

Trends in Chemical Production

Hotel Dubrovnik, Zagreb, Croatia

Tuesday 3 October 2017

8:00	Registration
8:30	<p>Welcome and Opening Remarks</p> <p><i>Dr Christopher Timperley (OPCW SAB Chairperson, Workshop Chair)</i></p> <p><i>Dr Zrinka Kovarik (OPCW SAB)</i></p> <p><i>Dr Jonathan Forman (OPCW Science Policy Adviser)</i></p>
9:00	Tour de table
9:15	<p>The Chemical Weapons Convention in Croatia Dr Zrinka Kovarik (OPCW SAB), Moderator</p> <p>20 years of implementation of the Chemical Weapons Convention in Croatia (<i>Ms Mirna Maravić, Ministry of Economy, Entrepreneurship and Craft of Croatia</i>)</p> <p>20 Years of collaboration with the OPCW (<i>Professor Zvonko Orehovec, University of Applied Science, Croatia</i>)</p>
9:45	<p>Chemical Industry and the Chemical Weapons Convention Mr Cheng Tang (OPCW SAB Vice-Chairperson), Moderator</p> <p>Trends in the European and global chemical industry (<i>Dr René van Sloten, cefic</i>)</p> <p>Industry inspections and Chemical Weapons Convention policy: looking toward the future (<i>Dr Stephanie Dare-Doyen, OPCW Office of Strategy and Policy</i>)</p>
11:00	Coffee Break
11:15	<p>Commodity and Platform Chemicals Professor Ferruccio Trifiró (OPCW SAB), Moderator</p> <p>Future directions of the modern chemical industry (<i>Professor Fabrizio Cavani, University of Bologna</i>)</p> <p>Sustainability in Chemistry (<i>Dr Detlef Maennig, Evonik Industries AG</i>)</p> <p>Chemical production by conversion of carbon to products through gas fermentation (<i>Dr Sean Simpson, LanzaTech</i>)</p>





OPCW

1997-2017
YEARS



Institute
for Medical
Research and
Occupational
Health

Trends in Chemical Production

Hotel Dubrovnik, Zagreb, Croatia

Tuesday 3 October 2017 (Continued)

13:00	Lunch
14:00	<p>Bio-based Production Professor Isel Alonso (OPCW SAB), Moderator</p> <p>Manufacturing: current status and future of biologicals in therapy <i>(Dr Florian M. Wurm, ExcellGene SA)</i></p> <p>European bio based industries sector <i>(Mr Andrea Božić, Saponia)</i></p>
15:30	Coffee Break
16:45	<p>Specialty and Fine Chemicals, and Small Scale Production Dr Koji Takeuchi (OPCW SAB), Moderator</p> <p>Fine chemicals – current trends and challenges in industry <i>(Dr Olaf Burkhardt, Evonik Industries AG)</i></p> <p>Custom synthesis in chemical production <i>(Dr Tony Bastock, Contract Chemicals UK)</i></p> <p>Trends in bioproduction and bioreactor design in relation to specialty chemical production <i>(Dr i.r. Nico M.G. Oosterhuis, Director of Technology, Celltainer Biotech BV)</i></p>
18:00	End of Day 1
19:00 – 21:00	Reception hosted by the office of the Mayor of Zagreb at the Palača Dverce





OPCW

1997-2017
YEARSInstitute
for Medical
Research and
Occupational
Health

Trends in Chemical Production

Hotel Dubrovnik, Zagreb, Croatia

Wednesday 4 October 2017

9:00	Pharmaceuticals Dr Renate Becker-Arnold (OPCW SAB), Moderator Highly active pharmaceutical ingredients <i>(Dr Andreas Beyeler, F. Hoffmann-La Roche AG)</i> Safety and quality by design: minimizing risk and environmental impact in pharmaceutical production <i>(Dr Ernest Meštrović, Teva Group)</i>
10:30	Agricultural Chemicals Ms Barbara Hedler (OPCW Industry Verification Branch), Moderator Pesticides <i>(Dr Syed Reza, OPCW SAB)</i>
11:15	Coffee Break
11:45	Synthesis Tools Dr Christophe Curty (OPCW SAB), Moderator Dial-a-Molecule <i>(Professor Richard Whitby, University of Southampton)</i> Continuous flow reactor technology <i>(Dr Kerry Gimore, Max Planck Institute of Colloids and Interfaces)</i>
13:15	Lunch
14:15	Nucleic Acids Dr Pål Aas (OPCW SAB), Moderator Next-generation DNA synthesis: a biological tool driving innovation in metabolic engineering <i>(Dr Devin Leake, Ginko Bioworks)</i>
15:00	Chemical Analysis and Informatics Professor Roberto Martínez-Álvarez (OPCW SAB), Moderator Transferable learnings from a decade of mutagenic impurity analysis <i>(Dr Dave Elder, CMC Consultant)</i> Machine learning in chemical synthesis <i>(Dr Marwin Segler, Westfälische-Wilhelms Universität Münster)</i>
16:30	Coffee Break
17:00 – 18:30	Zagreb City Tour
20:00	Conference Dinner





Trends in Chemical Production

Hotel Dubrovnik, Zagreb, Croatia

Thursday 5 October 2017

8:30

Regulatory Frameworks

Dr Stephanie Dare-Doyen (OPCW Office of Strategy and Policy), Moderator

Regulation in the chemical industry (*Dr Renate Becker-Arnold, OPCW SAB*)

Biomediated processes and industry verification under the Chemical Weapons Convention (*Ms Barbara Hedler, OPCW Industry Verification Branch*)

10:00

Coffee Break

Break-Out/Discussion Sessions (Run in Parallel)

Advances in chemical production technologies and the synthesis of chemicals scheduled under the Chemical Weapons Convention

(Moderator *Dr Jonathan Forman, OPCW Science Policy Adviser*)

- *What has changed and what impact might it have on recognizing a relevant process?*
- *Does the answer change when considering different production scales?*

Advances in biological production technologies and the synthesis of bioregulators and/or biological toxins (Moderator *Mr Cheng Tang, OPCW SAB Vice-Chairperson*)

- *What is the current status of chemical synthesis of bioregulators and/or biological toxins?*
- *Is there an impact to the Chemical Weapons Convention given these capabilities available for production of bioregulators and/or toxins?*

10:15

The impact of current trends and future directions in chemical production on the Chemical Weapons Convention verification regime

(Moderator *Dr Stephanie Dare-Doyen, OPCW Office of Strategy and Policy*)

- *Which current trends and potential future directions in chemical production would be of concern for the Convention?*
- *In light of advances in science and technology, and a changing security environment, are revisions to the verification approach necessary?*

New synthesis tools and technologies for enhancing capabilities of OPCW Designated Laboratories (Moderator *Dr Christopher Timperley, OPCW Chairperson*)

- *What synthetic tools/methods are available for enhancing the capabilities of OPCW Designated Labs?*
- *Which synthetic technologies being adopted by academia/industry could benefit the Designated Labs?*





OPCW

1997-2017
OPCW
YEARS



Institute
for Medical
Research and
Occupational
Health

Trends in Chemical Production

Hotel Dubrovnik, Zagreb, Croatia

Thursday 5 October 2017 (Continued)

11:15	Coffee Break
11:30	Breakout session reporting to capture key points and any recommendations for the workshop report Dr Christopher Timperley (OPCW SAB Chairperson), Moderator
12:30	Closing Comments Dr Christopher Timperley (OPCW SAB Chairperson)
13:00	Closure of workshop and lunch <i>Drafting committee to meet after lunch</i>

