

ATV

# VISIONS IN CHEMISTRY THE TORKIL HOLM SYMPOSIUM

DGI-byen, CPH Conference Center 26 - 27 January 2018

PROGRAMME

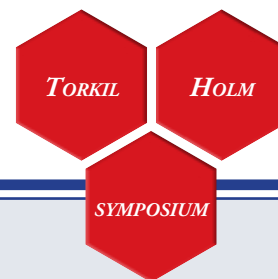


*TORKIL*

*HOLM*

*SYMPOSIUM*

# THE SYMPOSIUM



## The Themes

Topics to be presented include: molecular nanotechnology, chemical biology, drug discovery and delivery, organometallic catalysis, molecular bioscience, organic functional systems, and total synthesis of complex target molecules.

## The Aim

The aim of the Torkil Holm Symposium is to bring together world-leading experts, from both academia and industry, to present a broad range of topics within the field of chemical science.

## The Sponsor

Thanks to a generous donation from the Torkil Holm Foundation, the fourth Torkil Holm "Visions in Chemistry" Symposium will take place in Copenhagen on January 26 and 27 2018.



### Dr. phil Torkil Holm

Dr. phil Torkil Holm is a distinguished emeritus in organic chemistry at the Technical University of Denmark.

## The Danish Academy of Technical Sciences

Since the first symposium in 2000, ATV has structured these symposiums, which are today regarded among the world's most influential. The Danish Academy of Technical Sciences (ATV) is an independent, member-driven think tank. ATV's vision is that Denmark shall be one of five leading Science and Engineering regions in the world – to the benefit of future generations.

## The Torkil Holm Prize

During the symposium the Torkil Holm Research Award for Chemistry will be announced. The prize will be awarded to a younger researcher, who has already established his or her credentials as an independent investigator in any area of chemical science and who shows great promise for further scientific development. Candidates from Danish academia, private research institutions and industry are all eligible for the prize.

## Networking

The Torkil Holm Symposium provides an excellent environment for networking with some of the best in the chemistry field. This is further promoted by scientific and social gathering in appropriate breaks for discussion including seated lunch breaks and a symposium dinner.

Join the Torkil Holm Symposium to boost your network and experience world class chemistry.

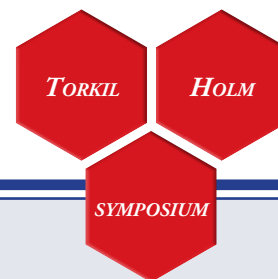
We look forward to two intensive days of presentations and discussions of research at the leading edge of chemistry.

*The ATV Scientific Organizing Committee*

s not going to eat the  
monster," Benn  
unnatural sy  
value in li



# PROGRAMME



FRIDAY 26 JANUARY 2018

**08:30 Registration and breakfast**

**09:00 Symposium opening and welcome**

Professor David Tanner, Technical University of Denmark  
Chairman of the ATV Scientific Organizing Committee

**09:05 SESSION 1**

Chaired by Professor Kurt Vesterager Gothelf

**The Art of Building Small**

Nobel Laureate, Professor Ben L. Feringa

**New directions in cancer immune therapy targeting the glycome**

Professor Carolyn R. Bertozzi

**Coffee and tea break**

**11.30 The Torkil Holm Prize 2018**

Chaired by Professor Klaus Bock

Lecture by prize winner

**12.30 Lunch**

**14.00 SESSION 2**

Chaired by Professor Jesper Wengel

**In situ analysis of C-X bond-making and bond-breaking reactions**

Professor Guy Lloyd-Jones

**Chemical Synthesis Enables Synthetic Biology**

Professor Dirk Trauner

**Coffee and tea break**

**Cyclic peptide scaffolds as templates in drug design**

Professor David Craik

**Cysteine arylation to engineer and discover proteins**

Associate Professor Bradley L. Pentelute

**18:00 Symposium dinner**

SATURDAY 27 JANUARY 2018

**09:00 Breakfast**

**09:30 SESSION 3**

Chaired by Professor Morten Meldal

**The Discovery of Sofosbuvir and How HCV Was Cured**

Dr. Michael J. Sofia

**Chemical tools for investigating histone deacetylase (HDAC) enzymes**

Professor Christian A. Olsen

**Coffee and tea break**

**Functional Supramolecular Chemistry**

Professor Stefan Matile

**12.30 Lunch**

**13.30 SESSION 4**

Chaired by Vice President Klaus Bæk Simonsen

**Total Synthesis of Polycyclic Natural Products by Domino Reactions**

Professor Dr. Tanja Gaich

**Translational Chemistry**

Professor Phil S. Baran

**15.10 Symposium closing remarks**

Professor David Tanner, Technical University of Denmark

Chairman of the ATV Scientific Organizing Committee





# THE SPEAKERS

TORKIL

HOLM

SYMPOSIUM



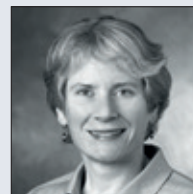
## Nobel Laureate, Professor Ben L. Feringa

was appointed lecturer and in 1988 full professor at the University of Groningen and named the Jacobus H. van 't Hoff Distinguished Professor of Molecular Sciences in 2004. He was elected Foreign Honorary member of the AAAS and was vice-president of the KNAW. In 2008 he was appointed Academy Professor and was knighted by Her Majesty the Queen of the Netherlands. In 2016, Prof. Feringa was awarded the Nobel Prize in Chemistry. The research interest includes stereochemistry, organic synthesis, asymmetric catalysis, photopharmacology, molecular switches and motors, self-assembly and molecular nanosystems.



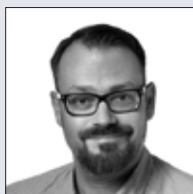
## Professor Bradley L. Pentelute

Associate professor. He is currently the Pfizer-Laubach Career Development Professor, Associate Member, Broad Institute of Harvard and MIT, and Member, Center for Environmental Health Sciences MIT. He has been recognized with several awards including Young Chemical Biologist Award, International Chemical Biology Society Rising Star, and the Damon Runyon-Rachleff Innovation Award. Research focuses on the use of cysteine arylation to generate abiotic macromolecular proteins, the precision delivery of biomolecules into cells, and the development of fast flow platforms to rapidly produce polypeptides.



## Professor Carolyn R. Bertozzi

is the Anne T. and Robert M. Bass Professor of Chemistry and Professor of Chemical & Systems Biology and Radiology at Stanford University, and an Investigator of the Howard Hughes Medical Institute. The Bertozzi Group studies cell surface interactions that contribute to human health and disease with specific projects in the areas of cancer, inflammation and bacterial infection. The Group uses the techniques of organic synthesis, genetics, and biochemistry as tools to study and manipulate complex cellular processes.



## Professor Christian A. Olsen

is a professor in the Center for Biopharmaceuticals and Department of Drug Design and Pharmacology at University of Copenhagen. He received his M.Sc. from The Technical University of Denmark in 2000 and his Ph.D. from The Danish University of Pharmaceutical Sciences in 2004. He did his postdoctoral fellowship with Prof. Ghadiri at The Scripps Research Institute. In 2010 he became a Lundbeck Foundation Fellow and in 2016 he was awarded the ERC Consolidator grant. His research interests include foldamers, macrocyclic peptide-based HDAC inhibitors and quorum sensing modulators, as well as investigation of protein lysine acylation.



## Professor David Craik

is an Australian Research Council Laureate Fellow at the University of Queensland's Institute for Molecular Bioscience. His research focusses on the discovery and applications in drug design of bioactive peptides from plants and animals, particularly macrocyclic peptides known as cyclotides. He is a Fellow of the Australian Academy of Science and has received numerous awards during his career, including the Ralph F Hirschmann Award from the American Chemical Society. He is an author of more than 600 publications and has trained 70 PhD students.



# THE SPEAKERS

TORKIL

HOLM

SYMPOSIUM



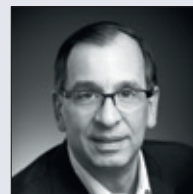
## Professor Dirk Trauner

resides as a Professor of Chemistry and Neuroscience at New York University (NYU). The broad objective of Prof. Trauner's research is to demonstrate the awesome power of chemical synthesis with challenging target molecules and to use it toward the establishment of synthetic biological pathways. He is well known for his pioneering contributions to Optogenetics and Photopharmacology, using synthetic photoswitches to confer light-sensitivity to a broad range of targets. The chemical tools which he developed are particularly useful in neuroscience and cell biology but also hold promise as precision therapeutics.

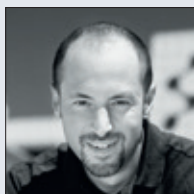


## Professor Guy Lloyd-Jones

was appointed a professor in 2003 and Head of Organic and Biological Chemistry in 2012, University of Bristol. In 2013, he moved to the University of Edinburgh to take up the Forbes Chair of Organic Chemistry. Research Interests comprise among other things: Mechanism, organometallics and catalysis, synthesis, physical organic chemistry. Prime research cases include a gold-catalysed direct arylation, pH-deconvolution of organoboron protodeboronation, a new pathway for amide solvolysis, the first catalysed alkene diamination, and new techniques for in situ reaction monitoring, and for testing chiral catalysts in racemic form.



**Dr. Michael J. Sofia** is co-founder and CSO of Arbutus Biopharma where he has been since 2014. His research focus is in the area of viral hepatitis drug discovery and development. He is credited with the discovery of sofosbuvir a breakthrough therapy for the rapid cure of hepatitis C virus (HCV) infection. Dr. Sofia received his B.A. degree from Cornell University, his Ph.D. degree from the University of Illinois and was an NIH postdoctoral fellow at Columbia University. Dr. Sofia is recipient of numerous awards including the 2016 Lasker-DeBakey Clinical Medical Research Award and the Economist's 2015 Innovation Award.



## Professor Phil S. Baran

is a Professor in the Department of Chemistry at the Scripps Research Institute and Member of the Skaggs Institute for Chemical Biology. He received his B.S. in chemistry from New York University in 1997 and his Ph.D. from The Scripps Research Institute in 2001, under the supervision of K.C. Nicolaou. He did his postdoctoral fellowship in the laboratory of Nobel Laureate E. J. Corey at Harvard University. Baran has authored over 180 published scientific articles. He has several patents. His research is focused on synthesizing complex organic compounds, the development of new reactions and the development of new reagents.

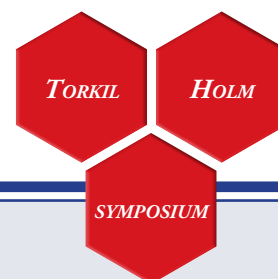


**Professor Stefan Matile** is a Full Professor at the University of Geneva and a founding member of the National Centre of Competence in Research (NCCR) Chemical Biology and the NCCR Molecular Systems Engineering. In 2010, he became an ERC Advanced Investigator. He is the co-author of more than 250 publications and has delivered more than 230 lectures all over the world. Research: At the interface of synthetic organic, biological and supramolecular materials chemistry. Emphasis is on molecules and supramolecular systems that are synthesized from scratch, have interesting functions, address lessons from nature and integrate unorthodox interactions.



**Prof. Dr. Tanja Gaich** did her post doctoral research at Scripps, then became AvH-Nachwuchsgruppenleiter at the Leibniz University, and in 2015 W3-Professor at the University of Konstanz. Research is focused on the total synthesis of polycyclic natural products which exhibit a unique molecular architecture. The synthetic strategy is governed by the biosynthesis of the respective structure. In a biosynthetic process molecular complexity very often originates from a domino reaction sequence. Establishing the chemical feasibility of such an avalanche of bond-forming events raises synthetic efficiency and lowers the costs.

# PRACTICAL INFO



## Dates

26 - 27 January 2018

Friday 26 January: 8.30 am - 11.00 pm

(incl. symposium dinner)

Saturday 27 January: 9.00 am - 3.30 pm

## Registration

Please register at [www.atv.dk](http://www.atv.dk) before 12 January 2018.

## Participation Fee

Includes breakfast both days, coffee and tea breaks, lunches both days, symposium dinner and free bar (from 6.00 to 11.00 pm) Friday 26 January

Ordinary participants: DKK 3,650

Graduate participants: DKK 1,250

All prices are excl. 25 % VAT

## Payment

Invoice and confirmation will be forwarded upon receipt of registration. If cancellation is received later than 12. January 2018, the participation fee cannot be refunded.

## Accommodation

Accommodation must be arranged individually by the participants.

## The ATV Scientific Organizing Committee

Professor Klaus Bock, Torkil Holm Foundation

Professor Kurt Vesterager Gothelf,  
Aarhus University

Vice President Ole Kirk, Novozymes A/S

Professor Morten Meldal,  
Copenhagen University

Vice President Klaus Bæk Simonsen,  
H. Lundbeck A/S

Professor David Tanner (Chairman),  
Technical University of Denmark

Professor Jesper Wengel, University of  
Southern Denmark

## Symposium Secretariat

ATV – Danish Academy of Technical Sciences

c/o FORCE Technology

Hjortekærsvvej 99, 2800 Kgs. Lyngby

Denmark

Tel. +45 4596 0824

E-mail.: [THSymposium@atv.dk](mailto:THSymposium@atv.dk)

[www.atv.dk](http://www.atv.dk)

## Venue

DGI-byen

CPH Conference Center

Tietgensgade 65, 1704 Copenhagen V

Denmark

Tel: +45 33 29 80 60

[www.dgi-byen.com](http://www.dgi-byen.com)

▼ From left to right: Managing Director of ATV Lia Leffland, Vice President Ole Kirk, Novozymes, Sponsor Torkil Holm and Professor Klaus Bock

