

**SCG**Schweizerische
Chemische
Gesellschaft**SSC**Société
Suisse
de Chimie**SCS**Swiss
Chemical
Society

KGF-SCS Industrial Science Awards

Dear CHIMIA readers,

On behalf of the KGF (Contact Group for Research Matters) it is my privilege to announce the prizewinners of the KGF-SCS industrial science awards. Together with the Swiss Chemical Society the KGF member companies honor outstanding achievements of industrial scientists working in Switzerland. For more than 40 years KGF, a Swiss Industry Association, has supported the promotion of scientific excellence and understanding in Switzerland and nearby regions. In the name of the KGF I congratulate all prizewinners for their outstanding scientific contributions.

Dr. Reto Naef
KGF chair
Novartis Pharma AG

KontaktGruppe für Forschungsfragen

Contact Group for Research Matters



Award Ceremonies and Award Lectures

The award ceremonies will take place on the occasion of the SCS Fall Meeting Dinner in Lausanne on September 5, 2013. We are proud to announce that the award lectures will be held either in the plenary session or in one of the parallel sessions of the Fall Meeting in Lausanne on September 6, 2013.

Friday, September 6, 2013; SCS Fall Meeting Lausanne

- *Prof. Klaus Müller* from F. Hoffmann-La Roche AG, Basel and ETH Zürich. Winner of the Distinguished Industrial Investigator Award 2013. Plenary Session, 17.00.
- *Dr. Ian Lewis* from Novartis Pharma AG, Basel. Winner of the Senior Industrial Investigator Award 2013. Organic Chemistry, Morning Session.
- *PD Dr. Werner Bonrath* from DSM Nutritional Products, Basel. Winner of the Senior Industrial Investigator Award 2013. Catalysis, Morning Session.
- *Dr. Mark Rogers-Evans* from F. Hoffmann-La Roche, Basel. Winner of the Industrial Investigator Award 2013. Medicinal Chemistry, Morning Session.

KGF-SCS Distinguished Industrial Investigator Award 2013

Certificate and payment of CHF 15'000



The award is given to **Prof. Klaus Müller**, F. Hoffmann-La Roche AG, Basel and ETH Zurich, for pioneering a number of important and crucial scientific initiatives both in academia and industry and most importantly for his early pioneering in ensuring quality academic-industry relations.

Professional career

- 1968–70 ETH Zürich, PhD (Prof. A. Eschenmoser)
- 1971 University of Chicago, Postdoc (Prof G. Closs)
- 1972–74 Harvard University, Lecturer
- 1974–77 ETH Zürich, Habilitation
- 1977–82 ETH Zürich, Junior Faculty Member
- 1982–2009 F. Hoffmann-La Roche AG, Basel, Group Head of Computer-Assisted Molecular Modeling, Head of Pharmaceutical Research New Technologies, Head of Science & Technology Relations in Roche Pharmaceutical Research, Member of the Board and Secretary-General of The Roche Research Foundation.
- 2009–2010 Roche Consultant, Lecturer at the ETH Zürich
- 2010 Prous Institute – Overton and Meyer Award for New Technologies in Drug Discovery
- 2011 Royal Society of Chemistry: Organic Industrial Chemistry Award Winner

Scientific experience/contribution

Prof. Klaus Müller quickly realized the pre-eminent importance of a deeper understanding of science at the molecular basis and after his intensely successful early research career leading to a junior faculty position at the ETH Zürich where synergistic elements of theoretical and physical chemistry were combined it was inevitable that he would dynamically seek out greater challenges in a new environment to develop further his knowledge, passion and scientific curiosity. These characteristics led him down stream of the Rhine from ETH Zürich to F. Hoffmann-La Roche AG in Basel – and this authentic bonding connectivity between these two institutions remains very strong to this day. Klaus became a pioneer and one of the first, if not the first, to implement in industry computer-assisted molecular modeling (1982) which up until that point was a mere academic curiosity. As the group head, Klaus quickly assembled a group of talented computational scientists that was to later become recognized leaders around the globe. Together they pioneered a number of new areas, creating and developing an industry first in what was coined 'Computer Aided Molecular Modeling' (Camm) already in 1982. With Paul Gerber they invented MOLOC and in response to needs of scientists both in the pharmaceutical industry and academia combined novel concepts, and functionalities with broad applicability namely developing the theories and concepts associated to polarization (non-covalent interactions) and

solvation/de-solvation (ionization interactions). Klaus accurately predicted that CAMM alone would not have maximum scientific impact and established the Structural Biology group in 1984 with Fritz Winkler – again becoming an industry first – and a key skill was embedding the CAMM knowledge together with structural biology in such a manner to guide iterative design with the common denominator of vital and specific knowledge generation allowing chemists for the first time a handle on how to understand at the molecular basis critical interactions between small molecules and key areas within proteins of therapeutic interest. Today elements of these technologies are close to becoming routine but the pioneering work of Klaus' team is a key contributor to that fact. One outstanding outcome of biostructural research was the opportunity to further understand biological function and hence the birth of structural genomics and bioinformatics with Clemens Broger. The transition of data into knowledge has been a key driver for Klaus throughout his career and it was inevitable that the next greatest challenge would involve leading the group entitled 'Pharmaceutical Research New Technologies' which combined the ultimate natural sciences of Chemistry, Physics, Molecular Biology and Biotechnology; an endeavor he led from 1991–1996. This mindset paradigm shift of pure multi-disciplinary research thinking in the pharmaceutical industry had been evolving since 1982 and reached its summit during this time and today remains a fully integrated and instinctive behavior of scientists in industry. Additional new and important paradigm shifts of how Roche scientists conducted early research are evident through the plethora of new technologies and initiatives that Klaus implemented that in many aspects arrived well before their times, e.g. development and implementation of Smart Roche Compound Depository, development of an ultra-HT Screening System, 1st Combined Chemistry-Biology Information Management System (CBIMS), development & implementation of Web-based Knowledge Bases, Structure-Property Relations & Initiation of Automated Parallel Miniaturized and the HT-Measurement of physicochemical compound properties. These platforms were the catalyst for informed decision-making globally within our Roche environment and not only remain today but have evolved into critical aspects of our daily work. From 1998–2009 Klaus took on the ambitious role of ensuring the Roche organization was ready for the future and focused in his role as Head of Science & Technology Relations in Roche Pharmaceutical Research in attracting only the most talented scientists to Roche which he did through the trilogy of Roche Symposia (Leading Chemists, Leading Bioscientists and Scientist of the next decade). Science remains Klaus' key passion and focus and throughout all the above mentioned initiatives he was able to invent and publish (>90 publications and patents). The recent times have seen perhaps some of Klaus' most impressive achievements bear fruit. His longstanding and deep interest in understanding small molecules can be exemplified by his pioneering work with fluorine with Francois Diederich (ETH Zürich) and innovative novel scaffolds with Erick Carreira (ETH Zürich). Fluorine was traditionally labeled as a way to alter metabolism in substrates and Klaus expanded this area to encompass a much more detailed and broader understanding of the molecular subtleties which can be attributed to fluorine e.g. through the effects of basicity, lipophilicity, polarity and polar interactions as well as the very important changes in conformational aspects in molecular property design. Establishing new concepts to offer medicinal chemists unique avenues to explore previously untapped chemical space was feasible due to the scholarly approach taken in the work developed on oxetanes and drug like compact modules and was enhanced to include small nitrogen containing congeners in collaboration with Mark Rogers Evans (KGF-SCS Industrial Investigator Award 2013).
Dr. Andrew W. Thomas (Roche, Senior Leader, Medicinal Chemistry)

KGF-SCS Senior Industrial Investigator Award 2013

Certificate and payment of CHF 10'000



The award is given to *Dr. Ian Lewis*, Novartis Institutes of Biomedical Research, Basel, for the design and synthesis of SOM230/Pasireotide (Signifor®), as the first pituitary directed medical therapy for Cushing's disease approved by EMEA and FDA in 2012.

Professional career

1985/88	University of Edinburgh, PhD with Prof. R. Ramage
1988/90	ETH Zürich, post-doc with Prof. A. Eschenmoser
2001/02	The Scripps Research Institute, La Jolla, California USA, Novartis Visiting Research Fellow with Prof. Dr. K. Barry Sharpless, Nobel Laureate
1990–	Novartis Institutes of Biomedical Research, Basel, Endocrinology Department, Bone & Joint Department, Core Technologies Combinatorial Chemistry Unit, Transplantation Chemistry Unit and Global Discovery Chemistry Exploratory Medicinal Chemistry Unit

Scientific experience/contribution

The unique contribution of Dr. Ian Lewis was to investigate mimicking the full pharmacology of the large, unstable macrocyclic SRIF-14, in a reduced-size, stable cyclohexapeptide template. In an innovative, creative and cutting edge approach, incorporation of four synthetic amino acids, mimicking Lys⁴ and Phe^{6,7} & Phe¹¹ in combination with D-Trp-Lys, the two essential β -turn forming amino acids of SRIF-14, into a stable cyclohexapeptide template resulted in SOM230. The fascination of this novel, multi-receptor ligand somatostatin mimic is that it combines the advantages of the full somatostatin pharmacology from the naturally occurring unstable ligand, encapsulated within the advantageously much more stable, reduced size drug-like cyclohexapeptide macrocycle.

Dr. Ian Lewis contributed the leadership of a unique medicinal chemistry strategy of starting with a reduced-size template or core and decorating it outwards with unnatural, exquisitely designed synthetic amino acids such as the novel basic hydroxy-proline urethane extension, (2*S*,4*R*)-4-(((2-amino ethyl)carbamoyl)oxy)pyrrolidine-2-carboxylic acid, which pivotally enabled reaching the high affinities to multiple sst receptors for the first time from a small molecule. Based on this unique design, SOM230 exhibits binding with a 30 to 40 times higher affinity than Sandostatin® to the sst1 and sst5 receptors and exhibits higher efficacy in preclinical models in lowering Growth Hormone, Insulin-Like Growth Factor-1, ACTH and corticosterone than Sandostatin®. These discoveries ultimately led to phase III clinical studies establishing the therapeutic potential of SOM230 / Pasireotide (Signifor®), as the first pituitary directed medical therapy for Cushing's disease, culminating in registration of SOM230 by both EMEA and FDA in 2012.

Dr. Andreas Marzinzik (Novartis, Unit Head, Exploratory Medicinal Chemistry, Global Discovery Chemistry, Novartis Institutes of Biomedical research)

KGF-SCS Senior Industrial Investigator Award 2013

Certificate and payment of CHF 10'000



The award is given to **PD Dr. Werner Bonrath**, DSM Nutritional Products, Basel, for his contributions in the fields of Vitamins, Carotenoids and Flavor and Fragrances, always related to the application of new catalytic processes which can be industrialized.

Professional career

- 1988 Max-Planck-Institute for Carbon research, PhD with Prof. G. Wilke
 1988 Max-Planck-Institute, senior fellow
 1988/89 University of Innsbruck, Assistant
 Since 1989 F. Hoffmann-La Roche AG, Basel,
 Since 2003 DSM Nutritional Products Ltd, Kaiseraugst, Research and development department for vitamins and fine-chemicals
- 1996 Senior Scientist
 2001 Scientific Specialist
 2005 Principal Scientist and Competence Manager Heterogeneous Catalysis
 2007 Friedrich-Schiller Universität Jena, Habilitation

Scientific experience/contribution

PD Dr Werner Bonrath covered in his career a broad range of different chemistries in the fields of catalysis and its industrial application. Especially catalytic ethynylation, hydrogenation (e.g. Lindlar-type hydrogenation), solid acid-base catalysis, rearrangement reactions (e.g. synthesis of α,β -unsaturated carbonyl compounds), C–C-bond formations, and development of catalytic methods were in the main focus of his interest. In the area of flavor compounds derivatives of isoprenoids were the target molecules. Main achievements of the work were applied in vitamins E and A processes (and building blocks thereof), vitamin B6 and biotin synthesis, the production of farnesyl acetone, pentynol and several other compounds. He is co-author of more than 150 patent applications and publications.

Roman Imhof (DSM, Nutrition Innovation Center)

KGF-SCS Industrial Investigator Award 2013

Certificate and payment of CHF 7'000



The award is given to **Dr. Mark Rogers-Evans**, F. Hoffmann-La Roche, Basel for his work in Medicinal chemistry, particularly for his studies of small heterocyclic ring systems such as Oxetanes and Azaspiro[3.4]octanes.

Professional career: (>70 publications/patents)

- 1989 Loughborough University, PhD with Prof. B.A. Marples
 1990/1 University of London, post-doc with Prof. R. Bonnett
 1992/3 Celltech Ltd: Lab-head in Medicinal Chemistry
 1994 University of Waterloo, post-doc with Prof. Snieckus
 1996 Roche, Basel, Lab-head in Process Research

- 2001 Lab-head in Medicinal Chemistry
 2005 SCS Mettler Toledo Award
 2010 Head Chemistry Frontiers Forum
 2012 Head Basel Innovation Incubation Council
 2012 Roche Plenary Lecturer IASOC, Ischia

Scientific experience/contribution

Mark's career at Roche has been as much innovative as unusual. Beginning in the Process Research department (1996–2000) he rapidly created a positive impact by devising and patenting the first commercial synthesis of a novel broad-spectrum antibiotic (with Dr. Hans Hilpert and later filed as Ceftobiprole). In 2001, as an expert in organic synthesis, Mark was invited to join Discovery Medicinal Chemistry in a new venture that merged *de novo* computational design, virtual screening and parallel synthesis, resulting in the rapid identification of a completely novel cannabinoid-1 inverse agonist. This work was presented by Mark and recognized with the 2005 Swiss Chemical Society Mettler Toledo Award. Along with several key contributions to clinical candidates in novel autism and Alzheimer's projects, Mark together with Professor Klaus Mueller, Professor Eric Carreira and Dr. Georg Wuitschik (ETH) have transformed the academic and industrial perspective on oxetanes as novel medicinal "compact" modules. Oxetane incorporation into drug-like molecules often achieves a significant reduction in lipophilicity whilst dramatically enhancing metabolic stability and solubility. Stimulated by these results, in 2010, Mark designed, set up and led a new collaboration (Dr. Dong Bo Li, ETH), examining a sophisticated second-generation set of spiro amino-sulphonyl modules as surrogates of well-established medicinal chemistry scaffolds: tailored to improve further safety properties and to explore and expand physicochemical and chemistry space. This work was presented for the first time by Mark in the Roche Plenary Lecture at the prestigious 2012 IASOC meeting in Ischia. In the same year Mark was appointed Chair of the Basel Innovation Incubation Council, a body designed to fund novel ideas and encourage entrepreneurial behavior at chemistry interfaces due to his strong track record in championing new concepts, challenging contemporary thinking and catalyzing innovation in discovery research endeavors.

Alex Alanine (Roche, Head Chemistry Technologies & Innovation)

A WARM WELCOME TO OUR NEW MEMBERS!

Abderrahim Ayaou, Basel – Michal Dabros, Genève – Murielle Delley, Zurich – Cagatay Dengiz, Zurich – Rahel Eberle, Bern – Lukas Felix, Basel – Matthias Frei, Zürich – Przemyslaw Gawel, Zurich – Helena Guiset Miserachs, Zürich – Shabir Hassan, Zurich – Mathias Mamboury, Fribourg – Michael Matthes, Bad Säckingen – Enkelejda Miho, Basel – Victor Mougel, Zürich – Anastasia Musiari, Zurich – Desislava Petkova, Mülheim an der Ruhr – Sereina Riniker, Basel – Diana Rueda, Basel – Tobias Schibli, Baldingen – Georges Siddiqui, Zurich – Caroline Souris, Mülheim an der Ruhr – Olivier Vorlet, Châbles – Johannes Windisch, Zürich – Marianthi Zampakou, Zürich.

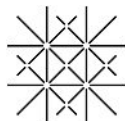


SCS

Division of
Polymers, Colloids
and Interfaces

Polycoll 2013

Annual Meeting of the Division of Polymers, Colloids and Interfaces

UNI
BASEL

Department of
Chemistry



Friday, June 7, 2013
Department of Chemistry
University of Basel
Organic Chemistry Lecture Hall
St. Johanns-Ring 19, CH-4056 Basel

The 2013 annual spring meeting of the Division of Polymers and Colloids of the Swiss Chemical Society will take place at the University of Basel. Eight invited speakers from academia and industry, as well as a poster session and the distribution of the division's PhD awards will showcase recent developments in the field.

Program

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|-------|---|
| 9.30 | Coffee |
| 9.55 | <i>Welcome</i>
Dr. Bettina Steinmann, Division of Polymers and Colloids |
| 10.00 | <i>Biomimetic and compartmentalized self-assembled polymersomes</i>
Prof. Sébastien Lecommandoux, University of Bordeaux |
| 10.45 | <i>New routes to nanoparticles for the controlled release of drugs</i>
Dr. Sebastian Koltzenburg, BASF, Ludwigshafen |
| 11.15 | Distribution of the PhD Award of the Division (3 talks, each 15 minutes) |
| 12.15 | Lunch and posters |
| 13.30 | <i>Magnetic memory switch from liquid-crystalline elastomer nanocomposites</i>
Dr. Antoni Sánchez-Ferrer, ETH Zürich |
| 14.00 | <i>Nanocomposites for tissue fusion</i>
Prof. Uwe Pieleles, Fachhochschule Nordwestschweiz, Muttenz |
| 14.30 | <i>Nano-chemicals as performance enablers in innovative thermosetting materials</i>
Kai Schierholz, Axson, Basel |
| 15.00 | Coffee break |
| 15.20 | <i>Vesicles as templates for the enzymatic synthesis of polyaniline</i>
Prof. Peter Walde, ETH Zürich |
| 15.50 | <i>Title tba</i>
Prof. Alke Fink, University of Fribourg |
| 16.20 | <i>Polymer controlled mineralization: From sea urchin spines to elastic cement</i>
Prof. Helmut Cölfen, University of Konstanz |
| 17.05 | Apéro |

Conference Organizers

Prof. Wolfgang Meier, Department of Chemistry, University of Basel, wolfgang.meier@unibas.ch
Dr. Nico Bruns, Department of Chemistry, University of Basel, nico.bruns@unibas.ch

Abstracts

Poster contributions are highly welcome.

To present a poster please email a 1-page abstract with title, authors, and their affiliations (please use the template that can be downloaded from https://swiss-chem-soc.ch/index.php?option=com_superevents&redirect=category&catid=5&Itemid=525&task=group&view=details&id=2368&lang=en) to Bettina Steinmann (steinmannb@3dsystems.com) until May 15, 2013. The maximum poster size is A0 portrait.

Registration

Please register by sending an email to: Bettina Steinmann, 3D Systems SA
E-mail: steinmannb@3dsystems.com

Registration deadline is May 15, 2013

Registration fee is CHF 80.–

Attendance is free for PhD students.

Please pay *via* bank transfer to:

UBS AG
CH-8098 Zürich
Acc. No. 230-10 556 160.0
SWIFT UBSWCHZH80A
Clearing No. 230
IBAN CH84 0023 0230 1055 6160 0
Postal Account No. PC 80-2-2
Please indicate: *PolyColl 2013 and name*

Maps and Directions



For more details, please see <http://www.chemie.unibas.ch/visitors/index.html>



SCS

Division of
Analytical Sciences

Weiterbildung Analytik

Trenntechnik
Analytische Anwendungen
Methoden der Life Sciences
Qualitätssicherung
InCompany Trainings

Titel	Ort	Termin	Code
Enantioselektive chromatographische Trennmethode NEU	Dübendorf	14.05.2013	TR-14
Grundlagen der Kapillarelektrophorese (CE)	Basel/Novartis	14.–15.05.2013	TR-1
Interpretation von Massenspektren	Dübendorf	14.–15.05.2013	SP-8
Einführung in die Ionenchromatographie (IC)	Zofingen	16.05.2013	TR-8
Quality by Design-Ansatz in der multifunktionellen HPLC-Methodenentwicklung NEU	Basel/Novartis	22.05.2013	QS-13
Karl Fischer Titration	Zofingen	23.05.2013	AA-2
Oberflächengestützte Analytik und Sensorik mit der Schwingquarz-Mikrowaage NEU	Dübendorf	24.05.2013	AA-7
GC-Troubleshooting	Windisch	27.–28.05.2013	TR-5
Elektrochemische Titrationen: Einführung in die Praxis	Zofingen	28.05.2013	AA-1
Isolierung und Reinigung von Proteinen	Basel/Novartis	29.–30.05.2013	LS-3
Kritischer Umgang mit Informationsquellen in der Chemie	Zürich/ETH Hö	04.06.2013	QS-2
Effiziente Internet-Nutzung im analytischen Labor	Dübendorf	10.06.2013	QS-1
IR-Spektroskopie: Einführung und Interpretation der Spektren	Biel-Benken	11.–12.06.2013	SP-3
Säulen, Phasen und Trennoptimierung in der HPLC – Ergänzungskurs	Windisch	12.–13.06.2013	TR-10
Messunsicherheit in der Analytik	Dübendorf	13.06.2013	OS-5
IR Spektroskopie: Interpretationstraining	Biel-Benken	13.06.2013	SP-10
Grundlagen und Anwendungen in der Nah-Infrarot (NIR) Spektrometrie	Flawil	20.06.2013	SP-5
Validieren von Analyseverfahren II, Praktische Beispiele	Dübendorf	24.06.2013	QS-9
Atomabsorptions-, Atomemissions-Spektroskopie (AAS und AES) für Einsteiger/-innen	Dübendorf	25.06.2013	SP-1
Qualifizieren von Analysengeräten	Dübendorf	25.06.2013	QS-7

Französisch

Echantillonnage ou prélèvement représentatif en production, dans l'environnement et au laboratoire ainsi que les normes s'y rapportant	Genève	02.–03.05.2013	AA-4f
Préparation de l'échantillon liquide	Genève	07.05.2013	AA-2f
Analyse de matrices solides	Genève	08.05.2013	AA-3f
Analyse qualitative et quantitative en GC/MS	Genève	15.05.2013	MS-3f
Troubleshooting en GC/MS	Genève	16.05.2013	GC-5f
Spéctrométrie d'absorption atomique avec four graphite ((AAS-GF) et Spéctrométrie d'émission atomique à plasma inductif (ICP-OES)	Genève	17.05.2013	AA-1f

Es freut uns, Ihnen das Weiterbildungsprogramm 2013, das wir zusammen mit dem Centre de Compétence en Chimie et Toxicologie Analytiques (CCCTA) realisiert haben, vorzustellen.

Einzelmittglieder der folgenden Fachverbände können unsere Kurse zum vorteilhaften Mitgliedertarif besuchen:

Fachverband Laborberufe (FLB), Gesellschaft Deutscher Chemiker (GDCh), Schweizerische Arbeitsgemeinschaft für Spektrometrie und Elementaranalytik (SASP), Schweizerischer Chemikanten- und Chemisten-Verband (SCV), Schweizerische Gesellschaft für Lebensmittel- und Umweltchemie (SGLUC) und Schweizerische Gruppe für Massenspektroskopie (SGMS).

Falls Sie sich für unsere Veranstaltungen interessieren, erreichen Sie uns unter Telefon **058 765 52 00** oder Fax **058 765 58 01** oder mailen Sie an verena.schmid@eawag.ch. Online-Anmeldung im Internet unter: www.scg.ch/das

InCompany Training – Individuelle Beratung und Schulung

Im Rahmen des Weiterbildungsprogramms organisieren oder erarbeiten wir gemeinsam mit Ihnen InCompany-Schulungen und -Trainings nach Ihren Vorstellungen und Bedürfnissen. Profitieren Sie davon, dass wir für Sie

- Inhalte an firmenspezifische Anforderungen und Wünsche anpassen
- Frage- und Problemstellungen in Ihrem Einsatzgebiet gezielt behandeln
- praktische Übungen gegebenenfalls an Ihren Geräten durchführen
- Trainings bei Bedarf auch in französischer oder englischer Sprache durchführen

Ein weiterer Vorteil der InCompany-Trainings: für Ihre Mitarbeiterinnen und Mitarbeiter fallen keine Reise- und Übernachtungskosten an!

Experten stehen Ihnen für eine persönliche Bedarfsabklärung und Beratung gerne zur Verfügung.

Sie erreichen uns über
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