
	5 IN VIVO RENIN IMAGING AND METABOLIC CONTROL OF RENIN RELEASE	Janos Peti-Peterdi	USA
	6 Patch clamp analysis of ion channels in juxtaglomerular (JG) granular cells	Ole Skott	Denmark
RS- -28	Tight junction in epithelial permeability and function ----- Shoichiro Tsukita memorial-----	Alan S. L Yu Sachiko Tsukita	USA Japan
	1 SIGNALLING AT TIGHT JUNCTIONS AND REGULATION OF GENE EXPRESSION IN EPITHELIAL CELLS	Karl Matter	UK
	2 Epithelial intercellular junction proteins: to serve and protect	Asma Nusrat	USA
	3 Manner of claudin assembly within tight junction strands	Furuse Mikio	Japan
	4 TIGHT JUNCTION REMODELING PARTICIPATES IN CYTOSKELETALLY-MEDIATED BARRIER REGULATION: THE UNIQUE ROLE OF ZONULA OCCLUDENS-1 (ZO-1)	Jerrold Turner	USA
	5 Paracellular Channel-like Role of claudins : Knockout-mice analyses	Sachiko Tsukita	Japan
	6 Structure-function studies of the claudin-based ion pore	Alan S. L. Yu	USA
	7 Remarks	Alan S. L. Yu	USA

RS- -29	Nutrient sensing and signalling in response to a meal	Soraya P. Shirazi-Beechey David Alpers	UK USA
	1 INCRETIN HORMONES GIP AND GLP-1	Timothy James Kieffer	Canada
	2 Distributions of Short-chain Fatty Acid Receptors GPR41 and GPR43 in the Human colon	Hideaki Tazoe	Japan
	3 INTESTINAL GLUCOSE SENSING AND REGULATION OF GLUCOSE TRANSPORT	Soraya P Shirazi-Beechey	UK
	4 Role of ghrelin in the central regulation of feeding	Masamitsu Nakazato	Japan
	5 LUMINAL L-GLUTAMATE SENSING VIA MULTI GLUTAMATE RECEPTORS ENHANCES MUCOSAL DEFENSES IN RAT DUODENUM	Yasutada Akiba	USA
6 GASTROINTESTINAL CHEMOSENSATION: ROLES OF TASTE CELLS OF THE GUT AND ENDOCRINE CELLS OF THE TONGUE	Robert F Margolskee	USA	
RS- -30	Physiology, Cell Biology and Pharmacology of Epithelial Chloride Channels	John Cuppoletti Tsung-Yu Chen	USA USA
	1 BLOCKING THE PORE OF THE CLC-0 CHLORIDE CHANNEL WITH AMPHIPHILIC BLOCKERS	Tsung-Yu Chen	USA
	2 DRUG THERAPY FOR CYSTIC FIBROSIS BASED ON A RATIONAL UNDERSTANDING OF THE CFTR CHLORIDE CHANNEL	David Noel Sheppard	UK
	3 DISTINCT FUNCTIONAL ROLES OF CFTR'S TWO ATP BINDING SITES: WHY DO WE CARE?	Tzyh-Chang Hwang	USA
	4 Prostones as ClC-2 Channel Activators for Treatment of Diseases and Disorders	John Cuppoletti	USA
	5 EFFECTS OF PROSTONES ON TIGHT JUNCTIONS	Atsushi Tamura	Japan
6 CLC-2 KNOCKOUT MICE HAVE IMPAIRED POST-ISCHEMIC INTESTINAL BARRIER RECOVERY	Anthony Blikslager	USA	
Commission VI Molecular & Cellular Biology			
RS- -31	Voltage gated calcium channels and cellular excitability - regulation and pathophysiology	Gerald Zamponi Terrance P. Snutch	Canada Canada
	1 TRANSLATIONAL APPROACH TO THE IDENTIFICATION OF T-TYPE CALCIUM CHANNEL BLOCKERS TARGETING EPILEPSY	Terrance P. Snutch	Canada
	2 ROLE OF T-TYPE CALCIUM CHANNELS IN NEURONAL FIRING AND EPILEPSY	Gerald W Zamponi	Canada
	3 T-type Calcium channels in the generation of sleep rhythms	Hee-Sup Shin	Korea
	4 T-type calcium channel control of cardiovascular function	Philippe LORY	France
	5 REGULATION OF Cav1.2 BY PROTEIN KINASES.	Franz Hofmann	Germany
6 Cav1 channel modulatory complexes in neurons	Amy Lee	USA	
RS- -32	Dynamic aspects of functioning membrane proteins (J Physiol symposium)	Yoshihiro Kubo Ehud Isacoff	Japan USA
	1 VOLTAGE- AND [ATP]- DEPENDENT GATING OF THE P2X ₂ ATP RECEPTOR CHANNEL	Yoshihiro Kubo	Japan
	2 Variations on the melodies of membrane voltage	Ehud isacoff	USA
	3 VOLTAGE SENSOR: FUNCTION AND STRUCTURE	Francisco Bezanilla	USA
	4 MOLECULAR MECHANISMS OF K ⁺ CHANNEL ACTIVATION AND INACTIVATION GATING	Eduardo Perozo	USA
	5 G protein-mediated gating of potassium channels: a spectroscopic view	Eitan Reuveny	Israel
6 GPCR oligomers, two or more for what? The case of the GABAB receptor	Jean-Philippe R Pin	France	

RS- -33	Molecular physiology of receptor - activated and store - operated calcium influx	James W. Putney Yasuo Mori	USA Japan
	<ol style="list-style-type: none"> 1 Regulation of Store-operated Calcium Entry 2 Calcium signalling in lymphocytes: STIM and ORAI 3 Functional consequences of CRAC channel activation in health and disease 4 Molecular components of store-operated Ca²⁺ entry 5 Selective and direct inhibition of TRPC3 channels underlies biological activities of a pyrazole compound 	James W Putney Anjana Rao Anant B Parekh Reinhold Penner Yasuo Mori	USA USA UK USA Japan
RS- -34	Current advances in G protein and lipid modulation of ion channels	Paul A. Slesinger Mark S. Shapiro	USA USA
	<ol style="list-style-type: none"> 1 STRUCTURAL INSIGHTS INTO THE FUNCTION OF CYTOPLASMIC REGION OF G PROTEIN-GATED INWARD RECTIFIER K⁺ CHANNEL 2 Cell-specific role of PIP2 in GIRK channel regulation by receptors 3 RECEPTOR-SPECIFIC MODULATION OF POTASSIUM AND CALCIUM CHANNELS BY PHOSPHOINOSITIDE SIGNALS 4 CELL SURFACE REGULATION OF GIRK CHANNELS 5 G-protein coupled inwardly rectifying potassium (GIRK) channels as effectors of addictive drugs 6 Direct versus indirect regulation of ionotropic glutamate receptors by phosphoinositides 	Atsushi Inanobe Won-Kyung Ho Mark S. Shapiro Paul A. Slesinger Christian Luscher Diomedes Elias Logothetis	Japan Korea USA USA Switzerland USA
RS- -35	Cell volume regulation and cell survival	Florian Lang Else Kay Hoffmann	Germany Denmark
	<ol style="list-style-type: none"> 1 REGULATION AND PHYSIOLOGY OF THE UBIQUITOUS PLASMA MEMBRANE NA⁺/H⁺ EXCHANGER, NHE1 2 ROLES OF VOLUME-SENSITIVE ANION CHANNELS IN CELL DEATH INDUCTION AND GLIA-TO-NEURON SIGNALING 3 An update on TRPV4-mediated signaling in health and disease 4 CELL VOLUME IN REGULATION OF CELL PROLIFERATION AND SUICIDAL CELL DEATH 5 K⁺, Cl⁻ and water channels in regulation of cell volume and cell survival 6 α-ENaC is a functional element of the hypertonicity-induced cation channel in HepG2 cells and it mediates proliferation 	Stine Falsig Pedersen Yasunobu Okada Wolfgang B Liedtke Florian Lang Else Kay Hoffmann Frank Wehner	Denmark Japan USA Germany Denmark Germany
RS- -36	Calcium signals in cell death and disease	Pierluigi Nicotera Alexei Verkhratsky	UK UK
	<ol style="list-style-type: none"> 1 Calcium signals in cell death and disease 2 IP₃R Ca²⁺ SIGNALING REGULATION OF APOPTOSIS, AUTOPHAGY AND ALZHEIMER'S DISEASE 3 INTRACELLULAR CALCIUM RELEASE MECHANISMS IN CETRAL NERVOUS SYSTEM FUNCTIONS 4 TRPP2 CHANNELS AND POLYCYSTIC KIDNEY DISEASE: CALCIUM SIGNALING AND CELL DEATH 5 Endoplasmic reticulum Ca²⁺ homeostasis and neural cell disease and death 6 Ca²⁺- related mechanisms of apoptosis resistance in cancer cells 	Pierluigi Nicotera Kevin Foskett Masamitsu Iino Michael Kottgen Alexei Verkhratsky Natalia Prevarskaya	UK USA Japan USA UK France

RS- -37	Molecular and functional aspects of membrane transporters and pumps	Reinaldo DiPolo David Gadsby	Venezuela USA
	1 THE SODIUM/IODIDE SYMPORTER (NIS): AN UNENDING SOURCE OF SURPRISES	Nancy Carrasco	USA
	2 NBCn1 IS THE ONLY Na ⁺ ,HCO ₃ ⁻ COTRANSPORTER IN VASCULAR SMOOTH MUSCLE AND ENDOTHELIAL CELLS IN SITU: IMPORTANCE FOR VASCULAR TONE REGULATION	Ebbe Boedtkjer	Denmark
	3 INFLUENCE OF IONIC AND METABOLIC REGULATION ON THE TRANSPORT KINETICS OF THE SQUID NERVE SODIUM / CALCIUM EXCHANGER	Luis Beauge	Argentina
	4 STRUCTURAL MODELING OF THE HUMAN Na ⁺ /H ⁺ EXCHANGER ISOFORM 1: STUDIES OF THE PUTATIVE ION TRANSLOCATION SITE BY EPR SPECTROSCOPY	Eva Byskov Nygaard	Denmark
	5 Structural aspects of cation pumping by P-type ATPases 6 THE ION PATHWAY THROUGH THE Na,K-ATPase PUMP	Chikashi Toyoshima David C Gadsby	Japan USA
RS- -38	Mapping of Signaling Networks	Arthur Konnerth Hideo Mogami	Germany Japan
	1 MAPPING FEATURE-SELECTIVE NEURONS IN THE MOUSE VISUAL CORTEX IN VIVO	Arthur Konnerth	Germany
	2 SYNAPTIC MECHANISMS OF SENSORY PERCEPTION	Carl CH Petersen	Switzerland
	3 TBD	Philippe Bastiaens	Germany
	4 Secretagogue-induced multiple signal cross-talk in insulin secreting cells	Hideo Mogami	Japan
	5 Computational models of calcium signalling in pancreatic acinar cells show unique roles for calcium diffusion in the endoplasmic reticulum 6 Mapping the intracellular network of Ca ²⁺ signalling, calmodulin movement, NO changes and mitochondria responses	Kojiro Yano Alexei V Tepikin	UK UK
Commission VII Comparative Physiology: Evolution, Adaptation & Environment			
RS- -39	Molecular Basis of Cardiovascular adaptation to cold temperatures	Zhongjie Sun Johnson R. Candon	USA UK
	1 MOLECULAR MECHANISM OF COLD-INDUCED HYPERTENSION	Zhongjie Sun	USA
	2 Cold Stress on Neuropeptide Y and Norepinephrine Neurotransmission and Hypertension	Thomas C Westfall	USA
	3 THERMAL PLASTICITY OF CELLULAR CALCIUM CYCLING IN BLUEFIN TUNA MYOCYTES.	Holly Shiels	UK
	4 COLD PAWS, LARGE HEART: CHRONIC COLD EXPOSURE AND CARDIAC HYPERTROPHY	David Hauton	UK
	5 Systems Biology Approach to Mammalian Hibernation 6 Hypertrophic hamster hearts - a compromise for cold acclimation?	Jun Yan Stuart Egginton	China UK
RS- -40	Phylogenetic Approaches in Vertebrate Comparative Physiology	Theodore Garland Douglas L. Altshuler	USA USA
	1 An Overview of Phylogenetically Based Statistical Methods for Comparative Data	Theodore Garland	USA
	2 Phylogenetically-informed analysis of the universality of metabolic allometry	Craig White	Australia
	3 PHYLOGENETIC AND ECOLOGICAL CORRELATES OF RODENT METABOLIC RATES	Enrico L. Rezende	Spain
	4 The scaling of maximum flight performance in hummingbirds	Douglas Altshuler	USA
	5 ENERGETICS AND THERMOREGULATION OF THE BLACK-CHEEKED LOVEBIRD, <i>AGAPORNIS NIGRIGENIS</i> : ASPECTS OF PHYLOGENY AND ECOLOGY 6 CROSS-TALK BETWEEN THE METAZOAN FAMILY 2 GPCR SYSTEM	Jenny Richber Joao Carlos Cardoso	Germany Portugal

RS- -41	Gravitational Physiology: Evolution of Gravity Sensing Mechanisms. A Comparative View	Peter Norsk Charles A. Fuller	Denmark USA
	1 GRAVITY AND CELLS 2 GRAVITATIONAL PHYSIOLOGY OF CRABS 3 A GENETIC APPROACH TO UNDERSTANDING GRAVITY RESPONSES IN DROSOPHILA 4 Gravity sensing across vertebrate species 5 REGULATION OF BLOOD PRESSURE DURING HEAD MOVEMENT IN THE ANESTHETIZED GIRAFFE 6 Non-photoc entrainment: Gravity and the neurovestibular system	Millie Hughes-Fulford Peter John Fraser Kathleen Mary Beckingham Dmitry Vitalevich Lychakov Emil T Brondum Kristyn Michelle Ringgold	USA UK USA Russia Denmark USA

Education

RS-Ed-43	Energizing the physiology classroom and the physiology curriculum	Jonathan Kibble Maria Jose da Rocha	USA Brazil
	1 Introduction: The importance of active learning and its facilitation through curriculum design 2 Promoting active learning in large lecture groups with a personal response system. 3 ACTIVE LEARNING IN THE TEACHING LABORATORY: A MEANS FOR IMPROVING STUDENT ATTITUDES 4 ACTIVE LEARNING THROUGH FORMATIVE ASSESSMENTS IN THE INTRODUCTORY BASIC SCIENCES STREAM OF THE MEDICAL CURRICULUM 5 Active learning and curriculum reform in Japan 6 CLOSING REMARKS	Jonathan David Kibble David Alan Williams Kim Henige Mangala Gunatilake Osamu Matsuo Maria Jose Alves Rocha	USA Australia USA Sri Lanka Japan Brazil
RS-Ed-44	Sharing expertise through national, international and virtual education communities	Robert G. Carroll Adrianta Surjadhana	USA Indonesia
	1 Ten Years of Activity on the IUPS Education Committee List serve 2 INTERNATIONAL PARTICIPATION IN THE JOURNAL ADVANCES IN PHYSIOLOGY EDUCATION 3 THE SPREAD OF COMPETENCY-BASED EDUCATION 4 Introduction 5 Analyses of the effect of international and regional teaching workshops 6 BREAKING BARRIERS: TEACHING RESOURCE SHARING IN A GLOBAL COMMUNITY	Adrianta Surjadhana Robert Graham Carroll Beatriz Unwin Ramirez Ann Elizabeth Sefton Arif Siddiqui Marsha Lakes Matyas	Indonesia USA Chile Australia Pakistan USA

Physiome

RS-Ph-45	Infrastructure for computational physiology	James B. Bassingthwaighte Peter Hunter	USA New Zealand
	1 insilico ML and integrated environment 2 Translating the Cardiac Physiome into the clinic 3 An Overview of Several Standardization Efforts for Systems Biology 4 VPH Tools	Yoshiyuki ASAI Nicolas Peter Smith Michael Hucka S. Randall Thomas	Japan UK USA France

Ethics			
RS-Et-46	Best Practices in Physiological Research: Ethics and Integrity	Penny Moody-Corbett	Canada
	<ol style="list-style-type: none"> 1 ANIMALS IN MEDICAL RESEARCH: MAGIC OR TRAGIC? 2 GUIDELINES FOR PROPER TREATMENT OF ANIMALS IN RESEARCH 3 Standards for good research practice: scientific integrity and dealing with misconduct. 4 PUBLISHING PHYSIOLOGICAL RESEARCH: INTEGRITY AND MISCONDUCT 	Colin Blakemore Naoko Kagiyama Matthias Kaiser Kim Elaine Barrett	UK Japan Norway USA
Asian slots			
RS-A-47	Functional human imaging	Hidenao Fukuyama Norihiro Sadato	Japan Japan
	<ol style="list-style-type: none"> 1 Simultaneous MR-PET Enables Mechanistic Human Neuroimaging 2 DIFFUSION FMRI AND POTENTIAL FOR NEUROIMAGING 3 Visualizing Columnar Architectures Using High-Field Functional Magnetic Resonance Imaging 4 On arterial and cerebral blood flow responses to functional challenges 5 UTERINE CONTRACTILITY EVALUATED WITH CINE MR IMAGING 	A. Gregory Sorensen Denis LE BIHAN Kang Cheng Xavier Golay Kaori Togashi	USA France Japan UK Japan
RS-A-48	TRPML channels in intracellular organelle function	Shmuel Muallem Insuk So	USA Korea
	<ol style="list-style-type: none"> 1 AUTOPHAGY: A MOLECULAR SYSTEM FOR DEGRADATION OF PROTEINS AND ORGANELLES UNDER PHOSPHOINOSITIDE SIGNALING 2 TRPMLs regulate trafficking of lipids and proteins along the endosomal/lysosomal pathway 3 The Ca²⁺ Channel TRPML3 Regulates Membrane Trafficking and Autophagy 4 <i>DROSOPHILA</i> AS A MODEL SYSTEM FOR MUCOLIPIDOSIS TYPE IV 5 MACROAUTOPHAGY IS DEFECTIVE IN MUCOLIPIN 1-DEFICIENT MOUSE NEURONS 	Yasuyoshi Sakai rosa puertollano Hyun-Jin Kim Kartik Venkatachalam Susan Slaughaupt	Japan USA USA USA USA
RS-A-49	Mitochondrial calcium and ROS signaling	Jin Han Shey-Shing Sheu	Korea USA
	<ol style="list-style-type: none"> 1 MITOCHONDRIAL CALCIUM AND ROS CROSSTALK SIGNALING 2 Molecular and functional alterations of organelle crosstalk during cellular stress and tumorigenesis 3 Role of mitochondrial DNA in calcium signaling abnormality in bipolar disorder 4 Diet, Mitochondrial Uncoupling and Control of Redox State 5 ROLE OF THE PERMEABILITY TRANSITION PORE IN THE PATHOGENESIS OF COMPLEX I DYSFUNCTION DUE TO mtDNA MUTATIONS 6 MITOCHONDRIA MODULATE INTRACELLULAR CALCIUM SIGNALS THAT CONTROL ATP TRANSIENTS INDUCED BY ELECTRICAL STIMULATION OF SKELETAL MYOTUBES 	Shey-Shing Sheu Gyorgy Szabadkai Tadafumi Kato Alicia J. Kowaltowski Paolo Bernardi Veronica Raquel Eisner	USA UK Japan Brazil Italy Chile

RS-A-50	Potassium channels, from regulation to physiology	Florian Lesage Ru-Chi Shieh	France Taiwan
	<ol style="list-style-type: none"> 1 SK2 CHANNELS IN CA1 PYRAMIDAL NEURONS: MODULATION OF NEUROTRANSMISSION AND CONTRIBUTIONS TO LTP 2 SODIUM-ACTIVATED POTASSIUM CHANNELS AND THE CONTROL OF NEURONAL ACCURACY 3 K2P CHANNEL AND ASSOCIATED PROTEINS: MOLECULAR AND FUNCTIONAL PROPERTIES 4 ACTIVATION MECHANISM OF BK CHANNEL BY INTRACELLULAR CALCIUM 5 DIRECT ACTIONS OF ESTROGEN-RECEPTOR MODULATORS ON THE ACTIVITY OF LARGE-CONDUCTANCE CALCIUM-ACTIVATED POTASSIUM CHANNELS 6 POTASSIUM BINDING AND COUPLED MOVEMENT IN THE G-LOOP AND WATER CAVITY FACILITATE BARIUM FLOW IN THE KIR2.1 CHANNEL 	John Adelman Leonard K. Kaczmarek Florian Lesage Chul-Seung Park Sheng-Nan Wu Ru-Chi Shieh	USA USA France Korea Taiwan Taiwan

Neurobiology

RS-N-53	Perspective of Decision Neuroscience: beyond the Biological Approach of Brain Science	Daeyeol Lee Shigeru Kitazawa	USA Japan
	<ol style="list-style-type: none"> 1 Multiple brain circuits for decision-making 2 MECHANISMS FOR DECISION MAKING IN THE PRIMATE PREFRONTAL CORTEX 3 The Neural Basis of Gene-Environment Interactions 4 Neural Basis of Expected Utility and Mean-Variance Models of Risk 5 Social Neuroeconomics: Decisions and Games 	Masamichi Sakagami Daeyeol Lee Turhan Canli Mathieu d'Acremont Ming Hsu	Japan USA USA Switzerland USA
RS-N-54	Thalamocortical circuits in brain functions (IBRO symposium)	Hee-Sup Shin Mariko Miyata	Korea Japan
	<ol style="list-style-type: none"> 1 Thalamic synapses; their properties and modulations 2 TONIC AND BURST FIRING OF THALAMOCORTICAL NEURONS: A CONSTRAINED VIEW OF THALAMIC PHYSIOLOGY 3 SYNAPTIC INTEGRATION: A TIPPING POINT IN EPILEPSY 4 CORTICOTHALAMIC GATING OF AUDITORY INFORMATION 	Mariko Miyata Vincenzo Crunelli John Huguenard Ying Shing Chan	Japan UK USA China

Gender equality

RS-G-55	Women in Physiology	Junko Kimura Yuichi Suzuki	Japan Japan
	<ol style="list-style-type: none"> 1 Network of woman physiologists in Japan -it's an experience!- 2 Growing up together with the children; women scientists in China 3 INDIAN WOMEN'S PROSPECTIVE ON GENDER EQUALITY: FIGHT OR FLIGHT! 4 WE DO IT OUR WAY: a personal AND UK perspective on gender equality and physiology 5 Sustainable Should be Female Researchers' Career: Integrated Master Plan for the Support of Female Researchers at Hokkaido University 6 BARRIERS TO GENDER EQUITY IN US BIOMEDICAL SCIENCE: THE SLOW DRIP OF THE LEAKY PIPELINE 7 Promotion of gender equality and work/life balance at shiseido. 	Kazue Mizumura Li-Ying Hao Kamalesh K Gulia Susan Wray Sanae Maria Margherita IguchJia-Aparinga Kim Elaine Barrett Chika Katagiri	Japan China India UK Japan USA Japan

Late breaking

RS-LB-51	Contranmission and Presynaptic Receptors (UPHAR Joint symposium)	Salomon Z. Langer Geoffrey Burnstock	Israel UK
	<ol style="list-style-type: none"> 1 PURINERGIC CO-TRANSMISSION IN THE PERIPHERAL AND CENTRAL NERVOUS SYSTEM 2 Presynaptic receptors modulating transmitter release: therapeutic potential 3 AUTO- VERSUS HETERORECEPTOR FUNCTIONS OF ALPHA2-ADRENOCEPTORS 4 PRESYNAPTIC ADENOSINE AND P2Y RECEPTORS AND THEIR ROLE ON MODULATION OF NEUROTRANSMITTER RELEASE 	Peter Paul Illes Salomon Z Langer Lutz Hein Gloria Queiroz	Germany Israel Germany Portugal
RS-LB-52	Molecular/neural mechanisms of fatigue and fatigue sensation	Kazuhiro Kondo Yasuyoshi Watanabe Hirohiko Kuratsune	Japan Japan Japan
	<ol style="list-style-type: none"> 1 Identification of a novel molecular mechanism and a major cause of fatigue 2 Prolonged fatigue alters brain functions and affects homeostasis systems in rat 3 Neural and molecular mechanisms of central fatigue in the animal models 4 FATIGUE IN INFLAMMATORY DISORDERS 5 TBD 6 Mechanisms and scales of fatigue and development of anti-fatigue products 	Kazuhiro Kondo Hiroshi Kiyama YiLong Cui Mark Gordon Swain Hirohiko Kuratsune Yasuyoshi Watanabe	Japan Japan China Canada Japan Japan
RS-LB-56	What is New in Calorie Restriction and Ageing?	Haim Cohen Isao Shimokawa	Israel Japan
	<ol style="list-style-type: none"> 1 A ROLE FOR FOXO1 IN THE EFFECT OF CALORIE RESTRICTION 2 Calorie restriction mimetics: Developing Interventions for Healthy Aging and Longevity 3 MOLECULAR INFLAMMATION AND LIPID ACCUMULATION AS UNDERLYING CAUSES OF AGING AND THEIR INTERVENTION BY CALORIE RESTRICTION 4 Would MOSES (mice overexpressing exogenous SIRT6) reach 120? and if so, how? 5 CALORIC RESTRICTION AND ADIPONECTIN IN CARDIOPROTECTION 6 CALORIC RESTRICTION DELAYS AGING CHANGES IN CELLS OF MANY TISSUES 	Isao Shimokawa Joanne S. Allard Hae Young Chung Haim Cohen Ken Shinmura Norman Wolf	Japan USA Korea Israel Japan USA
RS-LB-57	Connecting Brains and Machines: New approaches for BCI, BMI and BNI	Mitsuo Kawato Tetsuya Yagi	Japan Japan
	<ol style="list-style-type: none"> 1 Functional alterations of cortices after neurosurgical treatment for sensorimotor lesions 2 Neurorehabilitation and BMI 3 Restoring motor function with Brain-Machine Interfaces 4 Neuroprosthetics: Restoration of Function Via Neuronal Scale Communication Systems 5 Analog VLSI vision device for cortical implants 6 Visual image reconstruction from human brain activity: A modular decoding approach 	Amami Kato Tadashi Isa Andew Jackson Gregory A. Clark Tetsuya Yagi Yukiyasu Kamitani	Japan Japan UK USA Japan Japan