PROGRAM

March 6 (Thursday)

15:00–18:00 Registration at Okazaki Conference Center

18:00–20:00 Get-Together Party at Okazaki Conference Center

March 7 (Friday)

8:50 – 9:00 Welcome Address
Hideo Mohri (President, Okazaki National Research Institutes)

9:00 – 9:10 Opening Remarks
Teizo Kitagawa (Center for Integrative Bioscience)

Chair: Teizo Kitagawa (Center for Integrative Bioscience)

9:10 – 10:10 **Kenneth D. Karlin** (The Johns Hopkins University)
Bioinorganic "Oxygen Activation" Emphasizing Copper and Non-Heme Iron Enzymes & Model Chemistry

Chair: Masao Ikeda-Saito (Tohoku University)

10:10 – 11:10 **Yoshihito Watanabe** (Nagoya University)
Molecular Mechanisms on the Compound I Formation of Heme Enzymes

11:10 – 11:30 Coffee Break

Chair: Toru Shimizu (Tohoku University)

11:30 – 12:30 **Isao Morishima** (Kyoto University)
Molecular Mechanism of P450cam Catalyzed Oxygenation Reaction Regulated by the Association with Putidaredoxin

12:30 – 13:30 Lunch

13:30 – 15:00 **Poster Discussion** (Odd Numbers)

Chair: Osamu Yamauchic (Kansai University)

15:00 – 16:00 **Lucia Banci** (University of Florence)
NMR in Structural Genomics of Metalloproteins

Chair: Takamitsu Kohzuma (Ibaraki University)

16:00 – 17:00 **Gerard W. Canters** (Leiden University)
The Spectroscopy of Copper Proteins in Relation to Their Function

Chair: Isao Morishima (Kyoto University)

17:00 – 18:00 **Andrew J. Thomson** (University of East Anglia)
Magnetic and Optical Methods of Studying Metalloproteins

March 8 (Saturday)

Chair: Kiyoshi Fujisawa (Tsukuba University)

9:00 – 10:00 **Thomas V. O'Halloran** (Northwestern University)
Chemistry of the Cellular Cytoplasm: Receptors for Monitoring and Controlling Metal Ion Activity

Chair: Hideo Akutsu (Osaka University)

10:00 – 11:00 **Eiichi Kimura** (Hiroshima University)
Macrocyclic Zinc(II)-Fluorophores for New Detectors of Apoptosis

11:00 – 11:20 Coffee Break

Chair: Norikazu Ueyama (Osaka University)

11:20 – 12:20 **Anthony G. Wedd** (The University of Melbourne)
Chemistry of the Transfer of Copper(I) between Copper-Binding Proteins

12:20 – 13:20 Lunch

13:20 – 15:00 **Poster Discussion** (Even Numbers)

Chair: Kenneth D. Karlin (The Johns Hopkins University)

15:00 – 15:30 **Shinobu Itoh** (Osaka City University)
Mechanism of Phenolase Reaction of Tyrosinase Enzymatic Reaction vs. Model Reaction

15:30 – 16:00 **Wonwoo Nam** (Ewha Womans University)
Reactive Intermediates in Biomimetic Models of Heme and Nonheme Iron Oxygenase Enzymes

16:00 – 16:30 **Prasat Kittakoop** (National Center for Genetic Engineering and Biotechnology)
Biologically Active Compounds from Thai Plants and Microorganisms

16:30 – 16:50 Coffee Break

Chair: Anthony G. Wedd (The University of Melbourne)

16:50 – 17:20 **Takeshi Nishino** (Nippon Medical School)
Structure and Mechanism of Xanthine Oxidoreductase, a Molybdenum Containing Iron-Sulfur Flavoprotein

17:20 – 17:50 **Periakaruppan T. Manoharan** (Indian Institute of Technology)
Subunit Heterogeneity in Reconstituted and Hybrid Hemoglobins

17:50 – 18:20 **Zijian Guo** (Nanjing University)
From Mechanistic Study to the Design of Metal-Based Anticancer Complexes

18:30 – Steering Committee Meeting

March 9 (Sunday)

Chair: Thomas V. O'Halloran (Northwestern University)

9:00 – 9:30 **Shigetoshi Aono** (Center for Integrative Bioscience)
Structure and Function of the Heme-Based Sensor Proteins, CooA and HemAT-Bs

9:30 – 10:00 **Youn Soo Sohn** (Ewha Womans University)
Selective Tumor Targeting by EPR Effect. Synthesis, Biodistribution and Antitumor Activity of Polyphosphaze-Platinum(II) Conjugates

10:00 – 10:30 **Edward R. T. Tiekink** (National University of Singapore)
Triorganophosphinegold(I) Thiolates: Pharmacological Applications and Anti-Tumour Potential

10:30 – 11:00 Coffee Break

Chair: Lucia Banci (University of Florence)

11:00 – 11:30 **N. Jayaraman** (Indian Institute of Science)
Zinc(II)-Dithiolate Complex of Insulin B Chain

11:30 – 12:00 **Masatatsu Suzuki** (Kanazawa University)
Reversible O–O Bond Cleavage and Reformation of Peroxo Group of Peroxocarbonate Ligand of Iron(III) complex

12:00 – 12:30 **Wing-Tak Wong** (The University of Hong Kong)
Gadolinium Complexes Containing Polyamino Polycarboxylate Ligands for Magnetic Resonance Imaging (MRI) Contrast Agents

12:30 – 13:30 Lunch

13:30 – 15:00 **Poster Discussion**

Chair: Suresh V. S. Rana (Ch. Charan Singh University)

15:00 – 15:30 **Seog K. Kim** (Yeungnam University)
Simultaneous Binding of Ru(II)[(1,10-Phenanthroline)$_2$dipyridophenazine]$^{2+}$ and Minor Groove Binder 4′,6-Diamidino-2-Phenylindole to Poly[d(A-T)$_2$] and DNA Mediated Energy Transfer between the Drugs

15:30 – 16:00 **Bhaskar G. Maiya** (University of Hyderabad)
Photonuclease Activity of Co(III), Ni(II) and Ru(II) Complexes Containing Intercalatable, Photoactive Polypyridyl Ligands

16:00 – 16:20 Coffee Break

Chair: Gerard W. Canters (Leiden University)

16:20 – 16:50 **Pin Yang** (Shanxi University)
Double-Strand Hydrolysis of DNA by Some Artificial Nucleases

16:50 – 17:20 **Takamitsu Kohzuma** (Ibaraki University)
A Mechanistic Approach to the Crystal Growth of a Heme Protein, Cytochrome *c*'in Space Experiment STS-107

17:20 – 17:50 **Nenad M. Kostic** (Iowa State University)
Selective Cleavage of Peptides and Proteins with Metal Complexes as Artificial Enzymes

18:30 – 21:00 Banquet

March 10 (Monday)

Chair: Yoshihito Watanabe (Nagoya University)

9:00 – 9:30 **Shyamalava Mazumdar** (Tata Institute of Fundamental Research)
Effect of Variations in the Redox Potential of the Metal Center on the Peroxidase Activity of a Hemeprotein

9:30 – 10:00 **Norikazu Ueyama** (Osaka University)
Regulation of Oxo-Transfer Reactivity by Intramolecular Hydrogen Bond toward Ligating Atom in the Active Center of Mo-, W-Oxidases and P450

10:00 – 10:30 **Hongzhe Sun** (University of Hong Kong)
Interactions of Antimony Antiparasitic and Bismuth Antiulcer Agents with Peptides and Proteins: Insights into the Possible Mechanism of Action

10:30 – 11:00 Coffee Break

Chair: Andrew J. Thomson (University of East Anglia)

11:00 – 11:30 **Takashi Ogura** (The University of Tokyo)
Resonance Raman Study on Cytochrome *c* Oxidase in Its Solubilized State, in Intact Mitochondria and in Reconstituted Vesicles

11:30 – 12:00 **Yoshinori Naruta** (Kyushu University)
Preparation of Peroxo-Bridged Heme-Copper Complex and Its Crystal Structure

12:00 – 12:30 **Sunney I. Chan** (Institute of Chemistry, Academia Sinica)
Stereospecific Hydroxylation of Small Alkanes by the Particulate Methane Monooxygenase from *Methylococcus capsulatus* (Bath)

12:30 – 12:40 Concluding Remarks
Yoshihito Watanabe (Nagoya University)

Poster Presentation

P-1 Synthesis and Structure-Activity Relationships of Novel Platinum(II) Complexes of (N-Substituted) Dicarboxyliic Amino Acids

Jin Kyu Kim[1], Yeong-Sang Kim[1,2], Rita Song[1,3], Moo Jin Jun[2], and Youn Soo Sohn[1] ([1]Ewha Womans University, Korea, [2]Yonsei University, Korea, [3]Korea Institute of Science and Technology, Korea)*

P-2 Synthesis of Orally Active (Diamine)Platinum(IV) Complexes of Mixed Carboxylates

Joo Ik Kim[1,2], Sun Young Park[1], Yeong-Sang Kim[1,2], Rita Song[3], and Youn Soo Sohn[1] ([1]Ewha Womans University, Korea, [2]Younsei University, Korea, [3]Korea Institute of Science and Technology, Korea)

P-3 The Detection of Polynuclear Pt(II) Species During the Reaction of Platinum Complexes and Biological Thiols

Qin Liu[1,2], Jun Lin[1], Longgen Zhu[1], and Zijian Guo[1] ([1]Nanjing University, P. R. China, [2]Nanjing College of Economics, P .R. China)*

P-4 Synthesis and Antitumor Activity of DNA-Binding Cationic Porphyrin-Platinum(II) Complexes

Rita Song[1], Yeong-Sang Kim[2,3], Chong Ock Lee[4], and Youn Soo Sohn[2] ([1]Korea Institute of Science and Technology, Korea, [2]Ewha Womans University, Korea, [3]Younsei University, Korea, [4]Korea Research Institute of Chemical Technology, Korea)

P-5 Interaction of Certain Binuclear Cobalt(III)-Diimine Complexes with Calf Thymus DNA

Pitchumony Tamil Selvi and Mallayan Palaniandavar (Bharathidasan University, India)*

P-6 Anion Recognition by Zn^{2+}-(Guanidinylethyl)cyclen in Aqueous Solution

Shin Aoki[1], Kenta Iwaida[1], Motoo Shiro[2], Kei Takeda[1], and Eiichi Kimura[3] ([1]Hiroshima University, Japan, [2]Rigaku Corporation X-Ray Research Laboratory, Japan, [3]Hiroshima University, Japan)

P-7 Modification of DNA by the Platinum Complex of the Dimeric Zinc Complex Having a 2,2'-Bipyridyl Linker

Mohd Zulkefeli[1], Rieko Okatani[1], Shin Aoki[1], Kei Takeda[1], and Eiichi Kimura[2] ([1]Hiroshima University, Japan, [2]Hiroshima University, Japan)

P-8 Reduction of Pentavalent Antimony(Sb^V) by Trypanothione and Formation of a Binary and Ternary Complex of Antimony(III) and Trypanothione

Siucheong Yan, Fei Li and Hongzhe Sun (University of Hong Kong, China)*

P-9 Biologically Active Copper(II) Complexes: Synthesis, Spectral and Electrochemical Characterization, DNA Intercalation and Biological Studies

Gurusamy Rajagopal[1], Kasi Nehru[2], and Periakaruppan Athappan[2] ([1]Crescent Engineering College [Affiliated to Anna University], India, [2]Madurai Kamaraj University, India)*

P-10 Binding Mode of the Cu(Brazilin) Complex to Native DNA and Its Active Species as Chemical DNA Nuclease

Hyun Mee Lee[1], Youn Hee Chae[1], Maeng-Joon Jung[2] and Seog K. Kim[1] ([1]Yeungnam University, Republic of Korea, [2]Sangju National University, Republic of Korea)*

P-11 Interaction of Metal Complexes Containing Tridentate Ligand with DNA

V. G. Vaidyanathan and Balachandran Unni Nair (Central Leather Research Institute, India)

P-12 Double Strand Cleavage by a Dinuclear Cu(II) Complex

Junghee Kim and Soohyun Kim (Sun Moon University, Korea)*

P-13 Hydrolytic Cleavage of DNA by Dinuclear Metal Complexes

Fei Gao and Yin Caixia (Shanxi University, P. R. China)

P-14 Selective Recognition of Nucleobases by Organometallic Ruthenium Complexes

Rafael Fernández, Michael Melchart, Abraha Habtemariam, and Peter J. Sadler (University of Edinburgh, UK)

P-15 DNA Interactions of Ruthenium(II) Complexes Bearing a New Generation of Photoactive Ligands

Sastri, C. V. and Maiya, B. G (University of Hyderabad, India)*

P-16 Modulation of Heavy Metal Toxicity by Vitamins and Hormones

S. V. S. RANA (Ch. Charan Singh University, India)

P-17 Molecular Dynamic Correlation Analyses of the Metal-Protein Binding Motif, the Protein Profile and Biosorption-Toxicity Studies of Lead (Pb) and Cadmium (Cd) Resistant Marine Sediment Bacteria (*Bacillus spp*. 1 and 2 and *Chryseomonas sp*. 2) Isolated from Iligan Bay

Myrna S. Mahinay[1], Mannix P. Balanay[2], Franco G. Teves[3], and Alexes C. Daquinag[4] ([1]MSU-Iligan Institute of Technology, Philippines, [2]Siquijor State College, Philippines, [3]MSU-Iligan Institute of Technology, Philippines, [4]Baylor College of Medicine, USA)

P-18 Specification of Bio-Accumulated Toxic Metals-A Computer Modeling Study

T. Sive Rao and G. Nageswara Rao (Andhra University, India)

P-19 Studies on the Interaction between cis-[Ru(2,2,2-tet)Cl_2]ClO_4 with Human Serum Albumin and Human Serum Transferrin

Rong Chen, Ella Lai-Ming Wong, Hong-Zhe Sun, and Chi-Ming Che* (The University of Hong Kong, P. R. China)*

P-20 Hydrolysis of Phosphate Ester by Zinc(II) Complex of a Tetradentate Ligand Providing Sulfur and Nitrogen Donors

Fumio Akagi and Masami Ito (Oita University, Japan)

P-21 Hydrolysis by the Zinc Finger Peptides: Conversion of Structural Zinc Sites into Catalytic Zinc Sites

Akiko Nomura and Yukio Sugiura (Kyoto University, Japan)

P-22 Design of Dimetal-Binding □-Helical Coiled Coil Peptide

Toshihisa Mizuno[1], Mihoko Koike[1], Kiyoko Wada[1], Kunihiro Tajima[2], Jun-ichi Oku[1], and Toshiki Tanaka[1] ([1]Nagoya Institute of Technology, Japan, [2]Kyoto Institute of*

Technology, Japan)

P-23 Towards the Design of Synthetic Enzymes

David Weber and Christin Choma (Rensselaer Polytechnic Institute, USA)

P-24 The Investigation of Bacterial Iron Transports Using Trihydroxamate Artificial Siderophores

Kenji Matsumoto, Masanori Hasebe, Tomohiro Ozawa, Koichiro Jitsukawa, and Hideki Masuda (Nagoya Institute of Technology, Japan)

P-25 Design, Expression, and Self-Assembling Properties of Hydrophobic Polypeptides Bearing Cysteine(s) as a Mimic of Bacterial Photosynthetic Antenna Complex

Takehisa Dewa[1,2], Taku Yamada[1], Taeko Mizuno[1], Makiko Ogawa[1], Kiyotaka Yoshida[1], Yoshiaki Nakao[1], Masaharu Kondo[1], Kouji Iida[3], Keiji Yamashita[1], Toshiki Tanaka[1], and Mamoru Nango[1] ([1]Nagoya Institute of Technology, Japan, [2]PRESTO, JST, [3]Nagoya Municipal Industrial Research Institute, Japan)

P-26 Structure and Biological Activity of Germatranes Containing Ge-C Bond

Edmunds Lukevics and Luba Ignatovich (Latvian Institute of Organic Synthesis, Latvia)

P-27 1,10-Phenanthroline Phosphorylates (Activates) MAP Kinase in *Xenopus* Oocytes

Ken-Ichi Watanabe, Toshinobu Tokumoto, and Katsutoshi Ishikawa (Shizuoka University, Japan)

P-28 Luminescent Terbium(III) Complex Showing Selectivity to Bicarbonate and Salicylate in Aqueous Solution: The Recognition Derived from Chelating Mode

Cong Li and Wing-Tak Wong (The University of Hong Kong, P. R. China)*

P-29 Structure and Spectrochemical Study Using Metal Substituted Blue Copper Model Complexes

Yuki Matsunaga, Naoko Ibi, Yoshitaro Miyashita, Kiyoshi Fujisawa, and Ken-ichi Okamoto (University of Tsukuba, Japan)

P-30 Magnetic, EPR and SOD Studies of Some Cu^{II}-Cu^{II}, Cu^{II}-Ni^{II} and Cu^{II}-Zn^{II} Imidazolate Bridged Complexes

R .N. Patel (A. P. S. University, India)

P-31 A Sterically Hindered Salen Iron Complex as a Model for Mononuclear Non-Heme Iron Enzymes

Takuya Kurahashi[1], Hiroshi Fujii[1], Manabu Sugimoto[2], Takashi Ogura[3], and Kenji Oda[3] ([1]Institute for Molecular Science, Japan, [2]Kumamoto University, Japan, [3]The University of Tokyo, Japan)

P-32 Efficient Olefin cis-Dihydroxylation and Epoxidation by Non-Heme Iron Catalysts with H_2O_2

Jinheung Kim, Ju Yeon Ryu, Wonwoo Nam, Lawrence Que, Jr. (Changwon National University, Korea, Ewha Womans University, Korea, University of Minnesota, USA)

P-33 Interaction of a Monodentate Ligand to Five-Coordinated Co(III) Complex with N_2S_3 Environment Directed to Nitrile Hydratase

Tomohiro Ozawa, Takayuki Goto, Yasuhiro Funahashi, Koichiro Jitsukawa, and Hideki Masuda (Nagoya Institute of Technology, Japan)

P-34 Cu(II) Regulation by Aromatic-Aromatic Ring Stacking Interaction

Akira Odani[1], Tetsuro Taniguchi[2], Maya Saita[2], Yoshihito Watanabe[2], and Osamu Yamauchi[3] ([1]Nagoya University, Japan, [2]Nagoya University, Japan, [3]Kansai University, Japan)

P-35 Synthesis and Reactivity of Dinuclear Transition Metal Complexes Supported by Binaphthyl-Containing Dinucleating Ligands with Axial Chirality

Takayuki Nagataki, Yoshimitsu Tachi, and Shinobu Itoh (Osaka City University, Japan)

P-36 Synthesis and Characterization of Tetranuclear Manganese Complexes of a Quinoline-Based Ligand

Yuji Mikata[1], Motoko Wakamatsu[2], Yuriko Abe[2], and Shigenobu Yano[3] ([1]Nara Women's University, Japan, [2]Nara Women's University, Japan, [3]Nara Women's University, Japan)

P-37 Synthesis and Characterization of the Dicopper(I) Complex Supported by Novel Unsymmetrycal Penta-Pyridine Ligand

Kazuki Aita[1], Yoshimitsu Tachi[1], Shinichi Teramae[2], Shunichi Fukuzumi[2], and Shinobu Itoh[1] ([1]Osaka City University, Japan, [2]Osaka University, CREST, Japan)

P-38 Characterization of Isomerism beween the □-□^{2}:□^{2}-Peroxo and Bis(□-oxo)dicopper Cores by Density Functional Theory

Ping-Yu Chen and Sunney I. Chan (Academia Sinica, Taiwan)

P-39 Dioxygen Reactivity of Mono- and Di-Copper(I) Complexes Supported by 1,3,5–Triethylbenzene Spacer Ligands Carrying Pyridylamine Didentate Metal Binding Sites

Hiromi Ohi, Yoshimitsu Tachi, and Shinobu Itoh (Osaka City University, Japan)

P-40 Ternary Copper(II) Complexes with Axial Sulfur Ligation as Structural Models for the Cu_B Site of Dopamine □-Hydroxylase and Peptidylglycine □-Hydroxylating monooxygenase

Pattubala A. N. Reddy, Bidyut K. Santra, Munirathinam Nethaji, and Akhil R. Chakravarty (Indian Institute of Science, India)*

P-41 Bis(□-Oxo)Dicopper Complex with Tetrahedral Distortion Introduced by Using (-)-Sparteine

Yasuhiro Funahashi[1], Yuko Wasada-Tsutsui[1], Shun Hirota[2], Mitsumi Kishida[1], Toshio Ouchi[1], Tomohide Nishikawa[1], Hidekazu Arii[1], Yasutaka Honda[1], Syuhei Yamaguchi[1], Tomohiro Ozawa[1], Koichiro Jitsukawa[1], and Hideki Masuda[1] ([1]Nagoya Institute of Technology, Japan, [2]Kyoto Pharmaceutial University, Japan)

P-42 Spectroscopic Characterization of the Reaction between Bis(□-oxo)dicopper(III) Complex and Triphenylphosphine

Svitlana V. Pavlova[1], Huang-Chou Chen[2], and Sunney I. Chan[1,2] ([1]Academia Sinica, Taiwan, [2]National Tsing-Hua University, Taiwan)

P-43 Low–Temperature Stopped–Flow Studies on the Reactions of Copper(II) Complexes and Hyrogenperoxide

Takao Osako, Yoshimitsu Tachi, and Shinobu Itoh (Osaka City University, Japan)

P-44 Characterization of the Copper C-Clusters of the Particulate Methane Monooxygenase in *Methylococcus Capsulatus* (BATH)

Huang-Chou Chen[1,2], Steve Sheng-Fa Yu[1], Sunney I. Chan[1,2] ([1]Academia Sinica, Taiwan, [2]National Tsing-Hua University, Taiwan)

P-45 The Hydroxylation Chemistry of Chiral Butanes Mediated by the Particulate Methane Monooxygenase from *Methylococcus Capsulatus* (BATH)

Steve Sheng-Fa Yu, Lo-Ying Wu, and Sunney I.Chan (Academia Sinica, Taiwan)

P-46 Recent Developments in the Synthesis of Mo/Fe/S Clusters. Pursuit for the Synthetic Nitrogenase Cofactor

Jaehong Han (Virginia Polytechnic Institute and State University, USA)

P-47 Preparation and Characterization of a (Cu, Zn)-pMMO From *Methylococcus Capsulatus* (BATH)

Chang-Li Chen[1,2], Huang-Chou Chen[1,2], Shyue-Chu Ke[3], Steve S.-F. Yu[2], Lo-Ying Wu[1,2], and Sunney I. Chan[1,2] ([1]Academia Sinica, Taiwan, [2]National Tsing-hua University, Taiwan, [3]National Dong-hua University, Taiwan)*

P-48 Preparation, Purifications and Characterization of CODH/ACS from *Methanosarcina thermophila* and Its Interactions with CO and NO

Tapan Kumar Kundu and Stephen W. Ragsdale (University of Nebraska Lincoln, U..SA)*

P-49 Reaction Mechanism of Nitrile Hydratase; Analysis by Isovarelonitrile

Kayoko Taniguchi[1,2], Masanari Tsujimura[1], Masafumi Odaka[1], Mikio Hoshino[3], Hiroyuki Koshino[4], Takuji Hirose[2], Isao Endo[5], and Mizuo Maeda[1] ([1]The Institute of Physical and Chemical Research (RIKEN), Japan, [2]Saitama University, Japan, [3]RIKEN, Japan, [4]RIKEN, Japan, [5]Utsunomiya University, Japan)

P-50 Reaction Mechanism of Nitrile Hydratase; Analysis by Isobutyronitrile

Masafumi Odaka[1], Masanari Tsujimura[1], Hiroshi Nakayama[2], Naoshi Dohmae[2], Hiroyuki Koshino[3], Tadao Asami[4], Mikio Hoshino[5], Koji Takio[2], Mizuo Maeda1, and Isao Endo[6] ([1]The Institute of Physical and Chemical Research (RIKEN), Japan, [2]RIKEN, Japan, [3]RIKEN, Japan, [4]RIKEN, Japan, [5]RIKEN, Japan, [6]Utsunomiya University, Japan)

P-51 NMR Structure of the Transmembrane Domain4 of the Divalent Metal-Ion Transporter DMT1

Fei Li[1], Hongyan Li[2], Zhong-Ming Qian[2] and Hongzhe Sun[1] ([1]The University of Hong Kong, P. R. China, [2]The Hong Kong Polytechnic University, P. R. China)*

P-52 Structural Study of Iron Transporter Nramp1 by CD and Fluorescence

Miufan Kwan, Fei Li and Hongzhe Sun (The University of Hong Kong, P. R. China)*

P-53 ^{19}F NMR Study on Heme Electronic Structure in Reconstituted Hemoproteins

Yueki Hirai[1], Satoshi Nagao[1], Tatsunori Inose[1], Norifumi Terui[1], Yasuhiko Yamamoto[1], and Akihiro Suzuki[2] ([1]University of Tsukuba, Japan, [2]Nagaoka National College of Technology, Japan)

P-54 Characterization of the F20A Mutant of Cytochrome c_3 from *D. vulgaris* Miyazaki F

Yuki Takayama[1], Rie Kobayashi[2], Erisa Harada[1,3], Kiyoshi Ozawa[2] and Hideo Akutsu[1,4] ([1]Osaka University, Japan, [2]Yokohama National University, Japan, [3]Japan Biological Informatics Consortium, Japan, [4]Institute for Molecular Science, Japan)

P-55 The Effects of Surface Charges in Cytochrome c_3 from *D. Vulgaris* Miyazaki F on Its Reduction by Hydrogenase

Naoki Yahata[1], Kiyoshi Ozawa[2], and Hideo Akutsu[1,3] ([1]Osaka University, Japan, [2]Yokohama National University, Japan, [3]Institute for Molecular Science, Japan)

P-56 The Role of Substrate Binding on the Stability of the Heme Cavity and the Overall Structure of Cytochrome P450cam

R. Murugan and S. Mazumdar (Tata Institute of Fundamental Research, India)

P-57 Molecular Mechanism of the Structural Changes in Cytochrome P450cam upon the Binding of Putidaredoxin

Takehiko Tosha[1], Haruyuki Harada[1], Shiro Yoshioka[1], Satoshi Takahashi[1], Koichiro Ishimori[1], Isao Morishima[1], Shingo Nagano[2], Jason K. Yano[2], and Thomas L. Poulos[2] ([1]Kyoto University, Japan, [2]University of California, Irvine, USA)

P-58 Crystallographic and Spectroscopic Characterization of Nonheme Fe(IV)=O Complexes

Jun-Hee In[1], Jan-Uwe Rohde[2], Mi Hee Lim[1], Audria Stubna[3], Yon-Ok Ryu[1], Eckard Münck[3], Lawrence Que, Jr.[2], and Wonwoo Nam[1] ([1]Ewha Womans University, Korea, [2]University of Minnesota, USA, [3]Carnegie Mellon University, USA)

P-59 Evolution of Copper-Binding Sites in Cu-Oxidases Estimated from Structural and Functional Similarities

Kensuke Nakamura[1], Takeshi Kawabata[1], Kei Yura[2], and Nobuhiro Go[2] ([1]Nara Institute of Science and Technology, Japan, [2]Japan Atomic Energy Research Institute, Japan)

P-60 Resonance Raman Spectra of Cytochrome *c* Oxidase of Intact Mitochondria

Toshinari Takahashi[1], Shinya Yoshikawa[2], and Takashi Ogura[1] ([1]The University of Tokyo, Japan, [2]Himeji Institute of Technology, Japan)

P-61 Activation Mechanism of Soluble Guanylate Cyclase in the Presence of CO and YC-1

Biswajit Pal[1], Zhengqiang Li[1], Shigeo Takenaka[2], Takeshi Tomita[1], Shingo Tsuyama[2], and Teizo Kitagawa[1] ([1]Center for Integrative Bioscience, Japan, [2]Osaka Prefecture University, Japan)

P-62 Molecular Mechanism of the Catalase Reaction Studied by Myoglobin Mutants

Shigeru Kato[1], Takafumi Ueno[2], Shunichi Fukuzumi[3], and Yoshihito Watanabe[2] ([1]The Graduate University for Advanced Studies, Japan, [2]Nagoya University, Japan, [3]Osaka University, Japan)

P-63 Mechanistic Studies of Olefin Epoxidations by Manganese Complexes of Salen and Porphyrin Ligands

Na Young Oh[1], Se-Eun Park[1], In Kyung Lim[1], Chang Young Cho[1], Jinheung Kim[2], and Wonwoo Nam[1] ([1]Ewha Womans University, Korea, [2]Changwon National University, Korea)

P-64 Formation of Iodosylbenzene-Iron Porphyrins on the Reaction of Oxoiron(IV) Porphyrin Cation Radicals and Iodobenzene

Ying Ji Sun[1], Sun Kyung Choi[1], Mi Hee Lim[1], Sun Ok Kim[1], Jan-Uwe Rohde[2], Lawrence Que, Jr.[2], and Wonwoo Nam[1] ([1]Ewha Womans University, Korea, [2]University of Minnesota, USA)

P-65 Functionalization of Myoglobin by Reconstitution with an Artificial Heme Having a Substrate Binding Region

Hideaki Sato, Takaaki Matsuda, Takashi Hayashi, Tsutomu Ando and Yoshio Hisaeda (PRESTO, Japan Science and Technology Corporation, Kyushu University, Japan)

P-66 Semisynthesis of Metalloproteins, Fe(Schiff Base)•Apo-Mb: Control of Cyanide Binding by Ala71->Gly Mutation

Takafumi Ueno[1], Masataka Ohashi[2], Masaharu Kono[3], Atsuo Suzuki[3], Takashi Yamane[3], and Yoshihito Watanabe[4] ([1]Nagoya University, Japan, [2]The Graduate University for Advanced Studies, Japan, [3]Nagoya University, Japan, [4]Nagoya University, Japan)

P-67 Rational Design of Cr (Schiff base)•apo-Mb for Enantioselective Sulfoxidation

Tomomi Koshiyama[1], Takafumi Ueno[2], Masataka Ohashi[4], Masaharu Kono[3], Atsuo Suzuki[3], Takashi Yamane[3], and Yoshihito Watanabe[1] ([1]Nagoya University, Japan, [2]Nagoya University, Japan, [3]Nagoya University, Japan, [4]The Graduate University for Advanced Studies, Japan)

P-68 Regulation of Cyanide Binding to Fe^{III}(Schiff base)•apo-myoglobin by the Schiff Base Ligand Structure

Masataka Ohashi[1], Takafumi Ueno[2], and Yoshihito Watanabe[2] ([1]The Graduate University for Advanced Studies, Japan, [2]Nagoya University, Japan)

P-69 Model Study on Electron Transfer Reaction within Protein-Protein Complexes Using a Reconstituted Myoglobin

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P-70 Use of Lanthanide Ions as NMR Structure Probes: Bioinorganic Conformational Analysis

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P-71 Gd^{3+} Polyaminocarboxylate Complexes Containing Macrocycles as Magnetic Resonance Imaging (MRI) Contrast Agents (CAs)

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P-72 Determining the Potentials of Rieske Clusters: How Is Cluster Redox State Coupled to Histidine Protonation State ?

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P-73 Self-Assembly of Polyethylenimine (PEI)-Linked Metalloporphyrin on an Electrode And It's Electron Transferability

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P-74 Metal-Nucleobase Interaction: Supramolecular Self-Assembly via Hydrogen Bonding and Coordination in Polymeric Cadmium Complex of N^6-Benzyladenine

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P-75 Identification of Functional Peptides for Gb3 Isolated from a Random Peptide Library

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P-76 3D and Electronic Structural Analysis of Metalloproteins by the DV-Xa Analysis

Akihiro Kikuchi (RIKEN Harima Institute/SPring-8, Japan)

P-77 A Useful Sieve-Supported Cobalt(II)/Acetate Mimic System for Catalytic Alkane Oxidantion with Tert-Butyl Hydroperoxide

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