

sc | nat 

Chemistry

Platform of the Swiss Academy of Sciences

**Motivation, Politics and Funding at the Second 'Young Faculty Meeting'**Barbara Winter-Werner\*, Hermann A. Wegner<sup>a</sup>, and Andreas Zumbuehl<sup>b</sup>

Correspondence: Dr. B. Winter-Werner, Swiss Academy of Sciences (SCNAT) Platform Chemistry, Schwarztorstrasse 9, CH-3007 Bern, E-mail: winter@scnat.ch  
<sup>a</sup>University of Basel, St. Johannis-Ring 19, CH-4056 Basel  
 E-mail: hermann.wegner@unibas.ch, <sup>b</sup>University of Geneva, 30, Quai Ernest Ansermet, CH-1211 Genève 4, E-mail: andreas.zumbuehl@unige.ch

The second 'Young Faculty Meeting' took place on June 17th, 2009 at the University of Bern and again brought together twenty young researchers from all Swiss universities and all disciplines of chemistry. This annual symposium is sponsored by the Platform Chemistry of the Swiss Academy of Sciences (SCNAT) in order to promote both scientific exchange and networking for young academics in chemistry. This year's organizers were *Barbara Winter-Werner* (Chief Science Officer, Platform Chemistry SCNAT), *Hermann Wegner* (University of Basel) and *Andreas Zumbuehl* (University of Geneva).

"What makes you move?" – "What gets you out of bed every morning?" With these questions *Christine Wittmer*, Coach and CEO of the company 'Punkt - Satz - Sieg', opened the morning session. 'Motive and Motivation' was the theme of the following two and a half hours. The answers to the questions were elaborated in small groups revealing not only the noble ideals of a scientist, such as fascination and curiosity for scientific phenomena, but also basic needs such as earning one's daily bread and butter as well as satisfaction of the inner ego and career considerations. Different external positive and negative influences on personal motivation were identified which demonstrated the complexity

of the topic. Starting with Sigmund Freud's thoughts on motivation, Christine Wittmer gave a brief overview of different theories of motivation. In the end she introduced the approach of David McClelland, who divides motivation into three categories: achievement, affiliation, and power and exemplified the characteristics of a person driven by each of these motivations. A personal questionnaire then showed each participant's motivation profile. Christine Wittmer impressively demonstrated, how this analysis could help to understand one's own actions and, applied to other people, explains specific reactions and behavior. Although the typical scientist usually shows more an achievement-driven motivation profile, all three types are important in a group. Each of them might be the perfect person for a specific task!

After the coffee break Christine Wittmer took the concept one step further: How can we motivate our coworkers and how the theory of David McClelland could help to understand a student's motivation? Addressing the individual motivation needs of each student will be the key to make them 'walk the extra mile'. From this point Christine Wittmer raised the question about group leading in general: What qualifies a good group leader? Although a simple question, the answers given by the participants of the



Christine Wittmer, Coach and CEO of 'Punkt - Satz - Sieg'



The conference participants of the Young Faculty Meeting 2009

meeting differed greatly. While discussing the characteristics of a good group leader in small groups, it turned out that different people run their group very differently. These controversies continued in a very stimulating debate in the plenum, to manifest again the complexity of the subject and that there is a lot more than one right way.

Closing the loop Christine Wittmer gave the participants a flavor of the possibilities that exist for exploring one's own origins of motivation and to use those, not only to improve one's own actions, but also to motivate and lead coworkers.



Dr. Mauro Dell'Ambrogio, Secretary of State for Education and Research

After lunch Prof. *E. Peter Kündig*, president of the Platform Chemistry, gave a short introduction to the afternoon session and welcomed Dr. *Mauro Dell'Ambrogio*, Secretary of State for Education and Research. Dr. Dell'Ambrogio's visit at the Young Faculty Meeting was – given his busy agenda – a great honor and another highlight of the day. First, Mauro Dell'Ambrogio gave an overview of the 'Future of Science and Research in Switzerland', which was mainly focused on the natural, technical and medical sciences.

The following lively discussion clearly showed that Dr. Dell'Ambrogio is aware of the importance of chemistry as a basic science and fully supports its status and development at the Swiss Universities and Federal Technical Institutes. However, it also highlighted the political part of the story, which puts hopes and wishes in a federalistic, narrow corset.

Taking the medical education as an example, it was shown that the lack of places for medical students is primarily a lack of funds. More doctors – Switzerland currently has a shortfall of 400 per year – can only be educated by cutting the costs per capita of the current studies which is currently approx. 2 Mio. CHF per student.

In this context, it is worth mentioning that the education of a chemistry student at a Swiss University costs half of what an equal education costs at the Federal Technical Institutes. The Secretary of State pointed out that the Federal Technical Institutes were initially intended to educate engineers, but for the past decades this has been ignored. New studies have been introduced while the education of engineers has been neglected in such a fashion that now the Universities of Applied Sciences are filling the gap. Moreover, the new trend towards life sciences levels boundaries between medical studies and chemistry.

Mauro Dell'Ambrogio clearly accented that there is a lack of natural scientists and chemists in particular and that the Swiss Confederation is aware of this and should promote the studies with a clear top-down statement. The education in natural sciences has to be made more attractive (e.g. by specific funding schemes). However, no clear plan exists and the Secretary of



Dr. Ingrid Kissling-Näf, Managing Director of the Innovation Promotion Agency KTI-CTI

State's main influence is the regulation of funds going into the different institutions. The discussion continued in the break and again showed that the natural sciences have an important supporter in the person of Dr. Dell'Ambrogio.

The final presentation of the day was given by Dr. *Ingrid Kissling-Näf*, head of CTI, the Innovation Promotion Agency. Switzerland is currently leading the European Innovation Scoreboard 2008. This is mainly due to the innovative power of the 297'694 (!) small and medium enterprises and the 1028 multinational enterprises in this country. These companies maintain strong research activities in basic and applied sciences, as well as a strong patent portfolio. As was already pointed out by the Secretary of State, Switzerland is providing a perfect environment for these companies, backed by a strong education system.

But Dr. Kissling-Näf sees action needed in order to keep Switzerland at the top of the innovation list. Particularly she notices clearly lowered innovation dynamics in this country compared to the past years. This ultimately goes back to the lack of engineers in Switzerland, the weaknesses in service innovation, the lack of absorptive capacity of small and medium enterprises in knowledge and technology transfer, and the cultural weaknesses of Switzerland has in entrepreneurship.

The CTI, founded as early as 1943, has an annual budget of 130 Mio. CHF. The money is mainly spent on market-oriented R&D promotion of companies collaborating with universities on joint projects. Furthermore, funds are allocated to the training and coaching of entrepreneurs creating, setting-up and developing start-up companies, and to knowledge and technology transfer in regional networks.

The 250 funded projects are mainly initiated by the Universities of Applied Sciences (49%), and the Federal Institutes of Technology (30%) and only to a minor part by other Swiss Universities (13%). In 2008, 23 projects in chemistry were funded with a total sum of 10.3 Mio. CHF. These projects are initiated mainly by the Federal Institutes of Technology (49%), the Universities of Applied Sciences (31%) and the other Swiss Universities (16%). (More information and an updated application form can be found at [www.kti-cti.ch](http://www.kti-cti.ch)).

The discussion during and after the talk of Dr. Kissling-Näf clearly showed that the chemistry done by most of the participants of the Young Faculty Meeting falls into the domain of pure fundamental chemistry and outside the funding scheme of CTI.

With a small aperitif, the day was concluded. The Young Faculty Meeting was again a success and the Platform Chemistry of the Swiss Academy of Sciences (PFC-SCNAT) is looking forward to welcoming the community of young researchers in the field of chemistry next year.