



Program Description (Continued)

Abstract #

#586 **Poster Board Number 445**
Lactoperoxidase-Mediated Degradation of Oxidized Single-Walled Carbon Nanotubes and Its Modulatory Effects on Airway Antibacterial Activity. K. Bhattacharya¹, R. El-Sayed¹, F. T. Andón¹, A. Fornara², H. Li³, J. Gregory¹, K. Leifer³, S. Dahlén¹, A. Star⁴, and B. Fadeel¹. ¹Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden; ²Unit for Chemistry, Materials and Surfaces, SP Technical Research Institute of Sweden, Royal Institute of Technology, Stockholm, Sweden; ³Department of Engineering Sciences, Ångström Laboratory, Uppsala, Sweden; and ⁴Department of Chemistry, University of Pittsburgh, Pittsburgh, PA.

#587 **Poster Board Number 446**
Effects of MWCNT and Nitrogen-Doped MWCNT in Lung Epithelial Cells. A. Mihalchik^{1,2}, D. W. Porter², V. Castranova², S. Tsuruoka³, M. Endo³, and Y. Qian². ¹Pharmaceutical and Pharmacological Sciences, West Virginia University, Morgantown, WV; ²Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Morgantown, WV; and ³Research Center for Exotic Nanocarbons, Shinshu University, Nagano, Japan.

#588 **Poster Board Number 447**
Autophagy and Extracellular HMGB1 Are Mediators of Inflammasome Activity in Response to MWCNT Exposure. F. Jessop, R. Biswas, and A. Holian. Center for Environmental Health Sciences, University of Montana, Missoula, MT.

#589 **Poster Board Number 448**
Effects of SWCNT Fiber Length and Functionalization on ROS and Collagen Production. A. Manke¹, T. A. Stueckle², L. Wang², C. A. Dinu¹, and Y. Rojasakul¹. ¹Pharmaceutical Sciences, West Virginia University, Morgantown, WV; ²NIOSH, Morgantown, WV; and ³Chemical Engineering, West Virginia University, Morgantown, WV.

#590 **Poster Board Number 449**
Differential Gene Expression in SAEC and HMVEC Grown in Monoculture or Coculture and Exposed to MWCNT: Correlation with In Vivo Studies. B. Talkington¹, C. Dong², X. Zhao², J. Dymacek^{2,3}, V. Castranova⁴, Y. Qian¹, and N. L. Guo². ¹National Institute for Occupational Safety and Health, Morgantown, WV; ²West Virginia University Mary Babb Randolph Cancer Center, Morgantown, WV; and ³West Virginia University Lane Department of Computer Science and Electrical Engineering, Morgantown, WV.

#591 **Poster Board Number 450**
Determination of Stoichiometric ROS Degeneration and Relationship between Redox Potential and Bioavailability to Design Safe CNTs. S. Tsuruoka¹, H. Matsumoto², K. Takeuchi³, K. Koyama¹, N. Saito⁵, Y. Usui¹, S. Kobayashi⁵, E. Akiba⁴, D. W. Porter⁶, V. Castranova⁶, F. R. Cassee⁷, and M. Endo^{1,8}. ¹Research Center for Exotic Nanocarbons, Shinshu University, Nagano, Japan; ²Tokyo Institute of Technology, Meguro, Tokyo, Japan; ³Institute for Carbon Science & Technology, Shinshu University, Nagano, Japan; ⁴Kuraray Living Co., Ltd., Osaka, Japan; ⁵School of Health Science, Shinshu University, Matsumoto, Nagano, Japan; ⁶NIOSH, Morgantown, WV; and ⁷RIVM, Bilthoven, Netherlands.

Abstract #

#592 **Poster Board Number 451**
Development of Determination Method of Single-Walled Carbon Nanotubes in the Lung of Intratracheal-Instilled Rat. N. Shinohara^{1,2}, K. Uchino³, K. Fujita^{1,2}, S. Endoh², J. Maru³, and H. Kato^{1,2}. ¹National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, Japan; and ²Technology Research Association for Single Wall Carbon Nanotubes (TASC), Tsukuba, Ibaraki, Japan.

#593 **Poster Board Number 452**
Acute Inhalation Toxicity of Graphene Oxide and 5-Day Repeated Inhalation Toxicity of Graphene. J. Kim¹, J. Shin², J. Hwang², J. Lee², T. Kim¹, J. Lee¹, Y. Kim⁶, H. Lee³, N. Song⁴, K. Ahn⁵, and I. Yi¹. ¹Institute of Nanoproduct Safety Research, Hoseo University, Asan, Republic of Korea; ²Occupational Lung Diseases Institute, KCOMWEL, Ansan, Republic of Korea; ³Donga University, Busan, Republic of Korea; ⁴KRISS, Daejeon, Republic of Korea; ⁵Hanyang University, Ansan, Republic of Korea; and ⁶Korea Ginseng Corporation, Daejeon, Republic of Korea.

#594 **Poster Board Number 453**
Modulation of Toll-Like Receptor Activity by Pristine Single-Walled Carbon Nanotubes with Distinct Chiral Enrichment. X. Zheng¹, N. Afroz², N. B. Saleh², J. Bisesi¹, and T. Sabo-Attwood¹. ¹University of Florida, Gainesville, FL; and ²University of South Carolina, Columbia, SC.

#595 **Poster Board Number 454**
Carbon Nanotubes Effects on Primary Human Umbilical Vein Endothelial Cells (HUVEC) Cultures Morphology and Expression of Endothelial Genes and Proteins Implicated in Fibrinolysis. Y. Rodríguez-Yáñez¹, B. Chavez-Munguia², B. Cisneros³, R. López-Marure⁴, S. K. González⁵, and A. Albores¹. ¹Toxicology, Cinvestav, Mexico City, Mexico; ²Infectomics, Cinvestav, Mexico City, Mexico; ³Genetics, Cinvestav, Mexico City, Mexico; ⁴Cell Biology, Instituto Nacional de Cardiología Ignacio Chávez, Mexico City, Mexico; and ⁵HG Ticomán, Mexico City, Mexico.

#596 **Poster Board Number 455**
Pulmonary Instillation of Multiwalled Carbon Nanotubes Increases Lung Permeability and Decreases Glycoprotein 130 Expression in the Lungs. L. C. Thompson¹, R. J. Snyder², B. S. Harrison⁴, J. M. Brown², and C. J. Wingard¹. ¹Physiology, East Carolina University, Greenville, NC; ²Pharmacology & Toxicology, East Carolina University, Greenville, NC; ³NanoHealth Program, National Institute of Environmental Health Sciences, NIH, Research Triangle Park, NC; and ⁴Institute of Regenerative Medicine, Wake Forest University, Winston-Salem, NC.

#597 **Poster Board Number 456**
Correlation of Toxicity and Material Properties: Oral and Inhalation Exposure of 16 Surface-Functionalized Nanomaterials. R. Büsen¹, L. Ma-Hock¹, W. Wohlleben³, S. Gröters¹, D. Geiger², B. van Ravenzwaay¹, and R. Landsiedel¹. ¹Toxicology, BASF SE, Ludwigshafen/Rhein, Germany; ²Product Safety, BASF SE, Ludwigshafen, Germany; and ³Material physics, BASF SE, Ludwigshafen, Germany.

MONDAY

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