



第 30 回生理研国際シンポジウム
「生物電子顕微鏡の最前線－蛋白質から超分子へ」
“Frontiers of Biological Electron Microscopy-From Proteins to Supramolecules”

日時：2003年3月12日～3月15日
 場所：岡崎コンファレンスセンター 大会議室 (<http://www.occ.orion.ac.jp/index.html>)
 世話人：永山國昭 (<http://www.nips.ac.jp/ultra/NIPS30/>)
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PROGRAM

3月12日 水曜日	12:00-14:00 : Reception
	14:00-15:30 : Hybrid Methods I – Prion Structures (Discussion Leader: 桑田一夫) T. James (Univ. of California) “Prion Protein Structure and Conformational Heterogeneity: Implications for Disease” H. Wille (Univ. of California) “Electron Crystallographic Analyses on Two-Dimensional Crystals of the Scrapie Prion Protein” 赤坂一之 (近畿大学) “High pressure NMR characterizes higher energy conformers of proteins. Application to prion.”
	16:00-17:30 : Hybrid Methods II – Amyloid Structures (DL: 後藤祐児) 山口晴保 (群馬大学) “Ultrastructural Analysis of the Cerebral β Amyloid Deposition.” 橘 秀樹 (神戸大学) “Pressure Dissociates Amyloid-Fibrillogenic Assembly of Disulfide-Deficient Lysozyme Variant.” 荒井啓行 (東北大学) “Perspectives in Alzheimer's Disease Diagnosis.”
	18:00-18:45 : 基調講演 (廣川信隆・東京大学) (DL: 永山國昭) “Molecular Motor, Kinesin Superfamily Proteins (KIFs) : Structure, Dynamics and Functions”
	19:00-21:00 : Poster Session (奇数番号)
	3月13日 木曜日
9:00-10:30 : TEM Technology I – Electron-Phase Microscopy (DL: 田中通義) K. Nugent (Melbourne Univ.) “Non-Interferometric Phase Recovery for Transmission Electron Microscopy” 細川史生 (日本電子(株)) “New Phase Plate System Applied to the 120kV TEM” 永山國昭 (統合バイオサイエンスセンター) “Image Enhancement with Phase Plates in Electron-Phase Microscopy”	
11:00-12:30 : TEM Technology II – Cs Correction (DL: 田中信夫) M. Haider (CEOS GmbH) “Advantages of Cs-Correction for TEM and STEM.” 高井義造 (大阪大学) “Real-time Phase Transmission Electron Microscopy” R. Danev (統合バイオサイエンスセンター) “Cs-Correction with Complex Observation in TEM.”	
14:00-15:30 : Cell Structures I – Organelles (DL: 藤木幸夫) W. Baumeister (Max Planck Inst.) “Electron Tomography: Towards Visualizing Supramolecular Architecture Inside Cells.” M. Marko (Wadsworth Center) “Electron Tomography of Cell Organelles: A Comparison of Cryo Techniques and Prospects for 3-D Correlative Elemental Microanalysis” B. Marsh (Univ. of Colorado) “3D Structure Studies of the Pancreatic Beta Cell by High Resolution EM Tomography”	

3月13日 木曜日	16:00-17:30 : Cell Structures II – Cytoskeltons (DL: 廣川信隆)
	K. Downing (Lawrence Berkeley Lab.) “Tubulin Structure and the Interactions That Regulate Microtubule Dynamics.”
	S. Burgess (Univ. of Leeds) “Structure and Power Stroke of a Flagellar Dynein.”
	S. Stoilova (Wadsworth Center) “Structure of the Arp2/3 Complex by Cryo-EM and Single Particle Analysis, or How Amoeba Moves”
3月14日 金曜日	18:00-18:45 : 基調講演 (J. Heuser • Washington Univ.) (DL: 濱 清)
	“The Elusive Goals of Current Electron Microscopy.”
	19:00-21:00 : Poster Session (偶数番号)
	9:00-11:00 : Cell Structures III – Muscles (DL: R. Schroeder)
3月15日 土曜日	K. Holmes (Max Planck Inst.) “High Resolution Cryo-Electron Microscopy of “Decorated Actin” Reveals How the ATP and Actin Binding Sites of Myosin are Linked.”
	M. Reedy (Duke Univ.) “X-ray Diffraction of Insect Flight Muscle as a Guide to Optimizing Freeze-Substitution and Thin-Section EM Tomography.”
	R. Craig (Univ. of Massachusetts) “Molecular Switching in Muscle.”
	片山栄作 (東京大学医科学研究所) “Three-Dimensional Analyses of Free and Actin-Associated Myosin Heads in Function.”
	11:30-13:00 : Cell Structures IV – Cell Membranes (DL: 藤本豊士)
	M. Kuehnelt (Eur. Mol. Biol. Lab.) “Manipulation of Signalling Networks Regulating Actin Nucleation Arrests Pathogen Growth”
	J. Rash (Colorado State Univ.) “Freeze-Fracture Replica Immunogold-Labeling (FRIL) of Membrane Proteins in Identified Neurons and Glia in Developing and Adult Vertebrate Central Nervous Systems: Connexins, Glutamate Receptors and Aquaporins.”
	藤本 和 (福井県立大学) “Dynamics of Cell Membrane Proteins and Lipids as Revealed by Freeze-Fracture Replica Labeling Electron Microscopy.”
	14:30-15:30 : Supramolecular Structures I – Virus et al. (DL: 光岡 薫)
	W. Chiu (Baylor College of Med.) “Electron Cryomicroscopy of Virus Particles at Sub-Nanometer Resolution”
石川 尚 (NIAMS (NIH)) “Clp Protein-degradation Machines: Mechanisms of ATP-dependent Proteolysis Revealed by Cryo-electron Microscopy and Single Particle Analysis.”	
16:00-17:00 : Supramolecular Structures II – Flagella et al. (DL: 廣瀬恵子)	
A. Blocker (William Dunn Sch.) “Functional and Structural Analysis of the Type III Secretion Apparatus of <i>Shigella Flexneri</i> .”	
米倉 功治 (大阪大学) “Electron Cryomicroscopy of Bacterial Flagellar Structures.”	
17:15-18:00 : 基調講演 (D. DeRosier • Brandeis Univ.) (DL: 難波啓一)	
“The Structure of the Bacterial Flagellar Motor.”	
18:45-21:00 : Banquet with Japanese attraction	
3月15日 土曜日	9:00-10:00 : Hybrid Methods III – Supramolecular Dynamics (DL: 馬場則男)
	C. Brooks III (Scripps Res. Inst.) “Exploring Ribosome Motion During Translocation Using Elastic Network Models and Normal Modes”
	W. Wriggers (Scripps Res. Inst.) “Reconciling Shape With Structure: Strategies for Multi-Resolution Flexing of Biophysical Data.”
	10:30-12:00 : Hybrid Methods IV – Light and Electron Microscopy (DL: 白田信光)
	M. Ellisman (Natl. Cent. Microsc. Imag. Res.) “Correlated Multi-scale Microscopy of the Nervous System.”
	篠田 晃 (山口大学) “Correlated Light and Electron Microscopy for Immunohistochemistry and <i>in situ</i> Hybridization ; with Special Reference to Structure and Function of the Stigmoid Body.”
重本隆一 (生理学研究所) “Number and Density of AMPA-Type Glutamate Receptors in Synaptic Sites: Corresponding Studies of Electrophysiology and Freeze-Fracture Replica Labelling.”	
12:15-13:00 : 基調講演 (月田承一郎 • 京都大学) (DL: 永山國昭)	
“The Claudin Family: A Key Player in the Barrier Function of Epithelium/Endothelium in Multicellular Organisms.”	