The 2nd Asia-Pacific NMR Symposium

October 12-14, 2007

Program and Abstracts

Symposium Venue
Lakeshore Hotel, Hsinchu, Taiwan

Organized by
Taiwan Magnetic Resonance Society
National Tsing Hua University, Taiwan

Sponsored by
National Science Council, Taiwan
Ministry of Education. Taiwan
Academia Sinica, Taiwan

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Schedule Overview
The 2nd Asia-Pacific NMR Symposium

Friday, October 12

11:00 – 14:00	**Registration**
14:00 – 15:20	**Plenary Lecture (2)**
15:20 – 15:40	**Coffee Break**
15:40 – 17:50	**Parallel Session I (A+B)**
	A: 4 Invited Lectures + 1 Oral Presentations
	B: 4 Invited Lectures + 2 Oral Presentations
18:50 – 21:00	**Reception & Poster Session**

Saturday, October 13

08:30 – 09:50	**Plenary Lecture (2)**
09:50 – 10:10	**Coffee Break**
10:10 – 12:00	**Parallel Session II (A+B)**
	(3 Invited Lectures + 2 Oral Presentations)
12:00 – 13:40	**Lunch**
13:40 – 15:40	**Special Session**
	(2 Special Lectures + 2 Invited Lectures)
15:40 – 16:00	**Coffee Break**
16:00 – 17:30	**Parallel Session III (A+B)**
	A: 1 Special Lectures + 1 Invited Lectures + 2 Oral Presentations
	B: 1 Special Lectures + 1 Invited Lectures + 3 Oral Presentations
17:30 – 18:30	**Poster Session**
19:00 – 21:00	**Banquet**

Sunday, October 14

08:30 – 09:50	**Plenary Lecture (2)**
09:50 – 10:20	**Coffee Break / Check out**
10:50 – 16:00	**Bullet Train / Bus to Kenting for 16th ISMAR**
16:00 – 17:00	**Registration for 16th ISMAR**

17:00 – 19:00 **Mixer 16th ISMAR**

Tentative Scientific Program

	10/12 Friday		**10/13 Saturday**		**10/14 Sunday**
11:00 | 14:00	**Registration**	08:30 – 9:50	**Plenary lecture(2)**	08:30 – 9:50	**Plenary lecture(2)**
		09:50 – 10:10	**Coffee Break**	09:50 – 10:20	**Coffee Break**
		10:10 – 12:00	**Parallel session II** (IL + OP)	10:50 | 16:00	**Bullet train / Bus to Kenting for 16th ISMAR**
		12:00 – 13:40	**Lunch**		
		13:40 – 15:40	**Special session** (**SL** + IL)		
14:00 – 15:20	**Plenary lecture(2)**	15:40– 16:00	**Coffee Break**		
15:20 – 15:40	**Coffee Break**	16:00 – 17:30	**Parallel session III** (**SL** + IL + OP)		
15:40 – 17:50	**Parallel session I** (IL + OP)	17:30 – 18:30	**Poster session**	16:00 – 17:00	**Registration for 16th ISMAR**
18:50 – 21:00	**Reception Poster session**	19:00 – 21:00	**Banquet**	17:00 – 19:00	**Mixer 16th ISMAR**

6 PL: Plenary Lecture (40min); 4 SL: Special Lecture (35min)

18 IL: Invited Lecture (25min); 12 OP: Oral Presentation (15min)

Speaker Presentations

The 2nd Asia-Pacific NMR Symposium (1st day)
October 12 (Fri)

11:00–14:00 **Registration**

14:00–15:20 **Plenary Lecture (2)**
Chair: Dr. Masatsune Kainosho
Nagoya University, Japan

PL1 Suppressors of cytokine Signalling: more than just structured proteins
Ray Norton
Structural Biology Division, Walter and Eliza Hall Institute of Medical Research, Australia

PL2 NMR Structural Studies of the σ^{54} Subunit of Bacterial RNA Polymerase
David Wemmer
Department of Chemistry, University of California and Physical Biosciences Division, Lawrence Berkeley National Laboratory, USA

15:20–15:40 **Coffee Break**

15:40–17:50 **Parallel Session I – A & B**

Parallel Session I – A: Solid State NMR
Chair: Dr. Hideo Akutsu
Institute for Protein Research, University of Osaka, Suita, Japan

IL1 Local Structure and Dynamics of Membrane Proteins and Membrane Associated Peptides as Revealed by Site Directed Solid State NMR
Akira Naito
Graduate School of Engineering, Yokohama National University, Yokohama, Japan

IL2 Alkanes and xenon as ligands: NMR methods for characterizing photolytically generated, short-lived complexes
Graham Edwin Ball

School of Chemistry, University of New South Wales, Sydney, Australia

IL3 Directly Probing the Metal Center Environment in Layered Zirconium Phosphates by Solid-state ^{91}Zr NMR
Yining Huang
Department of Chemistry, The University of Western Ontario, London, Ontario, Canada

IL4 Diffusion MRI in Neuropsychiatric Diseases: Tractography and Beyond
Wen-Yih Isaac Tseng
College of Medicine, National Taiwan University, Taipei, Taiwan

OP1 Unexpectedly Large Resolution and Sensitivity Enhancement at 900 MHz (21.1 T) in MAS NMR of Spin-1/2 in Solids
Riqiang Fu
National High Magnetic Field Laboratory, Florida State University, USA

Parallel Session I – B: Solution NMR

Chairs: Dr. Young Ho Jeon
Bio Magnetic Resonance Research Center, KBSI, Korea
Dr. Ichio Shimada
Graduate School of Pharmaceutical Sciences, University of Tokyo, Japan

IL5 Chelerythrine and sanguinarine bind at novel sites on Bcl_{XL} and Mcl-1 that are not the classic"BH3 binding cleft"
MOK Yu-Keung, Henry
Department of Biological Sciences, National University of Singapore, Singapore

IL6 Implementation of New NMR Methods
Ruediger Weisemann
Bruker Biospin GmbH, Silberstreifen, D-76275 Rheinstetten, Germany

IL7 Structural biology of SUMOylation
Masahiro Shirakawa
Graduate School of Engineering, Kyoto University, Japan

IL8 Structure and Protein-Protein Interaction of *Helicobacter pylori* Proteins
Bong-Jin Lee

College of Pharmacy, Seoul National University, Korea

OP2 Human Pancreatitis-associated Protein Forms Fibrillar Aggregates with a Native-like Conformation
Yuan-Chao Lou
Academia Sinica, Taipei, Taiwan

OP3 Oxidative protein folding in Gram-negative bacteria. Structure and dynamics of the oxidoreductase enzyme DsbA
Martin J. Scanlon
Monash University, Australia

18:50–21:00 **Reception & Poster Session**

The 2nd Asia-Pacific NMR Symposium (2nd day)
October 13 (Sat)

08:30–09:50 **Plenary Lecture (2)**
Chair: Dr. Chin Yu
Department of Chemistry, National Tsing Hua University, Taiwan

PL3 Structural and functional studies of non-coding RNAs
Juli Feigon
Department of Chemistry and Biochemistry, University of California, Los Angeles, USA

PL4 NMR approach for interaction analysis of larger proteins
Ichio Shimada
Graduate School of Pharmaceutical Sciences, University of Tokyo, Tokyo, Japan

09:50–10:10 **Coffee Break**

10:10–12:00 **Parallel Session II – A & B**

Parallel Session II – A: Solid State NMR
Chair: Dr. Akira Naito

Graduate School of Engineering, Yokohama National University, Japan

IL9 Solid-state NMR Structural Studies of Transmembrane Proteins

Yongae Kim

Department of Chemistry, Hankuk University of Foreign Studies, Yongin, Korea

IL10 Various Types of Hydrogen Bonds, Their Temperature Dependence and Water-Polymer Interaction in Hydrated Poly(Acrylic Acid) as Revealed by ^{1}H Solid-State NMR Spectroscopy

Ping-chuan Sun

College of Chemistry and College of Physics, Nankai University, Tianjin, China

IL11 Multinuclear Solid State NMR Studies and XRD/SEM Structural Characterisation of NZP-type Materials

John V. Hanna

CSIRO North Ryde NMR Facility, New South Wales, Australia

OP4 Pressure NMR system: Way to make and use

Ryo Kitahara

RIKEN SPring-8 Center, Japan

OP5 Structural determinants for membrane interaction of novel bioactive undecapeptides derived from gaegurin 5

Min-Duk Seo

National Research Laboratory (MPS), Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, Seoul 151-742, Korea

Parallel Session II – B: Solution NMR

Chairs: Dr. Shan-Ho Chou

Institute of Biochemistry, National Chung Hsing University, Taiwan

Dr. Chin-pan Chen

Academia Sinica, Taipei, Taiwan

IL12 Structural Studies for Disease-related Proteins

Chaejoon Cheong

Magnetic Resonance Team, Korea Basic Science Institute, Korea

IL13 NMR Structure and Backbone Dynamics of Streptopain: Insight into Diverse

Substrate Specificity
Woei-Jer Chuang
Department of Biochemistry, National Cheng Kung University, Tainan , Taiwan

IL14 Solution structures of two subunits in the whole TFIIE molecule
Yoshifumi Nishimura
Graduate School of Integrated Science, Yokohama City University, Japan

OP6 Solution structure of family 21 carbohydrate-binding module from Rhizopus oryzae glucoamylase
Yu-Nan Liu
Department of Life Sciences, National Tsing Hua University, Taiwan

OP7 Solution structure and dynamics of SWIRM domain from the SRG3, a murine homologue of yeast SWI3 and human BAF155
Joon Shin
Department of Biochemistry, Yonsei Univeristy, Korea

12:00–13:40 **Lunch**

13:40–15:40 **Special Session for Complementarity of NMR & X-ray crystallography**
Chair: Dr. Ray Norton
Structural Biology Division, Walter and Eliza Hall Institute of Medical Research, Australia

SL1 Protein NMR & Crystallography in Structural Genomics and Cancer Structural Biology
Cheryl Arrowsmith
Ontario Cancer Institute, University of Toronto, Ontario, Canada

SL2 Intrinsic motions along an enzymatic reaction trajectory studied by NMR, Crystallography, Computation and FRET
Dorothee Kern
Department of Biochemistry, Brandeis University, USA

IL15 Structural basis for superoxide generation by phagocyte NADPH oxidase
Fuyuhiko Inagaki
Department of Structural Biology, Hokkaido University, Sapporo, Japan

IL16 Structural Basis of Citrate-dependent and Heparan Sulfate-mediated Cell Surface Retention of Cobra Cardiotoxin A3

Chun-Jung Chen

National Synchrotron Radiation Research Center, Taiwan

15:40–16:00 **Coffee Break**

16:00–17:30 **Parallel Session III –A & B**

Parallel Session III – A: Solid State NMR

Chair: Dr. Lou-Sing Kan

Academia Sinica, Taipei, Taiwan

SL3 Atomic Structure of the Chlorosome Rod Element Specialized for Capturing Weak Light Determined by Solid-state NMR

Hideo Akutsu

Institute for Protein Research, University of Osaka, Suita, Japan

IL17 Structure of Silk studied with Solid State NMR

Tetsuo Asakura

Department of Biotechnology, Tokyo University of Agriculture and Technology, Tokyo, Japan

OP8 NMR investigation of a protein in membrane environments: a model study using crambin

Hee-Chul Ahn

Advanced Analysis Center, Korea Institute of Science and Technology (KIST), Korea

OP9 Applications of NMR in bioanalysis : small and LARGE

Sunghyouk Park

Department of Medical Science, Inha University, Korea

Parallel Session III – B: Solution NMR

Chair: Dr. Mitsuhiko Ikura

Department of Medical Biophysics, University of Toronto, Canada

SL4 Quantitative Metabolomics by Two-Dimensional ^{1}H-^{13}C NMR

John L. Markley
Department of Biochemistry, University of Wisconsin Madison, USA

IL18 Interconversion between two unrelated protein folds in the lymphotactin native state
Brian F. Volkman
Department of Biochemistry, Medical College of Wisconsin, USA

OP10 A glimpse into protein folding on the ribosome by NMR spectroscopy
Shang-Te Danny Hsu
Department of Chemistry, University of Cambridge, United Kingdom

OP11 Structural analysis of a biosurfactant, Arthrofactin, produced by *Pseudomonas sp.* MIS38
Takahisa Ikegami
Institute for Protein Research, Osaka University, Japan

OP12 Defining the molecular interactions of mitochondrial import receptors: A case for evolutionary convergence
Paul R. Gooley
Department of Biochemistry and Molecular Biology and Bio21 Molecular Science and Biotechnology Institute, University of Melbourne, Australia

17:30–18:30 **Poster Session**

19:00–21:00 **Banquet**

The 2nd Asia-Pacific NMR Symposium (3rd day)
October 14 (Sun)

08:30–09:50 **Plenary Lecture (2)**
Chair: Dr. Weontae Lee
Department of Biochemistry, Yonsei University, Korea

PL5 Nobody does it better than NMRers: Natively Unfolded Proteins
Kyou-Hoon Han
Protein Analysis & Design Section, Molecular Cancer Center, Korea Research

Institute of Bioscience and Biotechnology, Daejon, Korea

PL6 FHA – a phosphothreonine recognizing domain able to count the number of phosphates

Ming-Daw Tsai

Genomics Research Center and Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan

09:50–10:20 **Coffee Break**

10:50–16:00 **Bullet Train / Bus to Kenting for 16th ISMAR**

16:00–17:00 **Registration for 16th ISMAR**

17:00–19:00 **Mixer 16th ISMAR**

Poster Presentation

(A) Solution NMR

AP1 Solution Structures and Dynamics of Rat Lipocalins

Jiafu Liu, Fang Zhang, Chenyun Guo, Hongchang Gao, and Donghai Lin*

NMR Laboratory, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai 201203, China

AP2 Identification of the Neutralizing Antibody and Heparin Binding Sites of the Domain III of JEV and DENV Envelope Proteins

Jya-Wei Cheng, Chih-Wei Wu, Yi-Ting Lin, Shiyi Her, Kuo-Chun Huang, and Suh-Chin Wu

Institute of Biotechnology and Department of Life Science, National Tsing Hua University, Hsinchu, 300, Taiwan.

AP3 NMR studies on the di-SUMO2 and mono-SUMO2

Seong Ok Kim, Young Mee Kim, Hye Rim Yoon, and Byong-Seok Choi*

Department of Chemistry, Center for Repair System of Damaged DNA, KAIST, Daejeon, Korea

AP4 Structural basis of PmrD protein that connects PhoP/PhoQ and PmrA/PmrB two-component signal-transduction systems

Shih-Chi Luo[1,2,3], Yuan-Chao Lou[2], Hsin-Yao Cheng[4], Hwei-Ling Peng[4] and Chinpan Chen[1,2]*

[1]Chemical Biology and Molecular Biophysics, Taiwan International Graduate Program and [2]Institute of Biomedical Science, Academia Sinica, Taipei 115, Taiwan; [3]Institute of Bioinformatics and Structural Biology, College of Life Sciences, National Tsing Hua University, Hsinchu 300, Taiwan; [4]Department of Biological Science and Technology, National Chiao Tung University, Hsinchu 300, Taiwan

AP5 Conformational analysis of β subunit in 350 kDa F_1-ATPase subcomplex with solution NMR

Masumi Kobayashi[1], Hiromasa Yagi[1], Toshio Yamazaki[2], Masasuke Yoshida[3], and Hideo Akutsu[1]

[1.] Institute for Protein Research, Osaka University, [2.]RIKEN, G.S.C., [3.]Natural Resources

Laboratory, Tokyo Institute of Technology

AP6 Structural basis for tubulin recognition by CLIP-170

Masaki Mishima[1,5,6], Ryoko Maesaki[2,6], Miyuki Kasa[2,3], Takashi Watanabe[4], Masaki Fukata[4], Kozo Kaibuchi[4] and Toshio Hakoshima[1,2,3]

[1]Graduate School of Biological Science, [2] Structural Biology Laboratory, Nara Institute of Science and Technology, [3] CREST, [4]Department of Cell Pharmacology, Nagoya University, and [5]Graduate school of Science and Technology, Tokyo Metropolitan University, [6]Contributed equally to this work

AP7 Base-pair dynamics in GATC sites with various methylation status and structure of fully methylated GATC site

Jongchul Bang, Seikh Imtiaz Ali, Kyungeun Lim, and Byong-Seok Choi

Korea Advanced Institute of Science and Technology, 373-1 Guseong-dong Yuseong-gu Daejeon 305-701 Republic of Korea

AP8 PWWP Module of Human Hepatoma-derived Growth Factor Forms a Domain-swapped Dimer with Much Higher Affinity for Heparin

Wei-Tin Lee[1], Shih-Che Sue[1] , Shi-Chi Tien[1], Shao-Chen Lee[2] Jiun-Guo Yu[1], Wen-Jin Wu[1], Wen-guey Wu[2] and Tai-huang Huang[1,3]

[1]Institute of BiomedicalSciences, Academia Sinica,Taipei, Taiwan, R.O.C.[2]Institute of Bioinformatics and Structural Biology,College of Life Sciences,National Tsing Hua University,Hsinchu, Taiwan, R.O.C.[3]Department of Physics,College of Sciences,National Taiwan NormalUniversity, Taipei,Taiwan, R.O.C.

AP9 NMR Studies of Virulence-associated Proteins and Small Conserved Hypothetical Proteins in *Klebsiella Pneumoniae*

Kuo-Wei Hung [1], Yi-Chao Lin [1], Jia-Huei Chen [1], Pei-Ju Fan [2], Chi-Fon Chang [2], Shih-Feng Tsai [3] and Tai-Huang Huang [1,2,*]

[1]Inst. Biomed. Sci., [2]Genomic Research Center, Academia Sinica, Taipei, Taiwan, ROC

[3]Div. Molecular & Genomic Medicine, National Health Research Institute, Zhunan, Miaoli,Taiwan, ROC

AP10 Structural Characterization of the Individual Domains of BldD, a Transcriptional Regulator in *Streptomyces coelicolor*

Yoo-Sup Lee[1], Jeong-Mok Kim[2], Sung-Hee Lee[1], Hyun-Suk Ko[1], Sa-Ouk Kang[2], and Hyung-Sik Won[1,*]

[1]Dept. of Biotechnology, CBITRC, Konkuk University, Korea, [2]Seoul National University,

Korea

AP11 Solution structure of Kazal-type Serine Protease Inhibitor 2

Ting Chen, Tian-Ren Lee and Ping-Chiang Lyu
Institute of Bioinformatics and Structural Biology, National Tsing Hua University, Taiwan

AP12 Structural Study on RTN1-A by using NMR

Sun-Bok Jang, Ji-Yoon Lee , Sung-Jean Park, and Bong-Jin Lee
National Laboratory of Membrane Protein Structure, Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, Korea

AP13 Structural characterization of 19 kDa CD1 domain of human mitotic checkpoint serine/threonine-protein kinase, Bub1: Secondary structure determination using NMR

Hyun-Hwi Kim[a], Sung Jean Park[a], Yu-Sun Jung[a], Su-Jin Kang[a], Hyun-Kyu Song[b], and Bong-Jin Lee[a*]
[a]National Lab. of Membrane Protein Structure (MPS), Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, San 56-1, Shillim-Dong, Kwanak-Gu, Seoul 151-742, Korea [b]School of Life Sciences and Biotechnology, Korea University, Anam-Dong, Seongbuk-Gu, Seoul 136-701, Korea

AP14 Identification of the WW Domain-Interaction Sites in the Unstructured N-terminal Domain of EBV LMP 2A

Seung-Hyeon Seok, Min-Duk Seo, Sung Jean Park, Hyun-Jung Kim and Bong Jin Lee
National Research Laboratory (MPS), Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, San 56-1, Shillim-Dong, Kwanak-Gu, Seoul 151-742, Korea

AP15 Characterization of SSB2 Mutants by NMR Spectroscopy: Structural Perturbation and Implications for Binding Interactions

Shenggen Yao, Andrew Low, Zhihe Kuang, Rowena S Lewis, Seth L. Masters, Tracy A. Willson, Nick A. Nicola, Sandra E. Nicholson, and Raymond S. Norton
The Walter and Eliza Hall Institute of Medical Research, 1G Royal Parade, Parkville, Victoria 3050, Australia

AP16 NMR and structural studies of Plant Telomere Binding Protein, Ngtrf from Nicotonosa Glutinosa

Sunggeon Ko[a,c], Heeyoung Park[a,c], Jung-Sue Byun [b], Hansol Kim [b], Woong Han[a], Woo Taek Kim [b] , Hyun-Soo Cho[b,c] and Weontae Lee[a,c]*

[a]Department of Biochemistry, Yonsei University, Seoul 120-749, Korea; [b]Department of Biology and [c]Protein Network Research Center, Yonsei University

AP17 Implementation of 3D Projection Reconstruction Triple Resonance Experiments on Bruker NMR Spectrometers

Wen-Jin Wu and Tai-Huang Huang
Institute of Biomedical Sciences, Academia Sinica, Nankang, Taipei 11529, Taiwan

AP18 NMR-Based Folding Studies on Ubiquitin like domain and MTH1880

Ji-Hye Yun, Yong-Chul Kim, Heeyong Park and Weontae Lee
Department of Biochemistry, Structural Biochemistry & Molecular Biophysics Lab., Yonsei University, Seoul 120-749, Korea

AP19 NMR studies on human peroxiredoxin Ⅵ

Sangyun Kim[1], Eunmi Hong[1], Joon Shin[1], Sangwon Kang[2], Sangwon Kang [3], Chaejoon Cheong[3], and Weontae Lee[1]
[1]Department of Biochemistry, Yonsei University, Seoul 120-749, Republic of Korea
[2]Center for Cell Signalling Research and Division of Molecular Life Sciences, Ewha Womans University, Seoul 120-749, Republic of Korea [3]Magnetic Resonance Team, Korea Basic Science Institute, Daejeon 305-333, Republic of Korea

AP20 Structure and Dynamics of a Ribosome-bound Nascent Chain by NMR Spectroscopy

Shang-Te D. Hsu[1], Paola Fucini[2], Lisa D. Cabrita[1], Hélène Launay[1], Christopher M. Dobson[1], and John Christodoulou[1]
[1]Department of Chemistry, University of Cambridge, Lensfield Road, Cambridge CB2 1EW, United Kingdom and [2]Max Planck Institute for Molecular Genetics, Ihnestrasse 73, Berlin D-14196, Germany

AP21 Interaction Studies of Syndecan-4 and Syntenin-1 complex using NMR Spectroscopy

Ji-Eun Lee[1], Bon-Kyung Koo[1], Eok-Soo Oh[2], and Weontae Lee[1*]
[1]Department of Biochemistry and Protein Network Research Center, College of Science, Yonsei University, Seoul 120-749 Korea [2]Department of Life Sciences, Division of Molecular Life Sciences and Center for Cell Signaling Research, Ewha Womans University, Seoul 120-750

AP22 Fast Structure Elucidation of Small Molecules by Hadamard NMR

Eriks Kupce[1], and Ray Freeman[2,*]
[1]Varian NMR and MRI Systems, Oxford, UK, [2]Jesus College, Cambridge University, Cambridge, UK

AP23 Structural Basis of the G:G Specificity of ASFV DNA Polymerase X

Mei-I Su[1,4], Wen-Jin Wu[3], Sandeep Kumar[4], and Ming-Daw Tsai[1,2,4,5,]

[1]Genomics Research Center, [2]Institute of Biological Chemistry, and [3]Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan 115. [4]Department of Chemistry and [5]Department of Biochemistry, The Ohio State University, Columbus, Ohio 43210,USA

AP24 Recognition of SUMO-3 (Small Ubiquitin-like Modifier-3) by a SUMO-interacting motif

Naotaka Sekiyama[1], Hisato Saitoh[2], Takahisa Ikegami[3], Hidehito Tochio[1], and Masahiro Shirakawa[1]

[1]Department of Molecular Engineering, Kyoto University,[2]Department of Regeneration Medicine, Institute of Molecular Embryology and Genetics, Kumamoto University

[3]Institute for Protein Research, Osaka University

AP25 Accurate Quantification of Cyanobacterial Toxins by ^{1}H-NMR

Jan Schripsema[1,2], Denise Dagnino[2], and Peter Verhaert[1]

[1]Delft University of Technology, Analytical Biotechnology, Julianalaan 67, 2628 BC Delft, The Netherlands. [2]Grupo Metabolomica, Universidade Estadual do Norte Fluminense, Av. Alberto Lamego, 2000, 28015-620 Campos dos Goytacazes, RJ, Brazil.

AP26 Mutagenesis Study of Rice Nonspecific Lipid Transfer Protein 2 Reveals Residues that Contribute to Structure and Ligand Binding

Chao-Sheng Cheng, Ming-Nan Chen, Yen-Ting Lai, Ku-Feng Lin, Yaw-Jen Liu, and Ping-Chiang Lyu

Institute of Bioinformatics and Structural Biology, National Tsing Hua University, Taiwan

AP27 Studies on the SARS coronavirus nucleocapsid protein using a hybrid approach – From structure to function

Chung-ke Chang[1], Yuan-hsiang Chang[1], Yen-lan Hsu[1], Chun-Yuan Chen[2], Ming-Chya Wu[3], Chin-Kun Hu[3], Chwan-Deng Hsiao[2],and Tai-huang Huang[1,*]

[1]Institute of Biomedical Sciences, [2]Institute of Molecular Biology, and [3]Institute of Physics, Academia Sinica, Taiwan

AP28 Structural Characterization of Amyloidogenic Folding Intermediate of β_2-Microglobulin

Atsushi Kameda[1,4], Masato Shimizu[2],Eugene-Hayato Morita[2], Hironobu Naiki[3,4], and Yuji Goto[1,4,*]

[1]Institute for Protein Research, Osaka University, Japan, [2]Integrated Center for Science,

Ehime University, Japan, [3]Faculty of Medical Sciences, University of Fukui, Japan, [4]CREST/JST

AP29 Some new aspects of the SAIL method for protein structural studies

Mitsuhiro Takeda[1], Chung-ke Chang[2], Ing-jye Jiang[2], Kenichiro Nakamura[3], Tsutomu Terauchi[4], Saburo Aimoto[3], Tai-huang Huang[2], and Masatsune Kainosho[1,5,]

[1]Graduate School of Science, Nagoya University, Furo, Chikusa, Nagoya 464-8622, Japan [2] Institute of Molecular Biology, Academia Sinica, Taipei 115, Taiwan,[3]Graduate School of Science, Osaka University, Toyonaka, Osaka 560-0043, Japan [4]SAIL Technologies, 1-40 Suehiro, Tsurumi, Yokohama 230-0045, Japan [5] Graduate School of Science, Tokyo Metropolitan University, 1-1, Minami-ohsawa, Hachioji, Tokyo 192-0397, Japan

AP30 The Solution Structure of Recombinant RGD-hirudin

Linsen Dai[1*], Xia Song[1], Wei Mo[2], Xingang Liu[1], Lina Zhu[1], Xiaomin Yan[1], and Houyan Song[2*]

[1] Center of Analysis and Measurement, Fudan University, Shanghai 200433, [2]Key Laboratory of Molecular Medicine, Ministry of Education, Fudan University, Shanghai 200032, China.

AP31 Human Pancreatitis-associated Protein Forms Fibrillar Aggregates with A Native-like Conformation

Meng-Ru Ho[1,2], Yuan-Chao Lou[1], Ping-Chiang Lyu[2], and Chinpan Chen[1*]

[1]Institute of Biomedical Sciences, Academia Sinica, Taipei 115, Taiwan, ROC; [2]Institute of Bioinformatics and Structural Biology, College of Life Sciences, National Tsing Hua University, Hsinchu 300, Taiwan, ROC

AP32 Evaluation of Butter and Margarine by Nuclear Magnetic Resonance

Jan Schripsema[1,2]

[1] Analytical Biotechnology, Department of Biotechnology, Delft University of Technology, Julianalaan 67, 2628 BC Delft, The Netherlands, [2] Grupo Metabolomica, Laboratorio de Ciencias Quimicas, CCT, Universidade Estadual do Norte Fluminense, Av. Alberto Lamego, 2000, 28015-620, Campos dos Goytacazes, RJ, Brazil.

AP33 Structural determinants for membrane interaction of novel bioactive undecapeptides derived from gaegurin 5

Min-Duk Seo, [†] Hyung-Sik Won,[‡] and Bong-Jin Lee[†]

[†] National Research Laboratory (MPS), Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, Seoul 151-742, Korea [‡] Department of Biotechnology, Division of Life Sciences, College of Biomedical & Health Science,

Konkuk University, Chungju, Chungbuk 380-701, Korea

AP34 Investigation on the Interactions between Diperoxovanadate Complexes and Organic Molecules

Shu-Hui Cai, Xian-Yong Yu, Bi-Rong Zeng, and Zhong Chen
Departments of Physics and Chemistry, Xiamen University, Xiamen 361005, China

AP35 Role of S100A13 in the FGF-1 Non-classical pathway

S. Krishna Mohan, G. Sandhya Rani, Ch. Upendar, S. Manoj Kumar, C.Yu*
Chemistry Department, National Tsing Hua University, Hsinchu, Taiwan

AP36 Comparisons among ^{1}HNMR spectra of sacchaide molecule measured with 500MHz, 750MHz, 800MHz, and 920MHz NMR magnets

Hiroshi Nakanishi
Research Institute of Instrumentation Frontier, National Institute of Advanced Industrial Science and Technology, Japan

(B) Solid state NMR

BP1 Effect of Hydrogen Bonding Interactions in Crystalline Amino Acids and Peptides on ^{14}N EFG Parameters: A Theoretical Calculation Study

Anmin Zheng[1, 2], Hailu Zhang[2], Shang-Bin Liu[1], Chaohui Ye[2], and Feng Deng[2]
[1]Institute of Atomic and Molecular Sciences, Academia Sinica, P. O. Box 23-166, Taipei 106, Taiwan [2]State Key Laboratory of Magnetic Resonance and Atomic and Molecular Physics, Wuhan Institute of Physics and Mathematics, the Chinese Academy of Sciences, Wuhan 430071, China

BP2 Pressure induced isomerization of retinal and structural changes of bacteriorhodopsin as disclosed by fast magic angle spinning NMR

Izuru Kawamura[1], Junko Tanabe[1], Yoshiaki Degawa[1], Akimori Wada[2], Satoru Tuzi[3], and Akira Naito[1]
[1]Yokoahama National University, Japan, [2]Kobe Pharmaceutical University, Japan, [3]University of Hyogo, Japan

BP3 Characterization of Chitosan/Carboxymethyl Cellulose Complex by Solid NMR

Shiro Maeda[1*], Yuko Fujimoto[1], and Kensuke Sakurai[2]

[1]Division of Applied Chemistry and Biotechnology and [2]Division of Materials Science and Engineering, Graduate School of Engineering, University of Fukui, Japan

BP4 Characterization of Microbial Poly(ε-L-lysine)/Poly(acrylic acid) Complex by Solid-State NMR

Shiro Maeda*[1], Yasuhiro Fujiwara[1], Chizuru Sasaki[2], and Ko-Ki Kunimoto[3]
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BP5 Characterization of Microbial Poly(ε-L-Lysine) / Carboxy Methyl Cellulose Blends by Solid State ^{13}C and ^{15}N NMR

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BP6 Asymmetric metabolic changes in bilateral hippocampi at the early stage of electrogenic rat epilepsy measured by using HR-MAS NMR

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BP7 Expression and purification of a transmembrane region from Amyloid β protein for Solid-state NMR Structural Studies

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BP8 Expression, Purification, and NMR Structural Studies of Obesity related Melanocortin 4-Receptor TM2

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BP9 Metabonomic studies on human tumor tissues using high resolution magic angle spinning

NMR (HRMAS) spectroscopy and multivariate data analysis

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BP10 Selective Synthesis of Lamellar Titania with Carboxylate Precursor and Characterization by Solid-State NMR

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BP11 Characterization of Microbial Poly(ε-L-lysine)/Poly(L-lactic acid) Blend Films by Solid-State NMR

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BP12 Formation, Location and Photocatalytic Degradation of Methoxy Species on 12-$H_3PW_{12}O_{40}$: A Solid-State NMR and DFT Calculation Study

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BP13 Probing the bound conformation of Acetylcholinesterase (AChE) inhibitor at the binding site

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BP14 Solid-state NMR Investigations of Honeybee Wax and Hornet (*Vespa*) Silk

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BP15 ^{19}F and ^{27}Al Solid-State NMR Studies on Fluorination and Dealumination of HY with Ammonium Fluoride and Ammonium Hexafluorosilicate

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(C) NMR Imaging

CP1 Synthesis and evaluation of Gd-DTPA-Labeled Arabinogalactan Polymer as MRI Contrast Agent

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CP2 *In vivo* Visualization of Cortical Areal Boundaries Using MEMRI

Carolyn Wan-hsun Wu, Stephen J. Dodd, Alan P. Koretsky

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(D) Others

DP1 Characterization of Chiral Proline Derivative Anchored on Mesoporous SBA-15 Using Hyperpolarized ^{129}Xe NMR spectroscopy

Shing-Jong Huang[1,2], Li-Hsiu Hsiao[2], Shih-Yuan Chen[2], Shou Heng Liu[1], An-Ya Lo[1], Soofin Cheng[2], Shang-Bin Liu[1,*]

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DP2 Dynamics of Supercooled Water Confined in Single- and Double-walled Carbon Nanotubes

Wen Qian[1,3], Chou-Hsung Hsu[2], Lian-Pin Hwang[1,2*]

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DP3 Building PACSY database for protein structure and chemical shift analysis

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DP4 The conserved CPH domains of Cul7 and PARC are protein-protein interaction modules that bind the tetramerization domain of p53

Lilia Kaustov[1], Jack C.C. Liao[1], Alexander Lemak[1], Jonathan Lukin[1], Shili Duan[1], Linda Z. Penn[1], and Cheryl H. Arrowsmith[1,2,3.]

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DP5 Introduction of a biological macromolecular NMR database; BMRB

Yoko Harano[1], Eiichi Nakatani[1.2], Haruki Nakamura[1], Eldon L. Ulrich[3], John L. Markley[3], Hideo Akutsu[1], Toshimichi Fujiwara[1]

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