

Poster Presentations

Odd Number: 13:10~14:40 8/28 (Tue) Room C (4301)

Even Number: 13:10~14:40 8/29 (Wed) Room C (4301)

Session A: Application & Materials

PA-01 **Chih-Ying Li, Kuo-Chung Cheng**

Preparation of chitosan particles by continuous-feed ultrasonic atomizer

PA-02 **M. Anraku, S. Dochi, Y. Ichiyama, Y. Mizukai, Y. Maezaki, D. Iohara, M. Otagiri, F. Hirayama**

Evaluation of granulated chitosans with a high degree of dispersibility

PA-03 **T. H. Tran, H-L. Nguyen, J. Park, S. Y. Hwang, D. X. Oh**

One step transformation from chitin biomass to organo-dispersible chitin nanofibrils via ball-milling

PA-04 **Min-Lang Tsai, Yu-Fang Chen**

Preparation of chitosan/acid/NaCl microparticles with different degrees of deacetylation chitosan and application for low-sodium salty agents

PA-05 **T. H. Tran, S. Y. Hwang, J. Park, D. X. Oh**

Comparative studies of five different types of chitin nanomaterials from a source

PA-06 **A. Espadín, K. Shirai, M. Gimeno**

Production and characterization of a nanocomposite of highly crystalline nanowhiskers from biologically extracted chitin in enzymatic Polycaprolactone)

PA-07 **Trong-Ming Don, Yi-Lin Tsai, Tzu-Yu Chen, Yau-Hung Chen**

Studies of adsorption kinetics of aristolochic acid-absorbing chitosan particles and their biological activities in zebrafish

PA-08 **M. Velásquez, M. Mantilla, E. Memenza, J. Santiago**

Reaction of chitosan with activated carbon: Depolymerization of chitosan, Impregnation of chitosan onto activated carbon, Cleaned activated carbon

PA-09 **M. F. Silva, F.V. da Silva, A.C. Venturini, R. A. Carvalho, C. M. P. Yoshida**

Chitosan and lemongrass essential oil (*Cymbopogon citratus*) as coating cardpaper: sustainable and active food packaging material against weevil infestation

PA-10 **C. Afonso, R. Hirano, F.V. da Silva, C.F. da Silva, C.M.P. Yoshida**

Biodegradable antiaging mask based on reacylated chitosan films containing natural bioactive compounds

- PA-11** **Hui-Huang Chen, Jhao-Rong Jhuang, Shih-Bin Lin, Li-Chen Chen**
Using electrospun chitosan nano-fiber to immobilize laccase for enhancing the reliability of food quality monitoring in enzymatic time-temperature indicators
- PA-12** **Mayumi Egusa, Roxana Y. Parada, Yihum F. Aklog, Mai Yoshioka, Chihiro Miura, Shinsuke Ifuku, Hironori Kaminaka**
Optimization of nanofibrillation degree of chitin to induce disease resistance against fungal pathogens in plants
- PA-13** **Ayano Tosaki, Kazuo Azuma, Hironori Izawa, Minoru Morimoto, Hiroyuki Saimoto, Shinsuke Ifuku**
Emulsifying effect of chitin nanofiber and its influence on skin
- PA-14** **Hsien-Tsung Lu, Tzu-Wei Lu, Chien-Ho Chen, Fwu-Long Mi**
Genipin-crosslinked hydroxypropyl chitosan/nanohydroxyapatite composite scaffolds for bone tissue engineering
- PA-15** **K. Nishida, R. Ozakiya, D. Dechojarassri, T. Kitamura, M. Hashimoto, T. Furuike, H. Tamura**
Spinning condition of TEMPO-oxidized cellulose nanofiber coating chitosan fiber
- PA-16** **Seok Ju Kang**
Biodegradable, Electro-active Chitin Nanofiber Films for Flexible Piezoelectric Transducers
- PA-17** **O. R. Solano-Corona, E. Águila-Almanza, H. Hernández-Cocoletzi**
Chitosan membranes for caffeine permeation
- PA-18** **Jungho Jin**
Chitin nanofiber transparent paper: a renewable material platform for green electronics and energy devices
- PA-19** **Eun Joo Baek, Jun Tae Kim**
Effect of chitosan coating on the stability of β -carotene in nanoemulsion systems
- PA-20** **I. S. Cho, T. Ooya**
Supramolecular Hydrogelation by Mixing Two Kinds of Aqueous Solutions Consisting of Glycol Chitosan and Polyglycerol Dendrimer
- PA-21** **V. B. V. Maciel, C. M. P. Yoshida, C. Böesch, F. M. Goycoolea, R. A. Carvalho**
Self-assembly chitosan/pectin complexed particles as an oral iron carrier system using a non-conventional edible plant extract from Brazil
- PA-22** **Y. Yonemura, N. Okuda, H. Izawa, N. Ito, S. Ifuku, M. Morimoto, H. Saimoto**
Application of chitosan-based wrinkled films as cell culture substrates
- PA-23** **A. Onishi, T. Furuike, H. Tamura**
Preparation of N-succinyl chitosan and gelation behavior

- PA-24** **R. Ozakiya, K. Nishida, D. Dechojarassri, T. Kitamura, M. Hashimoto, T. Furuike, H. Tamura**
The mechanical properties and adsorption abilities of oxidized cellulose nanofiber coating on chitosan fiber surface
- PA-25** **Kenki Goto, Yoshikuni Teramoto**
Examination of influencing factors of chitinous nanofibers on cell adhesion
- PA-26** **Bhumin Than-ardna, Tuspon Thanpitcha, Hiroshi Tamura, Tetsuya Furuike**
Preparation of semi-IPNs beta-chitin/Poly (2-hydroxyethyl methacrylate) structure and their properties
- PA-27** **D. Dechojarassri, S. Omote, T. Minamino, K. Nishida, T. Furuike, H. Tamura**
Preparation and Characterization of KFe-immobilized chitin-coated nylon fibers as adsorbent for cesium ions
- PA-28** **Gyeong-Won Jeong, Woong-Gil Hong, Jun-Hyuk Ahn, Choong-Hyun Nam, Jae-Woon Nah**
Preparation and Characterization of Shiitake-Encapsulated Chitosan Microsphere
- PA-29** **Ditpon Kotatha, Yoshiki Torii, Mayuko Ogino, Masashi Ishikawa, Tetsuya Furuike, Hiroshi Tamura**
Preparation and characterizations of chitosan film electrolyte for electric double-layer capacitor
- PA-30** **K. Chatsupan, W. Tachaboonyakiat**
Extraction of bioactive neem leaves and encapsulation in chitin bead
- PA-31** **Kanako Saita, Shoji Nagaoka, Tetsuya Yamamoto, Kazuhiko Okuzono, Satoshi Hirano, Hirotaka Ihara**
Development of chitosan submicron particles using ion-exchange phase separation method and their application to oral and dental care materials
- PA-32** **S. Tanimoto, I. Nishii, S. Kanaoka**
Biomimetic fabrication of chitosan/calcium carbonate core-shell type composite microparticles as a drug carrier
- PA-33** **Selin Seda Timur, Selin Yüksel, Gülçin Akca, Sevda Şenel**
Chitosan based bioadhesive film and wafer formulations for local delivery of antibiotics into oral cavity
- PA-34** **Yi-Ying Lu, Ching-Wen Tsai, Min-Lang Tsai**
Spray dried chitosan/maltodextrin/NaCl microparticles regarded as a low-sodium salt
- PA-35** **K. B. Eide, B. B. Aam**
BioCHOS- antifungal chitosan oligomers
- PA-36** **Shwu-Jer Chiu, Jung-Chin Tsai, Chi-Lin Yang, Yu-Kaung Chang**
Adsorption Characteristics of Lysozyme on Chitosan Modified Dye-Ligand Affinity Nanofiber Membrane

- PA-37** Jung-Chin Tsai, Zih-Ming Ciou, Yu-Kaung Chang
Enhancement of C-phycoerythrin Purity by Chitosan Modified Nanofiber Membrane
- PA-38** Fan-Xuan Xu, Jheng-Yu Wu, Chen-Yaw Chiu, Yu-Kaung Chang
Antibacterial Activity of Quaternized Chitosan/ Polyvinyl Alcohol Nanofiber Membrane
- PA-39** S. P. S. Aung, H. Inzali, M. N. Khine, H. Tamura, T. Furuike, H. H. Aye, N. Nwe
Survey on production of chitin, chitosan and chitooligosaccharide in laboratory and industrial scale and their applications in different countries
- PA-40** Pakkamon Jarruwale, Kittima Bootdee, Manit Nithitanakul
Chitosan modified magnetic/PLGA nanoparticles-aptamer bioconjugated for tumor-targeted drug delivery
- PA-41** W. L. Nu, M. N. Khine, T. Furuike, H. H. Aye, H. Tamura, N. Nwe
Removal of protein and unpleasant smell from shrimp shells during production of chitin using green technology
- PA-42** Junnosuke Machida, Shin Suenaga, Mitsumasa Osada
Preparation of chitin nanofiber dispersion with high viscosity and high transmittance from α -chitin
- PA-43** Mizuki Nishiwaki, Shin Suenaga, Mitsumasa Osada
Purification of β -chitin from squid pens using only water and production of β -chitin hydrogel
- PA-44** Y. Matsubara, K. Matsuura, H. Izawa, M. Morimoto, H. Saimoto, S. Ifuku
Biotinylation of chitin nanofiber and its complex with avidin to form a hydrogel
- PA-45** H. Inzali, T. Furuike, H. Tamura, H. H. Aye, N. Nwe
Improvement of growth rate of mung bean plant and quantity of mung bean using chitooligosaccharide as a biostimulator
- PA-46** M. Phiriyawirut, T. Charlermviseksak, R. Phromphesatsakun, S. Charoensukwattana
Edible Film from Calcium Caseinate with Pectin and Chitosan
- PA-47** M. Phiriyawirut, C. Phadsuwan, P. Suandokmai, P. Somsak
Reinforcement of Poly (methyl methacrylate) and Poly (lactic acid) Films by Chitin Whisker
- PA-48** Seiji Kurozumi, Masatoshi Kiyose, Takako Noguchi, Kimihiko Sato
A novel production method for chitosan oligosaccharide hydrochloride free (COSHF) to improve the taste
- PA-49** T. Kuroiwa, Y. Kawauchi, R. Moriyoshi, T. Suzuki, A. Kanazawa
Preparation and characterization of chitosan-fatty acid complex particles as a novel carrier material for hydrophobic bioactive molecules
- PA-50** Y. Okuyama, T. Kuroiwa, A. Kanazawa
Preparation of monodisperse solid-fat microspheres and their stabilization by surface modification using chitosan

- PA-51** **D. T. Vo, J. Y. Lin, C.K. Lee**
Hydrophobically modified chitosan and chitin nanofibers reinforced transparent cellulose nanocrystal films preparation and its applications
- PA-52** **Kelvin Ogboe, Esosa Amayo**
Application of Nanotechnology on the Environment
- PA-53** **W. Son, S. Park, J. S. Lee, J. Seong, I. K. Kwon**
Biocompatible chitosan hydrogel scaffolds fabricated by ionic and physical crosslinkers for directly injectable bone regeneration material
- PA-54** **I. S. Cho, T. Ooya**
An Injectable and Self-Healing Hydrogel Consisting of a Glycol Chitosan and an Oxidized Dextran for Spatiotemporal Protein Release
- PA-55** **O. Pemble, A. Hamarova, O. Rosskopfova, M.E. Pemble, M. Bardosova**
Synthesis, design and characterization of chitosan-based interpenetrating polymer network membranes and their heavy metal sorption properties
- PA-56** **Jitima Preechawong, Pornsri Sabsrithong, Stephan T. Dubas, Manit Nithitanakul**
Modification of poly(S/DVB)HIPE with polystyrenesulfonate and chitosan using Layer by Layer polyelectrolyte multilayer technique

Session B: Biology & Medicine

- PB-01** **M. Igarashi, K. Nakamura, K. Sakamoto, I. Nagaoka**
Functional analysis of glucosamine in the induction of autophagy in chondrocytes
- PB-02** **Chen-Yuan Chiu, Tien-Chia Chang, Shing-Hwa Liu, Meng-Tsan Chiang**
Fish oil supplementation for the hypolipidemic effect of dietary chitosan in high-fat diet-induced obese rats
- PB-03** **K. Shirai, R. Aranday-García, A. Román Guerrero, S. Ifuku**
Chitin extraction by successive inoculation of *Lactobacillus brevis* and *Rhizopus oligosporus* from shrimp wastes
- PB-04** **M. Koshima, K. Azuma, T. Osaki, M. Yamashita, Y. Murahata, T. Tsuka, T. Imagawa, N. Ito, S. Kurozumi, K. Sato, Y. Okamoto**
Oral administration of chitosan oligosaccharides inhibit the progression of experimental rheumatoid arthritis
- PB-05** **Akiko Takenouchi, Katsuhiko Yoshizawa, Yuko Emoto, Yuichi Kinoshita, Michiko Yuki, Takashi Yuri, Yoshiharu Okamoto**
Inhibitory Effects of Chitosan Oligosaccharide in Green Tea Extract-Induced Rat Liver Injury Model

- PB-06** T. Kiritani, K. Azuma, S. Ifuku, T. Osaki, M. Yamashita, Y. Murahata, T. Tsuka, T. Imagawa, N. Ito, Y. Okamoto
Combination effects of surface deacetylated chitin nanofibers and ozonated glycerin for keratinocyte and macrophage activities
- PB-07** Yi-Cheng Ho, Chi Lin, Chia-Hua Lin, Jing-Chi Lin, Fwu-Long Mi
The preparation of Chitosan-Ophiopogon japonicus polysaccharide (OJP) complex as a Nano-carriers for the Immunomodulation of RAW264.7 Macrophages
- PB-08** Yi-Cheng Huang, Shu-Jyun Chen
Controlled Release 5-FU from Chitosan/Fucoidan Nanoparticles for Immune and Chemotherapy
- PB-09** Chih-I Chen, Li-Yen Shiu, Po-Yao Yang, Meng-Han Yang, Jai-Hong Cheng, Wen-Chuan Hsieh
Adipose derived stem cell culture study in the grafted chitosan 3D scaffold
- PB-10** A. Someya, K. Sakamoto, I. Nagaoka
Glucosamine modulates the activation of NF-kappaB via the O-linked-N-acetylglucosamine modification in synovial cells
- PB-11** Norie Sonoda, Daiki Kubomura, Tomoya Ueno, Hideki Matsuda
Skin moisturizing effect of N-acetylglucosamine assessed by a three-dimensional human skin model and its application in cosmetics
- PB-12** R. Guerle-Cavero, S. Mauri-Querol, S. Tintoré-Vidal, Alberto C. Balfagón
The study of anti-wrinkle products and active ingredients in Chitosan synthetic skin.
- PB-13** Tungalag Battulga, Oyunjargal Tumurbaatar, Takashi Yoshida
Antiviral mechanism of sulfated polysaccharides
- PB-14** Y. Kobira, C. Hirayama, Y. Mizukai, Y. Maezaki, D. Iohara, F. Hirayama, M. Anraku
Slow-release of olmesartan from tablets containing chitosan/sulfobutyl ether β -cyclodextrin composites
- PB-15** M. Goto, S. Ifuku, K. Azuma, H. Arima, S. Kaneko, D. Iohara, F. Hirayama, M. Anraku
Preparation and evaluation of sacran / chitosan nanofiber complex for drug sustained-release patch
- PB-16** J. A. Loaiza-Ruiz, H. Hernández-Cocoletzi, E. Águila-Almanza, J. Violante-González, Hermann Ehrlich, E. Rubio-Rosas
Isolation and characterization of chitosan from the skeleton of *Callyspongia* sp. Sponge
- PB-17** Sumire Matsukawa, Mayumi Egusa, Chihiro Miura, Shiori Nakatani, Jyunpei Yamada, Tsuneyoshi Endo, Shinsuke Ifuku, Hironori Kaminaka
Chitin promotes growth and nitrogen uptake with the modulation of global gene expression in plants
- PB-18** Mamu Gonnami, Yukiko Isowa, Sarasa Takashima, Naoya Takeda, Mayumi Egusa, Shinsuke Ifuku, Hironori Kaminaka
Chitin nanofiber promotes rhizobial symbiosis in the model legume *Lotus japonicas*

- PB-19** **P. Lemke, B. M. Moerschbacher**
Gene expression profile of early defense genes of potato plants in response to chitosan
- PB-20** **Yue Yang, Rong Xing, Song Liu, Yukun Qin, Kecheng Li, Huahua Yu, Pengcheng Li**
Immunostimulatory Effects of Chitooligosaccharides on RAW 264.7 Mouse Macrophages via Regulating MAPK Signaling Pathway
- PB-21** **Eui Jeong Han, Hee-Jin Han, Eun-Ji Shin, Nalae Kang, Eunyeong Park, Su-Jin Oh, Ginnae Ahn**
A polyphenolic compound suppresses IgE-mediated type 1 allergic response in mast cell
- PB-22** **Hee-Jin Han, Eui Jeong Han, Nalae Kang, Eun-Ji Shin, Su-Jin Oh, Eunyeong Park, Ginnae Ahn**
Anti-inflammatory effects of *Sargassum horneri* ethanol extracts against TNF- α /IFN- γ -induced inflammation in human keratinocytes
- PB-23** **Jae-Woon Nah, Gyeong-Won Jeong, Woong-Gil Hong, Jun-Hyuk Ahn**
Evaluation of Targeting effect and Transfection efficacy of Hyaluronic acid-coated Ternary complex
- PB-24** **Keiji Kan**
Therapeutic effect of chitin oligosaccharide mixtures by *per os* administration on human cancer
- PB-25** **E. Lavelle, H. Moran, M. Andersson**
The impact of chitosan acetylation pattern on inflammation and toxicity
- PB-26** **Chia-Rui Shen, Li-Cheng Chen, Chao-Lin Liu**
Less interferon-gamma response to chitin particles in patients and the animal model of allergic asthma
- PB-27** **Chen-An Li, Jeen-Kuan Chen, Chao-Lin Liu**
Identification of Chitinasome from *Chitinibacter tainanensis* with nanoparticle
- PB-28** **Mady, M.F., El-Shiekh, H.H., El-Aaser, M.M., El-Sheshtawy, H.S., Aboutaleb, A.Wael, Hefni, H.H.H.**
Biosynthesis of Ag, Cd, Fe and Cu nanoparticles by *Salmonella typhimurium* and loaded their on chitosan for cytotoxicity, antimicrobial and conductivity applications
- PB-29** **P. V. S. R. N. Sarma, B. Ramakrishna, P. Appa Rao**
Enzymatic approach for production of higher chain length chitooligosaccharides and their evaluation for elicitor response in rice seedlings

Session C: Chemistry & Physics

- PC-01** Mizuki Kinai, Hironori Izawa, Minoru Morimoto, Shinsuke Ifuku, Hiroyuki Saimoto
Synthesis of guanidinylated chitosan and chito-oligosaccharide
- PC-02** Daiki Komoto, Tetsuya Furuike, Hiroshi Tamura
Preparation of Sodium Alginate and Chitosan Gel by Basic Chitosan Solution
- PC-03** Sankar Rathinam, Ingibjörg Kristjánsdóttir, Sigríður Jónsdóttir, Priyanka Sahariah, Martha Hjálmarsdóttir, Már Másson
Synthesis, characterization, evaluation of antimicrobial activity and comparative SAR study of common chitosan derivatives
- PC-04** V. Nagy, P. Sahariah, M.Á. Hjálmarsdóttir, M. Másson
Synthesis of antioxidant chitosan conjugates using tert-butyldimethylsilyl (TBDMS) protection
- PC-05** Seiichiro Noguchi, Kazuya Yamamoto, Jun-ichi Kadokawa
Pickering emulsion polymerization of styrene using self-assembled chitin nanofibers
- PC-06** Hiroki Hirayama, Kazuya Yamamoto, Jun-ichi Kadokawa
Synthesis of chitin acylates with different chain lengths in ionic liquid
- PC-07** Y. Kawakami, Y. Kimura, H. Asamoto, H. Minamiswa, K. Yamada
Adsorptive Removal of Hexavalent Chromium Ions from Aqueous Solutions with Chemically Crosslinked Chitosan Beads and Kinetic Analysis
- PC-08** Kota Ito, Masato Noguchi, Shin-ichiro Shoda
Chitin-oxazoline as a novel intermediate for reducing-end-selective modification
- PC-09** S. Murasawa, H. Tamura, T. Furuike
Preparation of chitosan derivatives by a microwave assisted method
- PC-10** Fwu-Long Mi, Shao-Jung Wu, Wen-Yi Chen, Zhi-Run Chen
Adsorption of copper(II) ions by a phytic acid-immobilized chitosan biosorbent
- PC-11** Atsushi Sawada, Junko Hashimoto, Hironori Izawa, Minoru Morimoto, Shinsuke Ifuku, Hiroyuki Saimoto
Biological adhesive using carboxymethyl chitin derivative
- PC-12** G.M. Vinhas, G.K.M. Souza, A.M.P.Santos
Evaluation of poly (3-hydroxybutyrate) (PHB) / chitosan properties after thermal or radiolytic sterilization processes
- PC-13** Nguyen Cong Minh, Nguyen Van Hoa, Hoang Ngoc Cuong, Trang Si Trung
Preparation and characterization of low molecular weight and water soluble chitosan in solid state
- PC-14** S. Saita, D. Hikosou, T. Furuike, H. Tamura, H. Kawasaki
Hybrid nanogel of chitosan with AuAg bimetallic nanoclusters toward efficient photodynamic therapy

Session E: Enzymology

- PE-01** **H. Hosaka, M. Nagashima, T. Hirano, W. Hakamata, T. Nishio**
Search of enzymes involved in the hydrolysis of N-acetylsucrosamine from *Bifidobacterium pseudocatenulatum*
- PE-02** **Chi-Hang Wang, Chih-Yu Cheng**
The modification of *Bacillus circulans* MH-K1 chitosanase and its application for large-scale preparation of chitotriose
- PE-03** **K. Seki, S. Mitsuyuki, Y. Nishiyama, T. Iwamoto, Y. Hiromasa, K. Doi, M. Mitsutomi**
Primary structure of exo-chitobiohydrolase from *Gongronella butleri*
- PE-04** **M. H. Hsu, H. P. Lee, P. L. Wu, C. H. Hsu, Y. X. Liao, J. K. Chen**
Adsorption with chitin as the key factor of N-acetylglucosamine production by *Chitinibacter tainanensis*
- PE-05** **Yoichiro Yaguchi, Ryo Nishino, Mio Ohtake, Hideto Fukusima, Masahiro Matsumiya**
Molecular cloning of chitinase isozyme genes from the liver of spear squid *Heterololigo bleekeri*
- PE-06** **Song Liu, Miaomiao Zhou, Kecheng Li, Rong Xing, Pengcheng Li**
Study on effects and mechanism of microwave treating on enzymatic hydrolysis of chitosan
- PE-07** **K. Miyamoto, Y. Sakamoto, Y. Muroga, Y. Yagi, S. Sugawa, H. Tsujibo**
Analysis of the novel proteins involved in the chitinolytic system of *Pseudoalteromonas piscicida* strain O-7
- PE-08** **Y. Kitaoku, S. Nishimura, T. Numata, W. Suginta, T. Taira, T. Fukamizo, T. Ohnuma**
Lysin motifs from Plant Chitinases
- PE-09** **M. Kimura, T. Umeyama, S. Wakita, K. Okawa, M. Sakaguchi, F. Oyama**
Comparison of chitinolytic activities among mouse mammalian chitinases and *Serratia marcescens* chitinase B
- PE-10** **T. Watanabe, M. Kimura, K. Sekine, M. Sakaguchi, F. Oyama**
Functional differences between human and mouse chitotriosidase
- PE-11** **M. Uehara, E. Tabata, M. Ohno, M. Sakaguchi, F. Oyama**
Gene expression analysis of chitinases in crab-eating monkey: species-specific expression of acidic mammalian chitinase and chitotriosidase
- PE-12** **Y. Naka, Y. Hirano, M. Nakazawa, T. Sakamoto, T. Tamada, M. Ueda**
Structural and functional analysis of carbohydrate hydrolases from *Eisenia fetida*
- PE-13** **H. Tachimura, K. Nakadoi, M. Nakazawa, T. Sakamoto, M. Ueda**
Synergic effect of LPMO during the hydrolysis of the crystalline chitin by chitinase A from *Paenibacillus* sp.

- PE-14** **Naoki Munakata, Kyoko Horii, Takuya Yamagisi, Yujo Kojima, Takeshi Watanabe, Hayuki Sugimoto, Kazushi Suzuki**
Coordinated regulation of chitinase system by small RNA in *Serratia marcescens*
- PE-15** **N. Kishigami, K. Okawa, M. Sakaguchi, F. Oyama**
Amino acid substitutions at the active site of Chitinase 3-like-1
- PE-16** **Tomoya Takashima, Keiko Uechi, Toki Taira**
Antifungal activities of LysM domain multimers and their fusion chitinases
- PE-17** **Mohan Krishna Mallakuntla, Appa Rao Podile**
Construction of a hypertransglycosylating mutant of chitinase 2 (*EcChi2*) from *Enterobacter cloacae* subsp. *Cloacae*

***Titles and authors listed in this program are basically based on online application and registry information.**