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# **Welcome to the General Assemblee**

## **at METALOR AG, Marine-Epagnier**

**Friday, February 22nd, 2019, 10h**

22. February 2019



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# Program

From 09.45	Arrival and Welcome at Marin Business Center
10.00 -10.30	Introduction and presentation of Metalor SA by Dr. Lynda Si-Ahmed and Dr. Jonathan Jodry,
10.30 -11.15	Lecture by Prof. Dr. Rebecca Buller ZHAW about “Harnessing Nature – Biocatalysis for Development and Drug Discovery”
11.15 -11.45	General Assembly 2019 of DIAC
12.00	Lunch at Marin Business Center
13.15 -14.45	Site tour of Metalor SA at the Route des Perveuils 8 in Marin-Epagnier,
15.00	Wrap-up, Closure and Departure



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# Presentation of Metalor SA, Marin-Epagnier

Introduction and presentation of Metalor SA by  
Dr. Lynda Si-Ahmed and Dr. Jonathan Jodry





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**Prof. Dr. Rebecca Buller**

ZHAW Life Sciences und Facility Management  
Fachstelle Biokatalyse und Prozesstechnologie  
Einsiedlerstrasse 31  
8820 Wädenswil

☎ [+41 \(0\) 58 934 54 38](tel:+410589345438)

✉ [rebecca.buller@zhaw.ch](mailto:rebecca.buller@zhaw.ch)

## Prof. Dr. Rebecca Buller, ZHAW

Prof. Dr. Rebecca Buller leads the Competence Center for Biocatalysis (CCBIO) at the Institute of Chemistry and Biotechnology, Zurich University of Applied Sciences, Wädenswil.

Before joining the ZHAW, Rebecca Buller held a position as Laboratory Head and Project Manager at Firmenich, a flavour and fragrance company. In this role, she developed and optimized several biocatalysis based processes for the manufacture of asset molecules. Additionally, Prof. Dr. Buller brings in-depth knowledge of enzyme engineering through her academic research at ETH Zurich. Dr. Rebecca Buller received her Diploma degree in Chemistry from the University of Münster and studied at the University of California in Santa Barbara. She holds a PhD degree from the Institute of Chemistry and Applied Biosciences at ETH Zurich.»



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# **Harnessing Nature – Biocatalysis for Development and Drug Discovery**



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# Harnessing Nature – Biocatalysis for Development and Drug Discovery

Industrial biocatalysis has developed at a rapid pace and today the use of enzymatic catalysts is more frequently considered in chemical process design. However, in the development race between synthetic chemistry and biocatalysis the latter is still at a disadvantage. Synthetic organic expertise is still much more ingrained in almost all chemical companies, and synthetic catalyst systems are more prevalent in an off-the-shelf format than their enzymatic counterparts. As a consequence, fast development of a biocatalytic process step is only possible if a suitable enzyme is already available.

To meet the demand for screenable enzyme libraries, we are expanding the biocatalytic toolbox with new members of synthetically useful enzyme families. The lecture will highlight the discovery of novel ene reductases and the construction of a ketoreductase library for the synthesis of active pharmaceutical intermediates. By using a combination of microbial strain screening and databank analysis, genes encoding the desired functions were identified. Biochemical characterization of the (novel) enzymes highlights their application potential.»



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# DIAC General Assemble

1. DIAC Annual Report 2018
2. Outlook 2019
3. Annual financial statement 2018
4. Budget 2019
5. Election & confirmation of the DIAC Board
6. Various & Motions



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# 1. DIAC Annual Report (1/7)

## Activities, Symposia, Conferences, Projects

The annual DIAC meeting took place at CILG AG, in Schaffhausen, on March 22<sup>nd</sup> 2018:



*Picture 1: Main site entrance of CILAG AG in Schaffhausen, where the DIAC held its annual meeting 2018*

The welcome and introduction of CILAG AG was presented by Wolfgang Epple, Operations Director, BU Parenterals.



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## (DIAC Annual Report 2/7)

Cilag AG was established in Schaffhausen in 1936 and has been part of the Johnson & Johnson family of companies since 1959. Today Cilag AG is one of the largest manufacturers in the Swiss pharmaceuticals industry.

Cilag, employs approximately 1200 people. The company is a strategic market launch and manufacturing location for some of Johnson & Johnson's most important pharmaceutical products, using state-of-the-art technologies and processes.



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# (DIAC Annual Report 3/7)

## The scientific lecture:

An exclusive and very interesting lecture had been given by Setrak Bahceli from BASF Intertrade AG with the title.

### **“Trading in Procurement - Gambling or Necessity?”**

The trading and balancing of the raw material flows, contributes to the stabilisation of the world markets and therefore an increasing demand, considering the actual raw material supply situation in Europe.

BASF Intertrade AG  
Grafenauweg 8, 6300 Zug, Schweiz  
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+41 41 710 91 54





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# (DIAC Annual Report 4/7)

## Progress with the Green Chemistry Subgroup:

A follow-up discussion at the board meeting in June has been held with invited guests, aiming to create a new DIAC sub-division “Green & Sustainable Chemistry” G&SC.

The new group will already support a scientific ILMAC part in 2019 under the lead of the SCS. The DIAC board decided at its annual board workshop to support the integration of the G&SC, as a potential subgroup, into the DIAC.

Many of DIAC members are already actively working in the G&SC field. A final decision will be taken by the SCS board after the ILMAC 2019.



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# DIAC Annual Report (5/7)

## CHIMIA special edition from the DIAC:

A special Chimia was issued in March 2018 with the title:

QUALITY ASPECTS IN INDUSTRIAL CHEMISTRY

CHIMIA 2018, 72, No. 3 A121

### Quality Aspects in Industrial Chemistry



Xenia Beyrich-Graf

Quality is the overriding theme of this special issue compiled by the Division of Industrial and Applied Chemistry DIAC. The DIAC is a forum for chemists, chemical engineers, and process engineers interested in industrial chemistry, chemical production, development, and related fields. By organizing conferences such as the biennial Freiburger Symposium, we advocate the importance of process development and chemical production and provide a network for knowledge transfer, discussion and interdisciplinary collaborations.

Quality is simply defined as meeting the requirements of the customer. This statement still holds true, but management of quality has undergone a massive evolution. In the pharma, consumer and electronics industries, the purity and quality consistency requirements have increased dramatically leading to a rising number of regulations issued by authorities or original equipment manufacturers. Examples from Novartis and BASF show how these requirements are integrated into the production routine.

The Swiss Chemical Industry, like all others, competes globally not only on quality, but also on delivery and price. Increasing the quality can also reduce costs. DSM is using Lean Six Sigma methodology to improve quality by reducing variations and thereby increasing the performance and capacity of their processes.

Any process optimization requires process understanding first. Modern in-line techniques such as FT-NIR are an important and precise tool for analysis and improvement of chemical transformations or unit operations directly in the plant as described by Firmenich and Bruker Optics. However, all precision is worthless if the measurements are not accurate. METAS, the Federal Institute of Metrology, provides the expertise to ensure the accuracy of the measured process parameters, e.g. by developing accurate and traceable calibration methods for flow devices in production.

Let me conclude with a quote from Aristotle: *"Quality is not an act, it is a habit."*  
The contributions in this issue surely follow this philosophy.

Xenia Beyrich-Graf  
Performance Materials Research  
BASF SE  
67056 Ludwigshafen, Germany  
E-Mail: [xenia.beyrich-graf@basf.com](mailto:xenia.beyrich-graf@basf.com)





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# DIAC Annual Report (6/7)

## Swiss Industrial Chemistry Symposium (SICS) 2018:

The 2nd SICS meeting held in Basel on October 19<sup>th</sup> 2018, was again a success with more than 260 participants. Especially the organized dinner together with the organizing team and the active contributors, were successful. In addition the new short presentations and the best poster winner were well appreciated by the audience.



*Picture 2: lecture at the 2<sup>nd</sup> Swiss Industrial Chemistry Symposium SICS in Basel 2018*



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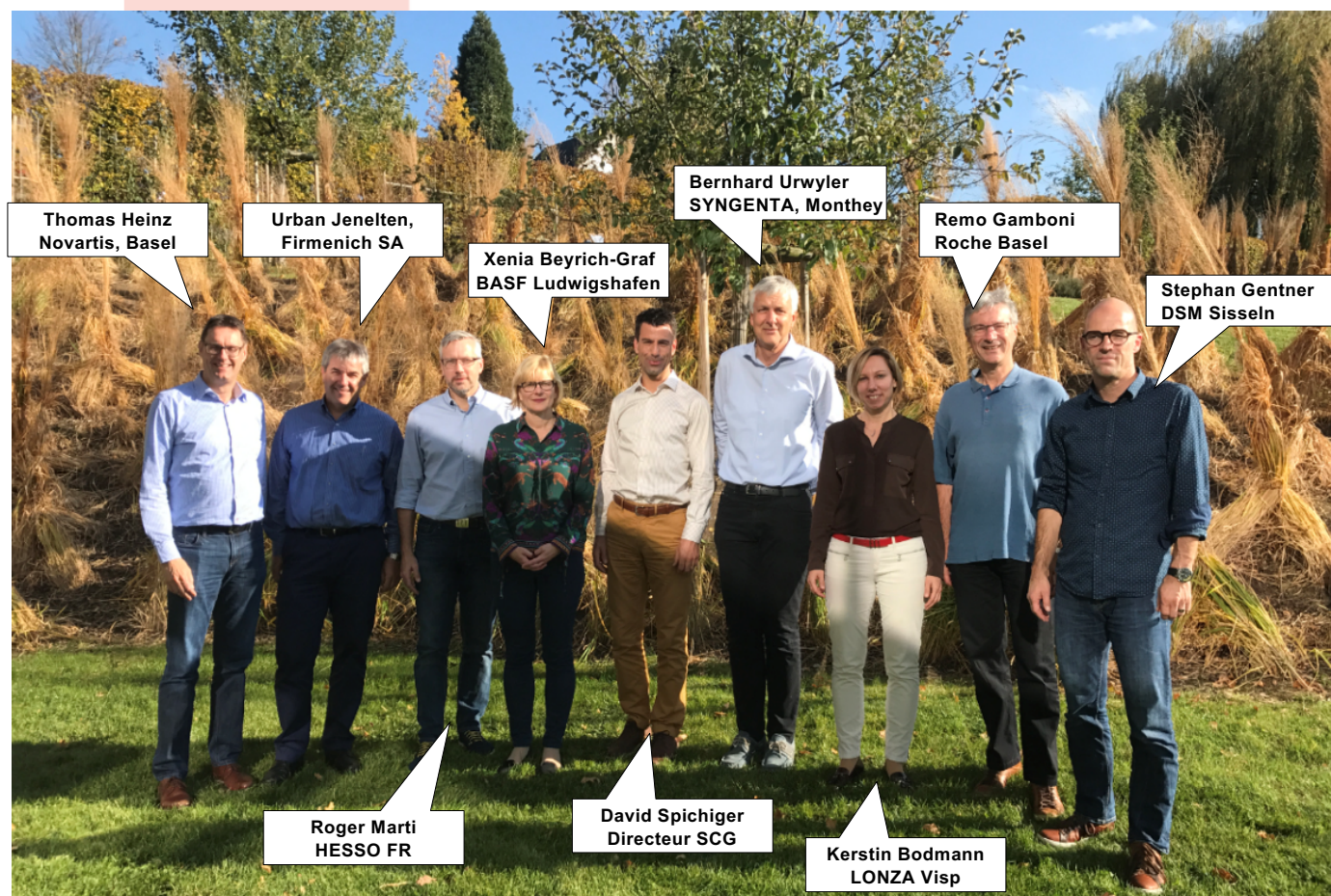
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# DIAC Annual Report 7/7

## DIAC Workshop:

DIAC Workshop was held from the 8<sup>th</sup> to 10<sup>th</sup> of November 2018 in Bürglen. One topic was the preparation of the 14<sup>th</sup> Freiburger Symposium in May 2019 and annual strategic review of the DIAC.



*DIAC board at the workshop in Meisterschwanden (AG) in November 2017.*



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## 2. Outlook 2019

(1/2)

**Annual Meeting DIAC 2019** takes place at “Metalor Technologies”, the worldwide leading precious metal company, in Marin-Epagnier (NE), on February 22<sup>nd</sup>

**DIAC plans to organize in spring 2019 a next working session at the FHNW in MuttENZ**, by inviting selected students (orientation: applied chemistry) to a discussion about “networking as a chemist” including an Apéro.

**The 14th Freiburger Symposium** will take place on **May 16<sup>th</sup> and 17<sup>th</sup>**, at the HESSO in Freiburg. The symposium topic will be: **Industrial Applications of Catalysis – Time for New Approaches.**

The Sandmeyer award ceremony, as well as Dr. Jürgen Roos CSO (new Chief Scientific Officer) of Siegfried AG, Zofingen, with a key note lecture, will be two highlights at the Freiburger Symposium 2019.



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## 2. Outlook 2019

(2/2)

**ILMAC Basel 2019:** 25.-27. September 2019 in Basel  
with “Green and Sustainable Chemistry” G&SC  
input

### **DIAC Workshop 2019:**

DIAC Workshop will be held from 7<sup>th</sup> to 9<sup>th</sup> of  
November 2019. Location will be defined.



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# 14. Freiburger Symposium 2019

Please reserve the  
date: 16<sup>th</sup> & 17<sup>th</sup> of May

Top Shot:

Dr. J. Roos CSO  
Siegfried

14. Freiburger Symposium  
Industrial and Applied Chemistry

«Industrial Applications of  
Catalysis – Time for New  
Approaches»

16-17 May 2019  
School of Engineering & Architecture  
of Fribourg



The event is supported by



**Lonza**

Firmenich

NOVARTIS



syngenta

Haute école d'ingénierie et d'architecture Fribourg  
Hochschule für Technik und Architektur Freiburg



**MERCK**

22. Februar 2019

[www.scg.ch/freiburger-symposium/2019](http://www.scg.ch/freiburger-symposium/2019)

Swiss Chemical Society (SCS)  
Haus der Akademien  
Laupenstrasse 7  
3008 Bern  
[info@scg.ch](mailto:info@scg.ch)  
<http://scg.ch/diac>



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PDF File

# 14. Freiburger Symposium 2019

## Program

### Thursday, 16 May 2019

- 
- 08.45 Opening of the symposium's reception desk  
Welcome Coffee
- 
- 09.30 Opening of the 14. Freiburger Symposium  
Address of welcome by  
**Dr. Roger Marti**, HTA-FR  
**Dr. Bernhard Urwyler** – Board Director of DIAC  
**Dr. Remo Gamboni** – Chairman of Organizing Committee
- 09.45 *Optimization of Catalysts with virtual High Throughput Screenings, Genetic Algorithms, and Machine Learning*  
**Dr. Marek P. Chęć**, Founder and CEO of CreativeQuantum GmbH, Berlin, Germany
- 10.30 *Tackling Challenges in Industrially Relevant Homogeneous Catalysis: The Catalysis Research Laboratory (CaRLa), an Industrial-Academic Partnership*  
**Dr. Thomas Schaub**, BASF SE, Ludwigshafen, Germany
- 11.15 *Olfactory Pleasures: How to Access Kg-Quantities of a Thiadiazole without Lawesson Reagent?*  
**Dr. Gabriel Schäfer**, Idorsia Pharmaceuticals Ltd., Allschwil, Switzerland
- 
- 12.00 Lunch break and Poster Session
- 
- 14.00 *Use of Catalysis in Fine Chemical Industry – From Research to Manufacturing – Case Study*  
**Dr. Bastien Monnerat**, Syngenta Crop Protection, Monthey, Switzerland
- 14.45 *Biocatalysis in the Flavor & Fragrance Industry*  
**Dr. Fredi Brühlmann**, Firmenich SA, Geneva, Switzerland
- 
- 15.30 Coffee break
- 
- 16.00 *(Swiss) Innovations in Selective Heterogeneous Hydrogenations – from the 1950s to the Present Day*  
**Dr. Jonathan Medlock**, DSM Nutritional Products, Kaiseraugst, Switzerland
- 16.45 Keynote Lecture  
*Catalysis - An Important Tool in Siegfried's Offering*  
**Dr. Jürgen Roos**, CSO Siegfried AG, Zofingen, Switzerland

- 
- 19.00 Aperitif and Symposium Dinner
- 

### Friday, 17 May 2019

- 
- 08.30 Opening of the symposium's reception desk  
Coffee
- 
- 09.00 Sandmeyer Award Lecture 2019  
*Arsenic and other Geogenic Contaminants in Groundwater – a Global Challenge*  
**Dr. Andreas Voegelin** and **Dr. Stephan Hug**, Eawag, Dübendorf, Switzerland
- 10.00 Sandmeyer Award Lecture 2018  
*Design, Synthesis and Biological Evaluation of Strigolactone and Strigolactam Derivatives for Potential Crop Enhancement Applications in Modern Agriculture*  
**Dr. Alain De Mesmaeker** and **Dr. Raymonde Fonné-Pfister**, Syngenta Crop Protection Research, Stein, Switzerland
- 
- 10.45 Coffee break
- 
- 11.00 *Enzyme Catalysis in the Synthesis of Ipatasertib, AKT Inhibitor*  
**Dr. Hans Idling**, F. Hoffmann-La Roche AG., Basel, Switzerland
- 11.45 *Application of Transition-metal Catalysis and Biocatalysis as State-of-the-art Technologies in the Manufacture of a Key Intermediate of Entresto*  
**Dr. Florian Kleinbeck**, Novartis Pharma AG, Basel, Switzerland
- 
- 12.30 Lunch break
- 
- 14.00 *Catalysis at Johnson Matthey: On the Cost Effective Use of Catalysis for Complex Synthesis*  
**Dr. Antonio Zanotti-Gerosa**, Johnson Matthey, Cambridge, UK
- 14.45 *Engineering of 3D Printed Catalytic Reactors*  
**Prof. Simon Kuhn**, KU Leuven, Belgium
- 15.30 *Catalysis Engineering for Sustainable Technologies*  
**Prof. Dr. Javier Pérez-Ramírez**, ETH Zürich, Switzerland
- 
- 16.15 Closure of the Symposium
-



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# 3. Annual financial statement 2018

	Budget 2018		Abrechnung 2018	
	CHF	CHF	CHF	CHF
<b>Einnahmen / Income</b>				
Mitgliederbeiträge	6'900.00		6'560.00	
Pauschalbeitrag SCG	6'800.00		6'800.00	
SICS 2018 (Teilnehmergebühren)	2'000.00		4'450.00	
SICS 2018 (Sponsoring Industrie)	13'500.00	<b>29'200.00</b>	12'214.97	<b>30'024.97</b>
<b>Ausgaben / Expenses</b>				
SICS 2018 (Organisationskosten)	13'500.00		15'844.90	
SICS 2018 (Best Poster Prizes)	400.00		300.00	
SICS 2018 (Drucksachen, Werbung)	2'800.00		670.30	
Support Website & CHIMIA	850.00		1'000.00	
Reise- und Versammlungsspesen Vorstand	7'000.00		5'032.85	
Büromaterial				
Support Head Office	850.00	<b>25'400.00</b>	2'500.00	<b>25'348.05</b>
<b>Einnahmenüberschuss / Profit</b>		<b>3'800.00</b>		<b>4'676.92</b>
<b>Vermögen 1. Januar 2018</b>				<b>270'662.35</b>
Veränderung Vermögen				4'676.92
<b>Vermögen 31. Dezember 2018</b>				<b>274'462.35</b>



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## 4. Budget 2019

	Budget 2019	
	CHF	CHF
<b>Einnahmen</b>		
Mitgliederbeiträge	6'500.00	
Pauschalbeitrag SCG	6'800.00	
FS 2019 (Teilnehmergebühren)	40'000.00	
FS 2019 (Sponsoring Industrie)	13'500.00	<b>66'800.00</b>
<b>Ausgaben</b>		
FS 2019 (Organisationskosten)	30'000.00	
Sandmeyer Preis	20'000.00	
SICS 2018 (Drucksachen, Werbung)	1'500.00	
Support Website & CHIMIA	1'350.00	
Reise- und Versammlungsspesen Vorstand	8'000.00	
Büromaterial	7'500.00	
Support Head Office	2'500.00	<b>70'850.00</b>
<b>Defizit</b>		<b>-4'050.00</b>



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## 5. Elections DIAC Board:

“Tagespräsident” for the elections:

Dr. Ruedi Pfluger



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# Changes in the DIAC Board

Dr. Kerstin Bodmann, LONZA AG had to resign from the DIAC board, due to a promotion and a related longer stay in the US.

Dr. Niklaus Künzle from the Lonza AG will replace her from this general assemble 2019 onwards

Dr. Xenia Beyrich-Graf will resign from todays general assemble after many years of active work in the DIAC board.

Dr. Remo Gamboni (Roche) and Dr. Bernhard Urwyler (Syngenta) announced our demission for the GA early 2020.

Dr. Stefan Hildbrand, Head Development & Catalysis in Roche, and

Dr. Andrea Sting, Head Global Process Technology in Syngneta have been designed as replacements.



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## Short CV: Dr. Niklaus Künzle

### Dr. Niklaus Künzle

Director, Process Technology &  
Innovation



Dr. Chem. Eng. ETH

2016 to present

**Lonza AG**, Director Corporate Process  
Technology & Innovation, Visp, CH

2013 to 2016

**Lonza AG**, Director R&T LSI Center of  
Excellence Technology, Visp, CH

2010 to 2013

**Lonza AG**, Head Chemical R&D LSI Process  
Design, Visp, CH

2007 to 2010

**Lonza AG**, Group Leader R&D LSI  
Basic Chemicals and High Performance  
Materials, Visp, CH

2003 to 2007

**Lonza AG**, Chemical Engineer R&D LSI and  
Project Manager, Visp, CH



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## Dr. Stefan Hildbrand, F. Hoffmann-La Roche AG

### Head Process Chemistry & Catalysis

- |           |  |
|-----------|--|
| Person    | <ul style="list-style-type: none"><li>■ Born in Gampel, VS, Lives in Gelterkinden, BL</li></ul>  |
| Education | <ul style="list-style-type: none"><li>■ MSc at University of Bern, Group of Prof. Rolf Scheffold</li><li>■ PhD at University of Bern, Group of Prof. Christian Leumann</li><li>■ Post doc at Stanford University, Group of Prof. Barry M. Trost</li></ul>  |
| Career    | <ul style="list-style-type: none"><li>■ 1998–2001 Lonza: Lab Head and Project Leader in Process R&amp;D</li><li>■ 2001–2003 Roche: Plant Chemist in the Clinical Supply Center</li><li>■ 2004–2012 Roche: Lab Head and Project Leader in Chemical Process Development</li><li>■ 2013–2016 Roche: Section Head in Chemical Process Development</li><li>■ Since 2016 Roche: Head of the Process Chemistry &amp; Catalysis Department</li></ul> |



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## **Dr. Andrea Rolf STING**

geboren am 24. Juni 1963 in Samedan, Kt. Graubünden



- 1980 – 1983 Chemielaborantenlehre bei Ciba-Geigy in Basel (Synthese)
- 1986 – 1989 Studium an der HTL Muttens (neu Fachhochschule), Dipl. Chem. HTL
- 1989 – 1992 Übertrittskurs und Studium in Chemie an der ETH Zürich. Abschluss als Dipl. Chem. ETH, mit der Diplomarbeit bei Prof. Dr. D. Seebach.
- 1993 – 1996 Doktorarbeit in organischer Chemie bei Prof. Dr. D. Seebach
  
- 1996 – 1998 Development Chemist bei Novartis Crop Protection Münchwilen AG.
- 1998 – 1999 Auslandsaufenthalt in St. Gabriel LA, USA, als Entwicklungschemiker
- 1999 – 2000 Senior Development Chemist bei Novartis CP Münchwilen
- 2000 – 2002 Group Leader Process Technology bei Syngenta Crop Protection Münchwilen AG, Leitung des Sicherheitslabors.
- 2002 – 2006 Head of Pilot Plants Münchwilen AG
- 2006 – 2010 Technology and Sourcing Manager, Basel BS
- 2010 – 2013 Production Technology Manager, Monthey VS
- 2013 – 2013 Seeds Processing Lead , Basel BS
- 2014 – Head of Global Process Technology and Site Manager Münchwilen AG

**Verheiratet, zwei Töchter**

**Hobbies: Skifahren, Reben hegen und pflegen, Wein**



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# Elections:

## **1) For the next two years 2019+:**

Thomas Heinz (Novartis),  
Urban Jenelten (Firmenich),  
Roger Marti (HES-SO),  
Stephan Gentner (DSM)

## **2) For 1 year 2020+:**

Niklaus Künzle (Lonza),  
Stefan Hildbrand (Roche),  
Andrea Sting (Syngenta),

## **3) For one year, 2019-2020**

Bernhard Urwyler (Syngenta)  
Remo Gamboni (Roche)



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## 6. Various & Motions

No motions were sent to the board



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## 6. Various:

### Special Thanks goes to:

- ❑ **METALOR SA**, Dr. Lynda Si-Ahmed and Dr. Jonathan Jodry for the presentation of Metalor and the warm Welcome and Hospitality
- ❑ Prof. Dr. Rebecca Buller ZHAW for the lecture about “Harnessing Nature – Biocatalysis for Development and Drug Discovery”
- ❑ Dr. Ruedi Plugger for taking the role of the Day President
- ❑ All my colleagues of the DIAC Board
- ❑ You, attending the general assemble of the DIAC.



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# Q & A?