

CONFERENCE AGENDA

CURIOUS2018
FUTURE INSIGHT CONFERENCE

JULY 16-18 2018
darmstadtium, DARMSTADT, GERMANY

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13.00

OPENING CEREMONY

Welcome

Introductory Speech

Ulrich Betz (*Merck KGaA, Darmstadt, Germany*)

Spectrum

David Bull (*Moderator*)

Stefan Oschmann (*Chairman of the Executive Board and CEO of Merck KGaA, Darmstadt, Germany*)

13.30

**The Merck family owned company
– how to prosper for 350 years and beyond**

Frank Stangenberg-Haverkamp
(*Chairman of the Executive Board and the Family Board of E. Merck KG*)

Spectrum

14.15

**Blue ocean shift- beyond competing: proven steps to
inspire confidence and seize new growth**

Renée Mauborgne (*INSEAD*)

Spectrum

15.00

From digital life to extending healthy human life

Craig Venter (*J. Craig Venter Institute*)

Spectrum

15.45

Networking Coffee Break & Curiosity Ground - Exhibition, E-Poster Session, Curiosity Circle

Joao Monteiro, Victoria Aranda (*Nature*) Spectrum

**Nature Roundtable
The Future of Medicine**



Don Cleveland (*UCSD*)
Juan Carlos Izpisua Belmonte (*Salk Institute*)
Crystal Mackall (*Stanford University*)
Jennifer Wargo (*MD Anderson Cancer Center*)
Caroline Dive (*CRUK, Manchester Institute*)
Carlos Caldas (*CRUK, Cambridge Institute*)
David Solit (*Memorial Sloan Kettering Cancer Center*)
Nancy COX (*Vanderbilt University*)
Alan Karthikesalingam (*DeepMind Health*)

David Bull

**Foresight for visioning
science, technology
and innovation policy**

Shinichi Akaike
(*NISTEP*)
Naohiro Shichijo
(*Tokyo University of Technology*)

Ferrum

Bringing new chemistry to life Frances Arnold
(*Caltech*)

**Curiosity driven research:
Don't predict the future.
Create it.** Daniel Zajfman
(*Weizmann Institute*)

Tim Appenzeller (*AAAS/Science*)

Titanium

**Stimuli-responsive smart soft
materials fabricated under
nonequibrated conditions**

Takuzo Aida
(*University of Tokyo*)

**A new concept for asymmetric
lewis acid catalysis**

Benjamin List
(*Max-Planck-Institut
für Kohlenforschung*)

**Nanomaterials for the life
sciences**

Uli Wiesner
(*Cornell University*)

18.30

Networking Night – Dinner, Topical Islands, AI-workshop, Dream Board & Curiosity Ground

The perfect place to meet inspiring people from all over the world and make surprising discoveries in a creative environment.

AGENDA DAY TWO


08.45	Introductory Comments	Ulrich Betz (<i>Merck KGaA, Darmstadt, Germany</i>) David Bull (<i>Moderator</i>)	Spectrum
09.00	Rapid discovery of gene function	Bruce Beutler (<i>UT Southwestern Medical Center</i>)	Spectrum
09.45	The rise and promise of artificial molecular machines based on the mechanical bond	Fraser Stoddart (<i>Northwestern University</i>)	Spectrum
10.30	Announcement Future Insight Prize	Stefan Oschmann (<i>Merck KGaA, Darmstadt, Germany</i>)	Spectrum
10.45	Networking Coffee Break & Curiosity Ground - Exhibition, E-Poster Session, Curiosity Circle		
11.15	David Bull Pathology from the molecular scale on up	Spectrum Garry Nolan <i>(Stanford University)</i>	
12.00	John Gyapong Impacting lives through innovative delivery of global health interventions in sub-saharan Africa	<i>(University of Health and Allied Sciences)</i>	
12.45	Networking Lunch & Curiosity Ground - Exhibition, E-Poster Session, AI Workshop, Curiosity Circle		

Tim Appenzeller (AAAS/Science) Ferrum

Barcamp Vibrant Digital

Joao Monteiro (Nature) Titanium

Barcamp Life Reimagined

13.45	Introductory Comments	David Bull	Spectrum
13.50	tbd	Thomas Reiter (<i>ESA Astronaut</i>)	Spectrum
14.00	Perspectives in chemistry – from supramolecular chemistry to adaptive chemistry	Jean-Marie Lehn (<i>University of Strasbourg</i>)	Spectrum
14.45	Cryo-electron microscopy, and the transformation of structural biology	Joachim Frank (<i>Columbia University</i>)	Spectrum
15.30	Networking Coffee Break & Curiosity Ground - Exhibition, E-Poster Session, Curiosity Circle		
16.00	Tim Appenzeller (AAAS/Science) Spectrum Science Roundtable: Technology Breakthrough of the Year  Friederike Schüür (<i>Cloudera</i>) Matt Rosseinsky (<i>University of Liverpool</i>) Yang Shao-Horn (<i>MIT</i>) Emmanuelle Charpentier (<i>MPI Infection Biology</i>) Christina Smolke (<i>Stanford University</i>) Mary Voytek (<i>NASA</i>)	David Bull Ferrum The neglected diseases: Will a „new world order“ reverse global gains? Peter Hotez (<i>Baylor College</i>) Man, Microbes and Systems Medicine Jeremy Nicholson (<i>Imperial College London</i>) Crystalline sponge method for synthetic and natural product studies Makoto Fujita (<i>University of Tokyo</i>)	Joao Monteiro (Nature) Titanium Liquid Sunlight Peidong Yang (<i>University of California, Berkeley</i>) Biological variability and experimental biology: Threats and opportunities Ruedi Aebersold (<i>ETH Zurich</i>) Genome writing Jef Boeke (<i>NYU Langone Health</i>)
16.45			
17.30			
18.15	Roundtable: Future Insight Prize Stefan Oschmann (<i>CEO Merck KGaA, Darmstadt, Germany</i>) Lothar H. Wieler (<i>Director Robert Koch Institute</i>) Nadia Tornieporth (<i>CEPI, Coalition for Epidemic Preparedness</i>) Subhanu Saxena (<i>Bill & Melinda Gates Foundation</i>) Christopher Milne (<i>Tufts University</i>) Justin Sanchez (<i>DARPA</i>) Sir Michael Jacobs (<i>Royal Free London NHS Foundation Trust</i>)		Spectrum
19.00	Curiosity Night – Dinner, AI-workshop, Gadget Lounge & Curiosity Ground <i>We keep moving forward opening new doors, and doing new things, because we are curious and curiosity keeps leading us down new paths.</i>		

AGENDA DAY THREE

08.45	Introductory Comments	Ulrich Betz (<i>Merck KGaA, Darmstadt, Germany</i>) David Bull (<i>Moderator</i>)	Spectrum
08.50	Curious2018 Future Insight - video message	Satya Nadella (<i>CEO Microsoft</i>)	Spectrum
09.00	What is happening to chemistry?	George Whitesides (<i>Harvard University</i>)	Spectrum
09.45	Taking synthetic biology out of the lab and into your life	Justin Sanchez (<i>DARPA</i>)	Spectrum
10.30	Networking Coffee Break & Curiosity Ground - Exhibition, E-Poster Session, Curiosity Circle		
11.00	David Bull	Spectrum	Titanium
	Cognitive computing for discovery	Scott Spangler <i>(IBM Watson Health)</i>	
11.45	Jake Yeston (AAAS/Science)	Ferrum	Titanium
	New chemical reactions energized by light	David MacMillan <i>(Princeton University)</i>	
11.45	Joao Monteiro (Nature)	Titanium	Titanium
	Assembly line synthesis creating molecules with tailored shape	Varinder Aggarwal <i>(University of Bristol)</i>	
12.30	Cybernetics Revolution: Fusion of humans, robots and information systems	Yoshiyuki Sankai <i>(Cyberdyne, INC.)</i>	Titanium
	Barcamp Healthy Lives		
12.30	Networking Lunch & Curiosity Ground - Exhibition, E-Poster Session, AI Workshop, Curiosity Circle		

AGENDA DAY THREE

13.15	Introductory Comments	David Bull	Spectrum
13.30	The transformative CRISPR-Cas9 technology: Origins and applications	Emmanuelle Charpentier <i>(Max Planck Institute for Infection Biology)</i>	Spectrum
14.15	<p>David Bull Spectrum</p> <p>Engineered T-cells for cancer therapy Crystal MacKall <i>(Stanford University)</i></p>	<p>Jake Yeston (AAAS/Science) Ferrum</p> <p>From diagnosing diseases to predicting diseases Rudi Balling <i>(University of Luxembourg)</i></p>	<p>Joao Monteiro (Nature) Titanium</p> <p>Barcamp Materials and Solutions</p>
15.00	<p>Standing on the shoulders of mice: adventures in human immunology Mark Davis <i>(Stanford University)</i></p>	<p>Building scale & breadth at the Ginkgo Bioworks Foundry Tom Knight <i>(Ginkgo Bioworks)</i></p>	
15.45	Networking Coffee Break & Curiosity Ground - Exhibition, E-Poster Session, Curiosity Circle		
16.15	<p>David Bull Spectrum</p> <p>Giving new life to materials for energy, the environment and medicine Angela Belcher <i>(MIT)</i></p>	<p>Jake Yeston (AAAS/Science) Ferrum</p> <p>Man, machine, magic Shyam Sankar <i>(Palantir Technologies)</i></p>	<p>Joao Monteiro (Nature) Titanium</p> <p>Magic: Ancient, modern, and future Dean Radin <i>(Institute of Noetic Sciences)</i></p>
17.00	Role of infectious agents in human colon cancer	Harald zur Hausen <i>(German Cancer Research Center)</i>	Spectrum
17.45	Closing comments and outlook	Ulrich Betz <i>(Merck KGaA, Darmstadt, Germany)</i>	Spectrum



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