Tuesday, March 26th, 2019

18:00 – 22:00 Ice-breaker incl. Science slam (Seargents’ Mess, building 07)

Wednesday, March 27th, 2019

08:00 – 08:25 Congress opening

08:00 Colonel (MC) Prof. Dr. Thiermann (Munich, Germany)
Bundeswehr Institute of Pharmacology and Toxicology
Welcome address

08:10 Major General (MC) Dr. Krüger (Munich, Germany)
Bundeswehr Medical Academy
Welcome address

08:15 Dr. Pilsinger (Munich, Germany)
Member of German parliament
Welcome address

08:25 – 09:15 Historical Background and Current Political Situation
Chair: Colonel (MC) Prof. Dr. Thiermann (DEU) & Prof. Dr. Vale (GBR)

08:25 Prof. Dr. Vale (Birmingham, United Kingdom)
University of Birmingham
History of nerve agent releases

08:50 Dr. Blum (The Hague, Netherlands)
Organisation for the Prohibition of Chemical Weapons (OPCW) Laboratory
The OPCW Technical Assistance visits to the United Kingdom following the Salisbury and Amesbury incidents in 2018

09:15 – 09:45 Coffee Break and Posters

09:45 – 11:15 Innovative approaches in treatment of organophosphate poisoning
Chair: Colonel (MC) PD DR. Kehe (DEU) & Dr. Timperley (GBR)

09:45 Dr. Deng (Taipei, Taiwan)
The Founder and Emeritus director of The National Poison Center of Taiwan
The management of organophosphates poisoning in Taiwan

10:05 Dr. Kovarik (Zagreb, Croatia)
Institute for Medical Research and Occupational Health
Non-Oxime reactivators of organophosphate inhibited acetylcholinesterase

10:25 Dr. de Koning (Amsterdam, The Netherlands)
Netherlands Organisation for Applied Scientific Research
Non-Oxime reactivators of organophosphate inhibited acetylcholinesterase
10:45  Dr. Nachon (Brétigny-sur-Orge, France)
   Institute of Army Biomedical Research
   Research and development of bioscavengers for the pretreatment and
   emergency treatment of nerve agents intoxication

11:05  Prof. Dr. Blain (Newcastle, UK) & Dr. Emmett (Salisbury, UK)
   Newcastle University & Defense Science and Technology Laboratory
   The Salisbury incident: Lessons for clinical management

11:25 – 11:40 Poster Award Competition
   Chair: Prof. Dr. Martin Wilks (CHE) & Dr. Fruchtengarten (BRA)

11:25  Simone Rothmiller (Munich, Germany)
   Bundeswehr Institute of Pharmacology and Toxicology
   Sulfur mustard exposure results in chronic senescence in mesenchymal stem
   cells

11:30  Beatrice Andrae (Kaiserslautern, Germany)
   Department of Chemistry, Technical University Kaiserslautern
   Functionalized sulfonatocalix[4]arenes as scavengers for the detoxification
   of V-type nerve agents

11:35  Amelie Tsoutsoulopoulos (Munich, Germany)
   Bundeswehr Institute of Pharmacology and Toxicology
   Evaluation of a novel air-liquid interface exposure system for the
   aerosolization of the chemical warfare agent sulfur mustard

11:40 – 13:10 Lunch

11:45 – 12:15 Meeting of the Scientific Advisory Board (members only)

13:10 – 14:10 Upcoming threats: chlorine
   Chair: Colonel (MC) Prof. Dr. Worek (DEU) & Dr. Dillman (USA)

13:10  Dr. Åstot (Umeå, Sweden)
   Division of CBRN Defence and Security, Swedish Defence Research Agency
   Phospholipid chlorohydrins as potential biomarkers for chlorine gas
   exposure

13:30  Dr. Jugg (Porton Down, United Kingdom)
   Defence Science and Technology Laboratory
   Outlook for upcoming therapeutics for chlorine induced acute lung injury

13:50  Dr. Zellner (Munich, Germany)
   Technical University of Munich, School of Medicine, Department of Clinical Toxicology
   Fast-acting irritant gases / chlorine gas – clinical effect, symptoms and
   treatment

14:10 – 14:40 Coffee Break and Posters
14:40 – 16:20 Upcoming threats: opioids
Chair: Lieutenant Colonel (MC) PD Dr. Wille (DEU) & Prof. Bucht (SWE)

14:40 Dr. Timperley (Porton Down, United Kingdom)
Defence Science and Technology Laboratory
Opioids: fundamentals

15:05 Dr. Hamelin (Atlanta, USA)
Center for Disease Control and Prevention National Center for Environmental Health/ATSDR Division of Laboratory Sciences
Identification of fentanyl exposures through analysis of clinical samples using mass spectrometry

15:30 Dr. Kristovich (Baltimore, USA)
Toxicology and Obscurants Division, US Army Research Development and Engineering Command Edgewood Chemical Biological Center
Derivation of human estimate of toxicity for ultra-potent opioid carfentanil

15:55 Dr. Gummin (Milwaukee, USA)
Medical College of Wisconsin, Emergency Medicine/ Medical Toxicology
Environmental hazards of potent opioids and implications for national defense

19:00 – 22:30 Conference Dinner

Thursday, March 28th, 2019

08:00 – 08:05 Opening of 2nd day

08:00 Lieutenant General Dr. med. Ulrich Baumgärtner, M.D. (Koblenz, Germany)
Surgeon General of the Bundeswehr, Germany
Welcome address

08:05 – 09:25 Chemical Warfare agents: From in vitro to in vivo
Chair: Lieutenant Colonel (MC) PD Dr. Steinritz (DEU) & Prof. Dr. Dorandeu (FRA)

08:05 PD Dr. Wille (Munich, Germany)
Bundeswehr Institute of Pharmacology and Toxicology
In vitro and ex vivo models in medical chemical defence research

08:25 Dr. Wong (Baltimore, USA)
US Army Medical Institute of Chemical Defense
Developing medical countermeasures against aerosolized opioids: animal models and inhalation exposure

08:45 Dr. Whitmore (Porton Down, United Kingdom)
Defence Science and Technology Laboratory
The evaluation of continuing medical management strategies in the VX-poisoned guinea-pig

09:05 Dr. Adams (Fort Belvoir, USA)
Defense Threat Reduction Agency, Department of Defense
Aiding the warfighter from chemical warfare agents using innovative medical diagnostics

09:25 – 09:50 Coffee Break and Posters

09:50 – 11:00 Sulfur mustard poisoning
Chair: Prof. Dr. Gudermann (DEU) & Prof. Dr. Chambers (USA)

09:50 Prof. Dr. Jeffrey Laskin (New Jersey, USA)
Environmental and Occupational Medicine, Rutgers Robert Wood Johnson Medical School
Vesicant-induced lung damage: The DNA damage response in lung epithelial cells

10:05 Prof. Dr. Debra Laskin (New Jersey, USA)
Environmental and Occupational Medicine, Rutgers Robert Wood Johnson Medical School
Natural history of inhaled sulfur mustard poisoning in rats: Mitigation of tissue injury by anti-TNFα antibody

10:20 PD Dr. Mangerich (Konstanz, Germany)
Molecular Toxicology, Department of Biology, University of Konstanz
A mass spectrometric platform for the quantitation of sulfur mustard-induced nucleic acid adducts as mechanistically-relevant biomarkers of exposure

10:35 Prof. Dr. Gudermann (Munich, Germany)
Walther-Straub-Institute of Pharmacology and Toxicology, LMU Munich
Interaction of sulfur mustard with proteins – Are there potential cellular effects in addition to DNA-alkylation?

10:50 Prof. Dr. Schmidt (Munich, Germany)
Bundeswehr Institute of Pharmacology and Toxicology
Is sulfur mustard exposure induced chronic senescence the reason for the chronic wound healing disorder?

11:10 – 11:30 Coffee Break and Posters

11:30 Prof. Dr. Chambers (Starkville, USA)
Department of Basic Sciences, Mississippi State University, College of Veterinary Medicine
Novel substituted phenoxyalkyl pyridinium oximes show promise for central neuroprotection against organophosphate anticholinesterase poisoning
11:45  Prof. Dr. Kubik (Kaiserslautern, Germany)
Department of Chemistry, Technical University Kaiserslautern
Low molecular weight scavengers for V-type nerve agents derived from
cation-binding synthetic receptors

12:00  Prof. Dr. Skerra (Munich, Germany)
Department of Biological Chemistry, Technical University of Munich
Catalytic bioscavenger with improved substrate profile, stability and plasma
half-life to treat acute poisoning with neurotoxic organophosphorous
compounds (OPs)

12:15  Dr. Seeger (Munich, Germany)
Bundeswehr Institute of Pharmacology and Toxicology
Correlation between positive allosteric modulation at human α7 nicotinic
acetylcholine receptors and functional recovery of soman-inhibited
respiratory muscles

12:30 – 13:30 Lunch

13:30 – 15:00 General aspects of Chemical Warfare Agents

Chair: Prof. Dr. Grasshoff (DEU) & Dr. Joosen (NLD)

13:30  Dr. Hermanns-Clausen (Freiburg, Germany)
Center for Pediatrics, Medical Center – University of Freiburg, Faculty of Medicine,
University of Freiburg, Germany
Acute severe intoxication with cyclopropylfentanyl, a novel synthetic opioid

13:45  Dr. Myers (Aberdeen Proving Ground, USA)
United States Army Medical Research Institute of Chemical Defense
Characterizing carfentanil intoxication in a laboratory primate model:
Behavioral safety and efficacy of naloxone therapy

14:00  PD Dr. Sezigen (Ankara, Turkey)
Medical CBRN Defense, University of Health Sciences
Recent sulfur mustard attacks in Middle East and experiences of health
professionals

14:15  Markus Siegert (Munich, Germany)
Bundeswehr Institute of Pharmacology and Toxicology
Alkylation of Methionine329 in human serum albumin by sulfur mustard

14:30  Dr. Wigenstam (Umeå, Sweden)
Division of CBRN Defence and Security, Swedish Defence Research Agency
Using precision cut lung slices to evaluate treatment strategies for nerve
agents

14:45  Kevin Lee (Calgary, Canada)
Hotchkiss Brain Institute, Cumming School of Medicine, University of Calgary
Brain perfusion and oxygenation as markers of physiological response to
soman exposure in a rat model: a 9.4T MRI and fiber-optic oxygen sensor study

15:00 – 15:15 Congress closing

15:00  Colonel (MC) Prof. Dr. Thiermann (Munich, Germany)

Commander Bundeswehr Institute of Pharmacology and Toxicology

Closing remarks