

Poster Session

P-01 Double Helix Formation of a Parallel Ethynylhelicene Oligomer

Ryo Amemiya¹ and Masahiko Yamaguchi^{2,*}

¹Graduate School of Pharmaceutical Sciences, Tohoku University, ²WPI Advanced Institute for Materials Research

P-02 Inhibitory Effect of Caffeic Acid Derivatives on LPS-Induced Nitric Oxide Production in RAW264.7 cells

Yuu Osanai,¹ Koji Uwai,² Takuma Imaizumi,² Syu-ichi Kanno,¹ Mitsuhiro Takeshita,² Masaaki Ishikawa¹

¹Department of Clinical Pharmacotherapeutics, ²Department of Pharmaceutics, Tohoku Pharmaceutical University

P-03 Design, Synthesis and SAR Studies of Heteroaryl-Pyrazole Derivatives as Cannabinoid-1 Receptor Antagonists

Hee Jeong Seo, Suk Ho Lee, Sung-Han Lee, Myung Eun Jung, Kwangwoo Ahn, Jeongmin Kim and Jinhwa Lee*

Green Cross Corp.

P-04 Disulfides exchange reaction of insulin using RhCl₃

Mieko Arisawa,¹ Manabu Kuwajima,¹ and Masahiko Yamaguchi^{2,*} (¹Graduate School of Pharmaceutical Sciences, Tohoku University, ²WPI Advanced Institute for Materials Research)

P-05 Synthesis and in vitro activity of 1 β -methylcarbapenem derivatives as antibacterial agents

Myung-Ho Jung,¹ Joon-Hee Hong,² Hee-Jin Kim,¹ Young-Bong Shin,³ Jung-Hyuck Cho¹ and Chang-Hyun Oh¹ (¹Biomaterials research center, Korea Institute of Science and Technology, ²Department of Pharmacy Cho-Sun University, ³Hawon Pharm. Co.,)

P-06 The Organocatalytic Activity of 4-Hydroxy-Prolinamide Alcohol in Asymmetric Michael and Direct Aldol Reactions

Yuko Okuyama,¹ Hiroto Nakano,¹ Yuki Watanabe,¹ Mika Makabe,¹ Reiko Fujita,¹ Koji Uwai,¹ Mitsuhiro Takeshita,^{*1} and Chizuko Kabuto² (¹Tohoku Pharmaceutical University, ²Research and Analytical Center for Giant Molecules, Graduate School of Sciences, Tohoku University)

P-07 Practical Synthesis of Bongkrekeic Acid as an Apoptosis Inhibitor

Yukiko Sato, Mitsuru Shindo*

Institute for Materials Chemistry and Engineering, Kyushu University

P-08 Stereoselective Total Synthesis of Bicyclic Dihydroxylated Alkaloids: Potential Glycosidase Inhibitors

In Su Kim and Young Hoon Jung*

College of Pharmacy, Sungkyunkwan University

P-09 A new orally active anti-rheumatic drug targeting IL-15 and IL-17 I. Discovery of a new pyrazoleanilide, Y-320

Hiroyuki Ushio,¹ Koichi Oshita,² Noriyasu Seki,² Noriko Sato,² Kunitomo Adachi,¹ and Kenji Chiba²

¹Medicinal Chemistry Laboratory, ²Pharmacology Laboratory, Research Division, Mitsubishi Tanabe Pharma Corporation

- P-10 A new orally active anti-rheumatic drug targeting IL-15 and IL-17 II. Y-320 inhibits IL-17 production by Th17 cells and ameliorates arthritis in mice and monkeys**
Koichi Oshita,¹ Hiroyuki Ushio,² Noriko Sato,¹ Hirotoshi Kataoka,¹ Noriyasu Seki,¹ Kunio Sugahara,¹ and Kenji Chiba¹
¹Pharmacology Laboratory, ²Medicinal Chemistry Laboratory, Research Division, Mitsubishi Tanabe Pharma Corporation
- P-11 Syntheses of UDP-GlcNAc Analogues as a Potential O-GlcNAc Transferase Inhibitor**
Kyung-Chang Seo, Jungkyun Im, and Sung-Kee Chung*
Department of Chemistry, Pohang University of Science and Technology
- P-12 Photo-generated carbene as a possible universal chemical handle for functionalizing small molecules**
Naoki Kanoh,^{1,2,*} Takemichi Nakamura,^{3,*} Kaori Honda,² Hiroyuki Yamakoshi,¹ Yoshiharu Iwabuchi,¹ and Hiroyuki Osada²
¹Graduate School of Pharmaceutical Sciences, Tohoku University, ²Antibiotics Laboratory and ³Biomolecular Characterization Team, Discovery Research Institute, RIKEN
- P-13 Solid-Phase Synthetic Methods for 2,1-Benothiazine-4-one 2,2-Dioxide and 1,4-Benzodiazepine-2,5-dione Derivatives**
Moon-Kook Jeon, Young-Dae Gong*
Drug Discovery Division, Korea Research Institute of Chemical Technology
- P-14 Thioazolo[4,5-c]thiazine ring system synthesis on solid-phase**
Taeho Lee, Young-Dae Gong*
Center for Drug Discovery Technologies, Korea Research Institute of Chemical Technology
- P-15 Synthetic Studies on Petrosin Possessing Anti-HIV Activity**
Hiroki Toya, Kentaro Okano, Kiyosei Takasu, Masataka Ihara, and Hidetoshi Tokuyama*
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-16 Synthesis and Biological Activity of Cinnamic acid Derivatives**
Dongguk Min,¹ Yongnam Lee,¹ Jae-Chul Jung,² Seikwan Oh² and Mankil Jung^{1*}
¹Department of Chemistry, Yonsei University, ²Department of Neuroscience and Medical Research Institute, School of Medicine, Ewha Womans University
- P-17 Purification and Characterization of Rat Liver Dehydrogenase Catalyzing Stereoselective Reduction of Acetophenones**
Koji Uwai, Noboru Konno, Yuka Yasuta, Hiroto Nakanano, Mitsuhiro Takeshita*
Department of Pharmaceutics, Tohoku Pharmaceutical University
- P-18 Michael Addition of Silyl Ketene Acetal to 2-Pyridinone Derivatives: Reactivity and Application to Synthetic Study of Awajanomycin**
Kou Hiroya,* Kei Kawamoto, Kiyofumi Inamoto, and Takayuki Doi
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-19 Synthetic and Biological Studies of KRN7000 stereoisomers**
Jeong-Ju Park, Ji Hyung Lee and Sung-Kee Chung*
Department of Chemistry, Division of Molecular and life Sciences, Pohang University of Science and Technology
- P-20 A Practical Total Synthesis of (-)-Kainic Acid**
Hiroyuki Suzuki, Masaki Tomizawa, Hayato Fukuda, Masatoshi Shibuya, Naoki Kanoh, Yoshiharu Iwabuchi*
Graduate School of Pharmaceutical Sciences, Tohoku University

- P-21 **KMS04014 Prevents Dopaminergic Cell Death in Parkinson's Disease**
Youn Suk Lee,¹ Onyou Hwang,² Dong Jin Kim¹ and Kye Jung Shin^{1*}
¹Korea Institute of Science and Technology, ²University of Ulsan College of Medicine
- P-22 **Chemopreventive Flavonoids from Citrus Plants**
Motoharu Ju-ichi,¹ Chihiro Ito² and Hiroshi Furukawa²
¹School of Pharmaceutical Sciences, Mukogawa-Women's University, ²Meijo University
- P-23 **Synthesis and Catalytic Activities of Pincer-type Bis(imidazolin-2-ylidene) Nickel(II) Complexes**
 Kiyofumi Inamoto,* Jun-ichi Kuroda, Kou Hiroya, and Takayuki Doi
 Graduate School of Pharmaceutical Sciences, Tohoku University
- P-24 **Design, Synthesis, and Biological Properties of Sucrose-based Guanidine-containing Molecular Transporters**
 Woo Sirl Lee and Sung-Kee Chung*
 Department of Chemistry, Pohang University of Science and Technology
- P-25 **Chiral Bisphosphazide-Catalyzed Direct Enantioselective 1,4-Addition of Dialkyl Malonates to Enones**
Nobuhiko Kanase, Masahiro Ueno, Hiroshi Naka and Yoshinori Kondo*
 Graduate School of Pharmaceutical Sciences, Tohoku University
- P-26 **Novel GSK-3 β inhibitors from sequential virtual screening**
 Hye-Jung Kim, Hyunah Choo, Yong Seo Cho, Moon Ho Chang, **Kyoung Tai No**, Ae Nim Pae
 Life Science Divisions, Korea Institute of Science and Technology, Department of Biotechnology, Yonsei University
- P-27 **Diastereoselective construction of substituted tetrahydropyrans via oxy-Michael strategy**
Fumika Yakushiji,¹ Jacques Maddaluno² and Kozo Shishido^{1*}
¹Graduate School of Pharmaceutical Sciences, The University of Tokushima, ²Laboratoire des Fonctions Azotées & Oxygènes Complexes de l'IRCOF, UMR 6014 CNRS, Université et INSA de Rouen
- P-28 **Synthesis of Indoles and Benzothiophenes via Palladium-Catalyzed C–H Activation**
 Kiyofumi Inamoto,* Yukari Arai, Tadataka Saito, Kou Hiroya, and Takayuki Doi
 Graduate School of Pharmaceutical Sciences, Tohoku University
- P-29 **Benzofuran Analogues as α -Amyloid Aggregation Inhibitors**
Hyuk-Min Kim,¹ Dong-Wook Kang,¹ Mi-Hyun Kim,¹ Jin-Mi Kang,¹ Jeewoo Lee,^{1*} Hee Kim,² Hee-Jin Ha,² Eun-Joo Nam,² Hye-Min Ju,² Young-Ho Kim²
¹Laboratory of Medicinal Chemistry, College of Pharmacy, Seoul National University, ²Digital Biotech
- P-30 **Catalytic Enantioselective Intramolecular 1,3-Dipolar Cycloaddition of Carbonyl Ylide: Asymmetric Synthesis of Aspidosperma Skeleton**
 Mayuka Hikime, Naoyuki Shimada, Hisanori Nambu and Shunichi Hashimoto*
 Faculty of Pharmaceutical Sciences, Hokkaido University
- P-31 **Synthesis and biological activities of anthranilic acid derivatives as Ca²⁺ activated Cl⁻ channel blockers**
 Jung Hwan Park, Soojin Oh, C. Justin Lee and Eun Joo Roh*
 Life Sciences Division, Korea Institute of Science and Technology

- P-32 **AZADOs: The Highly Active Organocatalysts for Alcohol Oxidations**
Masaki Tomizawa, Masatoshi Shibuya and Yoshiharu Iwabuchi*
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-33 **One-pot oxidation of primary alcohols to carboxylic acid using AZADOs**
Masatoshi Shibuya, Takahisa Sato, Masaki Tomizawa, Yoshiharu Iwabuchi*
Graduate School of Pharmaceutical Sciences, Tohoku
- P-34 **Conformationally Constrained Analogues of *N'*-(4-*t*-Butylbenzyl)-*N*-(4-methylsulfonyl-aminobenzyl)thiourea as TRPV1 Antagonists**
 Ju-Ok Lim,¹ Mi-Kyoung Jin,¹ HyungChul Ryu,¹ Dong-Wook Kang,¹ Jee-Young Lee,¹ Jeewoo Lee,^{1,*} Larry V. Pearce,² Richard Tran,² Attila Toth,² Peter M. Blumberg²
¹*Laboratory of Medicinal Chemistry, College of Pharmacy, Seoul National University,*
²*Laboratory of Cancer Biology and Genetics, Center for Cancer Research, NCI, NIH*
- P-35 **Design and Synthesis of Novel Isonucleoside Derivatives Built on an 2-Oxa-6-thiabicyclo[3.2.0]heptane Scaffold**
Yuichi Yoshimura,* Kazuhiro Asami and Hiroki Takahata*
Faculty of Pharmaceutical Sciences, Tohoku Pharmaceutical University
- P-36 **Pyrazolopyrimidinones as GSK-3 β inhibitors: Design, synthesis and biological evaluation**
 Jung hyun Kim, Nelamane Vani, Hye-jung Kim, Hyunah Choo, Kyung il Choi, Ae Nim Pae,* Ghilsoo Nam*
Life-Sciences Department, Chemoinformatics center, Korea Institute of Science and Technology
- P-37 **Asymmetric Synthetic Studies of Novel Poliketide Isolated from *Peperomia Duclouxii***
 Kou Hiroya,* Yusuke Ichihashi, Kiyofumi Inamoto, and Takayuki Doi
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-38 **Asymmetric Total Synthesis of *Martinella* Alkaloids**
Shuhei Ikeda, Masatoshi Shibuya, Masaya Iwashita, Masaki Saitoh, Norimichi Nakahata, Yoshiharu Iwabuchi*
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-39 **Stereospecific High-affinity TRPV1 Antagonists: Chiral *N*-(2-Benzyl-3-pivaloyloxy-propyl)-2-[4-(methylsulfonylamino)phenyl]propionamide Analogues**
 HyungChul Ryu,¹ Mi-Kyoung Jin,¹ Su Yeon Kim,¹ Hyun-Kyung Choi,¹ Sang-Uk Kang,¹ Dong Wook Kang,¹ Young-Soo Park,¹ Jeewoo Lee,^{1,*} Larry V. Pearce,² Vladimir A. Pavlyukovets,² Matthew A. Morgan,² Richard Tran,² Attila Toth,² Daniel J. Lundberg,² and Peter M. Blumberg²
¹*Laboratory of Medicinal Chemistry, College of Pharmacy, Seoul National University,*
²*Laboratory of Cancer Biology and Genetics, Center for Cancer Research, NCI, NIH*
- P-40 **Syntheses of Dysiherbaine and Neodysiherbaine A, Potent Glutamate Receptor Agonists**
Keisuke Takahashi, Takashi Matsumura, Jun Ishihara and Susumi Hatakeyama*
Graduate School of Biomedical Sciences, Nagasaki University

- P-41 Novel T-type calcium channel blockers : Oxazole derivatives**
Hyunah Choo,¹ Ji Eun Lee,¹ Yong Seo Cho,¹ Jae Kyun Lee,¹ Hyewhon Rhim,¹ Seon Hee Seo,¹ Hoon Yeong Koh,² Ae Nim Pae¹
¹*Center for Chemoinformatics Research, Korea Institute of Science and Technology,*
²*Department of Chemistry, College of Natural Sciences*
- P-42 Platinum-Catalyzed Regioselective Hydration of Acetylenic Compounds**
 Kou Hiroya,* Kentaro Ogiwara, Kiyofumi Inamoto, and Takayuki Doi
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-43 Total synthesis of melleumins A and B: Determination of stereochemistry and Wnt signal inhibitory activity**
Masami Ishibashi, Shuwa Hanazawa, Yujiro Uchino, Xiaofan Li, and Midori A. Arai
Graduate School of Pharmaceutical Sciences, Chiba University
- P-44 Synthesis, biological evaluation of indeno[1,2-c]isoquinolines and docking study into DNA-topoisomerase I complex**
Suh-Hee Lee, and Won-Jea Cho*
College of Pharmacy and Research Institute of Drug Development, Chonnam National University
- P-45 Development of the Synthetic Method for the Asymmetric Quaternary Carbon Center Utilizing Desymmetrization Reaction: Application to the Synthesis of (–)-Cepharamine**
 Kou Hiroya,* Ryuichi Sekioka, Kouki Fuchino, Kiyofumi Inamoto, and Takayuki Doi
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-46 Pyrazole derivatives as calcium channel blockers**
 Hyun Sook Hwang, Ghilsoo Nam, Moon Ho Chang, Kyung Il Choi*
Center for Chemoinformatics Research, KIST
- P-47 Studies on Asymmetric Synthesis of Chartelline A**
Shigeki Sato, Masatoshi Shibuya, Naoki Kanoh, Yoshiharu Iwabuchi*
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-48 Gallium Trichloride-Promoted Ethynylation Reaction of 1,4-Dienes**
 Yoshio Nishimura,¹ Masato Kiryu,¹ and Masahiko Yamaguchi^{2*}
¹*Graduate School of Pharmaceutical Sciences, Tohoku University,* ²*WPI Advanced Institute for Materials Research*
- P-49 Isolation and Bioactivities of Emodin and Its Derivatives from *Polygonum cuspidatum***
 Yun Mi Seo, Min Su Kang, Dong Ho Jo, Ju Young Kim, Byoung Wook Choi, and Bong Ho Lee
Department of Biotechnology, Hanbat National University
- P-50 Novel Secondary Metabolites Isolated from Cellular Slime Mold, *Polysphondylium tenuissimum***
 Haruhisa Kikuchi, Shinya Ishiko, and Yoshiteru Oshima*
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-51 Novel T-type calcium channel blockers : Lead optimization**
Yong Seo Cho, Jae Kyun Lee, Ae Nim Pae, Hyunah Choo, Hwasil Kim, Youna Oh, Hyewhon Rhim, Seon Hee Seo*
Center for Chemoinformatics Research, Korea Institute of Science and Technology

- P-52 Efficient Glycosylation by Using ODS Adsorption Method Based on the Affinity of Long Alkoxybenzyl Glycoside**
Hiroshi Imagawa, Atsushi Kinoshita, Hirofumi Yamamoto, Kosuke Namba and Mugio Nishizawa
Faculty of Pharmaceutical Sciences, Tokushima Bunri University
- P-53 Activation of Organozinc Reagents with *t*-Bu-P4 Base: Transition Metal-Free Catalytic 1,2-Addition and S_N2' Reaction**
Koji Kobayashi, Hiroshi Naka and Yoshinori Kondo*
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-54 Melanin-Concentrating Hormone Receptor 1 (MCHR1) Antagonists for the Treatment of Obesity**
Kyu Yang Yi*, Nakjeong Kim, Chae Jo Lim and Jeehee Suh
Center for Metabolic Syndrome Therapeutics Technologies, Drug Discovery Division, Korea Research Institute of Chemical Technology
- P-55 Deprotonative Lithiation of Fluorous-tagged Indole :Fluorous Synthesis of Yuehchukene**
Yusuke Akagi, Hiroshi Naka, Takahiro Kasahara and Yoshinori Kondo*
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-56 Benzofuroquinones : Synthesis, Cytotoxicity and Topoisomerase I, II Inhibitory Activity**
Hee-Kyung Rhee, So Yun Lim, Hea-Young Park Choo*
School of Pharmacy, Ewha Womans University
- P-57 Synthesis of Phoslactomycin B, a Potent PP2A Inhibitor**
Setsuya Shibahara, Masataka Fujino, Keisuke Takahashi, Jun Ishihara and Susumi Hatakeyama*
Graduate School of Biomedical Sciences, Nagasaki University
- P-58 Preparation of Piperazine Derivatives as 5-HT₇ Receptor Antagonists**
Eun A Yoo,¹ Ji Hye Yoo,¹ Ae Nim Pae,² Hyewhon Rhim,² Woo-Kyu Park,³ Jae Yang Kong,³ Hea-Young Park Choo¹*
¹*School of pharmacy, Ewha Womans University,* ²*Biochemicals Research Center, Korea Institute of Science & Technology*
- P-59 Synthesis of an enantiomeric DNA oligomer**
Kaichiro Haruta,¹ Yoshiyuki Tanaka,¹* Takuya Kawamura,¹ Yoshinori Kondo,¹ Akira Ono,² Hiroyuki Yamakoshi,¹ Naoki Kanoh,¹ Yoshiharu Iwabuchi¹*
¹*Graduate School of Pharmaceutical Sciences, Tohoku University,* ²*Faculty of Engineering, Kanagawa University*
- P-60 Preparation of Benzoxazole Amides as 5-Lipoxygenase Inhibitors**
Kyung-Eun Doh,¹ Yoo Lim Kam,¹ Hyunmin Song,¹ Sei-Ryang Oh,² Hyeong-Kyu Lee,² Hea-Young Park Choo¹*
¹*School of Pharmacy, Ewha Womans University,* ²*Natural Medicine Research Center, KRIBB*
- P-61 Synthesis of Optical Active Diketopiperazines for Absolute Configuration Determination of α-Amino Acids**
Michiyasu Nakao, Masanori Takeyasu, Shigeki Sano* and Yoshimitsu Nagao
Graduate School of Pharmaceutical Sciences, The University of Tokushima

- P-62 Anticholinergic Agents for Organophosphorus Nerve Agents Intoxication**
Hee Chun Jung,^{1,3} Garp Yeol Yang,¹ Woo-Kyu Park,¹ Gyeong Haeng Hur,² Seung Ju Choi,² Eul Kyun Yum,³ Jae-Yang Kong,¹ No-Sang Park¹ and Young-Sik Jung^{1,*}
¹Drug Discovery Division, Korea Research Institute of Chemical Technology, ²Agency for Defense Development, ³Department of Chemistry, Chungnam National University
- P-63 Total syntheses of both enantiomer of cylindrocyclophane A and their biological activities**
Hiroyuki Yamakoshi, Fumiya Ikarashi, Masataka Minami, Tsutomu Sugahara, Naoki Kanoh and Yoshiharu Iwabuchi*
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-64 Synthesis of Fluoroalkene Dipeptide Isosteres Utilizing Intramolecular Redox Reaction Catalyzed by N-Heterocyclic Carbene (NHC)**
Yoko Yamaki, Akira Shigenaga and Akira Otake*
Graduate School of Pharmaceutical Sciences, Institute of Health Bioscience, The University of Tokushima
- P-65 Nitroimidazoles as probes for anaerobic versus aerobic activity against *Mycobacterium tuberculosis***
Pilho Kim*, Liang Zhang, Ujjini Manjunatha, Clifton E. Barry, III, Cynthia S. Dowd
Tuberculosis Research Section, National Institute of Allergy and Infectious Diseases, National Institutes of Health
- P-66 Exploration of New Immune Regulators from Natural Resources**
Haruhisa Kikuchi, Mizuki Sekiya, Kaori Okazaki, Kazunori Ueda, Yasuhiro Katou, Shoichiro Kurata, Yoshiteru Oshima*
Graduate School of Pharmaceutical Sciences, Tohoku University