

2 . 3 . 1 0 誌上発表及び口頭発表

2 . 3 . 1 0 . 1 誌上発表 (査読あり)

- Inoue K, Koike E, Takano H, Yanagisawa R, Ichinose T, Yoshikawa T. Effects of diesel exhaust particles on antigen-presenting cells and antigen-specific Th immunity in mice. *Exp. Biol. Med.* in press
- Inoue K, Koike E, Yanagisawa R, Takano H. Effects of pulmonary exposure to diesel exhaust particles on extrathoracic CD4 polarization in asthmatic mice. *Immunopharmacol. Immunotoxicol.* in press
- Mizumura A., Watanabe T., Kobayashi Y., Hirano S. (2010) Identification of arsenite-and arsenic diglutathione-binding proteins in human hepatocarcinoma cells. *Toxicol. Appl. Pharmacol.*, 242 (2), 119-125
- Yanagisawa R, Takano H, Inoue K, Koike E, Kamachi T, Sadakane K, Ichinose T. Titanium dioxide nanoparticles aggravates atopic dermatitis-like skin lesions in NC/Nga mice. *Exp. Biol. Med.* in press
- Li C, Taneda S, Taya K, Watanabe G, Fukitani Y, Tto Y, Nakajima T, Suzuki AK. Effects of inhaled nanoparticle-rich diesel exhaust on regulation of testicular function in adult male rats. *Inhal. Toxicol.* in press
- Iijima A., Sato K., Fujitani Y., Fujimori E., Saito Y., Tanabe K., Ohara T., Kozawa K., Furuta N. (2009) Clarification of the predominant emission sources of antimony in airborne particulate matter and estimation of their effects on the atmosphere in Japan. *Environ. Chem.*, 6 (2), 122-132
- Inoue K., Koike E., Yanagisawa R., Hirano S., Nishikawa M., Takano H. (2009) Effects of multi-walled carbon nanotubes on a murine allergic airway inflammation model. *Toxicol. Appl. Pharmacol.*, 237 (3), 306-316
- Inoue K, Takano H, Yanagisawa R, Koike E, Shimada A. (2009) Size effects of latex nanomaterials on lung inflammation in mice. *Toxicol. Appl. Pharmacol.*, 234, 68-76
- Ohta Y., Kobayashi Y., Konishi S., Hirano S., Ohta Y. (2009) Speciation analysis of selenium metabolites in urine and breath by HPLC-and GC-inductively coupled Plasma-MS after administration of selenomethionine and methylselenocysteine to rats. *Chem. Res. Toxicol.*, 22 (11), 1795-1801
- Kanno S, Watanabe K, Hirano S, Yamagishi I, Gonmori K, Minakata K, Suzuki O. (2009) Application of thermosensitive HPLC to forensic toxicology: determination of arbiturates in human urine. *Forensic Toxcol.* 27, 103-106.
- Tin-Tin-Win-Shwe, Mitsushima D., Yamamoto S., Fujitani Y., Funabashi T., Hirano S., Fujimaki H. (2009) Extracellular glutamate level and NMDA receptor subunit expression in mouse olfactory bulb following nanoparticle-rich diesel exhaust exposure. *Inhal. Toxicol.*, 21 (10), 828-836
- Hirano S. (2009) A current overview of the health effect research for nanoparticles. *Environ. Health Prevent. Med.* 14, 223-225.
- Fujitani Y., Furuyama A., Hirano S. (2009) Generation of airborne multi-walled carbon nanotubes for inhalation studies. *Aerosol Sci. Technol.*, 43 (9), 881-890
- Fujitani Y., Hirano S., Kobayashi S., Tanabe K., Suzuki A.K., Furuyama A., Kobayashi T. (2009) Characterization of dilution conditions for diesel nanoparticle inhalation studies. *Inhal. Toxicol.*, 21 (3), 200-209
- Furuyama A., Kanno S., Kobayashi T., Hirano S. (2009) Extrapulmonary translocation of intratracheally instilled fine and ultrafine particles via direct and alveolar macrophage-associated routes. *Arch. Toxicol.*, 83 (5), 429-437
- Li C., Taneda S., Taya K., Watanabe G, Li X., Fujitani Y., Ito Y., Nakajima T., Suzuki A.K. (2009) Effects of inhaled nanoparticle-rich diesel exhaust on regulation of testicular function in adult male rats. *Inhal. Toxicol.*, 21 (10), 803-811
- Li C., Taneda S., Taya K., Watanabe G, Li X., Fujitani Y., Nakajima T., Suzuki A.K. (2009) Effects of in utero exposure to nanoparticle-rich diesel exhaust on testicular function in immature male rats. *Toxicol. Lett.*, 185 (1), 1-8
- Inoue K., Takano H., Kaewamatawong T., Shimada A., Suzuki J., Yanagisawa R., Tasaka S., Ishizaka A., Satoh M. (2008) Role of metallothionein in lung inflammation induced by ozone exposure in mice. *Free Radical Biol. Med.*, 45 (12), 1714-1722
- Inoue K, Koike E, Yanagisawa R, Takano H. (2008) Impact of diesel exhaust particles on Th2 response in the lung in

- asthmatic mice. *J. Clin. Biochem. Nutr.*, 43, 199-200
- Inoue K, Takano H, Koike E, Yanagisawa R, Sakurai M, Tasaka S, Ishizaka A, Shimada A. (2008) Effects of pulmonary exposure to carbon nanotubes on lung and systemic inflammation with coagulatory disturbance induced by lipopolysaccharide in mice. *Exp. Biol. Med.*, 233, 1583-1590
- Inoue K, Takano H, Yanagisawa R, Sakurai M, Shimada A, Satoh H, Yoshino S, Yamaki K, Yoshikawa T. (2008) Antioxidative role of interleukin 6 in septic lung injury in mice. *Int. J. Immunopathol. Pharmacol.*, 21, 501-507
- Kanno S, Furuyama A, Hirano S. (2008) Effects of eicosane, a component of nanoparticles in diesel exhaust, on surface activity of pulmonary surfactant monolayers. *Arch. Toxicol.*, 82, 841-850
- Koike E, Takano H, Inoue K, Yanagisawa R, Kobayashi T. (2008) Carbon black nanoparticles promote the maturation and function of mouse bone marrow-derived dendritic cells. *Chemosphere*, 73, 371-376
- Kobayashi Y., Hirano S. (2008) Effects of endogenous hydrogen peroxide and glutathione on the stability of arsenic metabolites in rat bile. *Toxicol. Appl. Pharmacol.*, 232 (1), 33-40
- Kobayashi Y., Negishi T., Mizumura A., Watanabe T., Hirano S. (2008) Distribution and excretion of arsenic in cynomolgus monkey following repeated administration of diphenylarsinic acid. *Arch. Toxicol.*, 82, 553-561
- Saitoh K., Sera K., Fushimi A., Fujitani Y., Hasegawa S., Takahashi K., Kobayashi S., Tanabe K. (2008) PIXE analysis of atmospheric nano- to micrometer-size particles in roadside atmosphere. *Int. J. PIXE*, 18 (3/4), 175-186
- Suzuki N, Naranmandura H., Hirano S., and Suzuki K.T.(2008) Theoretical calculations and reaction analysis on interaction of pentavalent thioarsenicals with biorelevant thiol compounds. *Chem. Res. Toxicol.*, 21, 550-553.
- Tin-Tin-Win-Shwe, Yamamoto S., Fujitani Y., Hirano S., Fujimaki H. (2008) Spatial learning and memory function-related gene expression in the hippocampus of mouse exposed to nanoparticle-rich diesel exhaust. *Neurotoxicology*, 29 (6), 940-947
- Hirano S, Kanno S, Furuyama A. (2008) Multi-walled carbon nanotubes injure the plasma membrane of macrophages. *Toxicol. Appl. Pharmacol.*, 232, 244-251.
- 平野靖史郎 (2008) ナノ粒子・ナノ材料の健康問題. その1「ナノ粒子健康影響の動向」日本衛生学雑誌 63 巻, 36-41
- 広瀬明彦, 平野靖史郎 (2008) ナノ粒子・ナノ材料の健康問題. その3「ナノ粒子の毒性・健康問題」日本衛生学雑誌 63 巻, 739-745.
- Fujitani Y., Kobayashi T. (2008) Measurement of aerosols in engineered nanomaterials factories for risk assessment. *Nano*, 3 (4), 245-249
- Fujitani Y., Kobayashi T., Arashidani K., Kunugita N., Suemura K. (2008) Measurement of the physical properties of aerosols in a fullerene factory for inhalation exposure assessment. *J. Occup. Environ. Hyg.*, 5 (6), 380-389
- 藤谷雄二, 平野靖史郎 (2008) ナノ粒子・ナノ材料の健康問題 - その2 - 「ナノ粒子の測定法および気相中ナノ粒子の現状」. *Jpn. J. Hyg.*, 63, 663-669
- Fushimi A., Hasegawa S., Takahashi K., Fujitani Y., Tanabe K., Kobayashi S. (2008) Atmospheric fate of nuclei-mode particles estimated from the number concentrations and chemical composition of particles measured at roadside and background sites. *Atmos. Environ.*, 42, 949-959
- 伏見暁洋, 長谷川就一, 藤谷雄二, 高橋克行, 斉藤勝美, 田邊潔, 小林伸治 (2008) 加熱脱着 GC/MS によるディーゼル排気および大気中ナノ粒子の有機成分分析, *Erozoru Kenkyu*, 23, 163-171,
- Furuyama A., Hosokawa T., Mochitate K. (2008) Interleukin-1 beta and tumor necrosis factor-alpha have opposite effects on fibroblasts and epithelial cells during basement membrane formation. *Matrix Biol.* 27 (5), 429-440
- Yasuda A, Takano H, Osakabe N, Sanbongi C, Fukuda K, Natsume N, Yanagisawa R, Inoue K, Kato Y, Osawa T, Yoshikawa R. (2008) Cacao liquor proanthocyanidins inhibit lung injury induced by diesel exhaust particles. *Int. J. Immunopathol. Pharmacol.*, 21, 279-288
- Yamamoto M., Hirano S., Vogel F.A., Cui X., and Matsumura F. (2008) Selective activation of NF- κ B and E2F by

- non-apoptotic concentration of arsenite in U937 human monocytic leukemia Cells. *J. Biochem. Mol. Toxicol.* 22, 136-146.
- Li J., Nagai H, Ohara H., Hara S., Tachibana M., Hirano S., Shinohara Y., Kohyama N., Akatsuka S., Toyokuni S. (2008) Characteristics and modifying factors of asbestos-induced oxidative DNA damage. *Cancer Sci.*, 99(11), 2142-2151
- Li C., Suzuki A.K., Takahashi S., Taneda S., Watanabe G., Taya K. (2008) Effects of 3-Methyl-4-nitrophenol on the reproductive toxicity in female Japanese quail (*Coturnix japonica*). *Biol. Pharm. Bull.*, 31 (11), 2158-61.
- Arimoto T, Takano H, Inoue K, Yanagisawa R, Yoshino, Yamaki K, Yoshikawa T. (2007) Pulmonary exposure to diesel exhaust particle components enhances circulatory chemokines during lung inflammation. *Int. J. Immunopatol. Pharmacol.* 20, 197-201
- Inoue Ken-ichiro, Takano H., Yanagisawa R., Hirano S., Kobayashi T., Fujitani Y., Shimada A., Yoshikawa T. (2007) Effects of inhaled nanoparticles on acute lung injury induced by lipopolysaccharide in mice. *Toxicology*, 238, 99-110
- Inoue K, Takano H, Yanagisawa R, Sakurai M, Ueki N, Yoshikawa T.(2007) Effects of diesel exhaust particles on cytokine production by splenocytes stimulated with lipopolysaccharide. *J. Appl. Toxicol.*, 27, 95-100
- Kanno S, Furuyama A, Hirano S. (2007) A murine scavenger receptor MARCO recognizes polystyrene nanoparticles. *Toxicol. Sci.*, 97, 398-406.
- Kobayashi Y., Hayakawa T., Hirano S. (2007) Expression and activity of arsenic methyltransferase Cyt19 in rat tissues. *Environ. Toxicol. Pharmacol.*, 23, 115-120
- Tin-Tin-Win-Shwe, Yamamoto S, Nakajima D., Furuyama A., Fukushima A., Ahmed S., Goto S., Fujimaki H. (2007) Modulation of neurological related allergic reaction in mice exposed to low-level toluene. *Toxicol. Appl. Pharmacol.*, 222(1), 17-24
- Tomaru M, Takano H, Inoue K, Yanagisawa R, Osakabe N, Yasuda A, Shimada A, Kato Y. (2007) Uematsu H: Pulmonary exposure to diesel exhaust particles enhances fatty changes of the liver in obese diabetic mice, *Int. J. Mol. Med.*, 19, 17-22
- Naranmandura H., Hua N., Suzuki N., Iwata K., Hirano S., and K.T. Suzuki. (2007) Arsenic metabolism and thioarsenicals in hamsters and rats. *Chem. Res. Toxicol.* 20, 616-624.
- Fujitani Y., Ideno Y., Fushimi A., Tanabe K., Kobayashi S., Kobayashi T. (2007) Generation of nanoparticles of lubricating motor oil for inhalation studies. *Aerosol Sci. Technol.*, 41(1), 14-23
- Hosokawa T., Betsuyaku T., Nishimura M., Furuyama A., Katagiri K., Mochitate K. (2007) Differentiation of tracheal basal cells to ciliated cells and tissue reconstruction on the synthesized basement membrane substratum in vitro. *Connect. Tissue Res.*, 48(1), 9-18
- Yanagisawa R, Takano H, Ichinose T, Mizushima K, Nishikawa M, Mori I, Inoue K, Sadakane K, Yoshikawa T. (2007) Gene expression analysis of murine lungs following pulmonary exposure to Asian sand dust particles. *Exp. Biol. Med.*, 232, 1109-1118
- Inoue K., Takano H., Yanagisawa R, Hirano S., Sakurai M., Shimada A., Yoshikawa T. (2006) Effects of airway exposure to nanoparticles on lung inflammation induced by bacterial endotoxin in mice. *Environ. Health Perspect.*, 114(9), 1325-1330
- Inoue K., Takano H., Yanagisawa R., Hirano S., Ichinose T., Shimada A., Yoshikawa T. (2006) The role of toll-like receptor 4 in airway inflammation induced by diesel exhaust particles. *Arch. Toxicol.*, 80, 275-279
- Inoue K., Takano H., Yanagisawa R., Hirano S., Kobayashi T., Ichinose T., Yoshikawa T. (2006) Effects of organic chemicals derived from ambient particulate matter on lung inflammation related to lipopolysaccharide. *Arch. Toxicol.*, 80, 833-838
- Inoue K., Takano H., Yanagisawa R., Ichinose T., Sakurai M., Yoshikawa T. (2006) Effects of nano particles on cytokine expression in murine lung in the absence or presence of allergen. *Arch. Toxicol.*, 80, 614-619
- Cui X., Wakai T., Shirai Y., Hatakeyama K., Hirano S. (2006) Chronic oral exposure to inorganic arsenate interferes with

- methylation status of p16INK4a and RASSF1A and induces lung cancer in A/J mice. *Toxicol. Sci.*, 91(2), 372-381
- Cui X., Wakai T., Shirai Y., Yokoyama N., Hatakeyama K., Hirano S. (2006) Arsenic trioxide inhibits DNA methyltransferase and restores methylation-silenced genes in human liver cancer cells. *Human Pathol.*, 37, 298-311
- Kobayashi Y., Hayakawa T., Cui X., Hirano S. (2006) The role of glutathione in the metabolism and detoxification of trivalent arsenicals. *Biomed. Res. Trace Elements*, 17 (4), 365-372
- Sakurai T., Kojima C., Kobayashi Y., Hirano S., Sakurai M.H., Waalkes M.P., Himeno S. (2006) Toxicity of a trivalent organic arsenic compound, dimethylarsinous glutathione in a rat liver cell line (TRL 1215). *Br. J. Pharmacol.*, 149, 888-897
- Hirano S., Kobayashi Y. (2006) Cytotoxic effects of S-(dimethylarsino)-glutathione: A putative intermediate metabolite of inorganic arsenicals. *Toxicology*, 227, 45-52
- Fujitani Y., Hasegawa S., Fushimi A., Kondo Y., Tanabe K., Kobayashi S., Kobayashi T. (2006) Collection characteristics of low-pressure impactors with various impactation substrate materials. *Atmos. Environ.*, 40, 3221-3229
- Furuyama A., Hirano S., Koike E., Kobayashi T. (2006) Induction of oxidative stress and inhibition of plasminogen activator inhibitor-1 production in endothelial cells following exposure to organic extracts of diesel exhaust particles and urban fine particles. *Arch. Toxicol.*, 80, 154-162
- Maruyama W., Hirano S., Kobayashi T., Aoki Y. (2006) Quantitative risk analysis of particulate matter in the Air: Interspecies extrapolation with bioassay and mathematical models. *Inhal. Toxicol.*, 18, 1013-1023

2.3.10.2 誌上発表(査読なし)

- 平野靖史郎 (2009) ナノマテリアルの生体への影響は? : アスベストの二の舞にならないためにすべきこと, 459号 (6月号) 現代化学 p22-26.
- 平野靖史郎 (2009) ナノ材料の環境への影響, 154号 環境研究 p122-128.
- 熊谷直子, 西村泰光, 前田恵, 村上周子, 林宏明, 除宝, 平野靖史郎, 大槻剛巳 (2008) 新しい環境中物質、繊維・粒子状物質による生体影響へのアプローチ。日本臨床環境医学、17巻(2号) 83-94
- 平野靖史郎 (2008) ナノ粒子の生体影響に関する動向。化学と生物, 10-11
- 藤谷雄二, 小林隆弘 (2008) ナノ材料製造現場におけるナノ粒子を含めたエアロゾルの現状, 金属, 78: 865-869
- 平野靖史郎 (2007) 環境中のアスベストと健康影響。日本医事新報, No.4353: 67-70.
- 山元昭二 (2007) 環境ナノ粒子による健康影響, カーボンナノ粒子がグラム陽性菌細胞壁成分による肺の炎症反応に及ぼす影響, 岡山実験動物研究会報, 24:22-27
- 平野靖史郎, アスベストに因る健康影響の再考. (2006) 日本血栓止血学会誌. 17:74-77.
- 藤谷雄二, 平野靖史郎, 小林伸治, 田邊潔, 鈴木明, 古山昭子, 小林隆弘 (2006) 国立環境研究所 ナノ粒子健康影響実験施設, Engine Technology, 8: 34-39

2.3.10.3 書籍

- 平野靖史郎, 小林弥生 (2010) ヒ素 (In “日本臨床 - 増刊 - ”) 68巻1号 p567-571, 日本臨床社, 東京

2.3.10.4 口頭発表

- 国外: 24件
国内: 145件

招待講演

- Hirano, S. (2009) Nanoparticles and Nanomaterials – toxicological aspects and risk- 46th Annual Convention of Chemists, 2009 & International Conference on Recent Research Trends in Chemical Sciences., (Vellore, India)
Invitation from Indian Chemical Society.