

v241003		20th ICRP program	
	Chair / Speaker	Content	
Time\Date Sunday-17-Nov-2024			
12:00-14:30		Registration	
14:30-14:50	Gebhard Schertler, Massimo Olivucci	Welcome speech	
14:50-15:00	Session A Chair = Steven Smith	Session A = Trends of retinal protein signaling research Title =	
15:00-15:20	Talk A1 Oliver Ernst	Structural insights into light-gating of potassium-selective channelrhodopsin	
15:20-15:40	Talk A2 Martha E. Sommer	Rhodopsin-Arrestin interaction	
15:40-16:00	Talk A3 Franz Bartl	Infrared studies on retinal proteins	
16:00-16:20	Talk A4 Ching-Ju Tsai	Active state structures of a bistable visual opsin bound to G proteins	
16:20-15:00		Coffee break & mount poster	
17:00-18:00	Keynote 1 Brian Kobilka (chaired by Gebhard Schertler)	Mechanisms of GPCR activation	
18:00-18:20	Poster presenters	Flash poster Talks. 10-15 poster presenters, 1-2 min plus one slide	
18:20-18:30		<<buffer time>>	
18:30-22:00		Poster session at the bar, light dinner provided	
Time\Date Monday-18-Nov-2024			
08:30-09:00		<<preparation>>	
09:00-09:10	Session B Chair = Kwang-Hwan Jung	Session B = Structural mechanism of microbial rhodopsins Title =	
09:10-09:30	Talk B1 Clemens Glaubitz	Solid-state and solution NMR studies of retinal proteins	
09:30-09:50	Talk B2 Hideaki Kato	Structural diversity of channelrhodopsins	
09:50-10:10	Talk B3 Matthias Broser	Structural elucidation of the far-red absorbing and highly fluorescent retinal chromophore in fungal neorhodopsins	
10:10-10:30	Talk B4 Ritsu Mizutori	Structural basis for proton transporting mechanism in viral heliorhodopsin, V2HeR3	
10:30-11:00		Coffee break	
10:30-10:40	Session C Chair = Brian Kobilka	Session C = Discovery of new animal rhodopsins Title =	
10:40-11:00	Talk C1 Zuzana Musilova	See you in the dark: rhodopsin-based visual system in the deep-sea fishes	
11:00-11:20	Talk C2 Marjorie Lienard	Functional evolution and spectral tuning mechanisms of insect visual Gq opsins	
11:20-11:40	Talk C3 Polina Isaikina	Characterization of Butterfly Long-Wavelength Opsin for Advanced Optogenetics	
11:40-12:00	Talk C4 Alina Pushkarev	Crustaceans as a source of new bistable rhodopsins for optogenetic applications	
12:30-13:30		Group photo Lunch + Poster	
13:30-13:40	Session D Chair = Josef Wachtveitl	Session D = Dynamics of retinal proteins Title =	
13:40-14:00	Talk D1 Stefan Haacke	New Insights on the Ultrafast Photophysics of Archaelrhodopsin-3 and its Fluorescent Mutants	
14:00-14:20	Talk D2 Gerrit Lamm	The photochemistry of a microbial rhodopsin from Cryobacterium levicorallinum investigated by time-resolved optical spectroscopy	
14:20-14:40	Talk D3 Giorgia Ortolani	STRUCTURAL BASIS FOR THE PROLONGED PHOTOCYCLE OF SENSORY RHODOPSIN II REVEALED BY SERIAL SYNCHROTRON CRYSTALLOGRAPHY	
14:40-15:00	Talk D4 Yosuke Mizuno	Light-induced FTIR spectroscopy of microcrystals of visual rhodopsin grown in LCP	
15:00-15:30		Coffee break	
15:30-15:40	Session E Chair = Keiichi Inoué	Session E = Advanced methods for retinal proteins Title =	
15:40-16:00	Talk E1 Miroslav Kloz	Femtosecond Stimulated Raman Spectroscopy: A Tool Tailored for the Study of Rhodopsin Dynamics	
16:00-16:20	Talk E2 John Kennis	Reaction Dynamics and Mechanisms of Newly Discovered Bistable Microbial Rhodopsins	
16:20-16:40	Talk E3 Thomas Perkins	Quantifying a light-induced energetic change in a single molecule of bacteriorhodopsin by atomic force microscopy	
16:40-17:00	Talk E4 Fengjie Wu	Elucidating GPCR conformational dynamics by a novel NMR method	
17:00-17:30		Coffee break	
17:30-18:30	Keynote 2 Rich Mathies (chaired by Massimo Olivucci)	Retinal analogues and mechanism of light activation	
18:30-18:50	Poster presenters	Flash poster Talks. 10-15 poster presenters, 1-2 min plus one slide	
18:50-19:00		<< buffer time >>	
19:00-22:00		Poster session at the bar	
Time\Date Tuesday-19-Nov-2024			
08:30-09:00		<<preparation>>	
09:00-09:10	Session F Chair = Thomas Sakmar	Session F = Function of animal rhodopsins and related proteins Title =	
09:10-09:30	Talk F1 Takahiro Yamashita	Characterization of red-sensitive non-visual opsins	
09:30-09:50	Talk F2 Yuji Furutani	Structural key elements crucial for function of Krokinobacter rhodopsin 2 and dynamics of heliorhodopsin	
09:50-10:10	Talk F3 Kota Katayama	How far can structure-spectroscopy studies of cone pigments approach the essence of the spectral tuning mechanism?	
10:10-10:30	Talk F4 Lee Harkless	The role of RGS proteins in determining melanopsin signaling outcomes	

10:30-11:00			Coffee break
10:30-10:40	Session G	Chair = Judith Klein-Seetharaman	Session G = Physiology of animal retinal proteins Title =
10:40-11:00	Talk G1	Stephan Neuhauss	From Light to Sight: Retinal Proteins in the Regulation of Photoreceptor Signaling in the Zebrafish Retina
11:00-11:20	Talk G2	Philip Reeves	retinal protein and disease
11:20-11:40	Talk G3	W Ajith Karunaratne	Melanopsin Governs Wavelength-Dependent Cell Signaling and Animal Behavior
11:40-12:00	Talk G4	Thomas Mager	ChReef – An improved ChR for Future Optogenetic Therapies
12:30-13:30			Lunch + Poster
13:30-13:40	Session H	Chair = Richard Neutze	Session H = Photopharmacology and dynamics of retinal proteins Title =
13:40-14:00	Talk H1	Amadeu Llebaria	Photopharmacology
14:00-14:20	Talk H2	Jörg Standfuss	Ultrafast XFEL studies with retinal proteins and beyond
14:20-14:40	Talk H3	Eriko Nango	Structural Dynamics of Microbial Rhodopsins Captured by X-ray Free Electron Lasers
14:40-15:00	Talk H4	Valerie Panneels	ULTRAFAST DYNAMICS OF OUR LIGHT-RECEPTOR FOR VISION RHODOPSIN, USING AN X-RAY FREE ELECTRON LASER
15:00-15:30			Coffee break
15:30-15:40	Session I	Chair = Igor Schapiro	Session I = Theoretical approaches in retinal proteins Title =
15:40-16:00	Talk I1	Massimo Olivucci	Retinal isomerization and quantum yields in retinal proteins
16:00-16:20	Talk I2	Flurin Hilbar	LAMBDA: Light Absorption Modeling via Binding Domain Analysis
16:20-16:40	Talk I3	Ana-Nicoleta Bondar	H-bond network of retinal proteins
16:40-17:00	Talk I4	Xavier Deupi	GPCR receptor dynamics in cells
17:00-17:30			Coffee break
17:30-18:30	Keynote 3	Richard Neutze (chaired by Jörg Standfuss)	Historical of XFEL and mechanisms of proton pumping
18:30-18:50		Poster presenters	Flash poster Talks. 10-15 poster presenters, 1-2 min plus one slide
18:50-19:00			<< buffer time >>
19:00-22:00			Poster session at the bar
Time\Date	Wednesday-20-Nov-2024		
08:30-09:00			<<preparation>>
09:00-09:10	Session J	Chair = Yuji Furutani	Session J = Carotenoids in retinal protein function Title =
09:10-09:30	Talk J1	Andrey Rozenberg	Carotenoid antennas in proton-pumping rhodopsins from bacteria and archaea
09:30-09:50	Talk J2	Keiichi Inoue	Spectroscopic study on carotenoid binding ion-transporting microbial rhodopsins
09:50-10:10	Talk J3	María del Carmen Marín Pérez	Light-harvesting by antenna-containing xanthorhodopsin from an Antarctic cyanobacterium
10:10-10:30	Talk J4	Shin-Gyu Cho	Heliorhodopsin-mediated light-modulation of ABC transporter
10:30-11:00			Coffee break
10:30-10:40	Session K	Chair = Jörg Standfuss	Session K = ion channel rhodopsins Title =
10:40-11:00	Talk K1	Quentin Clement Bertrand	Structural effects of high laser power densities on an early bacteriorhodopsin photocycle intermediate
11:00-11:20	Talk K2	Matthias Mulder	Structural insights into the opening mechanism of Channelrhodopsin C1C2
11:20-11:40	Talk K3	Han Sun	Channel opening and ion conduction mechanism in channelrhodopsin C1C2, ChR2, and iChloC
11:40-12:00	Talk K4	Shunki Takaramoto	ApuRhs, a new family of anion channelrhodopsin from apusomonads
12:30-13:20			Lunch
13:20-17:00			Excursion
17:00-17:30			<< buffer time >>
17:30-22:00			Poster session at the bar (Board dinner 1830-)
Time\Date	Thursday-21-Nov-2024		
08:30-09:00			<<preparation>>
09:00-09:10	Session L	Chair = Robert Lucas	Session L = Optogenetics with bistable rhodopsins Title =
09:10-09:30	Talk L1	Akihisa Terakita	Diverse coral opsins and their molecular properties
09:30-09:50	Talk L2	Mitsumasa Koyanagi	Evolution of jumping spider rhodopsin for optimizing depth perception from image defocus
09:50-10:10	Talk L3	Sonja Kleinlogel	An ultrafast opsin from the dreaded box jellyfish
10:10-10:30	Talk L4	Johannes Vierock	pHRoG: pH Regulating optoGenes for all-optical control of subcellular pH
10:30-10:50	Talk L5	Richard McDowell	Spectral tuning of mammalian melanopsins
10:50-11:20			Coffee break
11:20-11:30	Session M	Chair = Ana-Nicoleta Bondar	Session M = Ion-transporting mechanism in microbial rhodopsins Title =
11:30-11:50	Talk M1	Kirill Kovalev	4D structural studies of the light-driven sodium pump ErNaR
11:50-12:10	Talk M2	Moran Shalev-Benami	'Light Up the Dance Floor' – Cryo-EM Studies of Bestrhodopsins Provide New Snapshots of Light-Based Activation Mechanisms
12:10-12:30	Talk M3	Przemysław Nogły	Sodium/Chloride pumping retinal proteins
12:30-12:50	Talk M4	Kwang-Hwan Jung	Dual roles of proton pumping rhodopsin in Gloeobacter: Energy production and gene regulation
12:50-13:50			Lunch + Poster
13:50-14:00	Session N	Chair = Peter Hegemann	Session N = Physiology of microbial retinal proteins Title =

14:00-14:20	Talk N1	Josef Wachtveitl	Near-UV und IR spectroscopic markers for retinal configuration during the photocycle of microbial rhodopsins
14:20-14:40	Talk N2	Joachim Heberle	FTIR of retinal proteins
14:40-15:00	Talk N3	Shoko Hososhima	Proton transport mechanism of viral heliorhodopsin, V2HeR3
15:00-15:20	Talk N4	Wayne Busse	Localization of the Fluorescent Rhodopsin NeoR in Fungal Zoospores with Insights into Its Enzymatic Functionality
15:20-15:40	Talk N5	Phyllis Robinson	Melanopsin, from molecule to behavior
15:40-16:20			Coffee break unmount poster
16:20-17:20	Keynote 4	Robert J Lucas (chaired by Akihisa Terakita)	Optogenetics application in neurobiology and vision restoration.
17:20-18:20			Plenary discussion
18:20-18:30			<< buffer time >>
18:30-22:00			(Conference dinner??)