

第 32 回日本免疫毒性学会学術年会プログラム

第 1 日目 9 月 4 日 (木)

岐阜市文化センター小劇場 (メイン会場)

8:55 ～ 9:00 開会式

第 32 回日本免疫毒性学会学術年会 年会長 中西剛

9:00 ～ 9:45 学生・若手セッション 1 < Y-01 ～ Y-05 >

座長：長谷川潤 (神戸薬科大学)、本田晶子 (京都大学)

Y-01 PEG 誘導体含有化粧水の連日塗布による抗PEG IgM の誘導

○金侑里¹、高田春風^{1,2}、安藤英紀^{1,2}、石田竜弘^{1,2}

¹徳島大院医歯薬、²徳島大学DDS 研セ

Y-02 PEG修飾製剤投与時に生じるアナフィラキシー反応～抗PEG抗体の寄与～

○山口秀人¹、高田春風^{1,2}、小林慎吾^{1,2}、安藤英紀^{1,2}、石田竜弘^{1,2}

徳島大学 大学院医歯薬学研究部 ¹薬物動態制御学分野、²DDS研究センター

Y-03 ケモカインCCL28 によるIgE 抗体産生細胞制御を介したアトピー性皮膚炎病態形成機構

○酒井貴之、松尾一彦、山下絢香、橋本采奈、田中栞穂、原雄大、中山隆志

近畿大薬

Y-04 気管支喘息における気道上皮細胞に対するケモカインCCL28の役割

○急式杏樹、原雄大、松尾一彦、中山隆志

近畿大・薬・化学療法

Y-05 黄色ブドウ球菌分泌タンパク質による好塩基球活性制御

○榊原悠¹、鎌田汐音¹、岩田陸人¹、桐山陽菜¹、小川勇¹、肥田重明¹、伊藤佐生智^{1,2}

¹名古屋市立大学、薬、²愛知学院大、薬

<休憩>

9:50 ～ 10:35 学生・若手セッション 2 < Y-06 ～ Y-10 >

座長：柴田寛子（国立医薬品食品衛生研究所）、松尾一彦（近畿大学）

Y-06 アレルゲンの刺激方法の違いによるアレルギー応答調節機構の解析

○宮下祥佳、長田夕佳、古川敦、鈴木亮
金沢大院・医薬保

Y-07 コチニールアレルギーの発症に関わるアジュバント物質の解明

○江澤葵¹、高濱充寛¹、武村直紀¹、齊藤達哉^{1,2}
¹阪大院、薬、²阪大、MEI セ

Y-08 パルミチン酸による骨髄由来免疫抑制細胞の免疫毒性減弱

○佐野光洋、三ッ川聖菜、塩見萌々音、立花雅史
立命館大、生命

Y-09 HDAC阻害は骨髄由来免疫抑制細胞特異的にCCR2発現を低下させる

○三岡梨紗、前河香輝、伊藤寿宏、山田康貴、立花雅史
立命館大、生命

Y-10 HMG-CoA 還元酵素阻害薬による免疫応答への影響

○石川怜¹、水野遥香¹、笹野和希¹、村瀬香乃¹、小川勇¹、伊藤佐生智²、肥田重明¹
¹名古屋市立大、薬、²愛知学院大、薬

<休憩>

10:40 ～ 11:28 学生・若手セッション 3 < Y-11 ～ Y-16 >

座長：窪田篤人（北海道医療大学）、薄田健史（国立医薬品食品衛生研究所）

Y-11 マウスモデルを用いた特定のHLA拘束を前提としない抗てんかん薬によるT細胞活性化の解析

○中田智、伊藤晃成、青木重樹
千葉大学大学院 薬学研究院 生物薬剤学研究室

Y-12 Cx3cr1ノックインレポーターマウスの特性評価と大腸炎モデルにおける応答性の検討

○田中佐弥、石田慶士、但見堅二郎、松丸大輔、中西剛
岐阜薬大

Y-13 ヒト免疫受容体Siglec-14遺伝子導入マウスの作製と解析

○郷原隆之介¹、山口慎一郎¹、青島大和¹、伊川正人²、中山勝文¹

¹立命館大、薬、²大阪大、微研

Y-14 太陽光劣化ポリプロピレンによる炎症反応とそのリスク評価を指向した環境モデルの構築

○和田百合花¹、岩本洋子¹、梶野瑞王²、石原康宏¹

¹広島大院・統合生命、²気象庁・気象研

ショートプレゼンテーション< Y-15、Y-16 >

Y-15 タンパク質のアレルギー性を評価する*in vitro*試験法の開発

○里田裕紀¹、望月沙穂¹、水町秀之¹、高橋豊¹、井上智彰²、伊藤勇一¹

¹花王株式会社 安全性科学研究所、²株式会社フロンティア

Y-16 大気環境中カーボンブラックナノ粒子によるアレルギー炎症調節機構の解析

○渡邊航大、古川敦、長田夕佳、鈴木亮

金沢大院・医薬保

<休憩>

11:45 ~ 11:55 フラッシュプレゼンテーション

11:55 ~ 12:25 日本免疫毒性学会総会（兼評議員会）

<休憩>

岐阜市文化センター展示室

13:15 ~ 14:15 ポスター討論（一般）< P-01 ~ P-22 >

P-01 マウス脾初代培養系細胞を用いたPFAS 23物質の免疫毒性評価

○窪田篤人^{1,2}、村瀬渉¹、室本竜太^{1,2}、小島弘幸^{1,2}

¹北医療大院薬、²北医療大、薬

- P-02 インジウムスズ酸化物 (ITO) 曝露が及ぼす免疫毒性影響の基礎的検討 – ヒトT細胞株 MT-2におけるミトコンドリア機能傷害 –**
 ○西村泰光¹、丸尾奈生²、栄徳勝光²、小廣和哉³、伊藤達男¹、菅沼成文²
¹川崎医大 衛生学、²高知大 医学部医療学/予防医学・地域医療学分野 環境医学教室、³高知工科大 理工学群・総合研究所 構造ナノ化学研究センター
- P-03 Establishing a functional alveolar macrophage cell line: A valuable platform for elucidating the mechanisms of cell death and for high-throughput screening of environmental toxicants**
 ○Takumi Adachi¹, Hinata Inoue¹, Hiroto Izumi² and Etsushi Kuroda¹
¹Department of Immunology, Hyogo Medical University School of Medicine, Japan,
²Department of Occupational Pneumology, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan
- P-04 らい菌はマクロファージの免疫応答を回避し細胞内寄生を維持する**
 ○谷川和也¹、鈴木幸一²、中村亮介¹
¹帝京大、²帝京大、医療技
- P-05 Activation of caspase-11 by Gram-negative bacterial infection and its impact on the pathogenesis**
 ○Hideki Hara
 Infect Dis, Asahikawa Med Univ
- P-06 mRNA ワクチンにおける副反応誘導機序の解析**
 本田昂湧^{1,2}、武村直紀¹、深田宗一郎¹、齊藤達哉¹、平井敏郎^{1,2,3,4}、○吉岡靖雄^{1,2,3,4,5}
¹阪大院薬、²阪大微研、³阪大先端、⁴阪大CAMaD、⁵BIKEN 財団
- P-07 亜鉛欠乏状態に伴うワクチン効果の低下と亜鉛補充療法の検討**
 ○木戸尊将¹、柳澤裕之²、斎藤三郎²、須賀万智¹
¹東京慈恵会医科大学 医学部 環境保健医学講座、²東京慈恵会医科大学
- P-08 バイオ医薬品の免疫原性・免疫毒性評価に関する規制の国際動向調査**
 ○石井明子、柴田寛子、西村和子、青山道彦、多田稔、鈴木琢雄、田中庸一、斎藤嘉朗
 国立医薬品食品衛生研究所
- P-09 *In vitro*免疫原性評価法のアッセイ結果に影響する要因の検討**
 ○青山道彦、鈴木琢雄、多田稔、石井明子
 国立医薬品食品衛生研究所

- P-10 トルエンジイソシアネートの反復的な経皮・吸入曝露の影響と評価手法に関する検討**
○小池英子、柳澤利枝、藤谷雄二、高澤嘉一、鈴木剛
国立環境研究所
- P-11 ポリウレタン膜マイクロカプセルの経気道曝露が膜破砕前後で肺炎症に与える影響の相違と腸内細菌叢との関連**
○柳澤利枝、小池英子、鈴木武博、藤谷雄二、高澤嘉一、鈴木剛、
国立環境研究所
- P-12 環境中微粒子による肺線維化の異同における炎症・血管新生関連分子の役割**
宮坂奈津子^{1,2}、○本田晶子¹、井上健一郎³、定金香里⁴、市瀬孝道⁴、石川良賀⁵、大畑良子^{1,2}、
亀田貴之⁶、奥田知明⁵、高野裕久^{7,8}
¹京大院・工、²京先端大・研究連携、³静岡県立大・看護、⁴大分看護大、⁵慶應大・理工、⁶京大院・
エネ科、⁷京先端大・国際学術、⁸京先端大・共生健康科学
- P-13 環境中微粒子－血管の空間的位置関係：肺組織透明化技術を用いた 3次元解析**
○長尾慧^{1,2}、本田晶子¹、市瀬孝道³、宮坂奈津子^{1,2}、大畑良子^{1,2}、高野裕久^{4,5}
¹京大院・工、²京先端大・研究連携、³大分看護大、⁴京先端大・国際学術、⁵京先端大・共生
健康科学
- P-14 染色標本における環境中微粒子の同視野可視化手法に関する検討**
○赤路佐希子¹、佐川友哉²、本田晶子³、宮坂奈津子^{3,4}、定金香里⁵、市瀬孝道⁵、高野裕久^{6,7}
¹静岡県立大・看護、²京都府立医科大・免疫内科、³京大院・工、⁴京先端大・研究連携、⁵大
分看護大、⁶京先端大・国際学術、⁷京先端大・共生健康科学
- P-15 ヒト前骨髄球性白血病細胞株HL60での全トランス型レチノイン酸によるメタロチオネイン
1G遺伝子発現抑制の機構解析**
○木村朋紀¹、塩田玲以¹、廣内比菜¹、小串祥子²、中村武浩¹
¹摂南大、薬、²東京薬大、生命
- P-16 亜ヒ酸によるEGFRのシアル化促進を介したシグナル伝達経路の活性化**
○角大悟¹、中平早保¹、田口央基²、中山彩子¹、藤代瞳¹
¹徳島文理大、薬、²東北大、薬学研究科
- P-17 オランザピンによる体重増加とマウス腸内細菌叢の関連性の解析**
○青木明、岡本誉士典、神野透人
名城大、薬

P-18 Possible molecular mechanisms underlying the therapeutic effects of Gosha-jinki-gan in busulfan-induced aspermatogenesis

○Ning Qu, Satomi Miyakawa, Shota Toda, Yasuhiro Katahira, Izuru Mizoguchi, Takayuki Yoshimoto

Department of Immunoregulation, Institute of Medical Science, Tokyo Medical University

P-19 Individual T-cell chromatin accessibility correlates with cytokine release following ex vivo stimulation with a T-cell engager in cynomolgus monkeys

○Yoshika Iwata¹, Yuta Narushima², Asako Harada¹, Akihisa Sakamoto², Hisashi Ikegami¹, Masayuki Mishima¹, Hiromi Suzuki¹

¹Translational Research Division, Chugai Pharmaceutical Co., Ltd., ²Research Division, Chugai Pharmaceutical Co., Ltd.

P-20 β 2ミクログロブリン非依存的に細胞表面に発現するHLAクラスI重鎖の特徴解析

○青木重樹¹、野中麻衣¹、梅澤啓太郎²、三浦ゆり²、伊藤晃成¹

¹千葉大院・薬、²都健康長寿医セ研

P-21 難病・疾患モデル小動物の開発、系統維持、保存、供給および関連技術の開発

○鎌田春彦、神村麻友、佐々木光穂、内尾こずえ、鈴木治

国立研究開発法人医薬基盤・健康・栄養研究所 疾患モデル小動物研究室

P-22 マイクロバブルの繰り返し投与における血流造影への影響に関する基礎的検討

○鈴木亮、島忠光、影山彩織、宗像理紗、小俣大樹、丸山一雄

帝京大、薬

13:15 ~ 14:15 ポスター討論（若手）＜ Y-01 ~ Y-16 ＞

Y-15 タンパク質のアレルギー性を評価する*in vitro*試験法の開発

○里田裕紀¹、望月沙穂¹、水町秀之¹、高橋豊¹、井上智彰²、伊藤勇一¹

¹花王株式会社 安全性科学研究所、²株式会社フロンティア

Y-16 大気環境中カーボンブラックナノ粒子によるアレルギー炎症調節機構の解析

○渡邊航大、古川敦、長田夕佳、鈴木亮

金沢大院・医薬保

学生・若手セッションでは、口頭発表とポスター発表の両方を行っていただきます。演題は、口頭発表を主とする＜Y-01～Y-14＞と、ポスター発表を主とする＜Y-15、Y-16＞に分かれます。学生・若手優秀発表賞は、口頭とポスター両方の内容を考慮して選考されます。

<休憩>

14:20 ～ 15:20 教育講演＜ TL-01 ＞

座長：中西剛（岐阜薬科大学）

TL-01 質量分析イメージングの基礎とその応用研究

○新聞秀一^{1,2,3}

¹大阪大、院工、²大阪大学先導的学際研究機構、³大阪大学・島津分析イノベーション協働
研究所

<休憩>

15:25 ～ 16:25 特別講演 1 ＜ SL-01 ＞

座長：中西剛（岐阜薬科大学）

SL-01 腸内環境を基盤とした免疫毒性制御の新展開

○國澤純

医薬基盤・健康・栄養研究所

<休憩>

16:30 ～ 17:30 特別講演 2 ＜ SL-02 ＞

座長：西村泰光（川崎医科大学）

SL-02 Immunotoxicology testing for biotherapeutics: strategies and applications

○Marie-Soleil Piche

Immunology department, Charles River Laboratories, Senneville, Canada

ホテルグランヴェール岐山

18:30 ～ 20:30 懇親会

学生・若手優秀発表賞 授賞式

8:50 ～ 9:50 一般演題 1 < O-01 ～ O-05 >

座長：中山勝文（立命館大学）、原英樹（旭川医科大学）

O-01 慢性的な心理ストレスのmRNAワクチン作用発揮に対する影響

○中平雅清、黒田悦史

兵庫医科大、医学部、免疫学

O-02 The differential pyrin inflammasome responses between resident peritoneal and bone marrow-derived macrophages

○Izumi Sasaki¹, Shiori Kaji², Ayano Kurara¹, Naoko Wakaki-Nishiyama¹, Mai Yamagishi³, Yoshitaka Shirasaki⁴, Daisuke Okuzaki⁵, Tsuneyasu Kaisho^{1,6}

¹Department of Immunology, Institute of Advanced Medicine, Wakayama Medical University, ²Second Department of Internal Medicine, Wakayama Medical University,

³Live Cell Diagnosis, ⁴Research Center for Advanced Science and Technology, The University of Tokyo, ⁵WPI-Immunology Frontier Research Center, The University of Osaka, ⁶Industry-Government-Academia Collaboration Promotion Headquarters, Wakayama Medical University

O-03 HMGB1 はTLR4 を介してMDSC の免疫抑制機能を増強する

○伊藤寿宏¹、謝智奇²、立花雅史¹

¹立命館大、生命、²浙大城市、薬

O-04 Development of a coculture system of Fc γ receptor⁺ cell and antibody-targeted cell lines to predict cytokine release syndrome caused by antibody drugs

○Shota Toda¹, Izuru Mizoguchi¹, Natsuki Yamaguchi¹, Eri Horio¹, Satomi Miyakawa¹, Yasuhiro Katahira¹, Miki Igarashi¹, Ning Qu¹, Takao Ashikaga², Takayuki Yoshimoto¹

¹Department of Immunoregulation, Institute of Medical Science, Tokyo Medical University, ²Division of Genome Safety Science, National Institute of Health Sciences Center for Biological Safety and Research

O-05 Retrospective evaluation of complement activation by antisense oligonucleotides

○Satoko Yoshioka, Yuichiro Amano, Jodi Goodwin

Nonclinical Safety and Pharmacology, Takeda Pharmaceutical Company Limited

<休憩>

9:55 ～ 11:55 シンポジウム＜ S-01 ～ S-04 ＞

「免疫毒性を介した脳機能の破綻」

座長：西村有平（三重大学）、立花雅史（立命館大学）

S-01 Methylmercury-induced neurological damage mediated by microglial activation and future prospects

○Gi-Wook Hwang

Faculty of Pharmaceutical Sciences, Tohoku Medical and Pharmaceutical University

S-02 オリゴデンドロサイト毒性学—ミクログリアの先にあるもの—

○石原康宏

広島大院・統合生命

S-03 ゼブラフィッシュの全脳ライブイメージングを用いたミクログリアの評価

○西村有平

三重大・院医・統合薬理学

S-04 末梢の免疫バランス異常に伴う脳機能変容メカニズム

○宮島倫生^{1,2}

¹東大、医、²理化学研究所

<休憩>

13:00 ～ 14:12 一般演題 2 < O-06 ～ O-11 >

座長：浜村えり（第一三共株式会社）、松村匠悟（アステラス製薬株式会社）

O-06 Neutrophilic Inflammation Induced by PM2.5 Is Partially Dependent on TLR4 Signaling and Correlates with ROS and PAHs

○Duo Wang¹, Zirui Zeng², Ryuji Okazaki¹, Yasuhiro Yoshida³

¹Department of Radiobiology and Hygiene Management, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan, ²The First Department of Internal Medicine, School of Medicine, University of Occupational and Environmental Health, Japan, ³Department of Immunology and Parasitology, School of Medicine, University of Occupational and Environmental Health, Japan

O-07 エタノールの短期反復摂取による胸腺への遅発影響

○長谷川潤、中嶋満太、近藤真理

神戸薬科大学衛生化学研究室

0-08 ラマン分光法と機械学習による培養神経細胞の成熟過程モデリング

○橋本剛佑¹、青山音哉²、小泉桂一^{1,2}

¹富山大学、未病研究センター、²富山大学、和漢医薬学総合研究所

0-09 腫瘍溶解性ウイルスであるレオウイルスの肝臓における薬物代謝酵素の調節機構に関する検討

○川瀬篤史¹、竇彦欽¹、大上匠矢¹、島田紘明¹、石井健³、櫻井文教^{1,2}

¹近畿大院、薬、²阪大院、薬、³東大医科研

0-10 反復経口投与によりラット小腸パイエル板に取り込まれた二酸化チタンによる免疫毒性影響の検討

○赤木純一¹、水田保子¹、畝山瑞穂¹、赤根弘敏¹、松下幸平¹、豊田武士¹、小川久美子^{1,2}

¹国立医薬品食品衛生研究所、病理、²星薬大、毒性

0-11 細胞系譜安定性を持つ制御性T細胞分化による食物抗原に対する免疫寛容誘導

○川上竜司^{1,2}、荒井真也²、坂口志文^{1,2}

¹京都大、医生物学研究所、²大阪大、免疫学フロンティア研究センター

14:12 ～ 14:20 表彰式

14:20 ～ 14:45 学会賞受賞講演＜ AL-01 ＞

座長：西村泰光（川崎医科大学）

AL-01 Immunotoxicological mechanisms and integrated health risk assessment of allergy and inflammatory immune dysregulation induced by heavy metals, chemicals, and nutrients

○Hiroyuki Yanagisawa

The Jikei University School of Medicine

14:45 ～ 15:10 奨励賞受賞講演＜ AL-02 ＞

座長：中村亮介（帝京大学）

AL-02 HLA を介した薬物の免疫毒性を制御する環境因子の探索

○薄田健史

富山大学 学術研究部 薬学・和漢系 生体防御学領域

<休憩>

15:20 ～ 17:20 試験法ワークショップ＜WS-01 ～ WS-04＞
「呼吸器感作性試験の開発動向と国内における取り組み」

座長：吉田安宏（産業医科大学）、福山朋季（麻布大学）

WS-01 農薬等の一般化学物質により引き起こされる呼吸器感作性の特徴とその検出法の検討

○福山朋季

麻布大、獣医薬理

WS-02 In vitro呼吸器感作性試験の行政活用における国際動向とJaCVAMの取り組み

○小池英子¹、足利太可雄²

¹国立環境研究所、環境リスク・健康領域、²国立医薬品食品衛生研究所、ゲノム安全科学部

WS-03 化学物質のin vitro呼吸器感作性評価における再構成ヒト気管支上皮の活用

青島萌乃歌¹、松村一史¹、田邊郁也¹、○石川晋吉¹、溝口出²、善本隆之²、足利太可雄³

¹日本たばこ産業株式会社、R&Dグループ、製品評価センター、²東京医科大学、医学総合研究所、免疫制御研究部門、³国立医薬品食品衛生研究所、ゲノム安全科学部

WS-04 呼吸器感作性化学物質の予測評価を可能にする3次元共培養系の開発

○溝口出¹、戸田翔太¹、山口夏輝¹、堀尾恵里¹、片平泰弘¹、五十嵐美樹¹、宮川聡美¹、曲寧¹、足利太可雄²、善本隆之¹

¹東京医科大学 医学総合研究所 免疫制御研究部門、²国立医薬品食品衛生研究所 ゲノム安全科学部

17:20 ～ 17:30 年会賞授賞式、閉会式

Program

Day 1: September 4th (Thursday)

Small Theater, Gifu City Culture Center (Main Venue)

8:55 ~ 9:00 Opening Remarks

The 32nd Annual Meeting of The Japanese Society of Immunotoxicology

President : Tsuyoshi Nakanishi

9:00 ~ 9:45 Students and Young Scientists Session 1 < Y-01 ~ Y-05 >

Chairpersons: Hiroshi Hasegawa (Kobe Pharmaceutical University),
Akiko Honda (Kyoto University)

Y-01 Induction of anti-PEG IgM by daily application of PEG derivative-containing lotion

○Yuri Kim¹, Haruka Takata^{1,2}, Hidenori Ando^{1,2}, Tatsuhiko Ishida^{1,2}

¹Dept. of PK and Biopharmaceut., ²Res. Center for DDS, Inst. of Biomed. Sci., Tokushima Univ.

Y-02 The impact of anti-PEG antibodies on anaphylaxis by PEGylated nanoparticles

○Shuto Yamaguchi¹, Haruka Takata^{1,2}, Shingo Kobayashi^{1,2}, Hidenori Ando^{1,2},
Tatsuhiko Ishida^{1,2}

¹Department of Pharmacokinetics and Biopharmaceutics, ²Innovative Research Center for Drug Delivery System, Institute of Biomedical Sciences, Tokushima University

Y-03 Pathological role of CCL28 in atopic dermatitis through the recruiting of IgE antibody-producing cells

○Takayuki Sakai, Kazuhiko Matsuo, Ayaka Yamasita, Ayana Hashimoto, Kanon Tanaka,
Yuta Hara, Takashi Nakayama

Kindai University Faculty of Pharmacy

Y-04 Role of Chemokine CCL28 for the airway epithelial cells in asthma

○Anju Kyushiki, Yuta Hara, Kazuhiko Matsuo, Takashi Nakayama

Div. Chemother., Fac. Pharm., Kindai Univ.

Y-05 The regulation of basophil activation by Staphylococcal secretory proteins

○Haruka Sakakibara¹, Shion Kamada¹, Rikuto Iwata¹, Hina Kiriyaama¹, Isamu Ogawa¹,
Shigeaki Hida¹, Saotomo Itoh^{1,2}

¹Pharm Sci, Nagoya City Univ, ²Pharm, Aichi Gakuin Univ

<Break>

9:50 ~ 10:35 Students and Young Scientists Session 2 < Y-06 ~ Y-10 >

Chairpersons: Hiroko Shibata (National Institute of Health Sciences),
Kazuhiko Matsuo (Kindai University)

Y-06 Impact of Allergen Exposure Patterns on Mast Cell Activation and Allergic Inflammation

○Sachika Miyashita, Yuka Nagata, Atsushi Furukawa, Ryo Suzuki

Fac. Pharm. Sci., Kanazawa Univ.

Y-07 Analysis of adjuvant factors involved in the development of cochineal allergy

○Aoi Ezawa¹, Michihiro Takahama¹, Naoki Takemura¹, Tatsuya Saitoh^{1,2}

¹Grad Sch Pharm Sci, Univ Osaka, ²Global Ctr, Med Eng Inform, Univ Osaka

Y-08 Palmitic acid interferes with the immunotoxicity of myeloid-derived suppressor cells

○Koyo Sano, Sena Mitsukawa, Momone Shiomi, Masashi Tachibana

Life Sci., Ritsumeikan Univ.

Y-09 Myeloid-derived suppressor cell-specific CCR2 down-regulation by HDAC inhibitor

○Risa Mitsuoka, Koki Maekawa, Toshihiro Ito, Koki Yamada, Masashi Tachibana

Life Sci., Ritsumeikan Univ.

Y-10 HMG-CoA reductase inhibitors regulate helper T cell differentiation

○Satoshi Ishikawa¹, Haruka Mizuno¹, Kazuki Sasano¹, Kanon Murase¹, Isamu Ogawa¹,
Saotomo Itoh², Shigeaki Hida¹

¹Pharm Sci, Nagoya City Univ., ²Pharm Sci, Aichi Gakuin Univ.

<Break>

10:40 ~ 11:28 Students and Young Scientists Session 3 < Y-11 ~ Y-16 >

Chairpersons: Atsuhito Kubota (Health Sciences University of Hokkaido),
Takeshi Susukida (National Institute of Health Science)

Y-11 Analysis of T cell activation by antiepileptic drugs without specific HLA restriction using a mouse model

○Satoru Nakada, Kousei Ito, Shigeki Aoki

Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University

Y-12 Characterization of CX3CR1 knock-in reporter mice and their application in colitis model

○Saya Tanaka, Keishi Ishida, Kenjiro Tajimi, Daisuke Matsumaru, Tsuyoshi Nakanishi
Gifu Pharm. Univ.

Y-13 Generation and analysis of Siglec-14-transduced mice

○Ryunosuke Gohara¹, Shin-Ichiro Yamaguchi¹, Yamato Aoshima¹, Masahito Ikawa², and Masafumi Nakayama¹

¹Pharm Sci, Ritsumeikan Univ, ²Res Inst Microb Dis, Osaka Univ

Y-14 Inflammatory response by sun-aged polypropylenes and environmental model for their risk assessment

○Yurika Wada¹, Yoko Iwamoto¹, Mizuo Kajino², Yasuhiro Ishihara¹

¹Grad. Sch. Integr. Sci. Life, Hiroshima Univ, ²Japan Meteorol. Agency

Short Presentation < Y-15, Y-16 >

Y-15 Development of *in vitro* test method for allergenicity assessment of proteins

○Yuki Satoda¹, Saho Mochizuki¹, Hideyuki Mizumachi¹, Yutaka Takahashi¹,
Tomoaki Inoue², Yuichi Itou¹

¹Safety Science Research Laboratories, Kao Corporation, ²Frontier Co., Ltd.

Y-16 Differential Immunomodulatory Effects of Carbon Black Nanoparticles in Allergic Disease Models

○Kota Watanabe, Atsushi Furukawa, Yuka Nagata, Ryo Suzuki

Fac. Pharm. Sci., Kanazawa Univ.

<Break>

11:45 ~ 11:55 Flash Presentation

11:55 ~ 12:25 General Assembly

<Break>

13:15 ~ 14:15 Poster Discussion Session < P-01 ~ P-22 >

P-01 Immunotoxicological Evaluation of 23 PFAS Using Primary Cultured Mouse Splenocytes

○Atsuhito Kubota^{1,2}, Wataru Murase¹, Ryuta Muromoto^{1,2}, Hiroyuki Kojima^{1,2}

¹Grad. Sch. Pharm. Sci., Health Sci. Univ. Hokkaido., ²Sch. Pharm. Sci., Health Sci. Univ. Hokkaido.

P-02 Fundamental Study on the Immunotoxic Effects of Indium-Tin Oxide (ITO) Exposure: Mitochondrial Dysfunction in Human T Cell Line MT-2

○Yasumitsu Nishimura¹, Nao Maruo², Masamitsu Eitoku², Kazuya Kobiro³, Tatsuo Ito¹, Narufumi Suganuma²

¹Dept. of Hygiene, Kawasaki Medical School, ²Dept. of Environmental Medicine, Kochi Medical School, ³Lab. for Structural Nanochemistry, Kochi University of Technology

P-03 Establishing a functional alveolar macrophage cell line: A valuable platform for elucidating the mechanisms of cell death and for high-throughput screening of environmental toxicants

○Takumi Adachi¹, Hinata Inoue¹, Hiroto Izumi² and Etsushi Kuroda¹

¹Department of Immunology, Hyogo Medical University School of Medicine, Japan, ²Department of Occupational Pneumology, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan

P-04 *Mycobacterium leprae* evades macrophage immunity to sustain intracellular survival

○Kazunari Tanigawa¹, Koichi Suzuki², Ryosuke Nakamura¹

¹Pharm Sci, Teikyo Univ, ²Med Technol, Teikyo Univ.

P-05 Activation of caspase-11 by Gram-negative bacterial infection and its impact on the pathogenesis

○Hideki Hara

Infect Dis, Asahikawa Med Univ

P-06 Inflammatory mediators of mRNA vaccine-induced adverse reactions in mice

Koyo Honda^{1,2}, Naoki Takemura¹, So-ichiro Fukada¹, Tatsuya Saitoh¹, Toshiro Hirai^{1,2,3,4},
○Yasuo Yoshioka^{1,2,3,4,5}

¹Grad. Sch. Pharm. Sci./²RIMD/³OTRI/⁴CAMaD, The University of Osaka, ⁵BIKEN

- P-07 Zinc deficiency reduces the effectiveness of vaccine**
 ○Takamasa Kido, Hiroyuki Yanagisawa, Saburo Saito, Machi Suka
 The Jikei University School of Medicine
- P-08 International trends in regulations regarding immunogenicity and immunotoxicity assessment of biopharmaceuticals**
 ○Akiko Ishii-Watabe, Hiroko Shibata, Kazuko Nishimura, Michihiko Aoyama, Minoru Tada, Takuo Suzuki, Yoichi Tanaka, Yoshiro Saito
 Natl Inst Health Sci
- P-09 Study of factors influencing performance of *in vitro* immunogenicity assay**
 ○Michihiko Aoyama, Takuo Suzuki, Minoru Tada, Akiko Ishii-Watabe
 Natl Inst Health Sci
- P-10 Study on the effects of repeated dermal and inhalation exposure to toluene diisocyanate and their evaluation methods**
 ○Eiko Koike, Rie Yanagisawa, Yuji Fujitani, Yoshikatsu Takazawa, Go Suzuki
 National Institute for Environmental Studies
- P-11 Effects of intratracheal administration to polyurethane microcapsules before and after membrane rupture on pulmonary inflammation and its association with the gut microbiota**
 ○Rie Yanagisawa, Eiko Koike, Takehiro Suzuki, Yuji Fujitani, Yoshikazu Takazawa, Go Suzuki
 National Institute for Environmental Studies
- P-12 The role of inflammation and angiogenesis-related molecules in fibrosis induced by particulate matter**
 Natsuko Miyasaka^{1,2}, ○Akiko Honda¹, Kenichiro Inoue³, Kaori Sadakane⁴, Takamichi Ichinose⁴, Raga Ishikawa⁵, Ryoko Ohata^{1,2}, Takayuki Kameda⁶, Tomoaki Okuda⁵, Hirohisa Takano^{7,8}
¹Grad. Sch. of Eng., Kyoto Univ., ²Res. Collab. Ctr. Kyoto Univ. of Adv. Sci., ³Sch. of Nursing, Shizuoka Pref. Univ., ⁴Nursing and Health Sci., Oita Univ., ⁵Facul., of Sci. and Tech., Keio Univ., ⁶Grad. Sch. of Energy Sci., Kyoto Univ., ⁷Inst. for Int. Acad. Res., Kyoto Univ. of Adv. Sci., ⁸Res. Inst. for Coexistence and Health Sci., Kyoto Univ. of Adv. Sci.

- P-13 Environmental particulate matter – blood vessel spatial relationship: 3D analysis using lung tissue clearing technology**
 ○Megumi Nagao^{1,2}, Akiko Honda¹, Takamichi Ichinose³, Natsuko Miyasaka^{1,2}, Ryoko Ohata^{1,2}, Hirohisa Takano^{4,5}
¹Grad. Sch. of Eng., Kyoto Univ., ²Res. Collab. Ctr. Kyoto Univ. of Adv. Sci., ³Nursing and Health Sci., Oita Univ., ⁴Inst. for Int. Acad. Res., Kyoto Univ. of Adv. Sci., ⁵Res. Inst. for Coexistence and Health Sci., Kyoto Univ. of Adv. Sci.
- P-14 A method for visualizing environmental microparticles in the same field of view in stained specimens**
 ○Sakiko Akaji¹, Tomoya Sagawa², Akiko Honda³, Natsuko Miyasaka^{3,4}, Kaori Sadakane⁵, Takamichi Ichinose⁵, Hirohisa Takano^{6,7}
¹Sch. of Nursing, Shizuoka Pref. Univ., ²Kyoto Pref. Med. Univ., ³Grad. Sch. of Eng., Kyoto Univ., ⁴Res. Collab. Ctr., Kyoto Univ. of Adv. Sci., ⁵Nursing and Health Sci., Oita Univ., ⁶Inst. for Int. Acad. Res., Kyoto Univ. of Adv. Sci., ⁷Res. Inst. for Coexistence and Health Sci., Kyoto Univ. of Adv. Sci.
- P-15 Study of metallothionein 1G transcription suppression mechanism by all-*trans* retinoic acid in human promyeloblastic cell line HL60**
 ○Tomoki Kimura¹, Rei Shiota¹, Hina Hirouchi¹, Shoko Ogush², Takehiro Nakamura¹
¹Pharm Sci, Setsunan Univ, ²Tokyo Univ. Pharm. Life Sci
- P-16 Arsenite activates signaling pathways through enhanced sialylation of EGFR**
 ○Daigo Sumi¹, Saho Nakahira¹, Hiroki Taguchi², Ayako Nakayama¹, Hitomi Fujishiro¹
¹Fac. Pharm. Sci, Tokushima Bunri Univ, ²Fac. Pharm. Sci, Tohoku Univ
- P-17 The impact of gut microbiota composition on olanzapine-induced weight gain in mice**
 ○Akira Aoki, Yoshinori Okamoto, Hideto Jinno
 Fac Pharm, Meijo Univ
- P-18 Possible molecular mechanisms underlying the therapeutic effects of Gosha-jinki-gan in busulfan-induced aspermatogenesis**
 ○Ning Qu, Satomi Miyakawa, Shota Toda, Yasuhiro Katahira, Izuru Mizoguchi, Takayuki Yoshimoto
 Department of Immunoregulation, Institute of Medical Science, Tokyo Medical University

- P-19 Individual T-cell chromatin accessibility correlates with cytokine release following ex vivo stimulation with a T-cell engager in cynomolgus monkeys**
 ○Yoshika Iwata¹, Yuta Narushima², Asako Harada¹, Akihisa Sakamoto², Hisashi Ikegami¹, Masayuki Mishima¹, Hiromi Suzuki¹
¹Translational Research Division, Chugai Pharmaceutical Co., Ltd., ²Research Division, Chugai Pharmaceutical Co., Ltd.
- P-20 Characterization of β 2-microglobulin-independent HLA class I heavy chain expression on the cell surface**
 ○Shigeki Aoki¹, Mai Nonaka¹, Keitaro Umezawa², Yuri Miura², Kousei Ito¹
¹Grad Sch of Pharm Sci, Chiba Univ, ²TMIG
- P-21 Development and maintenance of strains, storage and supply of small animal models of rare and severe diseases and disorders, and related technologies**
 ○Haruhiko Kamada, Mayu Kamimura, Mitsuho Sasaki, Kozue Uchio, Osamu Suzuki
 NIBN
- P-22 Effect of the repetitive injection of microbubbles on blood flow imaging**
 ○Ryo Suzuki, Tadamitsu Shima, Saori Kageyama, Lisa Munakata, Daiki Omata, Kazuo Maruyama
 Fac Pharm Sci, Teikyo Univ

13:15 ~ 14:15 Poster Discussion (Young Researchers) < Y-01 ~ Y-16 >

- Y-15 Development of *in vitro* test method for allergenicity assessment of proteins**
 ○Yuki Satoda¹, Saho Mochizuki¹, Hideyuki Mizumachi¹, Yutaka Takahashi¹, Tomoaki Inoue², Yuichi Itou¹
¹Safety Science Research Laboratories, Kao Corporation, ²Frontier Co., Ltd.
- Y-16 Differential Immunomodulatory Effects of Carbon Black Nanoparticles in Allergic Disease Models**
 ○Kota Watanabe, Atsushi Furukawa, Yuka Nagata, Ryo Suzuki
 Fac. Pharm. Sci., Kanazawa Univ.

The presentations given in the Student & Young Researcher Session < Y-01 ~ Y-16 > will also be displayed in poster format. The Student & Young Researcher Presentation Award will be selected based on the evaluation of both the oral and poster presentations.

<Break>

Small Theater, Gifu City Culture Center (Main Venue)

14:20 ~ 15:20 Tutorial Lecture < TL-01 >

Chairperson: Tsuyoshi Nakanishi (Gifu Pharmaceutical University)

TL-01 Mass Spectrometry Imaging -Basics and its applications-

○Shuichi Shimma^{1,2,3}

¹Graduate School of Engineering, The University of Osaka, ²OTRI, The University of Osaka, ³The University of Osaka and Shimadzu Analytical Innovation Research Laboratory

<Break>

15:25 ~ 16:25 Special Lecture 1 < SL-01 >

Chairperson: Tsuyoshi Nakanishi (Gifu Pharmaceutical University)

SL-01 Immunotoxicity Regulation Through Gut Microbiota-Based Strategies

○Jun Kunisawa

National Institutes of Biomedical Innovation, Health and Nutrition

<Break>

16:30 ~ 17:30 Special Lecture 2 < SL-02 >

Chairperson: Yasumitsu Nishimura (Kawasaki Medical School)

SL-02 Immunotoxicology testing for biotherapeutics: strategies and applications

○Marie-Soleil Piche

Immunology department, Charles River Laboratories, Senneville, Canada

HOTEL Grand Vert GIZAN

18:30 ~ 20:30 Banquet

Award Ceremony for Students and Young Scientists

Day 2: September 5th (Friday)

Small Theater, Gifu City Culture Center (Main Venue)

8:50 ~ 9:50 Oral Presentation 1 < O-01 ~ O-05 >

Chairpersons: Masafumi Nakayama (Ritsumeikan University),
Hideki Hara (Asahikawa Medical University)

O-01 Impact of chronic social stress on LNP-mRNA vaccine efficacy

○Masakiyo Nakahira, Etsushi Kuroda

Department of Immunology, School of Medicine, Hyogo Medical University

O-02 The differential pyrin inflammasome responses between resident peritoneal and bone marrow-derived macrophages

○Izumi Sasaki¹, Shiori Kaji², Ayano Kurara¹, Naoko Wakaki-Nishiyama¹, Mai Yamagishi³, Yoshitaka Shirasaki⁴, Daisuke Okuzaki⁵, Tsuneyasu Kaisho^{1,6}

¹Department of Immunology, Institute of Advanced Medicine, Wakayama Medical University, ²Second Department of Internal Medicine, Wakayama Medical University, ³Live Cell Diagnosis, ⁴Research Center for Advanced Science and Technology, The University of Tokyo, ⁵WPI-Immunology Frontier Research Center, The University of Osaka, ⁶Industry-Government-Academia Collaboration Promotion Headquarters, Wakayama Medical University

O-03 HMGB1 enhances immunosuppressive activity of MDSCs via TLR4 signaling

○Toshihiro Ito¹, Zhiqi Xie², Masashi Tachibana¹

¹Life Sci., Ritsumeikan Univ., ²Pham., Hangzhou City Univ.

O-04 Development of a coculture system of Fc γ receptor⁺ cell and antibody-targeted cell lines to predict cytokine release syndrome caused by antibody drugs

○Shota Toda¹, Izuru Mizoguchi¹, Natsuki Yamaguchi¹, Eri Horio¹, Satomi Miyakawa¹, Yasuhiro Katahira¹, Miki Igarashi¹, Ning Qu¹, Takao Ashikaga², Takayuki Yoshimoto¹

¹Department of Immunoregulation, Institute of Medical Science, Tokyo Medical University, ²Division of Genome Safety Science, National Institute of Health Sciences Center for Biological Safety and Research

O-05 Retrospective evaluation of complement activation by antisense oligonucleotides

○Satoko Yoshioka, Yuichiro Amano, Jodi Goodwin

Nonclinical Safety and Pharmacology, Takeda Pharmaceutical Company Limited

<Break>

9:55 ~ 11:55 Symposium < S-01 ~ S-04 >

「Immune toxicity involvement in brain dysfunction」

Chairpersons: Yuhei Nisihimura (Mie University),
Masashi Tachibana (Ritsumeikan University)

S-01 Methylmercury-induced neurological damage mediated by microglial activation and future prospects

○Gi-Wook Hwang

Faculty of Pharmaceutical Sciences, Tohoku Medical and Pharmaceutical University

S-02 Oligodendrocyte Toxicology -Beyond Microglia-

○Yasuhiro Ishihara

Grad. Sch. Integr. Sci. Life, Hiroshima Univ.

S-03 Assessment of microglial morphology and function using in vivo whole-brain imaging of larval zebrafish

○Yuhei Nishimura

Department of Integrative Pharmacology, Mie University Graduate School of Medicine

S-04 Mechanistic insights into brain functional alterations associated with peripheral immune dysregulation

○Michio Miyajima^{1,2}

¹UTokyo Med, ²RIKEN

<Break>

13:00 ~ 14:12 Oral Presentation 2 < O-06 ~ O-11 >

Chairpersons: Eri Hamamura (Daiichi Sankyo Co., Ltd.),
Shogo Matsumura (Astellas Pharma Inc.)

O-06 Neutrophilic Inflammation Induced by PM2.5 Is Partially Dependent on TLR4 Signaling and Correlates with ROS and PAHs

○Duo Wang¹, Zirui Zeng², Ryuji Okazaki¹, Yasuhiro Yoshida³

¹Department of Radiobiology and Hygiene Management, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan, ²The First Department of Internal Medicine, School of Medicine, University of Occupational and Environmental Health, Japan, ³Department of Immunology and Parasitology, School of Medicine, University of Occupational and Environmental Health, Japan

O-07 Delayed Effects of Short-Term Repeated Ethanol Administration on the Thymus

○Hiroshi Hasegawa, Manta Nakajima, Mari Kondo

Laboratory of Hygienic Sciences, Kobe Pharmaceutical University

O-08 Modeling the maturation process of cultured neurons by Raman spectroscopy and machine learning

○Kosuke Hashimoto¹, Otoy Aoyama², Keiichi Koizumi^{1,2}

¹Research Center for Pre-disease Science, Univ. Toyama, ²Inst. Nat. Med., Univ. Toyama

O-09 Study on the Regulatory Mechanisms of Hepatic Drug-Metabolizing Enzymes by Oncolytic Reovirus

○Atsushi Kawase¹, Yanqin Dou¹, Shoya Oue¹, Hiroaki Shimada¹, Ken J. Ishii³,
Fuminori Sakurai^{1,2}

¹Graduate School of Pharmacy, Kindai University, ²Graduate School of Pharmaceutical Sciences, The University of Osaka, ³The Institute of Medical Science, The University of Tokyo

O-10 Study of immunotoxic effects of orally administered titanium dioxide on Peyer's patches in the small intestine of rats

○Jun-ichi Akagi¹, Yasuko Mizuta¹, Mizuho Uneyama¹, Hirotoshi Akane¹,
Kohei Matsushita¹, Takeshi Toyoda¹, Kumiko Ogawa^{1,2}

¹Div. Pathology, Natl. Inst. Health Sci., ²Dept. Toxicol., Hoshi Univ.

O-11 De novo generation of lineage-stable regulatory T cells promotes immune tolerance to food antigens

○Ryoji Kawakami^{1,2}, Masaya Arai², Shimon Sakaguchi^{1,2}

¹Institute for Life and Medical Sciences (LiME), Kyoto University, ²Immunology Frontier Research Center (IFReC), Osaka University

14:12 ~ 14:20 Awards Ceremony

14:20 ~ 14:45 JSIT Award Lecture < AL-01 >

Chairperson: Yasumitsu Nishimura (Kawasaki Medical School)

AL-01 Immunotoxicological mechanisms and integrated health risk assessment of allergy and inflammatory immune dysregulation induced by heavy metals, chemicals, and nutrients

○Hiroyuki Yanagisawa

The Jikei University School of Medicine

14:45 ~ 15:10 JSIT Young Investigator Award Lecture < AL-02 >

Chairperson: Ryosuke Nakamura (Teikyo University)

AL-02 Investigation of unclarified risk factors regulating the onset of HLA-mediated drug-induced immunotoxicity

○Takeshi Susukida

Section of Host Defences, Graduate School of Medicine and Pharmaceutical Sciences,
University of Toyama

<Break>

15:20 ~ 17:20 Workshop < WS-01 ~ WS-04 >

「Trends in the development of respiratory sensitization tests and domestic initiatives」

Chairpersons: Yasuhiro Yoshida (The University of Occupational and Environmental Health),
Tomoki Fukuyama (Azabu University)

WS-01 The feature and detection methods of respiratory sensitization induced by chemicals including pesticides

○Tomoki Fukuyama

Vet Pharm, Azabu Univ

WS-02 Global trends of in vitro respiratory sensitization tests to the regulatory use and JaCVAM' s efforts

○Eiko Koike¹, Takao Ashikaga²

¹Health and Environmental Risk Division, National Institute for Environmental Studies,

²Division of Genome Safety Science, National Institute of Health Sciences

WS-03 Utilization of Reconstructed Human Bronchial Epithelium in In Vitro Evaluation of Respiratory Sensitization Potential of Chemicals

Honoka Aoshima¹, Kazushi Matsumura¹, Ikuya Tanabe¹, ○Shinkichi Ishikawa¹,
Izuru Mizoguchi², Takayuki Yoshimoto², Takao Ashikaga³

¹Scientific Product Assessment Center, R&D Group, Japan Tobacco Inc., ²Department of Immunoregulation, Institute of Medical Science, Tokyo Medical University, ³Division of Genome Safety Science, National Institute of Health Sciences

WS-04 Development of the 3D coculture systems (DCsens and DC/Tsens) capable of accurately predicting chemical respiratory sensitizing potential

○Izuru Mizoguchi¹, Shota Toda¹, Natsuki Yamaguchi¹, Eri Horio¹, Yasuhiro Katahira¹, Miki Igarashi¹, Satomi Miyakawa¹, Ning Qu¹, Takao Ashikaga², Takayuki Yoshimoto¹

¹Department of Immunoregulation, Institute of Medical Science, Tokyo Medical University, ²Division of Genome Safety Science, National Institute of Health Sciences

17:20 ~ 17:30 Award Ceremony for the Best Presenter of 32nd Annual Meeting

Closing Remarks