



Scientific Programme

Tuesday, 11 September 2018

16:45 - 18:00

EMBO Scientific Sessions, Basel Kunstmuseum

Welcome and Opening session

16:45 - 17:00

Welcome

17:00 - 18:00

Art and Science

Michael N. Hall (University of Basel, Switzerland)

Jacques Herzog (Herzog & de Meuron, Basel, Switzerland)

18:00 - 19:00

EMBO Scientific Sessions, Basel Kunstmuseum

Welcome reception



Scientific Programme

Wednesday, 12 September 2018

09:00 - 09:45

EMBO Scientific Sessions, Montreal

Keynote lecture 1

09:00 - 09:45

Title to be announced

Jeffrey Engelman (Novartis, Boston, United States)

09:55 - 11:15

Innovation Forums, Kairo 1-2

Aging and drug discovery

Why do we age? And what can we do about it? In this symposium, a phenomenal group of thought-leaders will uncover the latest progress in aging and longevity at the molecular, cellular and organismal level. A panel of world leading experts will give us their cutting edge reports on the latest progress in our quest to extend our healthy lifespan. We will hear from both academic and top investors on where and how commercialization of aging and longevity research will likely occur. Please join us in this merger of driven scientists and global visionaries in an event that may shape the field in years to come.

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)

Morten Scheibye-Knudsen (Danish Center for Aging Research/National Institute on Aging, Copenhagen, Denmark)

09:55 - 10:00

Welcome to the intersection of AI, longevity and drug discovery

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)

Morten Scheibye-Knudsen (Danish Center for Aging Research/National Institute on Aging, Copenhagen, Denmark)

10:00 - 10:30

Title to be confirmed

Jay Olshansky (Lapetus Solutions, Chicago, United States)

10:30 - 11:00

Title to be confirmed

Michael Ristow (ETH Zurich, Zurich, Switzerland)

11:00 - 11:15

Title to be announced

Ivan Ozerov (InSilico Medicine, United States)

EMBO & Innovation forums - poster exhibition, Poster exhibition

Poster exhibition

10:15 - 11:55

EMBO Scientific Sessions, Montreal

Plenary session 1: Cancer I

René Bernards (Netherlands Cancer Institute, Amsterdam, Netherlands)



Scientific Programme

10:15 - 10:40

Presentation 1

Clare Isacke (The Institute of Cancer Research, London, United Kingdom)

10:40 - 11:05

Presentation 2

Caroline Robert (Institut Gustave Roussy, Paris, France)

11:05 - 11:30

Presentation 3

Alberto Bardelli (University of Torino, Candiolo, Italy)

11:30 - 11:55

Presentation 4

Lars Zender (University Tübingen, Germany)

Innovation Forums, Delhi

10:15 - 11:15

Basel Agenda Session I: Superior healthcare systems with sustainable behavioral impact

The 2018 dialogue will focus on the questions “Will holistic behavior change models be the next game changer in healthcare?” During the symposium, we will apply both system-level and specific best practice cases perspectives focusing on five critical aspects: •Successful behavioral economics approaches in healthcare •Challenges across healthcare from behavior shortcomings •Value of monetary incentives to maximize health outcomes •Behavioral lifestyle intervention framework – how holistic should it be? •Pay for performance health eco-systems – basis of robust business models The fourth international symposium The Basel Agenda is an interactive annual conference for healthcare & life science leaders and senior stakeholders since 2015. It brings together managers of innovative life science industries, providers, patient groups, ICT, governmental agencies, insurers, and many other stakeholders. The forum builds on topical input speeches of invited international speakers followed by extended, interactive and guided discussions with the panelists and the audience.

Beatus Hofrichter (ConCePlus, Weggis, Switzerland)

Aleksandar Ruzicic (INSEAD Alumni Association Switzerland - Healthcare Club, Baar, Switzerland)

Christoph Nabholz (SwissRe, Zurich, Switzerland)

10:15 - 10:30

Welcome & introduction

Beatus Hofrichter (ConCePlus, Weggis, Switzerland)

10:30 - 10:40

Title to be announced

10:40 - 10:50

Title to be announced

Matthias Heuberger (CSS Incentive Program, Luzern, Switzerland)

10:50 - 11:00

Title to be announced

Gerd Maass (Roche Pharma AG, Grenzach-Wyhlen, Germany)

11:00 - 11:10

Title to be announced

Francesca Tamma (SwissRe, Zurich, Switzerland)

11:10 - 11:15

Introduction live-voting

Aleksandar Ruzicic (INSEAD Alumni Association Switzerland - Healthcare Club, Baar, Switzerland)



Scientific Programme

10:15 - 11:15

Innovation Forums, Shanghai 1

Medicinal chemistry

The perpetual task of Medicinal Chemistry and Drug Discovery is the finding and profiling of pharmacologically active and safe medicine. In this forum the importance of new methodologies for profiling and synthesis of new compounds will be presented and discussed including new computational approaches for compound design.

Daniel Gygax (FHNW, Muttens, Switzerland)
Gerhard Grundler (FHNW, Muttens, Switzerland)

10:15 - 10:45

Where less is more: haploinsufficiency profiling by CRISPR/Cas9

Dominic Hoepfner (Novartis, Basel, Switzerland)

10:45 - 11:15

Development of a selective peptide macrocycle inhibitor of coagulation factor XII toward the generation of a safe antithrombotic therapy

Christian Heinis (Ecole Polytechnique Federal de Lausanne (EPFL), Lausanne, Switzerland)

10:15 - 11:15

Innovation Forums, Shanghai 2

Biotherapeutics

The 2018 Biotherapeutic Forum of Basel Life will focus on new advancements in tissue specific delivery of biotherapeutics, cover exciting examples of site specific drug activation and novel approaches for intracellular targets. Join us to discover and discuss the latest developments in the field together with renowned experts from academia and industry. Keywords: •Delivery of Biotherapeutics to specific tissue site of action •Biotherapeutic approaches for intracellular targets •Tissue specific activation

Thomas Huber (Novartis, Basel, Switzerland)
Stefan Weigand (Roche, Basel, Switzerland)

10:15 - 10:45

ImmTAC: soluble TCR based bispecifics

Stephen Harper (Immunocore, Milton, United Kingdom)

10:45 - 11:15

TCR based therapeutics

Carsten Reinhardt (Immatics, Tübingen, Germany)

11:45 - 12:45

Innovation Forums, Delhi

Basel Agenda

Beatus Hofrichter (ConCePlus, Weggis, Switzerland)
Aleksandar Ruzicic (INSEAD Alumni Association Switzerland - Healthcare Club, Baar, Switzerland)
Christoph Nabholz (SwissRe, Zurich, Switzerland)

11:45 - 12:45

Panel Discussion with speakers of morning session and live-voting

Beatus Hofrichter (ConCePlus, Weggis, Switzerland)
Aleksandar Ruzicic (INSEAD Alumni Association Switzerland - Healthcare Club, Baar, Switzerland)



Scientific Programme

11:45 - 12:45

Innovation Forums, Kairo 1-2

Aging and drug discovery

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)
Morten Scheibye-Knudsen (Danish Center for Aging Research/National Institute on Aging, Copenhagen, Denmark)

11:45 - 12:15

Title to be announced

Vadim Gladyshev (Harvard, Cambridge, United States)

12:15 - 12:45

Title to be announced

11:45 - 12:45

Innovation Forums, Shanghai 1

Medicinal chemistry

The perpetual task of Medicinal Chemistry and Drug Discovery is the finding and profiling of pharmacologically active and safe medicine. In this forum the importance of new methodologies for profiling and synthesis of new compounds will be presented and discussed including new computational approaches for compound design.

Daniel Gygax (FHNW, Muttens, Switzerland)
Gerhard Grundler (FHNW, Muttens, Switzerland)

11:45 - 12:15

New approaches for exploiting the druggable chemical space

Christoph Boss (Idorsia Pharmaceuticals Ltd., Allschwil, Switzerland)

12:15 - 12:45

Can a computer design a drug

John Cumming (Roche, Basel, Switzerland)

11:45 - 12:45

Innovation Forums, Shanghai 2

Biotherapeutics

Thomas Huber (Novartis, Basel, Switzerland)
Stefan Weigand (Roche, Basel, Switzerland)

11:45 - 12:15

Targeting intracellular proteins

Julia Neugebauer (Morphosys, München, Germany)

12:15 - 12:45

Intracellular delivery of antibodies

Andreas Plueckthun (University of Zurich, Zurich, Switzerland)

12:00 - 13:45

Break, Montreal

Lunch break



Scientific Programme

12:00 - 13:45	Break, Singapore Lunch break
13:00 - 14:00	Industry Symposium, Delhi Industry symposium
13:00 - 14:00	Industry Symposium, Kairo 1-2 Industry Symposium
13:00 - 14:00	Industry Symposium, Shanghai 1 Industry Symposium
13:00 - 14:00	Industry Symposium, Shanghai 2 Industry Symposium
13:45 - 15:30	EMBO Scientific Sessions, Montreal Parallel session 1 Plant disease and pathogens
	Regine Kahmann (Max Planck Institute for Terrestrial Microbiology, Marburg, Germany)
13:45 - 14:10	Presentation 1 Regine Kahmann (Max Planck Institute for Terrestrial Microbiology, Marburg, Germany)
14:10 - 14:35	Presentation 2 Antonio Di Pietro (Universidad de Cordoba, Spain)
14:35 - 15:00	Presentation 3 Paul Birch (The James Hutton Institute, Dundee, United Kingdom)
15:00 - 15:30	Abstract Presentations
13:45 - 15:30	EMBO Scientific Sessions, Singapore Parallel session 2 Cancer II
	Charles Swanton (The Francis Crick Institute, London, United Kingdom)
13:45 - 14:10	Presentation 1 Charles Swanton (The Francis Crick Institute, London, United Kingdom)



Scientific Programme

14:10 - 14:35

Presentation 2

Matthew G. Vander Heiden (Koch Institute for Integrative Cancer Research, Cambridge, United States)

14:35 - 15:00

Presentation 3

Caroline Dive (The University of Manchester, United Kingdom)

15:00 - 15:30

Abstract presentations

14:15 - 15:15

Innovation Forums, Delhi

Basel Agenda Session II: Best practice cases with superior behavior in diabetes care

Beatus Hofrichter (ConCePlus, Weggis, Switzerland)
Aleksandar Ruzicic (INSEAD Alumni Association Switzerland - Healthcare Club, Baar, Switzerland)
Christoph Nabholz (SwissRe, Zurich, Switzerland)

14:15 - 14:25

Re-welcome & introduction

Aleksandar Ruzicic (INSEAD Alumni Association Switzerland - Healthcare Club, Baar, Switzerland)

14:25 - 14:35

Title to be announced

Charlotte Summers (Diabetes.co.uk, Coventry, United Kingdom)

14:35 - 14:45

Title to be announced

14:45 - 14:55

Title to be announced

14:55 - 15:05

Title to be announced

15:05 - 15:15

Title to be announced

14:15 - 15:15

Innovation Forums, Kairo 1-2

Aging and drug discovery

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)
Morten Scheibye-Knudsen (Danish Center for Aging Research/National Institute on Aging, Copenhagen, Denmark)

14:15 - 14:35

Title to be announced

Martijn Luijsterburg (LUMC, Leiden, Netherlands)

14:35 - 14:55

Title to be announced

Morten Scheibye-Knudsen (Danish Center for Aging Research/National Institute on Aging, Copenhagen, Denmark)

14:55 - 15:15

Title to be announced

Alejandro Martín-Montalvo Sánchez (Cabimer, Sevilla, Spain)



Scientific Programme

14:15 - 15:15

Innovation Forums, Shanghai 1

Antibiotics brought by NTN Swiss Biotech

Antimicrobial resistance (AMR) of pathogenic bacteria is an emerging global health problem, which threatens the achievements of modern medicine. For several decades, lack of economic incentives prevented companies to develop novel antimicrobial drugs. Today, an increasing number of bacterial infections cannot be cured with the existing arsenal of antibiotics due to the spread of multidrug resistant strains. The forum "Antibiotics", organized by NTN SwissBiotech, brings together leaders in the field of antibiotic development from academia and industry to discuss technical innovations in order to overcome the AMR crisis. The invited speakers focus on novel concepts and targets to treat multidrug resistant pathogens.

Markus Seeger (UZH, Zurich, Switzerland)
Eric Kübler (FHNW, Basel, Switzerland)

14:15 - 14:45

Title to be announced

Samareh Azeredo da Silveira Lajaunias (Combioxin SA, Geneva, Switzerland)

14:45 - 15:15

Title to be announced

Pascal Simonet (University of Lyon, Lyon, France)

14:15 - 15:15

Innovation Forums, Shanghai 2

Biotherapeutics

Thomas Huber (Novartis, Basel, Switzerland)
Stefan Weigand (Roche, Basel, Switzerland)

14:15 - 14:45

Viral delivery

14:45 - 15:15

Balancing Selectivity and Efficacy of Bispecific Antibodies

Lars Toleikis (Merck Group, Darmstadt, Germany)

EMBO Flash Talks & Posters, Poster exhibition

Flash talks and poster session 1

15:45 - 16:45

Innovation Forums, Delhi

Basel Agenda

Beatus Hofrichter (ConCePlus, Weggis, Switzerland)
Aleksandar Ruzicic (INSEAD Alumni Association Switzerland - Healthcare Club, Baar, Switzerland)
Christoph Nabholz (SwissRe, Zurich, Switzerland)

15:45 - 16:35

Panel discussion with speakers of both sessions and live-voting

Aleksandar Ruzicic (INSEAD Alumni Association Switzerland - Healthcare Club, Baar, Switzerland)
Christoph Nabholz (SwissRe, Zurich, Switzerland)



Scientific Programme

16:35 - 16:45

Closing of Basel Agenda 2018

Beatus Hofrichter (ConCePlus, Weggis, Switzerland)

15:45 - 16:45

Innovation Forums, Kairo 1-2

Aging and drug discovery

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)

Morten Scheibye-Knudsen (Danish Center for Aging Research/National Institute on Aging, Copenhagen, Denmark)

15:45 - 16:15

Title to be announced

Joseph Baur (U Penn, United States)

16:15 - 16:45

Title to be announced

Judith Campisi (Buck Institute for Research on Aging, Novato, United States)

15:45 - 16:45

Innovation Forums, Shanghai 1

Antibiotics brought by NTN Swiss Biotech

Markus Seeger (UZH, Zurich, Switzerland)

Eric Kübler (FHNW, Basel, Switzerland)

15:45 - 16:15

Title to be announced

James Koerber (Genentech Inc., South San Francisco, United States)

16:15 - 16:45

Title to be announced

Thilo Köhler (University of Geneva, Geneva, Switzerland)

15:45 - 16:45

Innovation Forums, Shanghai 2

Biotherapeutics

Thomas Huber (Novartis, Basel, Switzerland)

Stefan Weigand (Roche, Basel, Switzerland)

15:45 - 16:15

TfR based brain delivery

Jens Niewoehner (Roche/Genentech, Basel, Switzerland)

16:15 - 16:45

Reversible Microenvironment Activation via Conditionally Active Biologics

Jay Short (BioAtla, San Diego, United States)

16:30 - 17:30

EMBO Scientific Sessions, Montreal

Louis-Jeantet Prize lecture

16:30 - 17:00

Presentation 1

Christer Betsholtz (Uppsala University, Sweden)



Scientific Programme

17:00 - 17:30

Presentation 2

Antonio Lanzavecchia (ETH Zurich, Switzerland)



Scientific Programme

Thursday, 13 September 2018

09:00 - 09:45

EMBO Scientific Sessions, Montreal

Keynote lecture 2

09:00 - 09:45

Title to be confirmed

May-Britt Moser (NTNU, Trondheim, Norway)

EMBO & Innovation forums - poster exhibition, Poster exhibition

Poster exhibition

09:45 - 10:15

Break, Montreal

Coffee Break

10:00 - 11:15

Innovation Forums, Kairo 1-2

Aging and drug discovery

Why do we age? And what can we do about it? In this symposium, a phenomenal group of thought-leaders will uncover the latest progress in aging and longevity at the molecular, cellular and organismal level. A panel of world leading experts will give us their cutting edge reports on the latest progress in our quest to extend our healthy lifespan. We will hear from both academic and top investors on where and how commercialization of aging and longevity research will likely occur. Please join us in this merger of driven scientists and global visionaries in an event that may shape the field in years to come.

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)

Morten Scheibye-Knudsen (Danish Center for Aging Research/National Institute on Aging, Copenhagen, Denmark)

10:00 - 10:30

Title to be announced

Stuart Maudsley (VIB University of Antwerp, Antwerp, Netherlands)

10:30 - 11:00

Title to be announced

Collin Ewald (ETH Zurich, Zurich, Switzerland)

11:00 - 11:15

Title to be announced

Garik Mkrtchyan (University Copenhagen, Copenhagen, Denmark)

10:15 - 11:55

EMBO Scientific Sessions, Montreal

Plenary session 2: Microbial disease and pathogens

Philippe Sansonetti (Insitute Pasteur, Paris, France)



Scientific Programme

10:15 - 10:40

Presentation 1

Philippe Sansonetti (Insitute Pasteur, Paris, France)

10:40 - 11:05

Presentation 2

Melanie Blokesch (EPFL, Lausanne, Switzerland)

11:05 - 11:30

Presentation 3

Jörg Vogel (Universität Würzburg, Germany)

11:30 - 11:55

Presentation 4

David Holden (Imperial College London, United Kingdom)

Innovation Forums, Delhi

10:15 - 11:15

Peptide therapeutics

The framework of the Basel Life 2018, we will host the "Peptide Therapeutics Forum 2018" for 2 days on Sept 13, and 14. Similar to previous events, presentations highlight important new insights regarding the drug discovery of peptides including examples for successful development. The first day is dedicated to topics to be addressed more early during peptide optimization, and the second day focuses more on issues related to later-stage development. As in the past, this event is thought to disseminate information on latest news in the broad field of therapeutic peptides and to enable networking of interested parties from academia and industries.

Thomas Vorherr (Novartis, Basel, Switzerland)
Roderich Süßmuth (TU Berlin, Berlin, Germany)

10:15 - 10:45

Rationalizing the passive membrane permeability of cyclic peptides using computer simulations

Sereina Riniker (ETH Zurich, Zurich, Switzerland)

10:45 - 11:15

Positive allosteric modulators for GABAs

Immanuel Lerner (Pepticom, Jerusalem, Israel)



Scientific Programme

10:15 - 11:15

Innovation Forums, Shanghai 1

Genome editing (CRISPR/Cas9) in drug discovery

Genome editing technologies allow engineering parts of the genome by removing, adding or altering sections of the DNA Sequence. Recent discovery of the CRISPR/Cas9 system as a technology for genome editing, enables the simplest, quickest and most versatile way of genome editing. CRISPR/Cas9 technology is quickly developing and has already found many applications as a drug discovery tool and even as a potential new therapeutic agent in cellular and gene therapy. This forum focuses on relevant applications of CRISPR/Cas9 for drug discovery such as identification of novel targets through genetic screens, generation of relevant genetic disease models (human cells or animal models) for validation of drug targets and for mechanistic and safety studies. Importantly, current standard practices and perspectives of genome editing in drug discovery will be presented. Furthermore, the forum will show novel applications and discuss future challenges and potential pitfalls of the technology.

Filip Roudnický (Roche, Basel, Switzerland)
Claas Aiko Meyer (Roche, Basel, Switzerland)

10:15 - 10:45

Title to be announced

10:45 - 11:15

Title to be announced

Jonathan Chesnut (Thermo Fisher, Carlsbad, United States)

10:15 - 11:15

Innovation Forums, Shanghai 2

Women in science - The power of FeMale innovation

Bejal Joshi (Plush Communique, Basel, Switzerland)
Jolanda Groenhuijzen (MyLanda GmbH, Basel, Switzerland)

10:15 - 10:45

Introducing WiS

Bejal Joshi (Plush Communique, Basel, Switzerland)

10:45 - 11:15

Title to be announced

11:45 - 12:45

Innovation Forums, Delhi

Peptide therapeutics

Thomas Vorherr (Novartis, Basel, Switzerland)
Roderich Süßmuth (TU Berlin, Berlin, Germany)

11:45 - 11:55

Employing electronic and structural constraints to advance peptide leads to therapeutic peptide mimic prototypes

William Lubell (University of Montreal, Montreal, Canada)

11:55 - 12:05

Design of bioactive macrocycles

Andrei Yudin (University of Toronto, Toronto, Canada)



Scientific Programme

11:45 - 12:45

Innovation Forums, Kairo 1-2

Aging and drug discovery

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)
Morten Scheibye-Knudsen (Danish Center for Aging Research/National Institute on Aging, Copenhagen, Denmark)

11:45 - 12:15

Title to be announced

Manuel Serrano (Centro Nacional de Investigaciones Oncológicas (CNIO), Madrid, Spain)

12:15 - 12:45

Title to be announced

Dudley Lamming (U Wisconsin, United States)

11:45 - 12:45

Innovation Forums, Shanghai 1

Genome editing (CRISPR/Cas9) in drug discovery

Filip Roudnický (Roche, Basel, Switzerland)
Claas Aiko Meyer (Roche, Basel, Switzerland)

11:45 - 12:10

CRISPR platform development for drug target discovery and validation

Benjamin Haley (Genentech, San Francisco, United States)

12:10 - 12:30

Title to be announced

Stefan Stricker (Helmholtz Center, Munich, Germany)

12:30 - 12:45

Title to be announced

Frederik Wermeling (Karolinska University, Stockholm, Sweden)

11:45 - 12:45

Innovation Forums, Shanghai 2

Women in science - The power of FeMale innovation

Bejal Joshi (Plush Communique, Basel, Switzerland)
Jolanda Groenhuijzen (MyLanda GmbH, Basel, Switzerland)

11:45 - 12:15

TBD: Topic theme industry and the role/opportunities for FeMale collaboration

Bahija Jallal (MedImmune/AstraZeneca, Washington D.C., United States)

12:15 - 12:45

Title to be announced

12:00 - 13:45

Break, Montreal

Lunch break

12:00 - 13:45

Break, Singapore

Lunch break



Scientific Programme

13:00 - 14:00

Industry Symposium, Delhi
Industry Symposium

13:00 - 14:00

Industry Symposium, Kairo 1-2
Industry Symposium

13:00 - 14:00

Industry Symposium, Shanghai 1
Industry Symposium

13:00 - 14:00

Industry Symposium, Shanghai 2
Industry Symposium

13:45 - 15:30

EMBO Scientific Sessions, Montreal
Parallel session 3 Microbiota

François Leulier (IGFL, Lyon, France)

13:45 - 14:10

Presentation 1

François Leulier (IGFL, Lyon, France)

14:10 - 14:35

Presentation 2

Eran Segal (Weizmann Institute of Science, Rehovot, Israel)

14:35 - 15:00

Presentation 3

Ruth Ley (Max Planck Institute for Developmental Biology, Tübingen, Germany)

15:00 - 15:25

Presentation 4

Nathalie Delzenne (Catholic University Leuven, Belgium)

13:45 - 15:30

EMBO Scientific Sessions, Singapore
Parallel session 4 Sensory function and deficit

Karen Avraham (Tel Aviv University, Israel)

13:45 - 14:10

Presentation 1

Karen Avraham (Tel Aviv University, Israel)

14:10 - 14:35

Presentation 2

David Julius (UCSF, San Francisco, United States)

14:35 - 15:00

Presentation 3

Deniz Dalkara (Institut de la Vision, Paris, France)



Scientific Programme

15:00 - 15:30

Abstract presentations

14:15 - 15:15

Innovation Forums, Delhi

Peptide therapeutics

Thomas Vorherr (Novartis, Basel, Switzerland)
Roderich Süßmuth (TU Berlin, Berlin, Germany)

14:15 - 14:45

Revolutionizing the discovery process of bioactive peptides

Hiroaki Suga (School of Science The University of Tokyo, Tokyo, Japan)

14:45 - 15:15

Potential of cell-penetrating peptides for improved drug delivery

Ines Neundorff (University of Cologne, Cologne, Germany)

14:15 - 15:15

Innovation Forums, Kairo 1-2

Artificial intelligence and blockchain in healthcare

The recent advances in deep learning techniques revolutionized the Artificial Intelligence (AI) and facilitated its application in the pharmaceutical industry. Alongside AI, Blockchain technology is also rapidly gaining popularity in the biopharmaceutical sector. These two technologies are remarkably converging with each other and enabling new, previously unthinkable applications in healthcare. The "Artificial Intelligence and Blockchain in Healthcare" forum is bringing together the AI and Blockchain thought leaders to explore the potential of bridging AI and Blockchain for drug discovery processes and personalized management of life data.

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)
Verner De Biasi (GSK, Collegeville, United States)
Ulrich Muehlner (GrowthCube Partners GmbH Basel BS, Basel, Switzerland)
Daniel Burgwinkel (DayOne.swiss, Basel, Switzerland)

14:15 - 14:45

Title to be announced

14:45 - 15:15

Title to be announced

Brandon Allgood (Numerate, Inc., San Francisco, United States)

14:15 - 15:15

Innovation Forums, Shanghai 1

Genome editing (CRISPR/Cas9) in drug discovery

Filip Roudnický (Roche, Basel, Switzerland)
Claas Aiko Meyer (Roche, Basel, Switzerland)

14:15 - 14:35

CRISPR Screening Directly in vivo

Rendall Platt (ETH Basel, Basel, Switzerland)

14:35 - 14:55

Title to be announced

Eric Paul Bennett (University of Copenhagen, Copenhagen, Denmark)



Scientific Programme

14:55 - 15:15

Title to be announced

Knut Woltjen (University of Kyoto, Kyoto, Japan)

14:15 - 15:15

Innovation Forums, Shanghai 2

Women in science - The power of FeMale innovation

Bejal Joshi (Plush Communique, Basel, Switzerland)

Jolanda Groenhuijzen (MyLanda GmbH, Basel, Switzerland)

14:15 - 14:45

Title to be announced

14:45 - 15:15

Title to be announced

15:30 - 16:00

Break, Montreal

Coffee break

15:30 - 16:00

Break, Singapore

Coffee break

15:45 - 16:45

Innovation Forums, Delhi

Peptide therapeutics

Thomas Vorherr (Novartis, Basel, Switzerland)

Roderich Süßmuth (TU Berlin, Berlin, Germany)

15:45 - 16:15

Tumor targeting peptides

Pirjo Laakonen (University of Helsinki, Helsinki, Finland)

16:15 - 16:45

Title to be announced

Ronald Kühne (Leibniz-Institut für Molekulare Pharmakologie, Berlin, Germany)

15:45 - 16:45

Innovation Forums, Kairo 1-2

Artificial intelligence and blockchain in healthcare

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)

Verner De Biasi (GSK, Collegeville, United States)

15:45 - 15:55

Title to be announced

Ulrich Muehlner (GrowthCube Partners GmbH Basel BS, Basel, Switzerland)

15:55 - 16:05

Title to be announced

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)



Scientific Programme

16:05 - 16:15

Title to be announced

16:15 - 16:45

Panel on AI in Healthcare

15:45 - 16:45

Innovation Forums, Shanghai 1

Genome editing (CRISPR/Cas9) in drug discovery

Filip Roudnicky (Roche, Basel, Switzerland)
Claas Aiko Meyer (Roche, Basel, Switzerland)

15:45 - 16:15

Title to be announced

Toni Cathomen (University of Freiburg, Freiburg, Germany)

16:15 - 16:30

Title to be announced

16:30 - 16:45

Editing of neurodegenerative disease mutations with the transient KamiCas9, (CRISPR/Cas9) system

Nicole Deglon (Lausanne University Hospital (CHUV), Lausanne, Switzerland)

15:45 - 16:45

Innovation Forums, Shanghai 2

Women in science - The power of FeMale innovation

Bejal Joshi (Plush Communique, Basel, Switzerland)
Jolanda Groenhuijzen (MyLanda GmbH, Basel, Switzerland)

15:45 - 16:15

Title to be announced

Helen Eriksen (Eriksson Institute, Copenhagen, Denmark)

16:15 - 16:45

Title to be announced

16:00 - 17:15

EMBO Scientific Sessions, Montreal

Plenary session 3: Inflammation

Yinon Ben-Neriah (The Hebrew University Hadassah Medical School, Jerusalem, Israel)

16:00 - 16:25

Presentation 1

Yinon Ben-Neriah (The Hebrew University Hadassah Medical School, Jerusalem, Israel)

16:25 - 16:50

Presentation 2

Ruslan Medzhitov (Yale University, New Haven, United States)

16:50 - 17:15

Presentation 3

Shimon Sakaguchi (Osaka University, Japan)



Scientific Programme

EMBO & Innovation forums - poster exhibition, Poster exhibition

Poster session

EMBO Flash Talks & Posters, Poster exhibition

Flash talks and poster session 2



Scientific Programme

Friday, 14 September 2018

09:00 - 10:15

EMBO Scientific Sessions, Montreal

Plenary session 4: Neurodegenerative Disease

John Hardy (University College London, United Kingdom)

09:00 - 09:25

Presentation 2

Lucia Chavez Gutierrez (Catholic University Leuven, Belgium)

09:25 - 09:50

Presentation 3

Christian Haass (Ludwig-Maximilians-University, Munich, Germany)

09:50 - 10:15

Presentation 4

Don W. Cleveland (Ludwig Institute for Cancer Research, La Jolla, United States)

09:00 - 10:00

Innovation Forums, Delhi

Innovation Forum Keynote lecture

09:00 - 10:00

Title to be announced

Mene Pangalos (Astra Zeneca, London, United Kingdom)

EMBO & Innovation forums - poster exhibition, Poster exhibition

Poster exhibition

10:15 - 10:45

Break, Montreal

Coffee Break

10:45 - 12:30

EMBO Scientific Sessions, Montreal

Parallel session 5 Aging and senescence

Tony Wyss-Coray (Stanford University, United States)

10:45 - 11:10

Presentation 1

Tony Wyss-Coray (Stanford University, United States)

11:10 - 11:35

Presentation 2

Manuel Serrano (Centro Nacional de Investigaciones Oncológicas (CNIO), Madrid, Spain)

11:35 - 12:00

Presentation 3

Judith Campisi (Buck Institute for Research on Aging, Novato, United States)



Scientific Programme

12:00 - 12:30

Abstract presentations

10:45 - 12:30

EMBO Scientific Sessions, Singapore

Parallel session 6 Model systems in disease

Cayetano González (Parc Científic de Barcelona, Spain)

10:45 - 11:10

Presentation 1

Cayetano González (Parc Científic de Barcelona, Spain)

11:10 - 11:35

Presentation 2

Stephen Simpson (The University of Sydney, Australia)

11:35 - 12:00

Presentation 3

Susan Michaelis (Johns Hopkins University, Baltimore, United States)

12:00 - 12:30

Abstract presentations

10:45 - 11:45

Innovation Forums, Delhi

Peptide therapeutics

The framework of the Basel Life 2018, we will host the "Peptide Therapeutics Forum 2018" for 2 days on Sept 13, and 14. Similar to previous events, presentations highlight important new insights regarding the drug discovery of peptides including examples for successful development. The first day is dedicated to topics to be addressed more early during peptide optimization, and the second day focuses more on issues related to later-stage development. As in the past, this event is thought to disseminate information on latest news in the broad field of therapeutic peptides and to enable networking of interested parties from academia and industries.

Thomas Vorherr (Novartis, Basel, Switzerland)

Roderich Süßmuth (TU Berlin, Berlin, Germany)

10:45 - 11:15

Title to be announced

11:15 - 11:45

Title to be announced



Scientific Programme

10:45 - 11:45

Innovation Forums, Kairo 1-2

Artificial Intelligence and blockchain in healthcare

The recent advances in deep learning techniques revolutionized the Artificial Intelligence (AI) and facilitated its application in the pharmaceutical industry. Alongside AI, Blockchain technology is also rapidly gaining popularity in the biopharmaceutical sector. These two technologies are remarkably converging with each other and enabling new, previously unthinkable applications in healthcare. The "Artificial Intelligence and Blockchain in Healthcare" forum is bringing together the AI and Blockchain thought leaders to explore the potential of bridging AI and Blockchain for drug discovery processes and personalized management of life data.

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)
Verner De Biasi (GSK, Collegeville, United States)
Ulrich Muehlner (GrowthCube Partners GmbH Basel BS, Basel, Switzerland)
Daniel Burgwinkel (DayOne.swiss, Basel, Switzerland)

10:45 - 11:15

Title to be announced

11:15 - 11:45

Big data analytics for small molecules

Theodore Alexandrov (EMBL - European Molecular Biology Laboratory, Heidelberg, Germany)

10:45 - 11:45

Innovation Forums, Shanghai 1

Genomics, blockchain smart contracts and the healthcare data sharing economy

Healthcare data is growing at an exponential rate. For example, current estimates suggest 500 million whole genomes sequenced by 2030, generating approximately 500 Exabytes of data, which is larger than all current global data repositories. In addition, Terabytes of data are being collected from wearable devices. However, insights for preventative health and care remain to be unlocked from these rich data sources. This forum will bring together stakeholders from across the value chain (pharma, hospitals, insurers, patient groups) to discuss how to build an ecosystem to unleash the power of this data. This ecosystem should connect the data owners (hospital, or individual patients as the lowest common denominator), to data analyzers (i.e. the algorithm developers), and the data users (companies paying for these insight to develop the best-in-class competitive products and services). We will hear from these stakeholders as the future landscape for how health and care is disrupted.

Bhupinder Bhullar (Swiss Vault Systems, Basel, Switzerland)
Daniel Gutierrez (Genebook, Basel, Switzerland)

10:45 - 11:15

Title to be announced

11:15 - 11:30

Title to be announced

Omar Fogliadini (Suisse Life Science, London, United Kingdom)

11:30 - 11:45

A patient centric ecosystem for genomic data sharing

Daniel Gutierrez (Genebook, Basel, Switzerland)



Scientific Programme

10:45 - 11:45

Innovation Forums, Shanghai 2

Microfluidics and microenvironment workshop

BaselArea.swiss and CSEM with their partners Toolpoint for Lab Science join forces to organize the Basel Microfluidics and Microenvironment Workshop at Basel Life. This Forum builds up from the experience of two successful years to provide critical technological insights and latest updates from the global microfluidics industry for applications in the life sciences. The focus of this year's forum will be on the preparation of microphysiological systems in a microenvironment for boosting the relevance of in-vitro assays towards in-vivo outcome. This includes developments related to organ or model organism on a chip, droplet microfluidics or bioprinting. The forum brings together scientists, entrepreneurs and managers in these fields, from both industry and academia, to exchange ideas and to promote innovation applicable to bio-pharmaceutical development, in particular to antibiotics R&D.

Ralf Dümpelmann (BaselArea.swiss, Basel, Switzerland)
Marc Creus (University of Basel, Basel, Switzerland)
Helmut Knapp (Alpnach, Switzerland)

10:45 - 10:55

Welcome and introduction of BaselArea.swiss and CSEM

Marc Creus (University of Basel, Basel, Switzerland)
Ralf Dümpelmann (BaselArea.swiss, Basel, Switzerland)
Helmut Knapp (Alpnach, Switzerland)

10:55 - 11:20

Title to be announced

Jennifer L. Rohn (Chronic UTI Group, Centre for Nephrology, University College London, London, United Kingdom)

11:20 - 11:45

Title to be announced

Adrian Roth (Roche, Basel, Switzerland)

12:15 - 13:15

Innovation Forums, Delhi

Peptide therapeutics

Thomas Vorherr (Novartis, Basel, Switzerland)
Roderich Süßmuth (TU Berlin, Berlin, Germany)

12:15 - 12:45

Title to be announced

Ved Srivastava (Intarcia Therapeutics, Boston, United States)

12:45 - 13:15

Title to be announced

12:15 - 13:15

Innovation Forums, Kairo 1-2

Artificial Intelligence and blockchain in healthcare

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)
Verner De Biasi (GSK, Collegeville, United States)
Daniel Burgwinkel (DayOne.swiss, Basel, Switzerland)
Ulrich Muehlner (GrowthCube Partners GmbH Basel BS, Basel, Switzerland)

12:15 - 12:45

Data - Blockchain - AI



Scientific Programmes

12:45 - 13:15

Title to be announced

12:15 - 13:15

Innovation Forums, Shanghai 1

Genomics, blockchain smart contracts and the healthcare data sharing economy

Bhupinder Bhullar (Swiss Vault Systems, Basel, Switzerland)
Daniel Gutierrez (Genebook, Basel, Switzerland)

12:15 - 12:45

Title to be announced

12:45 - 13:15

Panel discussion

12:15 - 13:15

Innovation Forums, Shanghai 2

Microfluidics and microenvironment workshop

Marc Creus (University of Basel, Basel, Switzerland)
Ralf Dümpelmann (BaselArea.swiss, Basel, Switzerland)
Helmut Knapp (Alpnach, Switzerland)

12:15 - 12:30

Title to be announced

12:30 - 12:45

Title to be announced

12:45 - 13:00

Title to be announced

Vincent Revol (CSEM, Alpnach, Switzerland)

13:00 - 13:15

Title to be announced

Sylke Hoehnel (Sun Bioscience, Lausanne, Switzerland)

12:30 - 14:00

Break, Montreal

Lunch break

12:30 - 14:00

Break, Singapore

Lunch break

13:30 - 14:30

Industry Symposium, Delhi

Industry Symposium



Scientific Programme

13:30 - 14:30	Industry Symposium, Kairo 1-2 Industry Symposium
13:30 - 14:30	Industry Symposium, Shanghai 1 Industry Symposium
13:30 - 14:30	Industry Symposium, Shanghai 2 Industry Symposium
14:00 - 15:40	EMBO Scientific Sessions, Montreal Plenary session 5: Metabolic disorders - Diabetes and obesity
	Helena Edlund (University of Umeå, Sweden)
14:00 - 14:25	Presentation 1 Helena Edlund (University of Umeå, Sweden)
14:25 - 14:50	Presentation 2 Stephen O'Rahilly (University of Cambridge, United Kingdom)
14:50 - 15:15	Presentation 3 Jens Brüning (Max Planck Institute for Metabolism Research, Cologne, Germany)
15:15 - 15:40	Presentation 4 Antonio Vidal-Puig (University of Cambridge, United Kingdom)
14:45 - 15:45	Innovation Forums, Delhi Peptide therapeutics
	Thomas Vorherr (Novartis, Basel, Switzerland) Roderich Süßmuth (TU Berlin, Berlin, Germany)
14:45 - 15:15	Drug delivery systems for peptides Michael Wagner (Sanofi, Frankfurt, Germany)
15:15 - 15:45	Title to be announced



Scientific Programme

14:45 - 15:45

Innovation Forums, Kairo 1-2

Artificial Intelligence and blockchain in healthcare

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)
Verner De Biasi (GSK, Collegeville, United States)
Ulrich Muehlner (GrowthCube Partners GmbH Basel BS, Basel, Switzerland)
Daniel Burgwinkel (DayOne.swiss, Basel, Switzerland)

14:45 - 15:15

Title to be announced

15:15 - 15:45

Title to be announced

Daniel Burgwinkel (DayOne.swiss, Basel, Switzerland)

14:45 - 15:45

Innovation Forums, Shanghai 1

Genomics, blockchain smart contracts and the healthcare data sharing economy

Bhupinder Bhullar (Swiss Vault Systems, Basel, Switzerland)
Daniel Gutierrez (Genebook, Basel, Switzerland)

14:45 - 15:15

Title to be announced

15:15 - 15:45

Title to be announced

14:45 - 15:45

Innovation Forums, Shanghai 2

Microfluidics and microenvironment workshop

BaselArea.swiss and CSEM with their partners Toolpoint for Lab Science join forces to organize the Basel Microfluidics and Microenvironment Workshop at Basel Life. This Forum builds up from the experience of two successful years to provide critical technological insights and latest updates from the global microfluidics industry for applications in the life sciences. The focus of this year's forum will be on the preparation of microphysiological systems in a microenvironment for boosting the relevance of in-vitro assays towards in-vivo outcome. This includes developments related to organ or model organism on a chip, droplet microfluidics or bioprinting. The forum brings together scientists, entrepreneurs and managers in these fields, from both industry and academia, to exchange ideas and to promote innovation applicable to bio-pharmaceutical development, in particular to antibiotics R&D.

Marc Creus (University of Basel, Basel, Switzerland)
Ralf Dümpelmann (BaselArea.swiss, Basel, Switzerland)
Helmut Knapp (Alpnach, Switzerland)

14:45 - 15:05

Title to be announced

Olivier Frey (Insphero, Schlieren, Switzerland)

15:05 - 15:25

Title to be announced

Janick Stucki (Alveolix, Bern, Switzerland)

15:25 - 15:45

Title to be announced

Marc Thurner (RegenHu, Villaz-St.Pierre, Switzerland)



Scientific Programme

15:40 - 15:55

EMBO Scientific Sessions, Montreal

Closing address

16:15 - 17:15

Innovation Forums, Delhi

Peptide therapeutics

Thomas Vorherr (Novartis, Basel, Switzerland)
Roderich Süßmuth (TU Berlin, Berlin, Germany)

16:15 - 16:45

N-butylpyrrolidinone as green solvent for solid phase peptide synthesis

John Lopez (Novartis Pharma AG, Basel, Switzerland)

16:45 - 17:15

Title to be announced

16:15 - 17:15

Innovation Forums, Kairo 1-2

Artificial intelligence and blockchain in healthcare

Alex Zhavoronkov (InSilico Medicine, Baltimore, United States)
Verner De Biasi (GSK, Collegeville, United States)
Ulrich Muehlner (GrowthCube Partners GmbH Basel BS, Basel, Switzerland)
Daniel Burgwinkel (DayOne.swiss, Basel, Switzerland)

16:15 - 16:30

Title to be announced

16:30 - 16:45

Title to be announced

16:45 - 17:15

Panel on blockchain in healthcare

16:15 - 17:15

Innovation Forums, Shanghai 1

Genomics, blockchain smart contracts and the healthcare data sharing economy

Bhupinder Bhullar (Swiss Vault Systems, Basel, Switzerland)
Daniel Gutierrez (Genebook, Basel, Switzerland)

16:15 - 16:45

Blockchain & smart contract dos and don'ts

Thomas Ackermann (Bundeswehr, Berlin, Germany)

16:45 - 17:15

Panel discussion

16:15 - 17:15

Innovation Forums, Shanghai 2

Microfluidics and microenvironment workshop

Marc Creus (University of Basel, Basel, Switzerland)
Ralf Dümpelmann (BaselArea.swiss, Basel, Switzerland)
Helmut Knapp (Alpnach, Switzerland)



Scientific Programme

16:15 - 16:25

Title to be announced

16:25 - 16:35

Panel discussion