Scientific Program of Prion 2024

10/23/2024 **Parallel Workshops**

Workshops 1: Epidemiology of Prion Diseases and Pathogenesis of Neurodegenerative Diseases		**Hall A**
Time	**Title**	**Speaker**
13:00 - 13:10	Welcome Remarks (Chairs: **Xiaoping Dong** & **Jesús R. Requena**)	
13:10 - 13:30	Prion disease surveillance in the United States	**Ryan A. Maddox** *CDC, USA* zzp7@cdc.gov
13:30 - 13:50	Characteristics of human prion diseases in China based on surveillance data	**Qi Shi** *CDC, China* shiqi76@126.com
13:50 - 14:10	An update on surveillance of human prion diseases in Australia	**Christiane Stehmann** *Australian National CJD Registry, Australia* christiane.stehmann@florey.edu.au
14:10 - 14:30	Different classical scrapie and CWD strains circulating in Europe as shown by prion strain typing using ovinized mice (Tgshp IX)	**Sonja Ernst** *Friedrich-Loeffer-Institut, Germany* sonja.ernst@fli.de
14:30 - 14:50	Isolation of infectious, oligomeric prions from human and animal prion diseases	**Ilaria Vanni** *Istituto Superiore di Sanità, Italy* ilaria.vanni@iss.it
14:50 - 15:10	New tools and insights to reveal the full picture of the endogenous PrP shedding by the metalloprotease ADAM10	**Hermann Clemens Altmeppen** *University Medical Center Hamburg, Germany* h.altmeppen@uke.de
15:10 - 15:25	**Coffee Break**	
15:25 - 15:35	Welcome Remarks (Chairs: **Jiyan Ma** & **Richard Knight**)	
15:35 - 15:55	The role of plasmin in PrP^{Sc} propagation	**Chongsuk Ryou** *Hanyang University, Korea* cryou2@hanyang.ac.kr
15:55 - 16:15	Identification and characterization of amyloidogenic proteins within the human proteome	**Aleksander Rubel** *Saint Petersburg State University, Russia* arubel@mail.ru
16:15 -16:35	The cellular prion protein antagonist PSCMA prolongs survival and reduces microglia dysregulation in the RML prion disease mouse model	**Yue Wang** *University Medical Center Hamburg-Eppendorf, Germany* yuewang306@gmail.com

16:35 - 16:55	Experimental transmission of protease sensitive prionopathy (VPSPr) to nonhuman primates	**Jacqueline Mikol** *Paris Diderot University, France* jacqueline.mikol@wanadoo.fr
16:55 - 17:15	Mechanism of misfolding of the mammalian prion protein	**Jayant Udgaonkar** *Indian Institute of Science Education and Research, India* jayant@iiserpune.ac.in
17:15 - 17:25	Closing Remarks	
17:30 - 19:30	**Dinner**	

Workshops 2: Diagnostic Biomarkers of Prion and Prion-like Diseases		**Hall B**
Time	**Title**	**Speaker**
13:00 - 13:10	Welcome Remarks (Chairs: **Jason Bartz** & **Zhijun Luo**)	
13:10 - 13:30	α-Synuclein aggregation and propagation in Parkinson's disease	**Taku Hatano** *Juntendo University, Japan* thatano@juntendo.ac.jp
13:30 - 13:50	Research progress on α-Synuclein RT-QuIC	**Jianwen Deng** *Peking University First Hospital, China* jianwendeng@pkufh.com
13:50 - 14:10	Propagation of the prion pathology in the brain as seen with MRI	**Alberto Bizzi** *Carlo Besta Neurological Institute, Italy* alberto.bizzi@istituto-besta.it
14:10 - 14:30	Blood-based Alzheimer's biomarkers: advancements and applications in Parkinson's disease	**Huifang Shang** *West China Hospital of Sichuan University, China* hfshang2002@126.com
14:30 - 14:50	14-3-3 as a useful biomarker in the process of developing the method of real-time quaking induced conversion (RT-QuIC) for prion disease identification	**Keding Cheng** *Guangzhou Medical University, China* zb-chengkeding@kingmed.com.cn
14:50 - 15:10	Autophagy regulates α-Synuclein trans-synaptic propagation and induces dopaminergic neuron functional deficits in drosophila	**Wen Li** *China Medical University, China* wli87@cmu.edu.cn

15:10 - 15:25	**Coffee Break**	
15:25 - 15:35	Welcome Remarks (Chairs: **Christina Orrú** & **Xiaofen Chen**)	
15:35 - 15:55	Is weight gain an early sign of sporadic Creutzfeldt-Jakob disease?	**Laura J. Ellett** *University of Melbourne, Australia* laura.ellett@florey.edu.cn
15:55 - 16:15	Revealing the characteristics and early diagnosis of Alzheimer's disease using fluid and neuroimaging markers	**Tengfei Guo** *Peking University Shenzhen Graduate School, China* tengfei.guo@pku.edu.cn
16:15 -16:35	Detection of skin α-Synuclein using RT-QuIC as a diagnostic biomarker for Parkinson's disease in the Chinese population	**Haiyang Luo** *The First Affiliated Hospital of Zhengzhou University, China* fccluohy@zzu.edu.cn
16:35 - 16:55	The diagnostic value of new technologies for amplifying misfolded protein seeds in central motor disorders	**Pingyi Xu** *The First Affiliated Hospital of Guangzhou Medical University, China* pingyixu@sina.com
16:55 - 17:15	Developing enhanced RT-QuIC for detection of serum tau-seeding activity as a diagnostic biomarker of Alzheimer's disease	**Yirong Yang** *The First Affiliated Hospital of Nanchang University, China* yangyirong19@qq.com
17:15 - 17:25	Closing Remarks	
17:30 - 19:30	**Dinner**	

Workshops 3: Prion Diseases and Related Disorders		**Hall C**
Time	**Title**	**Speaker**
13:00 - 13:10	Welcome Remarks (Chairs: **Tiago Fleming Outeiro** & **Xiaoxin Yan**)	
13:10 - 13:30	The genetic causes and pathogenesis of PolyG diseases	**Daojun Hong** *The First Affiliated Hospital of Nanchang University, China* hongdaojun@hotmail.com
13:30 - 13:50	Intermediate-length GGC repeat expansion in NOTCH2NLC was identified in Chinese ALS patients	**Dongsheng Fan** *Peking University Third Hospital, China* dsfan@sina.com

13:50 - 14:10	Condensation of cellular prion protein guides the TBK1-IRF3 signaling pathway to promote renal fibrosis	**Jing Nie** *Peking University, China* jingnie2006@163.com
14:10 - 14:30	Cellular prion protein controls DNA damage response and fibrosis following kidney injury by interacting with epithelial growth factor receptor	**Nana Song** *Zhongshan Hospital, Fudan University, China* song.nana@zs-hospital.sh.cn
14:30 - 14:50	Src-phosphorylated PrP traps TBK1 to inhibit the activation of the innate immunity	**Chao-Yang Li** *Guangzhou Medical University, China* chaoyangli@gzhmu.edu.cn
14:50 - 15:10	Excess PrPC inhibits muscle cell differentiation via miRNA-enhanced liquid–liquid phase separation implicated in myopathy	**Yi Liang** *Wuhan University, China* liangyi@whu.edu.cn
15:10 - 15:25	**Coffee Break**	
15:25 - 15:35	Welcome Remarks (Chairs: **Eric Vallabh Minikel** & **Yue Huang**)	
15:35 - 15:55	Molecular mechanism of strain-distinct α-Synuclein and tau cross-seeding uncovered by correlative approach with O-PTIR super-resolution imaging	**Jia-Yi Li** *China Medical University, China* jia-yi.li@cmu.edu.cn
15:55 - 16:15	Structural studies of De Novo formation of [PSI+]	**Ziang Wang** *University College London, UK* z.wang@prion.ucl.ac.uk
16:15 -16:35	Single intravenous treatment with Zinc finger repressor leads to brain-wide reduction of prion in nonhuman primates and significantly prolongs survival in the RML mouse model	**Shih-Wei Chou** *Sangamo Therapeutics Inc. USA* vchou@sangamo.com
16:35 - 16:55	Light identification of protein suppressors (LIPS) as a new technology to screen for genetic and pharmacological modulators of the cellular prion protein	**Emiliano Biasini** *University of Trento, Italy* emiliano.biasini@unitn.it
16:55 - 17:15	Vaccines that imitate the structural epitopes on α-Synuclein fibrils offer protection against Parkinson's disease	**Erdem Gültekin Tamgüney** *University of Alberta, Canada* erdem@hhu.de
17:15 - 17:35	Rationally designed, structure-based vaccine candidates targeting chronic wasting disease	**Andrew Fang** *University of Alberta, Canada* jfang5@ualberta.ca
17:35 - 17:50	Closing Remarks	
17:50 - 20:30	**Dinner**	

10/24/2024, Main Hall

Opening Session (Chairs: Jianming Li & Bing-Xing Pan)		
Time	**Title**	**Speaker**
08:30 - 08:50	Welcome Remarks	Leaders from Provincial Government, Nanchang University and NeuroPrion Association
08:50 - 09:00	Group Photography	All invited guests
Plenary Speech (Chairs: Giuseppe Legname & Jialin Zheng)		
09:00 - 10:00	The expanding prion paradigm	**Stanley B. Prusiner** *University of California San Francisco, USA* stanley.prusiner@ucsf.edu
Session 1: Prion Strains: From Molecular Structures to Disease Diversity (Chairs: Jean-Philippe Deslys & Weidong Le)		
Keynote Speeches		
10:00 - 10:25	Decoding PrP misfolding: Learning from nature to design the future	**Joaquín Castilla** *CIC bioGUNE, Spain* jcastilla@cicbiogune.es
10:25-10:50	Critical gatekeepers in mammalian prion infection	**Peter-Christian Klöhn** *University College London, UK* p.kloehn@prion.ucl.ac.uk
10:50 - 11:05	**Coffee Break**	
Oral Presentations (selected from abstracts)		
11:05 - 11:20	Transmission of VPSPr in macaque: An open gate to prion-like diseases?	**Emmanuel E. Comoy** *CEA-Prion Research Unit, France* emmanuel.comoy@cea.fr
11:20 - 11:35	High resolution structures of brain-derived prion strains	**Parvez Alam** *National Institutes of Health, USA* parvez.alam@nih.gov
11:35 - 11:50	Exploring the complex role of cofactors in prion strain diversity: Distinct polysaccharides generate unique recombinant PrP^{Sc} conformers	**Hasier Eraña** *CIC bioGUNE, Spain* herana.atlas@cicbiogune.es
12:00 - 13:30	**Lunch**	

Plenary Speech (Chairs: Yang Shi & Holger Wille)		
13:30 - 14:30	Cryo-EM structures of amyloid filaments from human brains	**Michel Goedert** *University of Cambridge, UK* mg@mrc-lmb.cam.ac.uk
Session 2: Advances in Pathogenic, Diagnostic, and Therapeutic Studies (Chairs: Hidehiro Mizusawa & Rujing Ren)		
Keynote Speeches		
14:30 - 14:55	Novel diagnostic and prognostic approach for rapidly progressive dementias: Indicators based on amyloid/tau/neurodegeneration (ATN) framework	**Jintai Yu** *Huashan Hospital Affiliated to Fudan University, China* jintai_yu@fudan.edu.cn
14:55 - 15:20	Distinct tau fibril types and their role in prion diseases	**Giuseppe Legname** *Scuola Internazionale Superiore di Studi Avanzati, Italy* giuseppe.legname@sissa.it
15:20 - 15:45	Induced neural stem cell-derived extracellular vesicles: New therapeutic strategy of neurological diseases	**Jialin Zheng** *Tongji University, China* jialinzheng@tongji.edu.cn
15:45 - 16:00	**Coffee Break**	
Oral Presentations (selected from abstracts)		
16:00 - 16:15	The purely thermodynamic anti-prionic mode of action for the treatment of all neurodegenerative diseases, including CJD	**Dieter Willbold** *Forschungszentrum Jülich, Germany* d.willbold@fz-juelich.de
16:15 - 16:30	Syntaxin-6 modifies prion pathogenesis in vivo & in cellular models	**Elizabeth Hill** *University College London, UK* e.hill@prion.ucl.ac.uk
Session 3: Advances in Therapeutic Studies (Chairs: Hermann Clemens Altmeppen & Zhentao Zhang)		
Keynote Speeches		
16:30 - 16:55	Engineering the next generation of PrP-lowering therapeutics	**Eric Vallabh Minikel** *Broad Institute, USA* eminikel@broadinstitute.org
16:55 - 17:20	TREM2 in the pathogenesis and targeted therapy of Alzheimer's disease	**Xiaofen Chen** *Xiamen University, China* chenxf@xmu.edu.cn

17:20 - 17:45	Translating structural biology into rationally-designed vaccines for neurodegenerative diseases	**Holger Wille** *University of Alberta, Canada* wille@ualberta.ca
17:45 - 18:45	**Poster Session**	
18:45 - 20:30	**Welcome Reception & The 20th Anniversary Celebration of NeuroPrion** **Chairs: Jean-Philippe Deslys & Wen-Quan Zou**	

10/25/2024, Main Hall

Plenary Speech (Chairs: Wen-Quan Zou & Hermann Schaetzl)		
Time	**Title**	**Speaker**
08:30 - 09:30	Human prion diseases: Past, present, and a glance to the future	Introductory greetings from **Pierluigi Gambetti** *Case Western Reserve University, USA* pxg13@case.edu presentation by **Laura Cracco** *Indiana University, USA*
Session 4: Pathogenic Mechanisms (I) (Chairs: Chongsuk Ryou & Renshi Xu)		
Keynote Speeches		
09:30 - 09:55	Prion neurotoxic pathways	**David Harris** *Boston University, USA* daharris@bu.edu
09:55 - 10:20	Excitatory neuron tropism of prion propagation	**Motohiro Horiuchi** *Hokkaido University, Japan* horiuchi@vetmed.hokudai.ac.jp
10:20 - 10:45	Vascular aging and cognitive defect	**Xiaoli Tian** *Nanchang University, China* tianxiaoli@ncu.edu.cn
10:45 - 11:00	**Coffee Break**	
11:00 - 11:25	Human prion diseases: Clinical variations & diagnosis	**Richard Knight** *University of Edinburgh, UK* r.knight@ed.ac.uk
11:25 - 11:50	Procrustean bed: Forcing PrP^{C} into the PrP^{Sc} shape. A perspective.	**Jesús R. Requena** *University of Santiago de Compostela, Spain* jesus.requena@usc.es
Oral Presentations (selected from abstracts)		

11:50 - 12:05	Sup35N prion domain drives liquid-liquid phase separation during hyperosmotic shock in a pH-independent manner	**Natalia Gorsheneva** *St. Petersburg State University, Russia* natalia.gorsheneva@mail.ru
12:05 - 13:30	**Lunch**	
Plenary Speech (Chairs: Joaquín Castilla & Chao-Yang Li)		
Time	**Title**	**Speaker**
13:30 - 14:30	Understanding the biology of prions and prion-like misfolded protein aggregates in neurodegenerative diseases	**Claudio Soto** *University of Texas Health Science Center at Houston, USA* claudio.soto@uth.tmc.edu
Session 5: Pathogenic Mechanisms (II) (Chairs: Ilia V. Baskakov & Daojun Hong)		
Keynote Speeches		
14:30 - 14:55	Genetic modifiers of human prion diseases and potential mechanisms	**Simon Mead** *University College London, UK* s.mead@prion.ucl.ac.uk
14:55 - 15:20	Rapid neurotoxicity in prion disease	**Jiyan Ma** *Chinese Institute for Brain Research, China* majiyan@cibr.ac.cn
15:20 - 15:45	VPS35 regulation of the development and progression of Alzheimer's disease	**Wencheng Xiong** *Case Western Reserve University, USA* wxx119@case.edu
15:45 - 16:00	**Coffee Break**	
Oral Presentations (selected from abstracts)		
16:00 - 16:15	Cryo-correlative imaging of prion strains *ex situ*	**Thomas J. Trainer** *University College London, UK* t.trainer@prion.ucl.ac.uk
Session 6: Diagnostic Biomarkers (Chairs: Mark Zabel & Pingyi Xu)		
Keynote Speeches		
16:15 - 16:40	Sensitive detection of proteopathic seeds from surfaces, tissue biopsies and biofluids	**Christina Orrú** *National Institutes of Health, USA* christina.orru@nih.gov

16:40 - 17:05	Structure-based design of a PET tracer of α-Synuclein fibril for diagnosis of Parkinson's disease	**Cong Liu** *Shanghai Institute of Organic Chemistry, CAS, China* liulab@sioc.ac.cn
17:05 - 17:30	Seeding activity of misfolded proteins in skin as diagnostic biomarkers of neurodegenerative diseases	**Wen-Quan Zou** *The First Affiliated Hospital of Nanchang University, China* wenquanzou@ncu.edu.cn
17:30 - 17:55	Brain organoid for modeling neural diseases	**Nam-Hyung Kim** *Wuyi University, China* nhkim@wyu.edu.cn
Oral Presentations (selected from abstracts)		
17:55 - 18:10	Tubular-derived exosomal prion protein plays a critical role in macrophage activation and renal fibrosis	**Tantan Long** *Nanfang Hospital, Southern Medical University, China* zeishuailong@163.com
18:10 - 18:25	Anti-chaperone activity of prion disease risk factor Syntaxin-6	**Jan Bieschke** *University College London, UK* j.bieschke@prion.ucl.ac.uk
18:25 - 19:30	**Poster Session**	
19:30 - 21:00	**Dinner**	

10/26/2024, Main Hall

Plenary Speech (Chairs: Cong Liu & Candace Mathiason)		
Time	**Title**	**Speaker**
08:30 - 09:30	α-Synuclein and its involvement in neurodegenerative diseases	**Maria Grazia Spillantini** *University of Cambridge, UK* mgs11@cam.ac.uk
Session 7: α-Synuclein in Prion & Prion-like Diseases (Chairs: Jian Wang & Hidehiro Mizusawa)		
Keynote Speeches		
09:30 - 09:55	Aberrant changes of the brain synuclein during prion infection	**Xiaoping Dong** *CDC, China* dongxp238@sina.com
09:55 - 10:20	Pathogenesis and early diagnosis of neurodegenerative diseases	**Keqiang Ye** *Shenzhen Technology University, China* kq.ye@siat.ac.cn
10:20 - 10:35	**Coffee Break**	

10:35 - 11:00	The molecular interaction between α-Synuclein and the prion protein and associated biological effects	**Tiago Fleming Outeiro** *University Medical Center Göttingen, Germany* touteir@gwdg.de
11:00 - 11:25	Genetically modified large animal models of brain diseases	**Xiao-Jiang Li** *Jinan University, China* xjli33w@jnu.edu.cn
Oral Presentations (selected from abstracts)		
11:25 - 11:40	The role of α-Synuclein fuzzy coat in its transmission activity	**Zhuohao He** *Shanghai Institute of Organic Chemistry, CAS, China* hezh@sioc.ac.cn
11:40 - 11:55	A novel prion species identified in familial Creutzfeldt-Jakob disease linked to substitution of glutamic acid with Lysine at residue 200 of prion protein	**Yue Lang** *Case Western Reserve University, USA* langyue@jlu.edu.cn
11:55 - 13:30	**Lunch**	
Plenary Speech (Chairs: Jiyan Ma & Jing Nie)		
Time	**Title**	**Speaker**
13:30 - 14:30	Functional genomics of the prion life cycle	**Adriano Aguzzi** *University of Zurich, Switzerland* adriano.aguzzi@uzh.ch
Session 8: Aging and Neurodegenerative Diseases and Organoid Modeling (Chairs: Emmanuel E. Comoy & Wei Luo)		
Keynote Speeches		
14:30 - 14:55	Prion mechanisms and aging: Lessons learned from long-term experiments	**Jean-Philippe Deslys** *CEA-Prion Research Unit, France* jean-philippe.deslys@cea.fr
14:55 - 15:20	Prion evolution: The role of prion strain interference	**Jason Bartz** *Creighton University, USA* jbartz@creighton.edu
15:20 - 15:35	**Coffee Break**	
15:35 - 16:00	Diagnostic value of skin biopsy RT-QuIC in prion diseases	**Liyong Wu** *Xuanwu Hospital, Capital Medical University, China* wmywly@hotmail.com

Oral Presentations (selected from abstracts)		
16:00 - 16:15	Oral small molecules for reducing prion protein levels: A new therapeutic strategy for prion disease	**Nina Oberbeck** *Gate Bioscience Inc., USA* noberbeck@gatebio.com
16:15 - 16:30	Genome-wide CRISPR activation screen identifies BMP signaling pathway as mediator of prion uptake by cells	**Elena De Cecco** *University of Zurich, Switzerland* elena.dececco@usz.ch
Session 9: Animal Prion Diseases (Chairs: Ryan A. Maddox & Qi Shi)		
Keynote Speeches		
16:30 - 16:55	Developing vaccines for chronic wasting disease	**Hermann Schatzel** *University of Calgary, Canada* hschaetz@ucalgary.ca
16:55 - 17:20	Tracking longitudinal CWD shedding profiles in the native host	**Candace Mathiason** *Colorado State University, USA* candace.mathiason@colostate.edu
Session 10: CJD international Support Alliance (Chairs: Xiaoping Dong & Christiane Stehmann)		
17:20 - 17:40	Grants & fellowships: Empowering research. Inspiring hope.	**Maria Thacker Goethe** *Georgia Bio, USA* mariathacker@gmail.com
17:40 - 18:00	CJD International Support Alliance (CJDISA) global support for prion disease patients, their families and those at risk	**Suzanne Solvyns** *CJD Support Group Network, Australia* s.solvyns@cjdsupport.org.au
18:00 - 19:00	**Poster Session**	
19:00 - 21:00	**Dinner**	

10/27/2024, Main Hall

Plenary Session (Chairs: Christina Orrú & Jia-Yi Li)		
Time	**Title**	**Speaker**
08:30 - 09:30	Self-propagating protein seeds as pathogens and biomarkers	**Byron Caughey** *National Institutes of Health, USA* bcaughey@niaid.nih.gov
Session 11: Glial Cells in Neurodegenerative Diseases (Chairs: David Harris & Wencheng Xiong)		
Keynote Speeches		

Time	Title	Speaker
09:30 - 09:55	Reactive microglia envelop viable neurons in prion diseases	**Ilia V. Baskakov** *University of Maryland, USA* baskakov@som.umaryland.edu
09:55 - 10:20	The impact of microglia-astrocyte cross-talk on CNS prion disease pathogenesis	**Neil Mabbott** *University of Edinburgh, UK* neil.mabbott@roslin.ed.ac.uk
10:20 - 10:45	Peptide-addressed liposome-embedded therapeutic systems: PALETS delivering tools to alter protein expression and limit pathologic protein misfolding	**Mark Zabel** *Colorado State University, USA* mark.zabel@colostate.edu
10:45 - 11:00	**Coffee Break**	
Session 12: Hot Topics, Breaking News & Controversies (Chairs: Simon Mead & Wen-Quan Zou)		
11:00 - 11:15	Novel emergent CWD strains with unstable properties cause chronic wasting disease (CWD) in Nordic cervids	**Xutong Shi** *Colorado State University, USA* xutong.shi@colostate.edu
11:15 – 11:30	Towards real-time monitoring of prion infection: Genetic code expansion to enable site-specific bioorthogonal labeling of functional and prion-convertible cellular prion protein in live cells	**Szymon W. Manka** *University College London, UK* s.manka@ucl.ac.uk
11:30 - 11:45	Zoonotic potential of moose-derived chronic wasting disease prions after adaptation in intermediate species	**Tomás Barrio** *École Nationale Vétérinaire de Toulouse, France* tomas.barrio@envt.fr
Closing Session (Chairs: Jean-Philippe Deslys & Wen-Quan Zou)		
11:45 - 12:30	Best Presentation, Poster Awards and Announcement of Prion 2025	