

CLINAM

European Foundation for Clinical
Nanomedicine
SWITZERLAND

11/2018
Basel, September 2-5

11th European and Global Summit for Clinical Nanomedicine, Targeted Delivery and Precision Medicine The Building Blocks to Personalized Medicine

Conference and Exhibition — September 2 - 5, 2018

FINAL PROGRAMME

Summit under the Auspices of the
Swiss Confederation in Collaboration
with 32 Organizations:



CLINAM Foundation

The goal of the CLINAM Foundation is to contribute to the benefit of patients and society by exploring and translating leading edge technologies towards clinical application, with an emphasis on nanomedicine, targeted medicine, precision medicine and personalization. The summit keeps its tradition to build bridges from the enabling technologies to clinical application for major and neglected diseases. There is broad support for this summit by many collaborating institutions.

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Summit Venue

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Scientific Committee

- Prof. Dr. med. Patrick Hunziker, University Hospital Basel (CH) (chairman)
- Prof. Dr. med. Christoph Alexiou, Head, Section of Experimental Oncology and Nanomedicine (SEON), Else Kröner-Fresenius-Foundation Professorship, University Hospital Erlangen (D)
- Prof. Dr. Lajos Balogh, Editor-in-Chief, "Precision Nanomedicine" Journal, North Andover, MA (USA)
- Prof. Dr. Gerd Binnig, Nobel Laureate, Munich (D)
- Prof. Dr. Yechezkel Barenholz, Hebrew University, Hadassah Medical School, Jerusalem (IL)
- Prof. Dr. med. Omid Farokhzad, Director, Center for Nanomedicine, Harvard Medical School and Brigham and Women's Hospital, Boston, MA (USA)
- Prof. Dr. Twan Lammers, Experimental Molecular Imaging, RWTH Aachen (D)
- Prof. Dr. med. Dong Soo Lee, PhD, Chair, Department of Nuclear Medicine, Seoul National University, Seoul (KOR)
- Dr. med. h.c. Beat Löffler, MA, CEO, CLINAM-Foundation, Basel (CH) (contents and programme)
- Prof. Dr. med. Marisa Papaluca, European Medicines Agency (EMA), London (UK)
- Prof. Dr. Gert Storm, Institute for Pharmaceutical Sciences, Utrecht University, Utrecht (NL)
- Prof. Dr. Dr. h.c. Viola Vogel, Head, Department of Health Sciences and Technology, Laboratory of Applied Mechanobiology, ETH Zürich (CH)

Introduction

The CLINAM Summit is a globally unique event that brings together all stakeholders in nanomedicine, targeted medicine and precision medicine. It builds on the principle that fundamental scientists, developers and professionals in clinical application and all persons related to nanomedicine can mutually learn from each other to find better solutions for the medicine of the future. Based on recent groundbreaking achievements, the meeting will be a highlight to explore the pathways to personalized medicine and show its potential for prevention, diagnosis, therapy by development of tools, materials and strategies for this young field. CLINAM is thus evolving toward its role as the international meeting forum for interdisciplinary fields of cutting edge medicine.

CLINAM will again welcome the participants from the community of nanomedicine, targeted drug delivery and precision medicine and bring the pioneers and worldwide opinion leaders together, not only to learn and discuss but also to develop new ideas, create new collaborative projects and shape the future of medicine. Senior scientists enlighten young researchers and students with their long experience and expertise. The summit expects again about 500 participants from more than 35 countries that make use of the role of the CLINAM Foundation as the nonprofit service provider for novel nanomedicine, targeted delivery and precision medicine. CLINAM welcomes you and wishes you three days of great science, great contacts and high level wellbeing with cultural elements in the evenings.

Target Audience

The faculty includes the pioneers and opinion leaders in the fields of medicine, nanoscience and targeted medicine, who share experience in an interdisciplinary and interactive manner that widens mutual understanding for both sides. The summit and the exhibition are aimed at physicians, as well as non-scientists with a background in pharmacology, biology, physics, chemistry, biophysics, medicine, materials science and engineering. The meeting is a particularly useful source of knowledge for the targeted medicine and delivery community. The conference is also of interest for members of the regulatory authorities as well as policymakers, experts from industry in the field of life sciences, developers of new tools and materials for nanomedicine, and all those investigating the potential of emerging technologies in the field of healthcare. Experts from venture companies can acquire knowledge on existing and upcoming developments and novel products in the emerging field of nanomedicine and knowledge based medicine. Government authorities can profit from the regulators' international sessions.

CLINAM is the worldwide melting pot in the field of nanomedicine, targeted delivery and precision medicine. Meet in Basel at a high-level communication platform where you find those striving for the development in all fields of renewing medicine.

Sun	All events on 2 nd Floor, Hall Osaka/Samarkand.				
Sept. 2	The Sunday of this Summit is reserved for official and unofficial gatherings.				
15.30	General Assembly of the European Society for Nanomedicine				
16.45	General Assembly of the International Society for Nanomedicine				
17.15	Special Lecture for Young Researchers and Students				
18.00	Editorial Board Meeting, CLINAM Precision Nanomedicine Journal				
19.45	First Meeting for all Speakers: Dinner at the Swissôtel Le Plaza, 1st Floor, Hall Helvetia				
Mon	Hall Montreal	Hall Sydney	Hall Singapore	Hall Rio	Hall Osaka/Samarkand
Sept. 3	Welcome Coffee				
08.00	1. Opening Addresses				
09.00	2. Scientific Introduction to CLINAM 11/2018: Nanomedicine in the Precision Principles to Personalization of Medicine, Prof Dr. med. Patrick Hunziker				
09.15	3. Activation of Innate Immunity: Toll-like Receptors and other Receptors of the Innate Immune System, Prof. Dr. Jules Hoffmann				
10.05	Break				
10.35	4. Linking the Global Threat of Resistance to Parasitic and Infectious Diseases: Next Generation of Antibiotics and Antiparasites, Prof. Dr. Ada Yonath				
11.30	5. Topic 2018: The Scope of Precision Medicine				
13.15	Lunch				
14.15	6. Polymeric Materials for Cancer Therapy	7. Small Speeches on Submitted Posters and University Village Posters	8. Understanding the Mechanisms of Nano Interacting with Life	9. Publishing, Dissemination and Market Size in Nanomedicine	Satellite 1 11. Education, Workforce and Regulatory Matters in Novel Nano and Precision Drugs
14.45				10. Risk Management for Nanomedical Products and Devices	
16.00	Break				
16.30	12. Nanomedicine and Precision Medicine Context in the Future				
18.50	End of Day 1				
19.35	Meeting in front of the Congress Center, Tram to Dinner 20.00 CLINAM Brokerage Dinner with Cultural Events and CLINAM Nano Award 2018 at Landgasthof Riehen				
Tue	Hall Montreal	Hall Sydney	Hall Singapore	Hall Rio	Hall Osaka/Samarkand
Sept. 4	Welcome Coffee				
08.20	13. Overcoming Barriers – Pharmaceutical Development and Manufacturing (APV Session)	14. Nano-Immunotherapy	15. Extracellular Vesicles in Nanomedicine – Exosomes	16. Clinical Experience with NBCDs and their Follow-On Versions: Are we Closer to Regulatory Alignment?	Satellite 2 17 a. Sizing of Nanoparticles: From Regulatory and Metrology Aspects to Application and Analysis – Joint Workshop
10.20	Break				
10.50	18. • Cancer Vaccination and Redefining Cancer: From Papillomavirus Discovery to Cancer Vaccination, Prof. Dr. med. Dr. h.c. mult. Harald zur Hausen • Redefining Cancer with Integrative Tumor Immunology: Novel Cutting Edge Immunotherapies for Patients, Prof. Dr. Jerome Galon				
13.00	Lunch				
14.00	20. Diagnostic and Theranostic Concepts for Personalized Cancer Immunotherapy	21. Nanomedicine in and against Infection and Inflammation	22. Targeting and Drug Delivery in Nanomedicine and Precision Medicine	23. Novel Approaches in Material Sciences and Smart Materials in Nanomedicine	Satellite 3 19. (Closed Session) Reg. Authorities
16.00	Break				
16.30	24. The Regulatory Authorities' Voice 2018				
18.00	25. Ethical Matters				
18.50	End of Day 2, Aperitif offered by the Canton of Basel-Stadt				
19.35	Speakers meet in front of the revolving doors of the Congress Center and leave for the Speaker's Dinner at Merian-Spitz (20.00 Aperitif on the Terrace, 20.20 Dinner)				
Wed	Hall Montreal	Hall Sydney	Hall Singapore	Hall Rio	Hall Osaka/Samarkand
Sept. 5	Welcome Coffee				
08.20	26. Cardiology and Atherosclerosis Nanomedicine	27. Clinical Imaging in Nanomedicine and Precision Medicine	28. New Findings and Procedures for Clinical Therapy and Diagnosis in Cancer Nanomedicine	29. Computational Modelling, Valuable Aid in Development of affordable Precision Medicine	Satellite 4 30. Part 1 Swiss Excellence in Science: SAMS/SPHN Workshop on Personalized Health
08.30					30. Part 2 Continuation of the Workshop
09.40	Break				
10.10	31. New Aspects of Physics in Nanomedicine Relating to Clinic	32. Degenerative Diseases Nanomedicine	33. Regenerative Medicine and Biomedical Engineering	34. EU-NCL European Nanomedicine Characterization Lab – Lessons learned	30. Part 2 Continuation of the Workshop
11.15	Change to Plenary Hall Montreal				
11.30	35. New Nano-pharmacological Concepts for the Treatment of Cancer, Prof. Dr. Patrick Couvreur and Prof Dr. med. André Nel				
12.40	Lunch and Awarding Poster Prizes				
13.45	36. Novel Preclinical Approaches to Nanomedicine and Targeted Therapies	37. Rare and Neglected Diseases	38. Safety of Nanomedicine by Design & Testing for Toxicity	39. Nanomedicine Applications and Platforms in Delivery and Precision Medicine	Satellite 5 40. EU-US Nanomedicine Community of Research
15.15	Break				
15.45	41. Nanomedicine and Targeted Delivery – Late Breaking and Ongoing Trials				
17.10	Closing Words				
17.20	End of CLINAM 11/2018				
18.00	Meeting in front of the Congress Center, leaving for a light Farewell Dinner at Brauerei (18.15)				

Programme

Sunday, September 2, 2018

All Sunday events on the 2nd Floor, Hall Osaka/Samarkand. The Sunday of this Summit is reserved for official and unofficial gatherings.

- 15.30 **General Assembly of the European Society for Nanomedicine**
16.45 **General Assembly of the International Society for Nanomedicine**
17.15 **Lecture for Young Researchers and Students: Translating Nanomedicine: From RNAi to Elephants and Cancer**
Prof. Dr. Avi Schroeder, PhD, Israel Institute of Technology, Haifa (IL)
18.00 **Editorial Board Meeting, CLINAM Precision Nanomedicine Journal**
19.45 **First Meeting for all Speakers: Dinner at the Swissôtel Le Plaza***** on the 1st Floor, Hall Helvetia**

Monday, September 3, 2018

Section 1: Plenary Sessions

- Monday, Hall Montreal
Plenary **1. Opening**
Chair **Dr. med. h.c. Beat Löffler, MA**, CEO, European Foundation for Clinical Nanomedicine, Basel (CH)
- 08.30 **Opening Address from the European Foundation for Clinical Nanomedicine**
Dr. med. h.c. Beat Löffler, MA, CEO, European Foundation for Clinical Nanomedicine, Basel (CH)
- 08.36 **Opening Address from the Canton of Basel-Stadt**
Christoph Brutschin, Member of the Executive Council of the Canton of Basel-Stadt, Head of the Department of Economic, Social and Environmental Affairs, Basel (CH)
- 08.42 **Opening Address from the European Commission**
Signe Ratso, Deputy Director General, DG Research & Innovation DDG3, European Commission Brussels (B)
- 08.48 **Opening Address from the Swiss Government**
Dr. Philipp Langer, Director EU Framework Programmes and European Research and Innovation Area (ERA), State Secretariat for Education, Research and Innovation SERI, Bern (CH)
- Monday, Hall Montreal
Plenary **2. Scientific Introduction to CLINAM 11/2018**
Chair **Prof. Dr. med. Simo Schwartz, Jr., PhD**, Director Molecular Biology and Biochemistry, Research Center for Nanomedicine (CIBBIM-Nanomedicine) University Hospital Vall d'Hebron and Vall d'Hebron Institut de Recerca (VHIR), Barcelona and President of the European Society for Nanomedicine, Barcelona (E)
- About** The Foundation keeps pace with the development: Nanomedicine as crucial interdisciplinary field is growing and gets in line with other fields to realize the rapid development of precision medicine. Nanomedicine is seen together with the field of genomics as a pacemaker towards the personalization of medicine.
- 09.00 **Personalization by Precise Knowledge and Precise Therapies, Enabled by Nanomedicine**
Prof. Dr. med. Patrick Hunziker, President of the International Society for Nanomedicine, University Hospital Basel, Head of the CLINAM-Lab, Basel (CH)

Monday, Hall Montreal

Opening keynote lecture 1

Plenary
Chair

3. Activation of Innate Immunity

Prof. Dr. Joy Wolfram, Assistant Professor and Director, Nanomedicine and Extracellular Vesicles Laboratory, Mayo Clinic, Jacksonville, Florida (USA)

About

Toll-like receptor-mediated activation of innate immunity controls not only host defense against pathogens but also immune disorders. The discoverer concerning the activation of innate immunity will explain how our defense system works.

09.15

Toll-like Receptors and other Receptors of the Innate Immune System

Prof. Dr. Jules Hoffmann, Nobel Laureate, Institut d'Études Avancées de l'Université de Strasbourg, Strasbourg (F)

09.55

Questions and Debate

10.05

Break

Monday, Hall Montreal

Opening keynote lecture 2

Plenary
Chair

4. Linking the Global Threat of Resistance to Parasitic and Infectious Diseases

Prof. Dr. Yechezkel Barenholz, Hebrew University, Hadassah Medical School, Jerusalem (IL)

About

The current global escalation of resistance in parasitic infectious diseases is a serious threat. It seems that the world is going towards a post-antibiotic era, in which common infections and minor injuries treated for decades could become fatal again. What will be the next generation antibiotics and antiparasitics?

10.35

Next Generation Species-Specific, Eco-Friendly Antibiotics and Thoughts about Origin of Life

Prof. Dr. Ada Yonath, Nobel Laureate, Weizmann Institute of Science, Structural Biology Department, Rehovot (IL)

11.15

Questions and Debate

Monday, Hall Montreal

Plenary
Chair

5. Topic 2018: The Scope of Precision Medicine (12' plus 3' Questions and Debate)

Prof. Dr. Yechezkel Barenholz, Hebrew University, Hadassah Medical School, Jerusalem (IL)

About

Researchers and clinicians have observed during centuries inter-individual variations in clinical characteristics and therapy responses in patients. The huge importance of precision medicine has been realized only in recent years. The approach towards prevention and treatment of disease by the development of diagnostics and therapies delivering maximum effectiveness implicates many disciplines. Nanomedicine has a substantial importance. The session will address different approaches to the field.

11.30

The Various Faces of Precision Medicine

Prof. Dr. med. Patrick Hunziker, President of the International Society for Nanomedicine, Basel (CH)

11.45

Unmet Needs in Developing Nanoparticles for Precision Medicine

Prof. Dr. med. Simo Schwartz, Jr., PhD, Director Molecular Biology and Biochemistry, Research Center for Nanomedicine (CIBBIM-Nanomedicine), University Hospital Vall d'Hebron and Vall d'Hebron Institut de Recerca (VHIR), Barcelona and President of the European Society for Nanomedicine, Barcelona (E)

- 12.00 **Precision Therapy Based on a Molecular Platform for RNAi Therapeutics**
Prof. Dr. Dan Peer, Chair, Tel Aviv University Cancer Biology Research Center, Director, Center for Translational Medicine, Director, Laboratory of Precision NanoMedicine, Dept. of Cell Research & Immunology, and Dept. of Materials Science & Engineering, Tel Aviv University, Tel-Aviv (IL)
- 12.15 **The Importance of Precision for Controlling Assembly and Targeting of Nanomedicines**
Dr. Heinrich Haas, Vice President Drug Delivery, BioNTech RNA Pharmaceuticals GmbH, Mainz (D)
- 12.30 **Virtual Self as the Basis of Truly Personalized Therapy and Prevention**
Prof. Dr. Hans Lehrach, Director, Head, Department of Vertebrate Genomics, Max Planck Institute for Molecular Genetics, Berlin (D)
- 12.45 **Precision Medicine in the Treatment of Breast Cancer of Relating Treatments to Mutation**
Dr. med. Daniela Katz, Head of Breast and Sarcoma Services at Assaf Harofeh Medical Center, Tel Aviv-Yafo (IL)
- 13.00 **Questions and Debate**
- 13.15 **Lunch**

Section 2: 4 Parallel Sessions

Monday, Hall Montreal

- Parallel 1 **6. Polymeric Materials for Cancer Therapy** (13' plus 2' Questions and Debate)
 Session in collaboration with the German Research Foundation (DFG) established "Collaborative Research Center on Nanodimensional Polymer Therapeutics for Tumor Therapy" (CRC 1066), Johannes Gutenberg University, Mainz (D)
- Chair **Prof. Dr. Rudolf Zentel**, Institute of Organic Chemistry, University of Mainz (D) and **Prof. Dr. Twan Lammers**, Experimental Molecular Imaging, RWTH Aachen (D)
- About** Polymeric materials are extensively employed in cancer therapy. This session, which is organized by the CRC/SFB 1066, exemplifies the breadth and the potential of polymers and polymeric drug delivery systems for diverse therapeutic applications.
- 14.15 **Is There More Than Tumor Targeting? Nanoparticles and the Immune System**
Prof. Dr. Rudolf Zentel, Institute of Organic Chemistry, University of Mainz, Mainz (D)
- 14.30 **Self-Assembled Supramolecular Polymeric Nanosystems for Smart Diagnosis and Targeted Therapy of Intractable Diseases**
Prof. Dr. Kazunori Kataoka, Director General, Innovation Center of NanoMedicine, Kawasaki Institute of Industrial Promotion, Professor at Policy Alternatives Research Institute, University of Tokyo (JPN)
- 14.55 **Polypept(o)ids: Novel Materials for Drug and Nucleic Acid Delivery**
Dr. habil. Matthias Barz, Lecturer at Institute of Organic Chemistry, Johannes Gutenberg-University of Mainz, Mainz (D)
- 15.10 **Engineering Innate and Adaptive Immunity with Polymeric Materials**
Prof. Dr. Bruno de Geest, Associate Professor, Department of Pharmaceutics, Ghent University, Ghent (B)
- 15.25 **Protein Nanocapsules for Targeting and Controlled Release of Drugs**
Prof Dr. Katharina Landfester, Director and Scientific Member, Max Planck Institute for Polymer Research, Mainz (D)

- 15.40 **Polymeric Materials for Biomedical Applications**
Prof. Dr. Ulrich S. Schubert, Laboratory of Organic and Macromolecular Chemistry, Jena Center for Soft Matter (JCSM), School of Chemistry and Earth Sciences, Friedrich-Schiller-University, Jena (D)
- 15.55 **Questions and Debate**
- 16.05 **Break**
- Monday, Hall Sydney
- Parallel 2 **7. Small Speeches on Submitted Posters and on University Village Posters 2018** (4' each)
 Chair **Dr. Sc. nat. Ruth Schmid**, Vice President Marketing, SINTEF Materials and Chemistry, Biotechnology and Nanomedicine, Polymer Particles and Surface Chemistry, Trondheim (N)
- About** Poster submitters, researchers and scientists at universities, participating in the University Village 2018 can apply for a small speech of 4 minutes, serving to highlight the research activities in nanotechnology/health. The speeches comprise a maximum of three slides. • Slide 1: General introduction to the topic's future and outlook on translation of the work presented in a way that is accessible to the highly interdisciplinary audience. • Slide 2: Some of the highlights of the submitter's work and institution's work. • Slide 3: The proof, how the work at the university/institute fits into the area of nanomedicine and targeted delivery including showing the outlook on translation of the work.
- 14.15 **Start of Presentations (separate programme in conference folders)**
- 16.00 **Break**
- Monday, Hall Singapore
- Parallel 3 **8. Understanding the Mechanisms of Nano Interacting with Life** (12' plus 2' Questions and Debate)
 Chair **Prof. Dr. Kirsten Sandvig**, Department of Molecular Cell Biology, Institute for Cancer Research, Norwegian Radium Hospital Oslo, University Hospital and University of Oslo (N)
- About** This session aims at understanding of the mechanisms of nanomaterial interactions with living systems and the environment across the entire life cycle of nanomaterials. What are the mechanisms and how do nanoparticles behave in different environments? Presentations include cell interaction, the importance of degradation and excretion and new methods for evaluation and screening of nanoparticles for therapeutic applications. Also imaging for evaluating the behavior of nanomaterials in vivo and the prediction of in vivo behavior of nanoparticles will be discussed.
- 14.15 **The Behavior of Nanoparticles in Complex Environments**
Prof. Dr. Barbara Rothen-Rutishauser, Co-Chair Bio Nanomaterials, Adolphe Merkle Institute, University of Fribourg (CH) and
Prof. Dr. Alke Fink, Chair BioNanomaterials, Adolphe Merkle Institute, University of Fribourg (CH)
- 14.35 **Entry of Nanoparticles into Cells: Mechanisms and Consequences**
Prof. Dr. Kirsten Sandvig, Department of Molecular Cell Biology, Institute for Cancer Research, Norwegian Radium Hospital Oslo, University Hospital and University of Oslo (N)
- 14.49 **Nanomaterial - Cell Interaction: a Mechanistic Perspective**
Dr. Peter Wick, Head Particles-Biology Interactions, EMPA - Swiss Federal Laboratories for Materials Science and Technology, St. Gallen (CH), Lecturer D-BAUG, ETH Zürich (CH)
- 15.03 **Nanoparticles for Clinical Use: Importance of Degradation and Excretion**
Dr. Tore Skotland, Centre for Cancer Biomedicine, Institute for Cancer Research, University of Oslo, Oslo (N)

- 15.17 **Multimodal Imaging for Evaluating the Behavior of Nanomaterials in Vivo**
Prof. Dr. med. Keon Wook Kang, PhD, Professor, Department of Nuclear Medicine, Seoul National University College of Medicine (SNUC), Seoul (ROK)
- 15.31 **Towards Prediction of In Vivo Behavior of Nanoparticles: New Methods for Evaluation and Screening of Nanoparticles for Therapeutic Applications**
Dr. Maria Gianneli, PhD, Application Specialist, Attana AB - Biosensor Technologies, Stockholm (S)
- 15.45 **Is Nanomaterials-induced Protein Citrullination a Common Pathogenetic Link to Diverse Autoimmune Conditions?**
Prof. Dr. med. Yuri Volkov, PhD, MA, FTCD, Professor of Molecular and Translational Medicine Department of Clinical Medicine, Trinity College Dublin, University of Dublin (IRL)
- 16.00 **Break**
- Monday, Hall Rio
- Parallel 4 **9. Publishing and Dissemination in Nanomedicine** (8' plus 2' Questions and Debate)
Chair **Prof. Dr. Lajos Balogh**, Editor-in-Chief, "Precision Nanomedicine" Journal, North Andover, MA (USA)
- About** What are the ways for integrating attempts to shape the future of nanomedicine and precision medicine and what is the role of public networks and publishing? How do we disseminate "nanomedicine" to the lay public? Without knowledge in novel medical technology the acceptance is low. Ways to raise the interest for the backgrounds of nanomedicine are needed.
- 14.15 **Precision Nanomedicine and the Landscape of Nanomedicine Publications**
Prof. Dr. Lajos Balogh, Editor-in-Chief, "Precision Nanomedicine" Journal, North Andover, MA (USA)
- 14.25 **Dissemination for Lay Public in Nanomedicine and Precision Medicine**
Dr. Donald Bruce, Managing Director, Edinethics Ltd., Edinburgh (UK)
- 14.35 **Questions and Debate**
- Continuation Monday, Hall Rio
- Parallel 4 **10. Risk Management for Nanomedical Products and Nanomedical Devices** (9' plus 1' Questions and Debate)
Chair **Robert E. Geertsma, M.Sc.**, Senior Scientist, Centre for Health Protection RIVM - National Institute for Public Health and the Environment, Bilthoven (NL)
- About** The application of nanotechnologies in healthcare holds groundbreaking potential for innovation but simultaneously bears certain challenges with respect to assessing efficacy, quality and safety. Within the concept of a "safe innovation approach", many questions are still open. Also regulatory requirements and related scientific guidance for nanomedical products are emerging. This session intends to show the need for risk management during the entire lifecycle of nanomedical products, in relation to patient safety and regulatory requirements.
- 14.45 **Risk Management for Nanomedical Products in Relation to Safe Innovation and Emerging Regulatory Requirements**
Robert E. Geertsma, M.Sc., Senior Scientist, Centre for Health Protection RIVM - National Institute for Public Health and the Environment, Bilthoven (NL)
- 14.55 **Emerging Regulatory Guidance for Nanomedicine and the Need for Innovator-Regulator Interaction during the Product Lifecycle**
Dr. Katherine Tyner, PhD, Associate Director for Science (acting), Office of Pharmaceutical Quality CDER/FDA, Springfield, IL (USA)

- 15.05 **An Improved and Integrated Strategy for Non-clinical Evaluation of Potential Immunotoxicity of Nanomedical Products**
Christina Giannakou, MSc, Maastricht University (NL) and National Institute for Public Health and the Environment (RIVM), Bilthoven (NL)
- 15.15 **Innovator’s Perspective on Understanding Regulatory Requirements for Nanomedical Products Prior to Innovator-Regulator Interactions**
Dr. Ana Benito, Senior Research Biomaterials Unit CIDETEC, Parque Científico y Tecnológico de Gipuzkoa Donostia-San Sebastián, Gipuzkoa (E)
- 15.25 **Reliable, Replicable Knowledge & Data Analysis - Towards Precise “Disease Signatures”**
Dr. Mira Marcus-Kalish, PhD, Director, International Research Affairs, Tel Aviv University Ramat Aviv, Tel Aviv (IL)
- 15.35 **Questions and Debate**
- 16.00 **Break**

Section 3: Satellite 1 - Education and Workforce in Medicine and Regulatory Matters

Monday, Hall Osaka

- Satellite Chair **11. Education, Workforce and Regulatory Matters in Novel Nano and Precision Drugs** (10’)
Dr. Anil Patri, Chair, Nanotechnology Task Force, Director, NCTR-ORA Nanotechnology Core Facility, U.S. Food and Drug Administration (FDA), National Center for Toxicological Research (NCTR), Jefferson, AR (USA)

About Emerging technologies always need training of the users. But training alone is not sufficient to support translation of new technologies and approaches into approved therapeutics. In nano-medicine and precision medicine we have the critical need to provide trainees and current researchers and clinicians with educational opportunities in regulatory science, with developing new tools, devices, standards and approaches to assess the safety, efficacy, quality and performance of regulated products. An interdisciplinary team of speakers will highlight the challenges in drug discovery, clinical trial design, medical device innovation, data analytics and other core competencies. This meeting is of crucial importance and of critical matter for the clinicians and researchers that are the drivers towards innovation for the benefit of the patient.

- 14.15 **Introduction: Workforce in Medicine**
Dr. Anil Patri, Chair, Nanotechnology Task Force, Director, NCTR-ORA Nanotechnology Core Facility, U.S. Food and Drug Administration (FDA), National Center for Toxicological Research (NCTR), Jefferson, AR (USA)
- 14.25 **Regulatory Matters in Nano- and Precision Medicine – Regulatory Clinician to Practicing Clinician**
Dr. med. Frank F. Weichold, PhD, Director of Critical Path and Regulatory Science Initiatives, Office of Regulatory Science & Innovation (ORSI) and Office of the Chief Scientist/Office of the Commissioner Food and Drug Administration (FDA), Silver Spring, MD (USA)
- 14.35 **Educational Ecosystems in Rapidly Changing Environments**
Jack Barokas, Head of Digital Media team and Digital Media Coordinator of International Projects at Tel Aviv University, Tel Aviv (IL)
- 14.45 **Pharmaceutical Development of Nanomedicines – Initial Learnings & Challenges**
Dr. Marianne Ashford, PhD, Senior Principal Scientist, Advanced Drug Delivery, Pharmaceutical Sciences, Innovative Medicines Biotech Unit, AstraZeneca, Macclesfield, Cheshire (UK)

- 14.55 **Regulatory Science to Advance Precision Medicine**
Prof. Dr. Scott Steele, PhD, Director, Regulatory Science Programs, Associate Professor, Public Health Sciences, University of Rochester, NY (USA)
- 15.05 **Crossing the Valley of Death: Moving Products toward Commercialization and Clinical Practice**
Prof. Dr. Frances Richmond, PhD, Professor and Chair, Department of Regulatory and Quality Sciences, Member of the International Center for Regulatory Science, Director of the Regulatory Science Program, USC School of Pharmacy, University of Southern California, Los Angeles, CA (USA)
- 15.15 **Questions and Debate**
- 16.00 **Break**

Section 4: Plenary Session

Monday, Hall Montreal

- Plenary Chair **12. Nanomedicine and Precision Medicine Context in the Future** (17' plus 3' Questions and Debate)
Prof. Dr. André Nel, M.B. Ch.B., PhD, Distinguished Professor of Medicine, Associate Director California NanoSystems Institute, Chief of Nanomedicine and Director of the Center for Environmental Implications of Nanotechnology, UCLA, Los Angeles, CA (USA)

About The actual impact of nanomedicine is growing and the pharmaceutical industry today sees many advantages of nanomedicines in the context of precision medicine and the shift away from a “one size fits all” in diagnosis and therapy of patients. This session aims to give insight into some of the challenges and solutions and at the same time addresses some crucial reflections in regulatory matters.

- 16.30 **Global Collaborations in Regulatory Science and Standards Development**
Dr. Anil Patri, Chair, Nanotechnology Task Force, Director, NCTR-ORA Nanotechnology Core Facility, U.S. Food and Drug Administration (FDA), National Center for Toxicological Research (NCTR), Jefferson, AR (USA)

- 16.50 **Engineering Enhanced Adoptive Cell Therapies against Cancer**
Prof. Dr. Darrell J. Irvine, PhD, Professor, Departments of Biological Engineering and Materials Science & Engineering, Koch Institute for Integrative Cancer Research, Massachusetts Institute of Technology, Ragon Institute of MGH, MIT and Harvard Investigator, Howard Hughes Medical Institute, Cambridge, MA (USA)

- 17.10 **Long-acting Injectable Nanomedicines for Addressing Adherence Issues in Infectious Diseases**
Prof. Dr. Andrew Owen, PhD, FRSB, FBPhS, Professor of Pharmacology, Molecular and Clinical Pharmacology University of Liverpool (UK)

- 17.30 **Bacterial Nanoglues Targeting Wound Sites for Theranostic Applications to Read out Tissue Fiber Tensions in Health and Disease**
Prof. Dr. Dr. h.c. Viola Vogel, Head, Department of Health Sciences and Technology Laboratory of Applied Mechanobiology, ETH Zürich (CH)

- 17.50 **Precision Nanomedicine by Design: The First Phase III FDA Clinical Approval for Dendrimer Based Nanomedicine Guided by CNDP Engineering**
Prof. Dr. Donald Tomalia, Distinguished Visiting Professor, Columbia University, NY, Affiliate Professor, Virginia Commonwealth University, Richmond, Adjunct Professor, University of Pennsylvania, Philadelphia, CEO & Founder NanoSynthons LLC National Dendrimer & Nanotechnology Center, Mt. Pleasant, MI (USA)

- 18.10 **The Great Divide: Meeting Need for Regulatory Competence in Academia versus Industry**
Prof. Dr. Frances Richmond, PhD, Professor and Chair, Department of Regulatory and Quality Sciences. Member of the International Center for Regulatory Science, Director of the Regulatory Science Program, USC School of Pharmacy, University of Southern California, Los Angeles, CA (USA)
- 18.30 **Questions and Debate**
- 18.50 **End of Day 1 and Brokerage Dinner with Cultural Events**
- 19.35 **We meet in front of the Congress Center**
- 19.50 **Tramway leaving Messeplatz to Riehen Dorf (be punctual not to miss the ride)**
- 20.00 **CLINAM Brokerage Dinner with Cultural Events, CLINAM Dwarf Award 2018 at Landgasthof Riehen**
 (Excerpts of the Czech Suite in D major Op. 39, composed by Antonín Dvořák and an outstanding Swiss choir with astonishing songs)

Tuesday, September 4, 2018

Section 5: 4 Parallel Sessions

- 08.00 **Welcome Coffee**
 Tuesday, Hall Montreal
- Parallel 1 **13. Overcoming Barriers - Pharmaceutical Development and Manufacturing (APV session)** (12' & 3' Q & D)
 A Session in collaboration with the APV, Mainz
- Chair **Dr. Bernd Riebesehl**, Principal Fellow, Novartis Pharma AG, Basel (CH)
- About** The International Association for Pharmaceutical Technology (APV) will feature the industrial perspective on pharmaceutical development and manufacturing of nanomedicine and precision medicine.
- 08.20 **CART Manufacturing**
Dr. Alexander Huber, Global CMC Head & Director, Cell & Gene Therapy Unit, Novartis Pharma AG, Basel (CH)
- 08.35 **CriPec® Nanomedicines the Translational Path from Preclinical to Clinical Studies**
Dr. Cristianne J. F. Rijcken, PharmD, PhD, Founder and CSO, Cristal Therapeutics, Maastricht (NL)
- 08.50 **Progressing the Development of AZD2811 Nanoparticle**
Dr. Marianne Ashford, PhD, Principal Scientist Drug Targeting, Pharmaceutical Development AstraZeneca, Macclesfield, Cheshire (UK)
- 09.05 **Updates on the Development of Self-Assembling Bispecific Antibodies**
Dr. Mark Chiu, PhD, Associate Director, Janssen Research & Development, Raritan, NJ (USA)
- 09.20 **Successful Design of Nano-carriers: Manipulation of the Release Rate of Drugs from Liposomal Carriers by Means of Selection of the (Phospho)lipid Composition**
PD Dr. Peter van Hoogevest, Lipoid GmbH, Scientific Department, Ludwigshafen am Rhein (D)
- 09.35 **Microfluidic Platform for Rapid Development and Scale-up of Nanoparticles for Genetic Medicine**
Dr. James Taylor, Ph.D., CEO & Co-Founder, Precision NanoSystems, Vancouver, BC (CND)

- 09.55 **Bupigel™: A Formulation Based on Two-stage Liposomes-in-hydrogel Slow-controlled Release Local Anesthetic with a Prolonged Duration of Analgesia: Basic, Animal, and Human Studies**
Prof. Dr. Yechezkel Barenholz, Hebrew University, Hadassah Medical School, Jerusalem (IL)
- 10.10 **Questions and Debate**
- 10.20 **Break**
- 08.00 **Welcome Coffee**
 Tuesday, Hall Sydney
- Parallel 2 **14. Nano-immunotherapy** (12' plus 3' Questions and Debate)
 A Session in Collaboration with the German Research Foundation (DFG) established "Collaborative Research Center on Nanodimensional Polymer Therapeutics for Tumor Therapy" organized by the CRC/SFB, Johannes Gutenberg University, Mainz (D)
- Chair **Prof. Dr. med. Volker Mailänder**, Center for Translational Nanomedicine, University Medicine of the Johannes-Gutenberg University Mainz (D) and
Prof. Dr. Twan Lammers, Experimental Molecular Imaging, RWTH Aachen (D)
- About** This sessions aims at understanding how nanocarriers can be used for tumor vaccination. With the advent of checkpoint inhibitors vaccination strategies are becoming more and more important. This has been a change of paradigm for the tumor therapy as no longer nanocarriers are directed to the hardly accessible tumor cells, but rather target immune cells which are circulating in blood or which are located in highly perfused organs like the spleen. Vaccines combine the antigen or the information of the antigenic moieties together with an immunostimulant molecule. The combination of these molecules offers opportunities for nanocarriers as they can co-deliver both in one delivery system hereby controlling the co-applications. While the target immune cells are more accessible compared to the cells of a solid tumor, still there is the need to get into the most potent cell type. These cells are mostly subtypes of antigen presenting cells and here mostly dendritic cells. The session will demonstrate new developments, chances and obstacles to targeted therapy for immune cells and for vaccination approaches.
- 08.20 **Employing the Protein Corona to Address Dendritic Cells**
Prof. Dr. med. Volker Mailänder, Center for Translational Nanomedicine, University Medicine of the Johannes Gutenberg University Mainz (D)
- 08.35 **Polymeric Nanogels for Antigen Delivery and Anticancer Vaccination Therapy**
Prof. Dr. ir. Wim Hennink, Head of Department, Pharmaceutical Sciences, Utrecht University, Utrecht (NL)
- 08.50 **Plant Virus Nanoparticles for In Situ Vaccination and Treatment of Metastatic Cancer**
Prof. Dr. Nicole Steinmetz, Professor of NanoEngineering, University of California, San Diego, La Jolla, CA (USA)
- 09.05 **Targeting of Antigen Presenting Cells for Tumor Immunotherapy**
Prof. Dr. med. Stephan Grabbe, Director of the Department of Dermatology, Medical Center and Polyclinic, Speaker of the Research Center for Immunotherapy, Mainz (D)
- 09.20 **Engineering Immune-modulating Materials**
Prof. Dr. Darrell J. Irvine, PhD, Professor, Departments of Biological Engineering and Materials Science & Engineering, Koch Institute for Integrative Cancer Research, Massachusetts Institute of Technology, Ragon Institute of MGH, MIT, and Harvard Investigator, Howard Hughes Medical Institute, Cambridge, MA (USA)
- 09.50 **Engineering Nanoparticles for a Controlled Reduction of Intratumoral cAMP Level**
Prof. Dr. rer. nat. Tobias Bopp, Professor for Molecular Immunology, Institute for Immunology, Johannes Gutenberg University Mainz (D)

- 10.05 **pH Degradable Immune Modulating Nanogels for Cancer Immunotherapy**
Dr. Lutz Nuhn, Junior Group Leader, Department of Prof. Tanja Weil, Max-Planck-Institute for Polymer Research (MPIP), Mainz (D)
- 10.20 **Break**
- 08.00 **Welcome Coffee**
 Tuesday, Hall Singapore
- Parallel 3 **15. Extracellular Vesicles in Nanomedicine – Exosomes** (9' & 1' Questions & Debate)
 Chair **Prof. Dr. med. Raymond Schiffelers**, Professor of Nanomedicine, Clinical Chemistry and Haematology, University Medical Center Utrecht UMCU, Utrecht (NL)
- About** Extracellular vesicles contain various biomolecules and mediate short- and long-distance intercellular communication in the body. Recent work has shown that extracellular vesicles (EVs) can be engineered to display therapeutic properties. This session will cover new research in extracellular vesicles with respect to their applications in nanomedicine. Exosomes and other EVs have recently emerged as promising biological nanoparticles for drug delivery and diagnostics. Preclinical findings have already resulted in clinical trials with EVs applications such as immunotherapy. Moreover, the first exosome-based diagnostic test was recently marketed. Nevertheless, many challenges including large-scale clinical-grade manufacturing, characterization, potential immunogenicity, and storage need to be overcome in order to exploit the full potential of EVs for therapy and diagnosis. This session will identify major hurdles and promising areas of study for EVs in nanomedicine.
- 08.20 **Exosomes and Naturally Occurring Vesicles**
Prof. Dr. med. Raymond Schiffelers, Professor of Nanomedicine, Clinical Chemistry and Haematology, University Medical Center Utrecht UMCU, Utrecht (NL)
- 08.30 **Engineered Extracellular Vesicles for Drug Delivery to the Brain**
Prof. Dr. Joy Wolfram, Assistant Professor and Director, Nanomedicine and Extracellular Vesicles Laboratory, Mayo Clinic, Jacksonville, Florida (USA)
- 08.40 **Nanostructure and the Formation Mechanism of Extracellular Vesicles Studied by State-of-the-art cryo-SEM and cryo-TEM**
Prof. Dr. Yeshayahu (Ishi) Talmon, PhD, Prof. em. of Chemical Engineering, Department of Chemical Engineering and the Russell Berrie Nanotechnology Institute (RBNI), Technion-Israel Institute of Technology, Haifa (IL)
- 08.55 **From Basic Science Exosome Research to Listing on Stock Exchange – Two Journeys: Myocardial Ischemia and Wound Care**
Prof. Dr. Lee Chuen Neng, MBBS, MMed, FRCS (Glasgow), FRCS (Edinburgh), FRACS, FAMS (Cardiothoracic Surgery), Senior Consultant Department of Cardiac Thoracic and Vascular Surgery, Head, Department of Surgery, Yong Loo Lin School of Medicine, National University Heart Centre, National University of Singapore (SGP)
- 09.10 **Exosome-Hydrogels as Machinery for Anti-inflammatory Therapeutics Synthesis**
Dr. Gregor Fuhrmann, Junior Research Group Leader, Helmholtz-Centre for Infection Research, Saarbrücken (D)
- 09.20 **The First Extracellular Vesicle-made Supported Lipid Bilayer Biosensor**
Sara Busatto, MSc., PhD Student, Colloidal Clinical Chemistry Laboratory, University Brescia (I), Visiting Pre-doctoral Student, Nanomedicine and Extracellular Vesicles Group at Mayo Clinic, Jacksonville, FL (USA)

- 09.30 **Optical Tracking of siRNA Encapsulated Exosomes in Cancer Models in Vitro and in Vivo**
Dr. Lizhou Xu, Marie-Curie Postdoc Research Fellow, Institute of Pharmaceutical Science, Faculty of Life Sciences & Medicine, King's College London (UK)
- 09.50 **Questions and Debate**
- 10.20 **Break**
- 08.00 **Welcome Coffee**
 Tuesday, Hall Rio
- Parallel 4 **16. Global Clinical Experience with Non-Biological Complex Drugs (NBCDs) and their Follow-on Versions: Are we Closer to Regulatory Alignment?** (13' & 2' Questions and Debate)
- Chair **Prof. Dr. Daan J. A. Crommelin**, Emeritus Professor at the Department of Pharmaceutics, Utrecht University (NL), Adjunct Professor at the Department of Pharmaceutics and Pharmaceutical Chemistry at the University of Utah (USA), Co-founder of Octoplus, Leiden (NL) **and**
Prof. Dr. Stefan Mühlebach, Chief Scientific Officer, Vifor Pharma Ltd, Villars-sur-Glâne, and Professor of Pharmaceutical Sciences, University of Basel (CH)
- About** Assessment of therapeutic equivalence of non-biological complex drugs (NBCDs) and their follow-on versions poses significant challenges to the scientific community. The family of NBCDs consists of products such as liposomes, glatiramoids, iron carbohydrate complexes and ocular emulsions. Regulatory agencies across the globe have approved follow-on versions of NBCDs based on different approaches. Some agencies have applied the generic drug approval paradigm, whilst others followed the biosimilar approach or a hybrid application route. As a consequence, the scope of studies required for marketing authorization of follow-on products depends on the countries where the product is planned to be launched. This regulatory uncertainty underlines the need for science-based evaluation criteria to ensure safe, effective and equivalent or similar follow-on versions of NBCDs. The questions to be answered in this session are: 1) What can we learn from recent experiences in this field, and 2) Which steps are being taken to globally align the regulatory processes?
- 08.20 **Introduction**
Dr. Jon de Vlieger, Secretary of the Non-Biological Complex Drug Working Group, Lygature, Utrecht (NL)
- 08.35 **Regulatory Considerations for Drug Products Containing Nanomaterials: US FDA Perspective**
Dr. Katherine Tyner, Associate Director for Science (acting), Office of Pharmaceutical Quality CDER/FDA, Springfield, IL (USA)
- 08.50 **NBCD: Trends and Current EU Regulatory Approach**
Prof. Dr. med. Marisa Papaluca, Senior Scientific Adviser, Scientific Committees Regulatory Science Strategy, European Medicine Agency (EMA), London (UK)
- 09.05 **Follow-on NBCDs at Health Canada: Current Perspectives and Future Considerations**
Dr. Michael Johnston, PhD, Research Scientist, Centre for Biologics Evaluation and Genetic Therapies Directorate, Health Canada, Ottawa (CND)
- 09.20 **BE of Liposomal Parenterals: Suggestions of the Global Bioequivalence Harmonization Initiative Conference 2018**
Prof. Dr. Henning Blume, Chairman of Steering Committee of the Network of Biopharmaceutics and Bioavailability of the European Federation for Pharmaceutical Sciences – EUFEPS and, SocraTec C&S GmbH, Oberursel (D)
- 09.35 **Characterization Challenges for Non-Biological Complex Drugs and Their Follow-on Versions**
Dr. Scott E. McNeil, Director, Nanotechnology Characterization Laboratory, National Cancer Institute, Vice-President, Leidos Biomedical Research Inc., Frederick, MD (USA)

09.50 **Questions and Debate**

10.20 **Break**

Section 6: Satellite 2 - Workshop of the Nanomedicine Alliance, ETPN and the US National Characterization Lab

08.00 **Welcome Coffee**

Tuesday, Hall Samarkand

Satellite **17 a. Sizing of Nanoparticles: From Regulatory and Metrology Aspects to Application and Analysis** (15')

Chair **Dr. Jeffrey D. Clogston**, Principal Scientist, Section Head, Physicochemical Characterization, Nanotechnology Characterization Lab National Cancer Institute, Frederick, MD (USA)

About This session will focus on how representatives from regulatory authorities, government and industry view the various aspects of particle sizing relating to nanomedicine/nanotechnology.

08.20 **Experiences of work within the European Nanomedicine Characterization Laboratory (EU-NCL)**

Prof. Dr. Adriele Prina-Mello, PhD, Ussher Assistant Professor/LBCAM Director Trinity Translational Medicine Institute (TTMI)/Department of Clinical Medicine, School of Medicine and AMBER/CRANN, Trinity College Dublin, University of Dublin (IRL)

08.35 **Physico-chemical Characterization and Standardization of Nanoparticles Intended in Therapeutics and Diagnostics**

Dr. Jeffrey D. Clogston, Principal Scientist, Section Head, Physicochemical Characterization, Nanotechnology Characterization Lab National Cancer Institute, Frederick, MD (USA)

08.50 **Product and Process Optimization to Improve Liposome/LNP Characteristics**

Dr. Andreas Wagner, Head Liposome Technology, Polymun Scientific, Immunbiologische Forschung GmbH, Klosterneuburg (A)

09.05 **Clinical Needs for Nanomedicine: Characterization as Key for Product Development**

Dr. med. Frank F. Weichold, PhD, Director of Critical Path and Regulatory Science Initiatives, Office of Regulatory Science & Innovation (ORSI) and Office of the Chief Scientist/Office of the Commissioner Food and Drug Administration (FDA), Silver Spring, MD (USA)

09.20 **Rational Design and In-depth Characterization of Targeted, Multi-functional Gold Nanoparticles**

Dr. Luigi Calzolari, PhD, Project Leader, Joint Research Center of the European Commission, Ispra (I)

09.35 **Questions and Debate**

10.20 **Break**

10.50 **Plenary Hall Session 18 and Lunch**

Continuation Tuesday, Hall Samarkand

Satellite **17 b. Presentations on Nanoparticles – Analytics, Methods and Technologies** (14' plus 1' Questions /Debate)

Chair **Prof. Dr. Adriele Prina-Mello, PhD**, Ussher Assistant Professor/LBCAM Director Trinity Translational Medicine Institute (TTMI)/Department of Clinical Medicine, School of Medicine and AMBER/CRANN, Trinity College Dublin, University of Dublin (IRL)

About The approach of using nanoparticles to problem-solving in health science includes a collection of tools and concepts which can be applied in pharmaceutical development. The application of nanomedical tools, models and devices gains continuous interest from the pharmaceutical R&D departments in industry. The model of "blockbuster" will more and more be removed by the model of personalized medicine.

- 14.00 **Nanoparticles, Liposomes, Extracellular Vesicles and Viruses**
Dr. Clemens Helmbrecht, Director R&D, Particle Metrix GmbH, Inning a. Ammersee (D)
- 14.15 **Single Particle Measurement of Number, Size and Charge is required for Confidence in Nanomedicine Engineering and Development**
Hans van der Voorn, BE (Hons), CEO, Izon Science Ltd, Christchurch (NZL)
- 14.30 **Nanoparticle and Biomolecule Detection in Tissue Sections: a Combined-method Approach from the NanoBioDetect Project**
Prof. Dr. Martin Wiemann, Chief Scientist, IBE R&D, Institute for Lung Health GmbH, Münster (D)
- 14.45 **Chemotherapeutic Drug Selective Nanoparticles and their Application in a Point-of-care Therapeutic Drug Monitoring Device**
Dr. Silke Krol, Laboratory for Translational Nanotechnology, IRCCS Istituto Tumori "Giovanni Paolo II" Bari and NanoMedLab, Fondazione IRCCS Istituto Neurologico "Carlo Besta", Milano (I)
- 15.00 **Technology Platform for the Production of Lipid-based Nanovesicles as New Nanomedicines**
Dr. Santi Sala, PhD, MBA, CEO, Nanomol Technologies SL Bellaterra, Barcelona (E)
- 15.15 **Monitoring of Protein Aggregation in Injectable Vaccines Syringes: a New Direct in Situ & Contact-less Technique**
Dr. David Jacob, CTO, Cordouan Technologies, Pessac (F)
- 15.30 **Questions and Debate**
- 16.00 **Break**

Section 7: Plenary Session

Tuesday, Hall Montreal

- Plenary Chair **18. Cancer Vaccination and Redefining Cancer** (50' & 15' Questions and Debate)
Prof. Dr. Dan Peer, Chair, Tel Aviv University Cancer Biology Research Center, Director, Center for Translational Medicine, Director, Laboratory of Precision Nanomedicine, Dept. of Cell Research & Immunology, and Dept. of Materials Science & Engineering, Tel Aviv University, Tel-Aviv (IL)
- About** Progress in understanding the immune system has significantly advanced the potential of cancer prevention and cancer therapy. This session will feature the state-of-the-art immune-therapies approaches and cancer vaccines as novel therapeutic modality in oncology.
- 10.50 **From Papillomavirus Discovery to Cancer Vaccination**
Prof. Dr. med. Dr. h.c. mult. Harald zur Hausen, Professor emeritus, Nobel Laureate, German Cancer Research Center (DKFZ), Heidelberg (D)
- 11.40 **Questions and Debate**
- 11.55 **Redefining Cancer with Integrative Tumor Immunology: Novel Cutting Edge Immunotherapies for Patients**
Prof. Dr Jérôme Galon, Research Director, Chief French National Institute of the Health and Medical Research (INSERM) laboratory of Integrative Cancer Immunology, Cordeliers Research Center, Paris (F)
- 12.45 **Questions and Debate**
- 13.00 **Lunch**

Section 8: Satellite 3 – Closed Session for IPRP Regulatory Authorities

Satellite	Tuesday, Hall Mexico 19. Closed IPRP (International Pharmaceutical Regulators Programme) Session for Regulatory Authorities
Chair	Dr. Michael Johnston, PhD , Research Scientist, Centre for Biologics Evaluation and Genetic Therapies Directorate, Health Canada, Ottawa (CND)
About	The International Pharmaceutical Regulators Programme (IPRP) holds its Nanomedicines Working Group meeting 2018 in Basel at the neutral CLINAM-Platform to discuss nanotechnology and specifically nanomedicine related issues relevant to regulated products. The meeting provides members a unique opportunity to leverage the expert scientific knowledge, regulatory and operational experience, on-going technical harmonization work, and information access of other participating regulators. Goals of the meeting include sharing of regulatory developments at national and international levels, support the international regulatory cooperation and furthering training opportunities. (The schedule of this meeting will be handed out to all invited participants.)
13.00	Group Lunch
13.45	Tuesday, Hall Osaka IPRF Meeting
	Speakers Dr. Michael Johnston , Research Scientist, Principal Investigator, Health Canada, Ottawa (CND) Dr. med. Frank F. Weichold, PhD , Director of Critical Path and Regulatory Science Initiatives, Office of Regulatory Science & Innovation (ORSI) and Office of the Chief Scientist/Office of the Commissioner Food and Drug Administration (FDA), Silver Spring, MD (USA) Dr. Anil Patri , Chair, Nanotechnology Task Force, Director, NCTR-ORA Nanotechnology Core Facility, U.S. Food and Drug Administration (FDA), National Center for Toxicological Research (NCTR), Jefferson, AR (USA) Dr. Katherine Tyner , Associate Director for Science (acting), Office of Pharmaceutical Quality CDER/FDA, Springfield, IL (USA) Dr. Yuki Takechi-Haraya, PhD , Research Scientist, Division of Drugs, National Institute of Health Sciences (NIHS), Kawasaki (JPN) Heico Frima , Research Programme Officer, European Commission, DG Research & Innovation Advanced Materials and Nanotechnologies, Brussels (B) Robert E. Geertsma, M.Sc. , Senior Scientist, Centre for Health Protection RIVM - National Institute for Public Health and the Environment, Bilthoven (NL) Prof. Dr. med. Marisa Papaluca , Senior Scientific Adviser, Scientific Committees Regulatory Science Strategy, European Medicine Agency (EMA), London (UK) Dr. rer. nat. Susanne Bremer-Hoffmann , European Commission, Directorate General Joint Research Centre, Directorate F - Health, Consumers and Reference Materials, Ispra (IT) Dr. Lada Leyens , Clinical Study Reviewer, Division Clinical Trials, Swiss Agency for Therapeutic Products (Swissmedic), Bern (CH) Prof. Dr. Guangjun Nie, PhD , Professor, CAS Key Laboratory for Biomedical Effects of Nanomaterials & Nanosafety, National Center for Nanoscience and Technology of China, Beijing (CHN) ...and further speakers
13.45	Via Video-/Teleconference Dr. Kumiko Sakai-Kato, PhD , Section Head, Division of Drugs, National Institute of Health Sciences (NIHS), Ministry of Health, Labour and Welfare, Tokyo (JPN) Dr. Shinichi Okudaira , Reviewer, Pharmaceutical and Medical Devices Agency (PMDA), Tokyo (JPN) Dr. Ying-Hsin Chang , Senior Reviewer, Center for Drug Evaluation (CDE), Taipei (TWN) Dr. Yen Wei , FDA Taipei (TWN) Dr. Carolina Lopes Krahn , Internal Nanotechnology Committee of ANVISA, Brasília (BRA)

Dr. Thais Correa Rocha, Regulation and Sanitary Surveillance of the National Agency of Sanitary Surveillance – ANVISA (Agência Nacional de Vigilância Sanitária), Brasília (BRA)
... and further speakers

16.00 **Break**

Section 9: 4 Parallel Sessions

Tuesday, Hall Montreal

Parallel 1 **20. Diagnostic and Theranostic Concepts for Personalized Cancer Immunotherapy** (13' plus 2' Question/Debate)

Chair **Prof. Dr. med. Stephan Grabbe**, Director of the Department of Dermatology, Medical Center and Polyclinic, Speaker of the Research Center for Immunotherapy, Mainz (D) **and**
Prof. Dr. Twan Lammers, Experimental Molecular Imaging, RWTH Aachen (D)

About Immunotherapy can induce unprecedented responses in cancer patients. Unfortunately, however, it only works in a relatively small fraction of patients. In this session, diagnostic and theranostic concepts will be discussed that help to stratify responders from non-responders, and that contribute to individualized and improved immunotherapy. In addition, innovative imaging-based nano- and micromaterials will be presented that can help to tailor immunomodulatory interventions.

14.00 **Immune Checkpoint Blockers (ICB) Drive Current Revolution in Immunotherapy from Melanoma across Multiple Tumor Types**

Prof. Alexander Eggermont, Professor of Oncological Surgery General Director of Gustave Roussy, University Paris-Sud (F) and Professor of Oncological Surgery at the Erasmus University of Rotterdam (NL)

14.25 **The Future of Clinical (Cancer) Diagnosis and its Role in Precision Therapy**

Prof. Dr. med. Fabian Kiessling, University Hospital Aachen, Director of the Department for Experimental Molecular Imaging (ExMI) RWTH Aachen University, Director of the Helmholtz Institute for Biomedical Engineering, Aachen (D)

14.40 **Monitoring and Modulating Innate Immunity Using Nanomaterials**

Prof. Dr. Willem Mulder, Professor of Radiology at Icahn School of Medicine at Mount Sinai, NY (USA), Professor of Radiology, ISMMS Professor of Cardiovascular Nanomedicine, Director, Nanomedicine Program, AMC, Amsterdam (NL)

14.55 **Ultrasound-based Approaches to Boost Cancer Immunotherapy**

Dr. Heleen Dewitte, Laboratory for General Biochemistry and Physical Pharmacy, Ghent Research Group on Nanomedicines, Department of Pharmaceutics, Ghent University, Ghent (B)

15.10 **Imaging Biomarkers to Predict the Efficacy of Cancer Immunotherapy**

PD Dr. med. Matthias Miederer, Deputy Director, Department of Nuclear Medicine, University Medical Center Mainz (D)

15.25 **The Role of PET and Radionuclide Therapy in Cancer Immunotherapy**

Prof. Dr. med. Andreas Kjær, PhD, DMSc, Chief Physician, Department of Clinical Physiology, Nuclear Medicine & PET, Rigshospitalet, Copenhagen (DK)

15.40 **Questions and Debate**

16.00 **Break**

Tuesday, Hall Sydney

Parallel 2 **21. Nanomedicine in and against Infection and Inflammation** (12' plus 3' Questions and Debate)
Chair **Prof. Dr. med. Dong Soo Lee, PhD**, Chair, Department of Nuclear Medicine, Seoul National University, Seoul (KOR)

About Recent efforts in nanomedicine research have provided scientists with nanocarriers designed to match the specific requirements for the treatment of different inflammatory and infectious disease conditions. The advances made with such nanocarrier technologies in (targeted) nanomedicine will be highlighted.

14.00 **Nanoparticles as Antivirals**

Prof. Dr. Francesco Stellacci, Supramolecular Nanomaterials and Interfaces Laboratory, Constellium Chair, EPFL, Lausanne (CH)

14.15 **Clarithromycin-PLGA Nanocapsules: A Promising Strategy to Target Intracellular Staphylococcus Aureus and Mycobacterium Abscessus Infections**

Dr. Cristiane de Souza Carvalho Wodarz, Department of Drug Delivery (DDEL), Helmholtz-Institute for Pharmaceutical Research Saarland, Saarbrücken (D)

14.30 **Challenges and Opportunities of Nanomedicine Approaches to Induce Immune Tolerance and Cure Type 1 Diabetes**

Dr. José M Carballido, Executive Director, Translational Research Fellow at Novartis Institutes for BioMedical Research Basel (CH)

14.45 **Biodegradable Silicon Nanoparticles for Targeted Treatment of Bacterial Infection**

Dr. Jinmyoung Joo, Assistant Professor, Department of Convergence Medicine, University of Ulsan, College of Medicine, Biomedical Engineering Research Center, Asan Institute for Life Sciences, Asan Medical Center Seoul (ROK)

15.00 **Clinical Experience with Liposomal Corticosteroids in Inflammation**

Dr. Josbert M. Metselaar, PharmD, PhD, Department of Experimental Molecular Imaging, RWTH Aachen University Clinic, Aachen (D) and CEO Enceladus Pharmaceuticals, Naarden (NL)

15.15 **Biocompatible, Aminocaproic Acid Stabilized Ceria Nanoparticles Reduce Brain Injury after Subarachnoid Hemorrhage**

Dr. med. Dong-Wan Kang, Department of Neurology, Seoul National University Hospital, Seoul (ROK)

15.30 **Questions and Debate**

16.00 **Break**

Tuesday, Hall Singapore

Parallel 3 **22. Targeting and Drug Delivery in Nanomedicine and Precision Medicine** (12' plus 3' Questions and Debate)
Chair **Dr. Marieluise Wippermann**, CEO, TecoMedical Ltd, Sissach (CH)

About In recent years, the use of nanomedicine formulations for therapeutic and diagnostic applications has increased exponentially. Many different systems and strategies have been developed for drug targeting to pathological sites, as well as for visualizing and quantifying important (patho-) physiological processes. These new technologies are considered to be highly useful for personalizing nanomedicine-based (chemo-)therapeutic interventions. The speakers will address some of the pressing questions in the field: Are we meeting the expectations? And how do collaborative teams of researchers-industry-physicians develop better nano-therapeutics?

- 14.00 **Precise Endovascular Drug Delivery for Optimal Efficacy and Minimal Toxicity in Oncology**
Dr. med. Eldad Elnekave, Director Interventional Oncology Clinic, Davidoff Cancer Institute & Radiology Department, Rabin Medical Center, Chief Medical Officer, Zebra Medical Vision, LTD., Tel Aviv (IL)
- 14.15 **Targeted Nano-therapeutics Aiming at the Resolution of Liver Diseases**
Dr. Ruchi Bansal, PhD, Assistant Professor, Biomaterials Science and Technology (BST), MIRA Institute, University of Twente (NL)
- 14.30 **Precision Cancer Nanomedicine with Tumor Homing Peptides and Peptidomimetics**
Prof. Dr. Tambat Teesalu, Head of the Lab of Cancer Biology, Institute of Biomedicine and Translational Medicine, University of Tartu (EST), Adjunct Assistant Professor Cancer Research Center, Sanford Burnham, Prebys Medical Discovery Institute, La Jolla, CA (USA)
- 14.45 **Nanomedicines Targeting the Multiple Myeloma-Stroma Alliance**
Prof. Dr. Gert Storm, Institute for Pharmaceutical Sciences, Utrecht University, Utrecht (NL)
- 15.00 **Development of Biohybrid Multistage Nanovaccines for Melanoma**
Flavia Fontana, MSc. Pharm., Drug Research Program, Faculty of Pharmacy, University of Helsinki (FIN)
- 15.15 **Redefining Therapeutic Agents Bioavailability by Transient Nanoparticle Liver Saturation**
Dr. Matthieu Germain, Senior Manager, Chemistry Team, Nanobiotix, Paris (F)
- 15.30 **Delivery of siRNA in Vivo to the Liver Using Redox Sensitive and Ionizable Lipids**
Dr. Daniel Zucker, Business Development Manager for Drug Delivery Systems, NOF Europe GmbH, Frankfurt (D)
- 15.45 **Barcoded Nanoparticles for Amplifying the Personalized Response to Immunotherapy**
Prof. Dr. Avi Schroeder, PhD, Assistant Professor of Chemical Engineering Laboratory for Targeted Drug Delivery and Personalized Medicine Technologies, Technion - Israel Institute of Technology, Haifa (IL)
- 16.00 **Break**
- Tuesday, Hall Rio
- Parallel 4 **23. Novel Approaches in Material Sciences and Smart Materials in Nanomedicine** (9' plus 1' Questions & Debate)
Chair **Prof. Dr. Paolo Decuzzi**, Senior Researcher and Professor, Director of the Laboratory of Nanotechnology for Precision Medicine, Italian Institute of Technology, Genova (I)
- About** Inspired by the behavior of circulating cells, vesicles and blood proteins, nano- and micro-particles with different geometrical and biophysical attributes are being developed. Size, surface properties, shape, and stiffness are known to affect the particle transport across multiple scales – from vascular dynamics to tissue deposition, from cell recognition to membrane crossing and intracellular localization. This session will present novel fabrication strategies and materials architectures for realizing particles with enhanced drug delivery and biomedical imaging properties, as guided by nature.
- 14.00 **Modulating Cell Sequestration, Blood Longevity and Biodistribution by Tuning Nanoconstruct Rigidity**
Prof. Dr. Paolo Decuzzi, Senior Researcher and Professor, Director of the Laboratory of Nanotechnology for Precision Medicine, Italian Institute of Technology, Genova (I)
- 14.10 **Nano Cell Vesicle Technologies (nCVTs): Exploiting Biomimicry for Nanomedicine**
Prof. Dr. Giorgia Pastorin, Associate Professor and Deputy Head (Research), Pharmacy Department, National University of Singapore (SGP)

- 14.20 **Sugar Based Surfactants for Biotherapeutics Permeability-enhancement**
Prof. Dr. Luca Casettari, Associate Professor in Pharmaceutical Technology, University of Urbino Carlo Bo, Department of Biomolecular Sciences, Urbino (I)
- 14.30 **Nano-structured and Nano-sized Shape-memory Polymers for Biomedical Applications**
Prof. Andreas Lendlein, Director of the Helmholtz Zentrum Geesthacht – Zentrum für Material und Küstenforschung, Hamburg (D)
- 14.40 **Mechano-responsive Nano-Medicines**
Prof. Dr. Netanel Korin, PhD, Assistant Professor of Biomedical Engineering, Technion - Israel Institute of Technology, Haifa (IL)
- 14.50 **Cellularized Scaffolds for the Treatment of Myocardial Infarction: from Bench to Bedside**
Dr. Beatriz Pelacho, Scientist at the Centro de Investigación Médica Aplicada (CIMA), Pamplona (E)
- 15.00 **Tumor Microenvironment Targeting Nanorobots: a Promise for a Cure of Cancer**
Prof. Dr. Guangjun Nie, PhD, Professor, CAS Key Laboratory for Biomedical Effects of Nanomaterials & Nanosafety, National Center for Nanoscience and Technology of China, Beijing (CHN)
- 15.10 **Photothermally Activated Magnetoliposomes for Cancer Therapy and Imaging**
Dr. Wafa Al-Jamal, Reader in Nanomedicine and Drug Delivery, Prostate Cancer Research Fellow, School of Pharmacy, Queen's University Belfast (UK)
- 15.20 **Multifunctional Nanoengineered Capsules and Chambers for Time and Site Specific Drug Delivery, In Vivo Application and Use as Cell-Based Delivery Vehicles**
Prof. Dr. Gleb B. Sukhorukov, Chair in Biopolymers and Bio-organic Interfaces, School of Engineering and Materials Science, Queen Mary University of London (UK)
- 15.30 **Questions and Debate**
- 16.00 **Break**

Section 10: Plenary Session

Tuesday, Hall Montreal

Plenary Chair **24. The Regulatory Authorities' Voice 2018**
Signe Ratso, Deputy Director General, DG Research & Innovation DDG3, European Commission, Brussels (B)

About At each CLINAM Summit, the international regulatory authorities make statements on the global cooperation to come to an optimal framework for regulatory matters in nanomedicine and precision medicine. The session helps to create trust and mutual understanding between all stakeholders in nanomedicine and the regulatory authorities. This lowers the barriers to contact the regulatory authorities at an early stage of projects.

16.30 – 18.00

Europe **Prof. Dr. med. Marisa Papaluca**, Senior Scientific Adviser, Scientific Committees Regulatory Science Strategy, European Medicine Agency (EMA), London (UK)

Japan **Dr. Yuki Takechi-Haraya, PhD**, Research Scientist, Division of Drugs, National Institute of Health Sciences, Kawasaki (JPN)

Canada **Dr. Michael Johnston**, Research Scientist, Principal Investigator, Health Canada, Ottawa (CND)

- China** **Prof. Dr. Guangjun Nie, PhD**, Professor, CAS Key Laboratory for Biomedical Effects of Nanomaterials & Nanosafety, National Center for Nanoscience and Technology of China, Beijing (CHN)
- USA** **Dr. med. Frank F. Weichold, PhD**, Director of Critical Path and Regulatory Science Initiatives, Office of Regulatory Science & Innovation (ORSI) and Office of the Chief Scientist/Office of the Commissioner Food and Drug Administration (FDA), Silver Spring, MD (USA)
- USA** **Dr. Katherine Tyner**, Associate Director for Science (acting), Office of Pharmaceutical Quality CDER/FDA, Springfield, IL (USA)
- India** **Prof. Dr. med. Amit Dinda, PhD**, Professor of Department of Pathology, All India Institute of Medical Sciences, and General Secretary for the Indian Society for Nanomedicine, Delhi (IND)
- Switzerland** **Dr. Lada Leyens**, Clinical Study Reviewer, Division Clinical Trials, Swiss Agency for Therapeutic Products (Swissmedic), Bern (CH)
- Africa** **Prof. Dr. Hulda Shaidi Swai**, Extraordinary Professor at University of Pretoria, School of Life Science and Bio-engineering, The Nelson Mandela African Institution of Science and Technology, Pretoria (ZA)

Section 11: Plenary Session

Tuesday, Hall Montreal

- Plenary **25. Ethical Matters** (35' plus 15' Questions and Debate)
- Chair **Dr. med. h.c. Beat Löffler, MA**, CEO of the European Foundation for Clinical Nanomedicine, Basel (CH)

About This traditional ethics plenary session intends to discuss ethical matters in health care and every year CLINAM invites an exponent to speak on a related topic. This year it is Dr. Peter Kapitein, who connects patients, researchers and clinicians to further research, treatments and care in the Netherlands as well as internationally. He organizes congresses, lobbies the matrix of public authorities, health care organizations, insurance companies and health research institutes. He also gives lectures and talks to help patients and society to fight cancer where possible and to live with cancer with a good quality of life.

- 18.00 **How has it Ever Come to This? A Fresh Look at Healthcare**
Dr. h.c. Peter Kapitein, President and Patient Advocate of Inspire2Live, Amsterdam (NL)
- 18.35 **Questions and Debate**
- 18.50 **End of Day 2**
- 18.50 **Official Aperitif offered by the Canton of Basel-Stadt** (Speakers get ready for Dinner)
- 19.35 **Speakers leaving in front of the revolving doors of Congress Center and walk to Hotel Merian-Spitz**
- 20.00 **Speakers' Welcome Aperitif on the Terrace of Merian Spitz**
- 20.20 **Speakers' Dinner at Hall Merian**
(Meet the two outstanding international famous artists Volker Biesenbender & Julio Azcano)

Wednesday, September 5, 2018

Section 12: 4 Parallel Sessions

08.00 **Welcome Coffee**

Wednesday, Hall Montreal

Parallel 1 **26. Cardiology and Atherosclerosis Nanomedicine** (9' plus 1' Questions and Debate)

Chair **Prof. Dr. Harald Mangge**, Interim Head, Clinical Institute for Medical and Chemical Laboratory Diagnosis (CIMCL), Medical University of Graz (A)

About Myocardial infarction and stroke remain killer number one. To sharpen the molecular understanding of new individual risk profiles opens ways to personalized therapy. Biomarkers and nanomedical aspects discussed in this session shall help to improve the diagnosis and therapeutic modification of “fatal check points” of cardiovascular pathology.

08.20 **New Facets of Cardiovascular Disease in Persons Lacking Conventional Risk Factors**

Prof. Dr. Harald Mangge, Interim Head, Clinical Institute for Medical and Chemical Laboratory Diagnosis (CIMCL), Medical University of Graz (A)

08.30 **Eradication of Atherosclerosis – New Steps**

Prof. Dr. med Patrick Hunziker, President of the International Society for Nanomedicine and University Hospital Basel, Basel (CH)

08.40 **The European NanoAthero Project: From the Design to the Clinical Trials**

Prof. Dr. Didier Letourneur, Director of Cardiovascular Bioengineering, Laboratory for Translational Vascular Science, INSERM, Paris (F)

08.50 **Targeted Delivery of Berberine via Liposomes Protects Heart Function in Myocardial Infarction**

Dr. Jiong-Wei Wang, PhD, Department of Surgery, Yong Loo Lin School of Medicine, NUS
Department of Physiology, NUS, Cardiovascular Research Institute (CVRI), National University Heart Centre (NUHCS), Singapore (SGP)

09.00 **Multifunctional Nanomedicines for Targeted Drug Delivery and Imaging for Ischemic Myocardial Injury**

Prof. Dr. Hélder A. Santos, Associate Professor (tenure track) in Pharmaceutical Nanotechnology, Head, Division of Pharmaceutical Chemistry and Technology, Head, Preclinical Drug Formulation and Analysis Group, Director, Doctoral Program in Drug Research, Faculty of Pharmacy and Helsinki Institute of Life Science, University of Helsinki (FIN)

09.10 **High-Throughput Screening of New Lipid Markers for Coronary Artery Disease**

Prof. Dr. med. Reijo Laaksonen, PhD, FESC, Chief Medical Officer, Zora Biosciences Oy, Tampere (FIN)

09.20 **In Vivo Multiplex Molecular Imaging of Vascular Inflammation Using Surface-Enhanced Raman Spectroscopy**

Pasquale Maffia PhD, FHEA, FRBS, FBPhS, FESC, Institute of Infection, Immunity and Inflammation & BHF Centre of Excellence in Vascular Science and Medicine, Laboratory of Immune Cell Visualization and Examination (LIVE), College of Medical, Veterinary and Life Sciences, University of Glasgow (UK)

09.30 **Questions and Debate**

09.40 **Break**

- 08.00 **Welcome Coffee**
Wednesday, Hall Sydney
- Parallel 2 **27. Clinical Imaging in Nanomedicine and Precision Medicine** (9' plus 1' Questions and Debate)
- Chair **Prof. Dr. med. Christoph Alexiou**, Department of Otorhinolaryngology, Head and Neck Surgery, Head Section of Experimental Oncology and Nanomedicine (SEON), Else Kröner-Fresenius-Foundation Professorship, University Hospital Erlangen (D)
- About** Precision medicine has a big recognition by clinicians, patients, and pharmaceutical companies, healthcare responsible and economic healthcare governmental boards. Imaging plays a critical role in precision medicine and includes screening, early diagnosis, guiding treatment, getting response to therapy, and assessing likelihood ratio of disease re-eruption. This session gives insight in different fields of imaging.
- 08.20 **Upscaling of Nanopharmaceuticals for Biomedical Applications**
Prof. Dr. med. Christoph Alexiou, Department of Otorhinolaryngology, Head and Neck Surgery, Head Section of Experimental Oncology and Nanomedicine (SEON), Else Kröner-Fresenius-Foundation Professorship, University Hospital Erlangen (D)
- 08.30 **Live-cell Fluorescence Imaging Platform to Characterize Internalization of Nanomedicines by Human Cells**
Dr. Natalia Vtyurina, Groningen Research Institute of Pharmacy, University of Groningen (NL)
- 08.40 **Radionanomedicine**
Prof. Dr. med. Dong Soo Lee, PhD, Chairman, Department of Nuclear Medicine, Seoul National University Seoul (ROK)
- 08.50 **Intersection of Machine Learning and Complex Neural Networks with Medical Imaging**
Dr. med. Eldad Elnekave, Director Interventional Oncology Clinic, Davidoff Cancer Institute & Radiology Department, Rabin Medical Center, Chief Medical Officer, Zebra Medical Vision, LTD., Tel Aviv (IL)
- 09.00 **Protein-sized and Ultrabright Dye-loaded Polymer Nanoparticles for Intracellular Imaging**
Dr. Andreas Reisch, Assistant Professor (Maître de conférences), Laboratory of Biophotonics and Pharmacology, UMR 7213 CNRS, Faculty of Pharmacy, University of Strasbourg, Illkirch (F)
- 09.10 **Imaging Carbon Nanotubes: Journey from Basic Understanding of the Carrier Biodistribution to Alzheimer's disease Monitoring**
Dr. Julie (Tzu-Wen) Wang, Senior Research and Teaching Fellow in Nanomedicine, School of Cancer and Pharmaceutical Sciences, King's College London (UK)
- 09.20 **Questions and Debate**
- 09.40 **Break**
- 08.00 **Welcome Coffee**
Wednesday, Hall Singapore
- Parallel 3 **28. New Findings for Clinical Therapy and Diagnosis in Cancer Nanomedicine** (12' plus 3' Questions & Debate)
- Chair **Dr. Klaus-Michael Weltring**, Managing Director, Gesellschaft für Bioanalytik Münster e. V., Münster (D)
- About** Development of new methodologies for cancer therapy and diagnosis is a primary goal of current nanomedicine. Immunotherapy employing nanomaterials and imaging tools offers effective ways to stimulate the immune system and assess the outcome of the treatment. Uncovered bacterial composition of tissues shows a new perspective in the battle against breast cancer, while understanding microenvironment of cancer cells helps to identify barriers of pancreatic tumors. Fluorescent nanoparticles for fast ultrasensitive detection of RNA cancer markers and nanocarriers for stimuli-responsive drug release open new possibilities for effective diagnosis and therapy of cancer.

- 08.20 **Breaking New Ground for the Future of Cancer Immunotherapy: Tumor-associated Macrophages, Nanomedicine and Imaging**
Dr. Saeid Zanganeh, PhD, Sloan Kettering Institute for Cancer Research, New York, NY (USA)
- 08.35 **Links Between Bacterial Composition Imbalances and Breast Cancer Tissue**
Stephen R. Grobmyer, MD, FACS, Professor of Surgery, Lerner College of Medicine, Director, Surgical Oncology Co-Leader, Cleveland Clinic Comprehensive Breast Cancer Program, Cleveland Clinic, Cleveland, OH (USA)
- 08.50 **Fluorescent Polymeric Nanoparticles for Ultrasensitive Detection of Nucleic Acid Cancer Markers**
Dr. Andrey S. Klymchenko, Director of Research, Laboratory of Biophotonics and Pharmacology, UMR 7213 CNRS, Faculty of Pharmacy, University of Strasbourg, Illkirch (F)
- 09.05 **Shedding Lights on Cancer Cells and their Microenvironment: a 3D Model to Mimic Pancreatic Tumor Barriers**
Prof. Dr. Simona Mura, Junior Member of the Institut Universitaire de France, Institut Galien Paris-Sud, UMR CNRS 8612, Châtenay-Malabry (F)
- 09.20 **Enhanced Efficacy of Stimuli-Responsive Liposomes of a Doxorubicin-PSA Cleavable Prodrug (L-377202) for Advanced Prostate Cancer**
Sara Pereira, MSc, School of Pharmacy, Queen's University Belfast (UK)
- 09.40 **Break**
- 08.00 **Welcome Coffee**
 Wednesday, Hall Rio
- Parallel 4 Chair **29. Computational Modelling, Valuable Aid in Development of Affordable Precision Medicine** (20')
Prof. Dr. Giacinto Scoles, CNR NANOTEC at LECCE, Campus Ecotekne – Università del Salento, Lecce, Italy (I) and Biology Department, Temple University, Philadelphia, PA (USA) **and**
Dr. Silke Krol, Laboratory for Translational Nanotechnology, IRCCS Istituto Tumori "Giovanni Paolo II" Bari and NanoMedLab, Fondazione IRCCS Istituto Neurologico "Carlo Besta" Milano (I)
- About** How do computational modelling strategies improve and facilitate drug delivery concepts and assist to the treatment of diseases? How can precision medicine deliver a treatment to the patient at an affordable price? The virtual patient gains new importance in the era of tailored nanomedicine, genetics and precision medicine.
- 08.20 **Cellular Materials for Organ Chip Research**
Prof. Dr. Giacinto Scoles, CNR NANOTEC at Lecce, Campus Ecotekne – Università del Salento, Lecce, Italy (I) and Biology Department, Temple University, Philadelphia, PA (USA)
- 08.40 **The Role of Digital Transformation in the Quest for Affordable Innovation**
Dr. Steliyan Tinkov, MBA, PMP, Senior Pilot Plant Manager, Novartis Pharma AG, Basel (CH)
- 09.00 **A Virtual Patient Model for Personalized Drug Response Predictions in Oncology**
Dr. Christoph Wierling, Head of Bioinformatics and Modelling, ALACRIS Theranostics Germany GmbH, Berlin (D)
- 09.20 **Questions and Debate**
- 09.40 **Break**

Section 13: Satellite 4 – SAMS (SAMW) Personalized Health

A Session for SAMW-registrars and all CLINAM Participants

Wednesday, Hall Osaka

Satellite **30. Swiss Excellence in Science: SAMS/SPHN Workshop on Personalized Health** (20')

A Satellite in collaboration with the SAMS

Chair **Prof. Dr. Torsten Schwede**, Director of the SPHN Data Coordination Center and chair of the SPHN Executive Board, Biozentrum, University of Basel & SIB Swiss Institute of Bioinformatics, Basel (CH)

About The Swiss Academy of Medical Sciences (SAMS) was mandated 2016 by the State Secretariat for Education, Research, and Innovation (SERI) and by the Federal Office of Public Health (FOPH) to develop a Swiss Personalized Health Network (SPHN). During the period 2017–2020, priority is given to the development of a nationally coordinated data infrastructure, for which the Swiss Institute of Bioinformatics (SIB) has been mandated to coordinate and organize through the Data Coordination Center and the Biomed IT project. The aim is to ensure data interoperability of local and regional information systems with special emphasis on clinical data management systems enabling effective exchange of patient data (e.g. disease phenotypes).

08.30 **Overview of Swiss Personalized Health Network SPHN**

Prof. Dr. med. Peter Meier-Abt, Chairman of the National Steering board of Swiss Personalized Health Network (SPHN), Bern/Zürich (CH)

08.50 **Building an Interoperable Data Ecosystem for Personalized Health Research in Switzerland**

Prof. Dr. Torsten Schwede, Director of the SPHN Data Coordination Center and chair of the SPHN Executive Board, Biozentrum University of Basel & SIB Swiss Institute of Bioinformatics, Basel (CH)

09.10 **Computational Oncology & Molecular Modeling – the Development of Novel Strategies**

Dr. med. Krisztian Homicsko, Head of Clinic, Service of Medical Oncology, CHUV – Department of Oncology, Research Scientist, EPFL, Lausanne (CH)

09.30 **Questions and Debate**

09.40 **Break**

10.10 **The Personalized Swiss Sepsis Study**

PD Dr. med. Adrian Egli, Department of Biomedicine, University Hospital Basel (CH)

10.30 **Report on Swiss Electronic Informed Consent (eConsent)**

Prof. Dr. Christiane Pauli-Magnus, Head of Department Clinical Research, University of Basel (CH)

10.50 **Questions and Debate**

11.15 **SHORT BREAK TO CHANGE TO PLENARY HALL MONTREAL**

12.40 **Lunch**

SAMW-registrars have free access to the CLINAM-Summit for the rest of the day.

Section 14: 4 Parallel Sessions

Wednesday, Hall Montreal

Parallel 1 **31. New Aspects of Physics in Nanomedicine Relating to Clinic**

Chair **Prof. Dr. Wolfgang J. Parak**, Physics Department, CHYN - Center for Hybrid Nanostructures, University of Hamburg (D)

About This session focuses on the latest advances relevant to nanomedicine originating from physicochemical and physical concepts. The focus here will be to present new techniques related to delivery and targeting, and how this can be understood by fundamental concepts.

10.10 **Towards Detecting the Protein Corona In Vivo**

Prof. Dr. Wolfgang J. Parak, Physics Department, CHYN - Center for Hybrid Nanostructures, University of Hamburg (D)

10.25 **Gold Nanoparticle-based Artificial Antibody Created by Conformational Engineering**

Prof. Dr. Aoneng Cao, PhD, Professor at the Institute of Nanochemistry and Nanobiology Shanghai University, Shanghai (CHN)

10.40 **Magnetic Drug Targeting: Preclinical in Vivo Studies, Mathematical Modelling, and Extrapolation to Human**

Prof. Dr. Khuloud T. Al-Jamal, Chair of Drug Delivery & Nanomedicine, King's College London (UK)

10.55 **Questions and Debate**

11.15 **SHORT BREAK: STAY IN PLENARY HALL MONTREAL**

Wednesday, Hall Sydney

Parallel 2 **32. Degenerative Diseases Nanomedicine** (12' plus 3' Questions and Debate)

Chair **Dr. Zahraa Al-Ahmady, BSc., MSc., PhD**, Division of Pharmacy and Optometry, Faculty of Biology, Medicine, and Health, Stopford Building, the University of Manchester, Manchester (UK)

About We are witnessing massive investments in targeted delivery of biopharmaceuticals, including nucleic acid-based therapeutics, with a key task to breach biological barriers in order to engage the target. These biological barriers still present a formidable challenge to successful site-specific drug delivery. For example, the blood-brain-barrier (BBB) is a considerable obstacle to successful delivery of promising neurotherapeutics into the brain and accounts for failure of a large number of central nervous system drug development initiatives. This session addresses cutting-edge technologies for harnessing the BBB and introduces biomimetic and multifunctional design features that could potentially transform the future development of nanopharmaceuticals for improved treatment and management of a wide range of brain diseases and disorders.

10.10 **Novel Neuronanopharmaceuticals for Alzheimer's Disease**

Prof. Dr. Moein Moghimi, Professor of Pharmaceutics and Nanomedicine, School of Pharmacy, Newcastle University, Institute of Cellular Medicine, School of Medicine, Newcastle University (UK) and Adjoint Professor, University of Colorado Medical Center, Boulder, CO (USA)

10.25 **Prions: Deadly Self-replicating Nanomachines**

Prof. Dr. med. Adriano Aguzzi, PhD h.c., DVM h.c. FRCP, FRCPath, Director of the Institute of Neuropathology, University Hospital of Zürich (CH)

10.40 **Selective Drug Delivery Approaches to Lesioned Brain through Blood Brain Barrier Disruption**

Dr. Zahraa Al-Ahmady, BSc., MSc., PhD, Division of Pharmacy and Optometry, Faculty of Biology, Medicine, and Health, Stopford Building, Manchester (UK)

10.55 **Developing Cell-targeted, Brain-penetrating Polymeric Nano-micelles to Treat Neurodegenerative Diseases**

Dr. Daniel Gonzalez Carter, PhD, Innovation Center of NanoMedicine, Kawasaki Institute of Industrial Promotion, Kawasaki City (JPN)

11.10 **Questions and Debate**

11.15 **SHORT BREAK TO CHANGE TO PLENARY HALL MONTREAL**

Wednesday, Hall Singapore

Parallel 3 **33. Regenerative Medicine and Biomedical Engineering** (12' plus 3' Questions and Debate)

Chair **Dr. Nadia Benkirane-Jessel**, Research Director and Head, Osteoarticular and Dental regenerative Nanomedicine Laboratory, INSERM (French National Institute for Health and Medical Research), Strasbourg (F)

About This session addresses the translational research in tissue engineering and molecular biology and as well the application of engineering principles and design concepts to medicine and biology for diagnosis and therapy of patients.

10.10 **Combined Advanced Therapeutic Medical Device and Stem Cells for Regenerative Nanomedicine**

Dr. Nadia Benkirane-Jessel, Research Director and Head, Osteoarticular and Dental Regenerative Nanomedicine Laboratory, INSERM (French National Institute for Health and Medical Research), Strasbourg (F)

10.25 **Non-destructive Three-dimensional Analysis of Repaired Peripheral Nerves Using X-ray Microtomography**

Dr. Georg Schulz, Biomaterials Science Center (BMC), University of Basel, Allschwil (CH)

10.40 **Programmable Design of Tissue-mimetic Materials**

Prof. Dr. Ronit Freeman, Associate Professor, Department of Applied Physical Sciences, University of North Carolina at Chapel Hill, Chapel Hill, NC (USA)

10.55 **Questions and Debate**

11.15 **SHORT BREAK TO CHANGE TO PLENARY HALL MONTREAL**

Wednesday, Hall Rio

Parallel 4 **34. EUNCL European Nanomedicine Characterization Laboratory – Lessons learned** (10')

Chair **Patrick Boisseau**, CEA-Léti, EUNCL Infrastructure Coordinator, Chairman of the ETPN, Grenoble (F)

About The EUNCL has the mission to provide a trans-disciplinary testing infrastructure covering a comprehensive set of preclinical characterization assays (physical, chemical, in-vitro and in-vivo biological testing) allowing researchers to fully comprehend the biodistribution, metabolism, pharmacokinetics, safety profiles and immunological effects of their Med-NPs. The session gives a status report and the lessons learned in the process of the development.

10.10 **Introduction to EUNCL**

Patrick Boisseau, CEA-Léti, EUNCL infrastructure coordinator, Chairman of the ETPN, Grenoble (F)

10.20 **How to Get Your Nanomedicines Processed by EUNCL?**

Dr. Simon Baconnier, Innovation Project Manager, CEA-Clinathec, Grenoble (F)

10.30 **The Regulators' Needs: Towards Standardization**

Dr. Susanne Bremer-Hoffmann, PhD, Team Leader European Commission Directorate General Joint Research Centre Directorate F – Health, Consumers and Reference Materials Consumer Products Safety, Ispra (I)

10.40 **New Frontiers in Characterizations: the Example of Liposomal Irinotecan Nanomedicine**

• **Dr. Sven Even Borgos**, Research Scientist at SINTEF Materials and Chemistry, Department of Biotechnology and Nanomedicine, Trondheim (N) • **Dr. Neill Liptrott, BSc., MSc., PhD, MRSB**, Tenure-track Fellow, Nano-immunotoxicology (Biocompatibility) & Immunopharmacology Nanomedicine Research Group, Dept. of Molecular and Clinical Pharmacology Institute of Translational Medicine, University of Liverpool (UK) • **Patrick Boisseau**, CEA-Léti, EUNCL

infrastructure coordinator, Chairman of the ETPN, Grenoble (F) • **Prof. Dr. Adriele Prina-Mello, PhD**, Ussher Assistant Professor/LBCAM Director Trinity Translational Medicine Institute (TTMI)/ Department of Clinical Medicine, School of Medicine and AMBER/CRANN, Trinity College Dublin, University of Dublin (IRL) • **Dr. Fanny Caputo**, EUNCL responsible of the physical-chemical characterization, CEA Grenoble/LETI/DTBS, Grenoble (F)

11.05 **Questions and Debate**

11.15 **SHORT BREAK TO CHANGE TO PLENARY HALL MONTREAL**

Section 15: Plenary Session

Wednesday, Hall Montreal

Plenary Chair **35. New Nano-pharmacological Concepts for the Treatment of Cancer** (25' plus 10' Questions and Debate)
Prof. Dr. med. Patrick Hunziker, President of the International Society for Nanomedicine and University Hospital Basel (CH)

About Two most experienced pioneers and experts in nanomedicine will speak about their nano-pharmacological concepts for the treatment of cancer.

11.30 **The Squalenylation, a Generic Approach for the Conception of New Nanomedicines**
Prof. Dr. Patrick Couvreur, Membre de l'Institut Universitaire de France, UMR CNRS 8612, Université Paris-Sud, UFR de Pharmacie, Chatenay-Malabry (F)

11.55 **Questions and Debate**

12.05 **Nano-enabled Chemo- and Immunotherapy for Pancreas Cancer**
Prof. Dr. André Nel, M.B. Ch.B., PhD, Distinguished Professor of Medicine, Associate Director California NanoSystems Institute, Chief of Nanomedicine and Director of the Center for Environmental Implications of Nanotechnology, UCLA, Los Angeles, CA (USA)

12.30 **Questions and Debate**

12.40 **Lunch**

➤ **During this lunch break the poster prizes will be awarded.**

Section 16: 4 Parallel Sessions

Wednesday, Hall Montreal

Parallel 1 Chair **36. Novel Preclinical Approaches to Nanomedicine and Targeted Therapies** (15' incl. 2' for first Questions)
Prof. Dr. Gert Storm, Institute for Pharmaceutical Sciences, Utrecht University, Utrecht (NL)

About The session elucidates the treatment of high-risk soft tissue sarcoma from comparative oncology trials towards clinical application, discusses selection criteria during preclinical evaluation and preclinical screening, models for the optimization of nanomedicine formulations, the improvement of vascularization with 2D angiogenesis and 3D osteosarcoma microtissues and a novel approach for metastatic cancer treatment.

13.45 **Novel Thermosensitive Liposomes for Neoadjuvant Treatment of High-risk Soft Tissue Sarcoma; From Comparative Oncology Trials Towards Clinical Application**
Prof. Dr. med. Lars Lindner, Head Sarcoma Medical Oncology, University of Munich (D)

- 14.00 **Selection Criteria during Preclinical Evaluation and Results from Integrin Targeting RS Polymer Drug Conjugates for Solid Tumors**
Prof. Dr. Rana Sanyal, CSO, RS Research Inc., Director of Center for Life Sciences and Technologies, Bogazici University, Istanbul (TR)
- 14.15 **The Zebrafish: A Preclinical Screening Model for the Optimization of Nanomedicine Formulations**
Dr. Sandro Sieber, Department of Pharmaceutical Sciences, Division of Pharmaceutical Technology, University of Basel (CH)
- 14.30 **A Nanostrategy for Dynamic Monitoring Patient Therapy Response**
Jing Wang, PhD Candidate, Australian Institute for Bioengineering and Nanotechnology, University of Queensland, St. Lucia (AUS)
- 14.45 **Sarah Nanotechnology: A Novel Approach for Metastatic Cancer Treatment**
Dr. Sarah Kraus, PhD, M.B.A., Head of Biology Department, New Phase Ltd, Petah Tikva (IL)
- 15.00 **Questions and Debate**
- 15.15 **Break**
- Wednesday, Hall Sidney
- Parallel 2 **37. Rare and Neglected Diseases** (12' & 3' for first Questions)
Chair **Prof. Dr. Pascal Mäser**, Head, Parasite Chemotherapy, Swiss Tropical & Public Health Institute, Basel (CH)
- About** Parasites are the causative agents of a plethora of human diseases. In the absence of effective vaccines, their sustainable control largely depends on chemotherapy but is jeopardized by the evolution of drug resistance. While this threat is particularly acute for malaria, it also affects other parasitoses and the vectors. Nanoparticles offer hope to circumvent drug resistance, for instance by improving drug delivery to the target.
- 13.45 **Introduction**
Prof. Dr. Pascal Mäser, Head, Parasite Chemotherapy, Swiss Tropical & Public Health Institute, Basel (CH)
- 14.00 **Efficacy and Safety of Bovine Lactoferrin Nanocarriers for Treatment of Placental Malaria and Pregnancy Induced Complications in Murine Model**
Dr. Namrata Anand, Postdoctoral Fellow, Department of Zoology, Panjab University, Chandigarh (IND)
- 14.15 **Formulation and in Vitro and in Vivo Anti-malarial Evaluation of Artesunate-loaded Ethosomes**
Chinazom Precious Agbo, MSc, Lecturer in the Department of Pharmaceutics University of Nigeria, Department of Pharmaceutics, Nsukka, Enugu State (NGA)
- 14.30 **Solid Lipid Emulsions For Delivery of Water-Insoluble Drug Candidates against Leishmaniasis**
Dr. Mehmet Hikmet Üçışık, Department of Biomedical Engineering, School of Engineering and Natural Sciences Istanbul, Medipol University, Istanbul (TUR)
- 14.45 **Schistosomiasis: New Data uncovering a major health problem in Eastern Kongo**
Maurice Mutro Nigo, PhD Student, Bunia (DRC), CLINAM Lab and University of Basel, Basel (CH)
- 15.00 **Questions and Debate**
- 15.15 **Break**

Wednesday, Hall Singapore

Parallel 3 **38. Safety of Nanomedicine by Design & Testing for Toxicity** (12' incl. 3' for first Questions)
Chair **Prof. Dr. med. János Szebeni**, Head of the Nanomedicine Research and Education Center, Semmelweis University, Budapest (H)

About For therapeutic nanoparticles, developed for human use there is an absolute need to withstand critical toxicological analysis. Only after this thorough investigation, it is possible to establish the clinical value of a drug delivery concept. Nanotoxicology is a maturing discipline in need of amelioration and the sine qua non for successful use of particles in human.

13.45 **Roadmap and Strategies for Overcoming Infusion Reactions to Nanomedicines**
Prof. Dr. med. János Szebeni, Head of the Nanomedicine Research and Education Center, Semmelweis University, Budapest (H)

14.00 **Anti-polyethylene-glycol Antibody Response to PEGylated Nanoparticles**
Dr. Tatsuhiko Ishida, PhD, Department of Pharmacokinetics and Biopharmaceutics, Institute of Biomedical Sciences, Tokushima University, Tokushima (JPN)

14.15 **Complement Activation-related Pseudoallergy (CARPA) as a Possible Reaction Behind Hypersensitivity Signs During Hemodialysis**
PD Dr. László Dézsi, PhD, Senior Researcher, Adjunct Professor, Semmelweis University, Institute of Pathophysiology, Nanomedicine Research and Education Center & SeroScience Ltd., Budapest (H)

14.30 **Role of Natural Antibodies and Protein Corona in Variability and Efficiency of Complement C3 Deposition on Preclinical and Clinical Nanomedicines**
Prof. Dr. Dmitri Simberg, Assistant Professor, Skaggs School of Pharmacy and Pharmaceutical Sciences, Colorado Center for Nanomedicine and Nanosafety (CCNN), University of Colorado, Denver, CO (USA)

14.45 **Nanomedicine Safety Testing in a Porcine Model: Questions Regarding Validity for Preclinical Testing and Mechanism**
Dr. med. Rudolf Urbanics, PhD, Semmelweis University & Geoscience Ltd., Budapest (H)

15.00 **Questions and Debate**

15.15 **Break**

Wednesday, Hall Rio

Parallel 4 **39. Nanomedicine Applications and Platforms in Delivery and Precision Medicine** (12' plus 3' Questions/Debate)
Chair **Prof. Dr. Moein Moghimi**, Professor of Pharmaceutics and Nanomedicine, School of Pharmacy, Newcastle University, Institute of Cellular Medicine, School of Medicine, Newcastle University (UK) and Adjoint Professor, University of Colorado Medical Center, Boulder, CO (USA)

About This session elucidates delivery systems, targeted liposomes, lipid-nanoparticle formulations for mRNA delivery and theranostic agents for tumor diagnosis.

13.45 **Novel Oral Self-nanoemulsifying Delivery Systems of Gentamicin: New Frontier against Cerebrospinal Meningitis**
Prof. Dr. Anthony A. Attama, Drug Delivery and Nanomedicines Research Group, Department of Pharmaceutics and Pharm. Microbiology, Faculty of Pharmaceutical Sciences, University of Nigeria, Nsukka, Enugu State (NGA)

- 14.00 **Lipid-nanoparticle Formulations for mRNA Delivery: A Focus on Cellular Uptake and Trafficking Mechanisms**
Dr. Audrey Gallud, PhD, Department of Biology and Biological Engineering, Division of Chemical Biology, Chalmers University of Technology, Göteborg (S)
- 14.15 **Novel Layered Double Hydroxide Nanoplatform as Ultrasensitive T1-MRI Contrast Agent and Theranostic Agent for Mice Tumor Diagnosis and Complete Treatment**
Bei Li, MSc., PhD Student, Australian Institute for Bioengineering and Nanotechnology, University of Queensland, Brisbane (AUS)
- 14.30 **Targeted Liposomes for Preterm Labor Management: Development, Optimization and Scale up towards Clinical Translation**
Dr. Fransisca Leonard, PhD, Faculty Fellow/Instructor, Department of Nanomedicine, Houston Methodist Research Institute, Houston, TX (USA)
- 14.45 **Questions and Debate**
- 15.15 **Break**

Section 17: Satellite 5 – International Cooperation

Wednesday, Hall Osaka

- Satellite Chair **40. EU-US Nanomedicine Community of Research** (12' & 3' for Questions and Debate)
Dr. Anil Patri, Chair, Nanotechnology Task Force, Director, NCTR-ORA Nanotechnology Core Facility, U.S. Food and Drug Administration (FDA), National Center for Toxicological Research (NCTR), Jefferson, AR (USA)
- 13.45 **Setting the Scene - History of the EU-US Cooperation in Nano**
Dr. Lisa Friedersdorf, Director of the National Nanotechnology coordination Office of the USA (NNCO) National Science and Technology Council Executive Office of the President of the United States, Alexandria, VA (USA) **and**
Heico Frima, Research Programme Officer, European Commission, DG Research & Innovation Advanced Materials and Nanotechnologies, Brussels (B)
- 14.00 **Introduction of the Nanomed CoR**
Dr. Anil Patri, Chair, Nanotechnology Task Force, Director, NCTR-ORA Nanotechnology Core Facility, U.S. Food and Drug Administration (FDA), National Center for Toxicological Research (NCTR), Jefferson, AR (USA) **and**
Patrick Boisseau, CEA-Léti, EUNCL Infrastructure Coordinator, Chairman of the ETPN, Grenoble (F)
- 14.15 **The EU-US Cooperation on Characterization of Nanopharmaceuticals**
Dr. Scott E. McNeil, Director, Nanotechnology Characterization Laboratory, National Cancer Institute, Vice-President, Leidos Biomedical Research Inc., Frederick, MD (USA) **and**
Dr. Simon Baconnier, Innovation Project Manager, CEA-Cinatec /EUNCL, Grenoble (F)
- 14.30 **The EU-US Cooperation in Standardization of Analytical Methods**
Dr. Matthias Roesslein, Senior Scientist Empa St. Gallen, Member of the Core Expert Team (CET) of the EU-NCL, St. Gallen (CH) **and**
Dr. Bryant C. Nelson, Ph.D., Staff Research Chemist, National Institute of Standards and Technology (NIST), Gaithersburg, MD (USA)
- 14.55 **Open Discussion with All Members and Groups Related to Nanomedicine in Europe and the US**
Some Organisations: **CLINAM Lab, California NanoSystems Institute, Center for Environmental Implications of Nanotechnology, UCLA, SINTEF Materials and Chemistry, Department of Biotechnology and Nanomedicine** ...and others

15.15 **Break**

Section 18: Plenary Session

Wednesday, Hall Montreal

Plenary Chair **41. Nanomedicine and Targeted Delivery – Late Breaking and Ongoing Trials** (12' plus 3' Questions/Debate)
Dr. Heinrich Haas, Vice President Drug Delivery, BioNTech RNA Pharmaceuticals GmbH, Mainz (D)

15.45 **Ongoing Phase 2 Trial of Lead Candidate, SEL-212, in Development for Chronic Severe Gout**
Dr. Werner Cautreels, CEO, Selecta Biosciences, Watertown/Boston, MA (USA)

16.00 **CriPec® Platform and Lead Product CriPec® Docetaxel: Principles, Preparation, Biomedical Applications and Clinical Translation**
Dr. Cristianne J. F. Rijcken, PharmD, PhD, Founder and CSO, Cristal Therapeutics, Maastricht (NL)

16.15 **Intravenously Injectable mRNA-lipoplex Nanoparticles for Tumor Immunotherapy: Clinical Update from a First-in-human Phase I/II trial**
Dr. Heinrich Haas, Vice President Drug Delivery, BioNTech RNA Pharmaceuticals GmbH, Mainz (D)

16.30 **Liposome Platform Addressing Unmet Medical Needs in Oncology and Neurology**
Dr. Stefan Halbherr, PhD, Manager Research and Development, InnoMedica Holding AG, Bern (CH)

16.45 **Questions and Debate**

17.10 **Closing Words**

17.20 **End of CLINAM 11/2018**

18.00 **Leaving in front of Congress Center and walking to Restaurant Brauerei**

18.15 **Light Farewell Dinner**

This Programme is subject to changes and under the responsibility, ownership and copyright of the European Foundation for Clinical Nanomedicine (CLINAM) in Basel, Switzerland.

General Information

1. Foyer Workshops

After stakeholders in exosomes last year found a great interest in having an open circle in the foyer to discuss together with success, CLINAM 2018 introduces a forum with 30 seats and a screen in the foyer. Here topics of high interest (e.g. atherosclerosis, mechanisms of nano interacting with life, but also presentations of exhibitors) will be discussed. Also an additional session for small speeches will be held. A kick-off speech of an expert will open each debate. These debates are scheduled for 30-60 minutes. The programme will be in the conference bags.

2. Topics of Abstracts for Posters

The CLINAM Foundation is glad that every year the amount of submissions is increasing and we hope to see a lot of new research progresses and findings. At CLINAM you have the possibility to present your work on a worldwide platform with members from more than 35 countries. The topics of abstracts are:

Clinical Topics: Nanomedicine and targeted delivery and precision medicine for cardiovascular disease, rheumatic disease, oncology, gastro-intestinal/hepatic disease, bacterial infection, viral infection, parasitic infection, implantology, inflammation, hematology, diabetes, neurology, neurosurgery, orphan diseases, eye and ear disease, tuberculosis, HIV, Ebola, tissue repair, orthopedics, etc.

Technology Topics: Nanosystems, nanoparticles, nanoanalytics and diagnostics, toxicology, nano-imaging, targeted drug delivery, using nanoparticles, GMP and quality assurance, propositions for solving a medical problem in a novel way by the use of nanotechnology, novel concepts and ideas if they can be supported by thorough reasoning and could lead to novel research and solutions. Materials for use in nanotechnology and targeted medicine, concepts, diagnosis and therapy in the field of personalized medicine: clinical diagnosis and management on the individual patient's clinical signs and symptoms, medical and family history, and data from laboratory and imaging evaluation to diagnose and treat illnesses, genetic testing leading to more personalized treatments. In addition, relevant novel tools for translational research and diagnostics, etc.

Implications Topics: Implications of nanomedicine for society, developing countries, environment, risks and benefits, public health finance, health economics, etc.

Strategy, Government and Political Topics: Strategy building and policy processes in nanomedicine. Strategic approaches towards establishing a unified funding area for nanotechnologies for medical research. Policy processes to foster leadership in nanomedicine, regulatory authority topics as well as financial and marketing matters.

Industry Topics: Industry projects and solutions in nanomedicine and targeted medicine, tools related to nanomedicine and targeted medicine. Industry models for future large-scale production, good manufacturing practice, etc.

Regulatory and Societal Affairs, Networking and Financing Topics: Regulatory issues in nanomedicine, strategy and policy, the patient's perspective, ethical issues in nanomedicine, University Village presentations, cutting-edge EU-project presentations, networking for international consortium formation, venture funding, fund investment and business-angel-investment.

3. Ongoing Submission of Poster Abstracts until 2 weeks before the Summit

Poster abstracts were accepted to be printed in the proceedings until July 10 at latest. Later submissions can be sent until 2 weeks before the summit but will not be included in the proceedings and the presenters must bring at least 20 handouts of their abstracts with them. One handout has to be deposited at registration for the poster jury.

Submission Procedure (sending poster abstract)

Abstract: Send us your poster-abstract (Microsoft Word, RTF or Open document file format, using Times New Roman, font size 11, single spacing, **NO PDF**). The submission must **not be longer than three pages**, including metadata and figures (one figure is obligatory). All illustrations, figures and tables must be placed within the text at the appropriate points. Index your file as follows: [Last name.First name.abstract18.docx](#)

Biography: Please attach your NARRATIVE CV, max. one page, in your mail as separate document. No more than 5 titles of recent publications can be included. Index your file as follows:
[Last name.First name.CV18.docx \(or RTF etc.\)](#).

Portrait Photo: Send us a head picture in gif or jpg, minimum 300 dpi. **DO NOT COPY PASTE THE PICTURE BUT SEND IT AS AN ATTACHMENT.** Index your file as follows: [Last name.First.Name.Picture18.jpg \(or gif\)](#).
All correspondence relating to the Submission 2018 have to be sent to submit18@clinam.org

Decision Regarding Acceptance: Decision for acceptance or declination **will be given as soon as possible but at latest within 2 weeks after submission.** You will receive a decision e-mail, regarding the acceptance or declination of your work. Decisions of the committee cannot be discussed.

Presentation Times, Size of Posters, Installation of Posters

Posters will be located in the foyer visible for all conference attendees. The meeting breaks and lunches will be the preferred time to study the posters. During lunch and breaks, the authors are asked to be present close to their poster. Posters are to be presented in the size of 1.40 meter high and 1.00 meter wide. Best posters will be awarded with a prize. Poster installation is September 3, 2018 from 6.30 until 8.00 am latest and the posters can be removed on September 5, after 3.00 pm and latest until 6.00 pm.

4. University Village Tables

The University Village is an exquisite forum for universities and research institutes, giving them opportunity to present themselves as well as novel approaches, new research projects and initial outcomes of research, and patents. Researchers and engineers can use the foyer to install exhibition tables as one-stop-shops for the large spectrum of conference participants. A University Village table costs 500.— € and includes 1 student's registration. Tables are booked by writing an E-mail to the organizers, clinam@clinam.org and as reference **UNIVERSITY TABLE**. We will contact you then. **Attending countries in 2018: The Netherlands, Switzerland, Italy, Austria, Hungary, Israel, Poland, Norway, Ireland and further countries.**

5. Small Speeches

Poster presenters and University Village members can apply **for presentations in a special session of small speeches, 4 minutes in length** and serving to highlight the research activities in nanotechnology, targeted delivery and precision medicine. They must comprise three slides. • **Slide 1:** General introduction to the topic • **Slide 2:** Some of the highlights of submitter's work and institution's work • **Slide 3:** The proof as to how the work fits into the area of nanomedicine or precision medicine, including a glimpse into the future. **Application for a small speech is only possible after your poster has been accepted. The selection is done by Dr. Schmid. Apply at Ruth.B.Schmid@sintef.no.**

6. Visa for Switzerland – Embassy Appointment minimum 6 weeks before travelling!

Before registering, check Visa-Regulations for Switzerland: Participants with visa-need for entering Switzerland have to usually make their appointment with the Swiss Embassy min. 6 weeks before the Summit in their country in order to make an application and to acquire a visa. All concerned will ask us in a mail to send an official invitation letter, which you will have to present at the embassy. For this we need your statement of nationality, full address, permanent address, passport number, date of birth. We assist where we can, but have to accept, when the Embassies keep their deadlines.

7. Registration for the Summit under www.clinam.org

Currency is EURO	ONLINE REGISTRATION ONLY Payment by credit card (MasterCard or VISA) is the regular procedure. Bill in exceptional cases possible.	
Category	3 Days Pass	1 Day Pass
Academy	820.00	300.00
Industry/Government	1'500.00	600.00
Students	490.00	200.00
Exhibitors multi-user-badge	800.00	-----
Submitted Poster academy	700.00	
Submitted Poster Student	450.00	
Cancellation: until 31.5.18 80.00 €; after that 50%; after 1.7. Full Fee, No Refund.		
Brokerage Cultural Event on Monday 3.9. is not included in registration. You can book it online. Your share in costs is 40.00 €.		
All ESNAM members, speakers, submitters and fellowship-receivers are invited for the farewell dinner. All others pay 45.00 €.		
University Table incl. 1 registration: 500 € Please contact clinam@clinam.org for booking		

8. Exhibition

Profit of Exhibiting

Exhibitors at the CLINAM Summit profit from meeting their potential clients in one spot since CLINAM is presently the world's largest summit on Clinical Nanomedicine with 450-500 participants in need of toolmakers findings, knowledge and their devices. SMEs and small start-up companies have the chance to showcase their skills at an affordable price and to meet ALL STAKEHOLDERS in the field of nanomedicine,

targeted delivery and precision medicine. This is a Foyer exhibition at low exhibitor's rate. All breaks and catering for lunches take place in midst of the CLINAM marketplace. Start-up booths are given to companies being less than 3 years in active development.

Regular Fees and Start-up Fees

Booking online <https://www.clinam.org/exhibition.html>

Floor space (350 €/m²)

6 m² (minimum) 2'100.00 €

8 m² 2'800.00 €

12 m² 4'000.00 €

(Maximum is 36 m²)

- Company name A3 on pillar 100.00 €
- 1 table, 2 chairs, 1 pin board for poster & power connection 200.00 €
- Exhibitors ticket for conference exhibitors multi-user-badge 800.00 €
- Booth construction **on demand**

Special Start-up Booth: 4 m², 1 table, 2 chairs, pillar, power connection, 1 pin board and 1 registration (Upon application, company less than 3 years active) **1'650.00 €**

Liability for the exhibits: Herewith the exhibitors are notified that the Congress Organizers do not take liability for the exhibits. Goods that have to be sent by mail or freight to the Congress Center have to be insured for transportation and loss.

For all questions please address the organizers

Summit Venue

Congress Center Basel
Messeplatz 21
CH-4058 Basel
Switzerland
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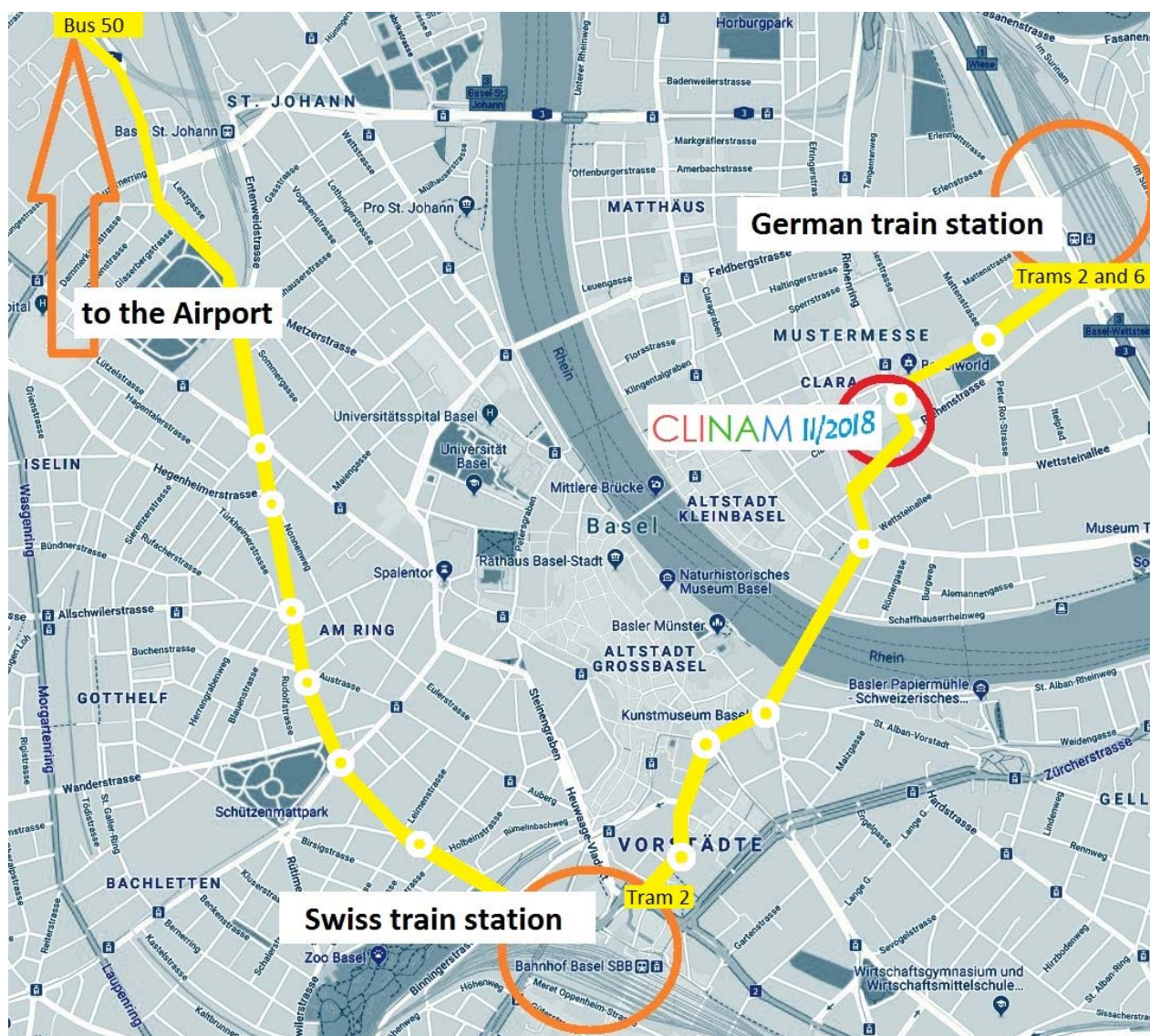
How to get to Congress Center Basel, Swissôtel Le Plaza and Hotel du Commerce

Coming by train: You will arrive at the Swiss Train Station Basel (SBB). From there you take tram number 2. You will after five stations, within 10 minutes, be at the conference center. The station is called "Messeplatz" and is announced. Coming from the German Station (Badischer Bahnhof) it is only 2 stops, also with tram number 2 (or also 6). The costs for a cab from SBB are about 20.-- CHF.

Coming by flight to Basel-Mulhouse-Freiburg Airport: This is a 15 minutes' drive to the Congress Center Basel. There is an easy connection from Euro-Airport to the Congress Center downtown Basel by public transport (Bus No. 50), via the central Swiss railway station (Bahnhof SBB). From Bahnhof SBB the tram line no. 2 (see above) serves Basel Messeplatz/Exhibition square directly. The costs for a cab are about 40.-- CHF.

Coming from Zürich Airport: There are frequent trains between Basel SBB station and Zurich Airport taking less than an hour. You arrive in Basel at the Swiss Train Station and take as described above.

Coming by Car: Basel is the point where the Swiss, French and German motorway networks meet. Basel Exhibition and the trade-fair grounds have their own motorway exit. The "Messe" exit from the A2 motorway leads directly to the fair and congress ground. There is a car parking garage with space for 1,200 vehicles at the Exhibition Square/Messeplatz next to the Congress Center.



List of Posters (incomplete)

Abuhelal, Shahd	The Combination of pH-Responsive Peptide and Cationic Liposomes Can Improve siRNA Transfection Efficiency in Cancer Cells
Ahmed, Mostak	A New Interfacial Bio-sensing Approach for Detecting Aberrant Protein Phosphorylation in Cancer
Dr. Al-Ahmady, Zahraa S.	Enhanced Metallic Nanoparticle Encapsulation into Liposomes Using Microfluidics Assisted Self-Assembly
Dr. Altube, María Julia	Nebulizable Azithromycin Into Anti-biofilm Superstable Nanovesicles
Dr. pharmD. Arabi, Leila	Targeting the Mucin 1 Marker in Colon Carcinoma Improves the Therapeutic Efficacy of Liposomal Doxorubicin
Dr. Argarate, Nerea	CIBER-BBN: Success Story of Collaboration between Research Institutions in Nanomedicine Fields in Spain
Arya, Braham Dutt	Graphene Oxide -Chloroquine Based Nanoconjugate for Enhanced Cancer Therapy
Bartucci, Roberta	Precision Cut Tissue Slices (PCTS) as an Ex Vivo Model to Study Nanomedicine Uptake and Distribution in Tissue
Batool, Nayab	Nanorobotics Based Physical Antibacterial Approach for Targeted Eradication of Multiple Drug Resistant Staphylococcus aureus
Biancacci, Ilaria	Theranostic polymeric micelles loaded with paclitaxel for image-guided anticancer therapy

Biran, Idan	Immuno-gold Labeling in the Liquid Phase of Extracellular Vesicles for Cryogenic-temperature Electron Microscopy
Dr. Bohmer, Nils	DaNa2.0 - reliable information on the safety of nanomaterials
Bremer-Hoffmann, Susanne	Mapping Nanomedicine Terminology in the Regulatory Landscape
Chaddad, Hassan	Combining 2D Angiogenesis and 3D Osteosarcoma Microtissues to Improve Vascularization
Charousová, Markéta	Using apoferritin as suitable nanocarrier for siRNA to achieve active targeting to cancer cells
Cheung Chun Long, Calvin	Single Step Production of Clinically Relevant Low-temperature-sensitive Liposomes Using Microfluidics
Dr. Cho, Er-Chieh	pH-induced controlled release of condensed polypeptide drug balls split from nano-delivery system as an efficient strategy for cancer therapeutics
Dr. Cicha, Iwona	Feasibility of magnetic drug targeting to vascular injury regions: Pilot studies in a rabbit model of atherosclerosis
Dr. Cichočka, Danuta	Resistell: nano-motion based fast antibiogram
Dr. Curley, Paul Anthony	Improved Oral In Vivo Pharmacokinetics of Novel Oil in Water Solid Drug Nanoparticle Formulations of Tenofovir Disoproxil Fumarate for the Treatment of HIV
Dr. David, Christopher	Investigation of KU-812 Cells as an In Vitro Model for Basophil Activation and Assessment of Complement Related Interactions
Dr. Digiacoimo, Luca	Novel insights on Nanoparticle-blood Interactions for Early Diagnosis of Pancreatic Cancer
Dr. Dostálová, Simona	Taking Advantage of Ferritin Disassembly for Drug Delivery
Dr. Einfalt, Tomáš	Bioinspired Molecular Factories with Architecture and In Vivo Functionalities as Cell Mimics
Elberskirch, Linda	A novel fluidic intestine-tumor-model as a tool to study the ability of nanoparticles to adsorb and permeate in a fluidic system
Faruqu, Farid N.	Membrane Radiolabelling of Exosomes for Comparative Biodistribution Analysis in Immunocompetent and Immunodeficient Mice – a Novel and Universal Approach
Figueiredo, Patrícia	In Vitro Evaluation of lignin-based Nanoparticles for Drug Delivery to Cancer Cells
Fodor, Bertalan	Preparing and Haemocompatibility Testing of Gelatine Coated Magnetite Nanoparticles
Francia, Valentina	Effect of the Biomolecular Corona Composition on the Mechanism of Endocytosis of Nanosized Materials
Fülöp, Tamás	Complement Activation-related Pseudoallergy to Corticosteroid-containing PEGylated Liposomes in Pigs: Roles of Natural anti-PEG Antibodies and Infusion Rate
Dr. med. Gatin, Eduard	A new Approach of Bone Evaluation in Oral Regenerative Surgery Based on Raman Spectroscopy <i>and</i> Viable Alternative to Histology
Gioria, Sabrina	Are Existing Standard Methods Suitable for the Evaluation of Nanomedicines? - Some Case Studies
Dr. Guan, Shanyue	Excitation-dependent Theranostic Nanosheet for Cancer Treatment
Horvat, Sonja	Thermo-responsive Iron Oxide Nanoparticles for Non-invasive Magnetic Imaging of Cancer Cells
Hu, Xiujie	Multimodal Bioimaging Based on Gold Nanorod Andcarbon dot Nanohybrids as a Novel Tool for Atherosclerosis Detection
Islek, Zeynep	Emulsome-based targeted delivery of anti-leishmanial compounds to macrophages
Jeong, Eun Ju	Microfluidic control device using orgel roll for genetic analyses
Dr. Khalin, Igor	In vivo brain imaging by ultra-bright dye-loaded fluorescent polymeric nanoparticles
Dr. Kim, Yong-Gun	Effects of Ultraviolet Photofunctionalization with 5% TiO ₂ Coated HA on Bone Regeneration in Rabbit Calvarial Defects

Dr. Kozma, Gergely	Involvement of Complement Activation in the Pulmonary Vasoactivity of Polystyrene Nanoparticles in pigs Part 1
Krinsky, Nitzan	Synthetic cells produce therapeutic proteins inside tumors
Dr. Küçük, Haluk	Design and Implementation of Multifunctional Gripper and Apparatus, for Robotic-Laparoscopic Surgical and Interventional Radiology
Kullenberg, Fredrik	Lansoprazole Pretreatment Increases Cytotoxicity Of Nanoformulation In 2D Cell Model
Dr. Lee, Kuen-Chan (Gordon)	Hyaluronic acid (HA) encapsulated graphene quantum dot (GQD) polymeric nanoparticles as potential drug delivery system for cancer therapeutics
Lee, Sharon	3D Co-culture Platform of Monocytes and Engineered T Cells for Pre-clinical Screening of Cancer Immunotherapy
Dr. Liptrott, Neill	Assessment of Antiretroviral Impacts on Cellular Health Following Incorporation into Solid Drug Nanoparticles and Investigation of Nanoparticle Mediated NETosis in Primary Human Neutrophils – links to Inflammatory Disease
Dr. Lojk, Jasna	The effect of selected industrial nanoparticles on neurotoxicity and possible neurodegenerative changes
Lui, Bonny Gaby	Targeting the tumor vasculature with engineered cystine-knot miniproteins
Lutz, Johanna	Novel Multifunctional Thioether-polyglycidol Coating for Metal Nanoparticles
Dr. Mahmood, Tariq	Nanocarriers for Gene Therapy: Recent Approaches
Dr. Mantaj, Julia	Probing the Barrier Properties of the Basement Membrane to Mucosal Delivery of Nanoparticles
May, Jan-Niklas	Multiscale optical imaging of 10 nm polymer accumulation in the brain upon temporarily opening up the blood-brain barrier using ultrasound and microbubbles
Meewan, Jitkasem	Preparation and characterization of mPEG-zein micelles as a delivery vehicle for hydrophobic drugs
Mészáros, Tamás	Involvement of Complement Activation in the Pulmonary Vasoactivity of Polystyrene nanoparticles in pigs – Part II
Milosevic, Ana	Contactpointnano.ch: a Strategic Initiative to Transfer the Nanosafety Knowledge to Swiss SME's
Dr. Mohamed, Nura A.	Metal Organic Frameworks as a Potential PAH Drug Carriers
Montizaan, Daphne	Zwitterionic Modifications Reduce Corona Formation and Affect Uptake Kinetics and Mechanism of Internalization of Liposomes
Mühlberger, Marina	Functionalisation of T lymphocytes for magnetically controlled immune therapy
Órfi, Erik	Characterisation of Complement-independent Pseudoallergy Caused by Liposomal Preparations in Mice
Dr. Pastorin, Giorgia	Immobilization of chemical compounds onto polymeric nanobackbones as a strategy to decrease the incidence of Allergic Contact Dermatitis
Pietrzykowska, Elżbieta	Warm Isostatic Pressing Technology for Orthopedic Implant
Prasad, Chandrashekhar	Ultrasound Mediated Spatial Delivery of Curcumin: In Vitro and In Vivo Study
Dr. rer. nat. Stefanie Pektor	Evaluating the EPR-effect in different tumor models using the clinically approved diagnostic drug Nanotop in comparison with liposomes
Dr. Pöttler, Marina	Magnetic Tissue Engineering (MTE) Using Superparamagnetic Ironoxide Nanoparticles in Human Vocal Fold Cells - Basic Studies for Translational Perspectives
Ray, Sayoni	Real-time Simultaneous Monitoring of Tumor Site and Alternating Magnetic Field Controlled Drug Release with Dual Modal MRI and Thermosensitive multifunctional liposomes
Resch, Susanne	Nanomaterial Technologies and Applications – Showcases in Imaging/Diagnostics, Therapeutics and Regenerative Medicine
Rogowska-Tylman, Julia	Ultrasonically Deposited Nanoparticle Coatings on Polymeric Biomaterials for Medical Application

Sakpakdeejaroen, Intouch	Development of transferrin-bearing vesicles entrapping plumbagin for cancer therapy
Dr. Schramm, Oana	pH-Sensitive PU-based Nanocontainers for Oral Drug Delivery
Dr. Séquier, Floriane	Development of a lab scale process to support clinical manufactures of polymeric nanoparticles
Severic, Maja	Monocyte Derived Exosome-like Vesicles as a Promising Drug Delivery Systems
Dr. Shi, Yang	Tumor Penetration Promoting Polymeric Micelles Stabilized by π - π Stacking
Dr. Sieber, Sandro	The Zebrafish: A Preclinical Screening Model for the Optimization of Nanomedicine Formulations
Dr. Silvestre, Oscar Ferreira	Cubosome nanoparticles for the delivery of mitochondria drugs and fluorescence lifetime imaging therapeutic monitoring
Dr. Snipstad, Sofie	Sonoporation Enhances Delivery of Nanomedicine for Improved Cancer Treatment
Somani, Sukrut	PEGylation of Polypropylenimine dendrimers: effects on cytotoxicity, DNA condensation, gene delivery and expression in cancer cells
Strassburger, David	A Supramolecular Platform for Nano-scaled Multifunctional Antitumor Vaccines
Sulheim, Einar	Effect of Vasculature and Extracellular Matrix on Nanoparticle Accumulation in Tumor Xenograft Models
Szénási, Gábor	Anaphylatoxin-dependent and Independent Circulatory Changes in Mice Caused by Complement Activators and Amphotericin-B-containing Liposomes
Taleb, Mohammad	Normalization of Tumor Blood Vessels by Delivery of Dopamine Using pH-sensitive Nanoparticles
Tesařová, Barbora	Cellular Uptake and Biocompatibility of Stealth, Protein-based Nanocarriers
Thakur, Kanika	Lipobrid-based Nanoconstructs for Topical Delivery of Anti-infectives: Evidences of Improved Antimicrobial Efficacy and Dermatokinetic Attributes in Burn Wound Bacterial Infections
Torrieri, Giulia	Acetalated Dextran Nanoparticles for Cardiomyocytes Proliferation
Tretiakova, Daria S.	Influence Of Stabilizing Components On The Integrity Of Antitumor Liposomes Loaded With Lipophilic Prodrug In The Bilayer
Dr. Vllasaliu, Driton	Intestinal Uptake and Transport of Albumin Nanoparticles: Potential for Oral Delivery
Vu, Vivian	Natural Antibodies Determine Between-subject Variability and Efficiency of Complement C3 Deposition on Preclinical and Clinical Nanomedicines
Walters, Adam	Sugar-functionalised and Far-red Fluorescence Emitting Graphene Oxide for Antigen Delivery and Monitoring
Dr. Wiemann, Martin	Abrogation of SiO ₂ Nanoparticle-Induced Inflammatory Lipid Changes in the Lung by Phosphonate Coating: a MALDI-MS Bioimaging Study
Wu, Yilun	Lipid Coated Calcium Carbonate/Phosphate Nanoparticles as a Novel gene/Drug Co-delivery Platform for Cancer Treatment
Yakovets, Ilya	mTHPC-in-Cyclodextrin-in-liposome Nanodelivery system
Yang, Lin	Novel in vivo and ex vivo imaging tools for deciphering pulmonary delivery and 3D cellular distribution of nanomedicine in intact murine lungs
Dr. Zacheo, Antonella	Attachment Inhibiting antiviral (AIAV) Gold Nanoparticles for Dengue and enteroviruses
Dr. Zucker, Daniel	Development of self-degradable lipid-like material equipped with environment sensing units

....and many further posters

Exhibitors at CLINAM 11/2018

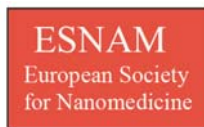
- Aseptic Technologies S.A.
- BioNanoNet
- CIBER-BBN
- CLINAM
- Cordouan Technologies
- Deutsche Plattform NanoBioMedizin
- Edinethics, NanoAthero Democs Game
- ESNAM
- ETPN / EUNCL
- EVA - the Basel Life Sciences Start-up Agency
- InnoMedica
- International Society for Nanomedicine
- Izon Science Europe Ltd.
- Lipoid AG
- Nacamed
- Particle Metrix GmbH
- Polymun Scientific GmbH
- Precision Nanomedicine (Journal) PRNANO
- Precision NanoSystems, Inc
- Resistell AG
- SeroScience
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Seroscience Ltd., Budapest
Hungary www.seroscience.com



InnoMedica AG, Bern, Switzerland
www.innomedica.com



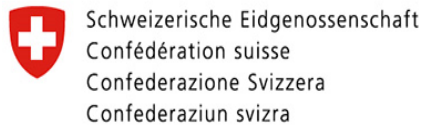
EVA - The Basel Start-up Agency, Basel, Switzerland
www.eva-basel.ch



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www.particle-metrix.eu



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