

# INFORMATION

## News

### BioSquare 2004 Brings the Bounce Back Into Biotech

Basel, Switzerland, March 15, 2004. – BioSquare 2004 in Basel (March 10-12, 2004), has again broken attendance records for this 4-year old event that brings together leading players in the biotech, pharmaceutical, agfood and finance sectors, the organizers announced today.

Co-hosted by the world's three largest bioindustry organizations (BIO – USA, EuropaBio – Europe, JBA – Japan), the event welcomed 1,150 experts from 36 countries. More remarkably, the organizers claim a world record in the number of match-makings that took place at the event.

“BioSquare set up some 3,450 pre-arranged meetings in Basel – a world record for a standalone event,” said Eric Poincelet, general manager of BioSquare's coorganizer, The World Life Sciences Forum BioVision. “Industry observers estimated that there are two or three more meetings that take place informally for every one of these officially arranged sessions. This means a total of more than 12,000 formal or informal match-makings took place in just three days. BioSquare is now Europe's biggest partnering event both from the number of meetings arranged and from the number of countries represented.”

Alongside these statistics, other key observations from the organizers point to a real rebound in biotech after a period where bounce has been for the most part absent. “Investors are coming back to biotech,” said Carola Schropp, Principal of EBD Group, the California-based company co-organizing the event with BioVision. “We saw a buzz at BioSquare that has been missing for some time, and a real rise in optimism.”

Events that took place in parallel with BioSquare also attracted a large number of attendees and resulted in productive discussion. At the Start-up Networking Event, a number of big pharma representatives fielded questions from biotech companies and gave constructive answers to some of the challenges that face young companies seeking partnerships.

“Pharmaceutical companies now seem to have realized that carefully crafted partnerships with biotechs can bring creativity

and the type of innovation that they need,” added Poincelet. “BioSquare originally went under the code name Gulliver Project and it is now obvious that the Giants have started to understand just how much the Little Ones can bring to their activity.”

The Basel venue clearly proved popular, reinforcing the belief that biotech clusters are transnational and reach beyond political frontiers, with national industrial and research policy rapidly becoming less important than regional considerations. It is perceived that Europe can be split into four ‘bioclusters’, one stretching from the UK into northern France, Benelux and the western edge of Germany, another from southern Germany through Switzerland, Rhône-Alpes and southern France and reaching into Lombardy and Catalonia, a third covering the Nordic countries, the Baltic states and northern Germany and a fourth embracing Berlin and south-east through the former Czechoslovakia into Austria and Hungary.

#### About BioSquare

BioSquare was co-organized by:

- EBD Group, a US-based service provider to the life sciences industry facilitating business between U.S. and European companies. It also supports companies efforts in securing financing, grants, and loans.
- BioVision: The World Life Sciences Forum BioVision focuses on issues and challenges facing the XXI Century. The Forum acts as an international venue for world-renown decision-makers and opinion-leaders to analyze, debate and set priorities for the evolution of Life Sciences. The next World Life Sciences Forum will be held in Lyon, France from April 11-15, 2005.
- BioValley Basel AG, a service organization for Life Sciences located in the triangle of Switzerland, Germany, and France.

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## Congresses – Conferences – Workshops

### Scientific Conference: 10th Anniversary of CCS

June 17/18, 2004, CCS-ETH, Technopark, Zurich, Switzerland

Celebrating the Decennial of CCS (The Centre for Chemical Sensors and Chemical Information Technology) founded by Prof. Ursula E. Spichiger-Keller.

For more information, please contact our homepage: <http://www.chemsens.pharma.ethz.ch>

E-mail: [info@chemsens.pharma.ethz.ch](mailto:info@chemsens.pharma.ethz.ch)

## 10th Anniversary of the Centre for Chemical Sensors and Chemical Information Technology (CCS) at ETH Zürich

### Scientific Conference on June 17/18, 2004, at Technopark Zürich

We are delighted to invite the international community of sensor research and technology to attend this conference marking the 10th anniversary of the Centre for Chemical Sensors and Chemical Information Technology (CCS) at ETH Zürich. CCS was established in March 1994, one year after the opening of Technopark Zurich. CCS operated as a self-supporting institute by agreement with the Swiss Federal Institute of Technology (ETHZ). Even though the situation was sometimes critical, a large number of partnerships and projects involving other research groups and companies enabled the development of innovative solutions some of which had been protected by totally ten patent applications. In addition, CCS was able to outsource technologies to its spin-off companies SENSORIX and C-CIT AG founded in 1999 and 2002, respectively.

Despite the fact that CCS had very little money for research work and had to work similar to a research institute, a good academic profile and curriculum was achieved. This is mirrored in the strong commitment from colleagues all over the world for the Decennial Conference. A number of distinguished scientists have accepted invitations to present highlights of their work in the topics 'Sensors in Medical Diagnostics, Life Science and Industry' and 'Trends in Sensor Research'. In the following, some highlights of the scientific programme are summarized.

Technological developments often need half a century to become mature for specific applications. This means, on the one hand, that sensor technology profits now from the merits achieved in the sixties and earlier. On the other hand, technologies needed in fifty years have to be developed now. This may be true for devices used in space laboratories and on space missions. 'As small as possible and as effective as necessary' seems to be the slogan of systems developed for space laboratories. *Nico De Rooij*, University of Neuchâtel, reports on 'Technology Transfer Opportunities Inspired by the Space Bioreactor'. *Augusto Cogoli*, ETH Zurich, describes 'Trends in Space Biology: Bioprocesses in Space Laboratories'.

On a more solid ground of today's reality but equally straightforward are the developments presented by *Mark Meyerhoff*, Michigan University, and *Bruno Oesch*, Prionics AG, Zurich, Switzerland. Devices developed for medical diagnostics show especially long development times before the medical community is able to trust in it. Some sensors are designed to be applicable to whole blood and, if possible, operated *in vivo* as catheter-style sensors. Mark Meyerhoff will show 'New Solutions to Old Analytical Challenges'. Characteristically this restrictive attitude can change rapidly if a test is urgently needed for a disease which is highly contagious, lethal for livestock and of high risk for humans. We will be happy to learn from Bruno Oesch about the technological background of BSE tests under the title 'Diagnosis of Mad Cow Disease: Immunoassays and Their Characteristics'.

The classical chemical sensor consists of a chemical receptor, which interacts with a specific class of analytes, combined with a

physical transducer which transmits an optical or electrochemical signal to a detector. Optodes ideally combine a chemical receptor and a chemical transducer emitting or absorbing light in one molecule. This allows very effective sensor designs. *Amilra P. de Silva* claims that Photoinduced Electron Transfer (PET) is one key "to build molecular-scale information processors" which are "much smaller than the smallest silicon-based electronic device".

The efficiency of an electrochemical biosensor is related to a tight and direct connection of the active site of biomolecules to the electrode. In order to improve and accelerate the electron transfer of redox enzymes between substrate and electrode, the enzyme structure and the catalytic mechanisms must be elucidated. *Elizabeth Hall*, University of Cambridge, UK, tackles the topic 'Attach of the Clones: Genetically Engineered Bioelectronics'. The effect of chemical and structural modifications of recombinant enzymes on the heterogeneous electron transfer rate is shown by *Lo Gorton*, Lund University, Sweden. Under the title 'Direct Electron Transfer between Heme containing Redox Enzymes and Electrodes as Basis for Third Generation Biosensors' he will compare the effects of modifications such as glycosylation, His tag or cysteine attachment.

Special notice is devoted to *Philippe Bühlmann*, University of Minnesota, USA, a doctoral student of late Prof. Wilhelm Simon. He closes the considerations on electron transfer with the topic 'Chemically Selective Imaging with Scanning Tunneling Microscopy Using Chemically Modified Tips'. Microscopical technique such as STM/Scanning Tunneling Microscopy) and AFM (Atomic Force Microscopy) are important analytical tools to image surface structures with submolecular and atomic resolution. Philippe Bühlmann shows in his presentation that the contrast between different elements can be enhanced by chemically modifying the STM tip. Despite the general success of the feasibility studies, he noticed relevant drawbacks. He claims that drawbacks may be overcome by carbon nanotubes grown on metal tips by chemical vapor deposition, a real challenge for the next research period.

With the Decennial Conference, we gratefully acknowledge the many fruitful contacts and collaborations, and the financial support of projects by Swiss funding bodies especially by CTI (Commission of Technology and Innovation).

We are happy to announce an attractive programme which nobody should miss. A conference book containing the abstracts and references will be provided. For details see [www.chemsens.ethz.ch](http://www.chemsens.ethz.ch)

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## DETECTA 04: Stofftrennung und Detektion in der Analytik

10.–11. Juni 2004 in der Pharma Novartis AG, Basel

Mehr Informationen finden Sie in dieser Ausgabe auf Seite 247 und unter [www.sach.ch](http://www.sach.ch)

## Honors/Ehrungen

Prof. *Peter H. Seeberger*, Laboratorium für Organische Chemie der ETH Zürich, wurde von der American Chemical Society mit dem Horace B. Isbell Award und dem Arthur C. Cope Young Scholar Award geehrt.

Prof. *François Diederich*, Laboratorium für Organische Chemie der ETH Zürich, übernahm den Vorsitz des Kuratoriums des Fachmagazins „Angewandte Chemie“

Prof. em. *Pier Luigi Luisi*, Institut für Polymere der ETH Zürich, ist von der Faculty of Sciences of Leiden University zum Van Arkel-Professor für das Jahr 2004 ernannt worden.

## Lectures

### Berner Chemische Gesellschaft

Mittwoch, 16.30 Uhr  
Hörsaal EG 16, Departement für Chemie und Biochemie,  
Freiestrasse 3  
(Kaffee um 16.10 Uhr vor dem Hörsaal)

5. Mai, 2004 Prof. *Johann Gasteiger*  
Universität Erlangen-Nürnberg, Computer-  
Chemie-Centrum und Institut für Organische  
Chemie, Erlangen  
'What is Chemoinformatics?'

12. Mai, 2004 Prof. *Peter Seeberger*  
ETH Hönggerberg, Laboratorium für  
Organische Chemie, Zürich  
'Automated Oligosaccharide Synthesis:  
From Carbohydrate Arrays to Malaria and  
HIV Vaccines'

26. Mai, 2004 Prof. *Sidney Brenner*  
Lecture-hall Nobel Prize in Medicine 2002  
U113, 15.15 h The Salk Institute, La Jolla, USA  
'From Genes to Organisms'

### Société Fribourgeoise de Chimie (SFC) Freiburger Chemische Gesellschaft (FCG)

Tuesday, 17.15h, Grand Auditorium,  
Chemistry Department, Pérolles  
Coffee, tea, and croissants will be served in front of the auditoire  
about 30 min before the lectures.

May 18, 2004 Prof. *Kay Severin*  
Institut de Chimie Moléculaire et Biologique,  
Ecole Polytechnique Fédérale de Lausanne  
'New Catalysts and Receptors by  
Self-Assembly and Combinatorial Chemistry'

### Chemische Gesellschaft Zürich

Mittwoch, 17.15 Uhr  
Hörsaal 19, Gebäude 15  
Universität Zürich-Irchel, Winterthurerstrasse 190

5. Mai, 2004 Prof. Dr. *Heinz Berke*  
Anorganisch-chemisches Institut, Universität  
Zürich  
'Chemistry in Ancient Times: The Develop-  
ment of Blue and Purple Pigments'

12. Mai, 2004 Prof. Dr. *Hans-Joachim Böhm*  
Head of Discovery Chemistry,  
F. Hoffmann-La Roche AG, Basel  
'New Approaches to Structure-Based *de novo*  
Design'

26. Mai, 2004 Prof. Dr. *Stefan Hell*  
Max-Planck-Institut für biophysikalische  
Chemie, Göttingen (D)  
'Fluorescence Nanoscopy with Focused Light'

### Institut für Physikalische Chemie der Univer- sität Basel

Mittwoch, 17.30 Uhr  
Kleiner Hörsaal, Raum 404/2. Stock, Klingelbergstrasse 80

5. Mai, 2004 Prof. Dr. *U. Nienhaus*  
16.30 Uhr Departement für Physik,  
Universität Ulm, Deutschland  
'Spectroscopic Studies of Light-induced  
Dynamics in Globins, Photosynthetic Reaction  
Centers and Fluorescent Proteins'

### Departement für Chemie und Biochemie der Universität Bern

#### Seminare in Anorganischer, Analytischer und Physikalischer Chemie

Donnerstag, 11.15 Uhr, Hörsaal 481, Freiestrasse 3

6. Mai, 2004 Prof. Dr. *Roberta Sessoli*  
Laboratory of Molecular Magnetism, Diparti-  
mento di Chimica, Università degli Studi di  
Firenze, Firenze, Italy

- ‘Single Molecule Magnets: Everybody Should Have One’
13. Mai, 2004 Prof. Dr. *Peter Day*  
(3ème Cycle en Chimie, Colloque)  
Royal Institution and University College,  
London, U.K.  
‘New Techniques for Probing Molecular  
Materials’
14. Mai, 2004 Prof. Dr. *Peter Day*  
Freitag (3ème Cycle en Chimie, Colloque)  
Royal Institution and University College,  
London, U.K.  
‘A Future for Molecular Electronics:  
Relearning Old Lessons’
27. Mai, 2004 Prof. Dr. *Rasmita Raval*  
Department of Chemistry, University of  
Liverpool, Liverpool, U.K.  
Title to be announced
27. Mai, 2004 Prof. Dr. *Rasmita Raval*  
14.00–16.30 h (3ème Cycle en Chimie, Colloque)  
Department of Chemistry, University of  
Liverpool, Liverpool, U.K.  
‘Chiral Expressions in 2-Dimensional  
Systems’

### Departement für Chemie und Biochemie der Universität Bern

#### Seminare in Organischer Chemie und Biochemie

16.30 Uhr, Hörsaal 379 Süd oder 481 Süd, Freiestrasse 3  
<http://www.dcb.unibe.ch>

10. Mai, 2004 Prof. *Miguel Llinas*  
Montag Department of Chemistry, Carnegie Mellon  
Hörsaal 481 University, Pittsburgh  
‘NMR-Studies on the Structure and Function  
of Collagen-Binding Domains of Collagenase  
A (MMP-2)’
17. Mai, 2004 PD *Stephan Christen*  
Montag Institut für Infektionskrankheiten, Universität Bern  
Hörsaal 481 ‘Role of Reactive Oxygen Species in Acute  
Inflammatory Brain Disorders’
24. Mai, 2004 Prof. *Raimund Dutzler*  
Montag Institut für Biochemie, Universität Zürich  
Hörsaal 481 ‘The Structural Basis of CIC Chloride Channel  
Function’
25. Mai, 2004 Prof. *Albin Hermetter*  
Dienstag Departement für Biochemie,  
Hörsaal 379 Technische Universität Graz  
‘Fluorescence Analytics of Lipolytic Enzymes  
in Biotechnology and Medicine’

### Département de Chimie Organique, Université de Genève

Sciences II, Auditoire A-100, 16h30  
30, quai Ernest Ansermet, Genève  
<http://www.unige.ch/sciences/chiorg/seminars.html>

- Jeudi Prof. *Alceo Macchioni*  
13 mai 2004 Dipartimento di Chimica Università di Perugia,  
Perugia, Italy  
‘Elucidation of the Solution Structures of  
Transition Metal Complex Ionic Adducts by  
NMR Methodologies’
- Lundi Prof. *Pavel Kocovsky*  
17 mai 2004 Department of Chemistry, University of  
Glasgow, Glasgow, UK  
Title to be announced
- Mercredi Dr. *Ernst R.F. Gesing*  
19 mai 2004 Bayer CropScience AG, Research Agricultural  
Center Monheim, Germany  
Part I: ‘Strategies for Lead Structure Discovery  
in Agrochemical Research’  
Part II: ‘Fungicidal and Insecticidal Research  
Based on Target Guided Strategies’
- Lundi Prof. *Uday Maitra*  
24 mai 2004 Department of Organic Chemistry, Indian  
Institute of Science, Bangalore, India  
‘Versatile Chemistry with Bile Acids:  
Hydrogelators, Dendrimers, and More’
- Jeudi Prof. *John Goodby*  
27 mai 2004 Department of Chemistry, The University of  
Hull, Kingston upon Hull, UK  
‘Liquid Crystal Glycolipids –  
Structure and Biological Function’

### Institut de Chimie, Université de Neuchâtel

- Mercredi Colloque de l’institut  
5 mai 2004 Prof. *Jay Siegel*  
10h30 Université de Zurich  
Petit Auditoire ‘Topological Motivations for Chemical Synthesis’
- Mercredi Colloque du 3 e cycle  
12 mai 2004 Prof. *Peter Day*  
10h30 University College of London, Grande Bretagne  
Petit Auditoire ‘Combining Disparate Physical Properties in  
Hybrid Organic-Inorganic Materials’
- Jeudi Colloque de l’institut  
13 mai 2004 Prof. *Qian Wang*  
17h15 University of South Carolina, Etats-Unis  
Salle E14 ‘New Bioconjugation Strategy Based on  
“Click” Chemistry: Plant Virus as the Testing  
Scaffold’
- Mercredi Colloque de l’institut  
19 mai 2004 Prof. *Jean-Luc Wolfender*  
10h30 Ecole Romande de Pharmacie  
Petit Auditoire ‘Produits naturels et techniques  
chromatographiques couplées (LC/MS et  
LC/RMN) - De la dérégulation d’extrait  
végétaux bruts aux applications  
métabolomiques’
- Mardi Colloque du 3 e cycle  
25 mai 2004 Prof. *Rasmita Raval*  
10h30 University of Liverpool, Grande Bretagne  
Petit Auditoire ‘Surface Techniques and Surface Phenomena’

Mardi  
25 mai 2004  
17h00  
Petit Auditorio

Colloque du 3 e cycle  
Prof. *Rasmita Raval*  
University of Liverpool, Grande Bretagne  
'Creation, Complexities, and Dynamics  
of Chiral Nanostructures at Surfaces'

Mercredi  
26 mai 2004  
10h30  
Petit Auditorio

Colloque de l'institut  
Prof. *John Goodby*  
University of Hull, Grande Bretagne  
'Liquid Crystals, Big is Beautiful-Polypedes,  
Multipedes, and Dendrimers'

Mercredi  
26 mai 2004  
16h00  
Grand Auditorio

Colloque de l'institut  
Prof. *John Goodby*  
University of Hull, Grande Bretagne  
'Liquid Crystals; The Fourth State of Matter –  
From Television to Beetles'

### Laboratorium für Organische Chemie der ETH Zürich

Montag, 16.30 Uhr  
Hörsaal HCI J3  
ETH Hönggerberg, 8093 Zürich

3. Mai, 2004 Prof. Dr. *John A. Gerlt*  
University of Illinois, Urbana, USA  
'Evolving, Designing, and  
Discovering New Enzymes'

10. Mai, 2004 Prof. Dr. *Konstantin Pervushin*  
Laboratorium für Physikalische Chemie  
der ETH, Zürich  
'New Approaches for Structural Studies of  
Large Proteins and Protein Complexes by  
NMR in Solutions'

14. Mai, 2004 Prof. Dr. *Matthias Beller*  
Universität Rostock, Rostock, DE  
'Catalysis: A Key Technology for the  
Environmentally Benign Synthesis of  
Fine and Bulk Chemistry'

### Laboratorium für Physikalische Chemie der ETH Zürich

Dienstag, 16.45 Uhr  
Hörsaal HCI J3  
ETH Hönggerberg

4. Mai, 2004 Prof. Dr. *Gerard W. Canters*  
Institute of Chemistry, Gorlaeus Laboratories,  
Leiden University, Holland  
'Electron Transfer in Covalent and Transient  
Protein Complexes'

11. Mai, 2004 PD Dr. *Frank Neese*  
Max Planck Institut für Bioanorganische  
Chemie Mülheim an der Ruhr  
'Theoretical Optical and Magnetic  
Spectroscopy of Open Shell Transition Metal  
Ions of Relevance to Bioinorganic Chemistry'

18. Mai, 2004 Prof. Dr. *Helmut Rechenberg*  
Max-Planck-Institut für Physik, Werner-  
Heisenberg-Institut, München  
'The Quantum Mechanics Circle –  
The Hexagon Copenhagen-Goettingen-  
Hamburg-Leipzig-Munich-Zürich'

25. Mai, 2004 Prof. Dr. *N. Thomas*  
Physikalisches Institut, Universität Bern  
'Missions to Mars'

### Institut Pharmazeutische Wissenschaften der ETH Zürich

Seminars on Drug Discovery and Development  
Mittwoch, 17.15 Uhr  
Irchel 17, M05

12. Mai, 2004 Prof. Dr. *Wilhelm Kre*  
Institut für Zellbiologie,ETH Zürich  
'Von Hippel-Lindau Tumor Suppressor  
Mechanisms'

26. Mai, 2004 Telepoly-Veranstaltung,  
HG D16.2  
Dr. *Gerhard Müller*  
CSO, Axxima Pharmaceuticals, Munich  
'The Priviledged Structure Concept in  
Medicinal Chemistry: Systematic Exploration  
of Gene Families' (Moderation in Zürich: Prof.  
Gerd Folkers)

### Biochemische Institute der Universität Zürich

Donnerstag  
Uni Zürich-Irchel, Winterthurerstrasse 190, Hörsaal HS 44-H-05  
17.00 Uhr

6. Mai, 2004 Prof. Dr. *David Knaff*  
Texas Technical University, Lubbock, USA  
'Disulfide/Dithiol Redox Regulation of En-  
zyme Activity and Gene Expression'

27. Mai, 2004 Prof. *Stefan Muller*  
Max-Planck Institute, Biochemistry,  
Martinsried, Germany  
'The Ubiquitin-Like SUMO System in  
Transcriptional Regulation Host'

### Anorganisch Chemisches Institut der Universität Zürich

Freitag, 17.00  
Room 34 F 48  
Winterthurerstrasse 190, Zürich-Irchel

14. Mai, 2004 Prof. *Ann Walker*  
University of Arizona  
'Novel NO-Releasing Heme Proteins from the  
Saliva of Blood-Sucking Insects'

17. Mai, 2004 (Montag!) Prof. *Peter T. Wolczanski*  
Cornell University  
'Metal Olefin to Alkylidene Rearrangements:  
Mechanism, Energetics,  
and Related Reactions'
21. Mai, 2004 Prof. *Volker A. Erdmann*  
Berlin  
'RNA-Technologies: Crystallization and X-ray  
Analysis of RNA Molecules, which are of  
Medical Interest'

### **Zürcher Hochschule Winterthur**

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Abteilung Chemie und Biologische Chemie  
Donnerstag, 17.00 Uhr

13. Mai, 2004 Dr. *Dirk Hegemann*  
Chemiegebäude, C402 EMPA, St. Gallen  
'Funktionalisierung von Fasern und Textilien  
mittels Plasmatechnologie'
27. Mai, 2004 Dr. *Andreas Schäfer*  
Laborgebäude, L201 Qiagen Deutschland,  
Hilden  
'Macroresults Through Microarrays? Current  
Challenges in Microarray Technology'

### **Novartis Chemistry Lectureship 2002/2003**

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- Location: Novartis Pharma AG,  
Auditorium Horburg, WKL-430.3.20  
Müllheimerstrasse 195, CH-4057 Basel
- Time: 10.30 am ('Get Together': 10.00 am)
- May 7, 2004 Prof. *Johann Mulzer*  
University of Vienna  
'Recent Advances in the Total Synthesis of  
Biologically Active Natural Compounds'