

# Improving occupational health

**Professor Dr Brigitta Danuser-Nideröst** is a leading research member of the Institute for Work and Health, University of Lausanne. Amongst her many roles is her position as President of the 'fitforwork-swiss' Association. Here, she describes her work and the Association's role in helping physicians to assess and adapt the working demands of an individual, which have a great impact on wellbeing

**As a starting point, can you briefly outline your main research interests and explain what drew you to these areas?**

My research interests are indicative of what occupational health (OH) research must address; we should not forget the classical OH research topic – physical harm due to work – as occupational diseases are still being underdiagnosed. Furthermore, work has changed enormously in the last 30 years and the emerging working demands are cognitive or intellectual, as well as emotional (affective work).

New working demands are not well-researched and understood, but we have strong indicators that they contribute to increasing work stress and related diseases. Therefore, I took a psychophysiological approach, as I began my career in an Institute with a tradition in experimental work physiology. For example my thesis, in which I evaluated the effect of passive smoking on the lung function of asthma sufferers, focused on the respiratory tract. However, the more I studied the respiratory health effect, the more I became interested in breathing itself. It is the only 'autonomic' body function we can direct and therefore an interesting parameter bridging physiology and psychology.

Additionally, psychosocial factors and affective demands at work play an important role in wellbeing. My last line of research – 'return to work' – is the product of a social need evaluation. It addresses long work absences and loss of work ability with eventual exclusion from the labour market.

**What are the main aims and objectives of the fitforwork-swiss Association?**

The report *Musculoskeletal Disorders and the Swiss Labour Market* shows that absences and loss of work ability are increasing due to musculoskeletal disorders in Switzerland, causing individual suffering and costing over CHF 4 billion annually. fitforwork-swiss wants to develop solutions for this problem; the aim is to promote work ability by means of early recognition and coordination to improve care and treatment of people with musculoskeletal disorders.

I am foremost an occupational physician and as such I want to improve the occupational conditions for workers, particularly for those with health limitations. As occupational

physicians are sparse in Switzerland (one for around 40,000 employees) such ideas can't be realised just by integrating them into occupational physicians' responsibilities. Therefore, a broader coalition had to be found and the fitforwork-swiss Association was created in 2010.

**What different expertise do the various members of the Association's committee bring to the table?**

We have renowned rheumatologists and rehabilitation experts on the board, bringing their diagnostic and therapeutic knowledge. As the health and insurance systems, with their incentives or barriers, influence maintaining work ability, it is important to have the President of the Swiss Insurance Medicine involved. It is also crucial for us that the patients are represented. Therefore, two of our members are from patient associations.

**You are also Director of the Institute for Work and Health (IST). Would you be able to name your proudest achievement to date in this role?**

When Professor J Rantanen told me recently, in the framework of a scientific evaluation of the IST, that I had transformed an institute for occupational exposure research into an occupational health research institute, I felt very proud.

**With an eye to the future, what path do you plan your research to follow?**

The workplace has been identified as an arena for the promotion of positive health behaviour and wellbeing, opening a research field which strongly overlaps with public health and occupational health psychology. Work ability, motivation and performance of employees are strongly determined by working conditions and organisation, as well as individual health. Finally, healthy employees and health-promoting organisations contribute to overall performance, innovativeness and the competitiveness of organisations, economy and society.

In light of the positive impact of work on health, which includes social status, daily structure, identity, self-esteem, social interaction, social support and social control in favour of positive health behaviour, I will continue to promote research that aims to increase labour participation and improve working conditions.

From a personal perspective as a psychophysiologicalist, I would like to evaluate the psychophysiological effects of smartphone and tablet use in different user groups as well as their using strategies (eg. switching off the tool), applying a panel study design.



Switzerland

Research

Education

Opportunities

# ProDoc Health@Work

ProDoc is a joint initiative between three universities in Switzerland to provide education and research opportunities for PhD students across the country. Importantly, the scheme is set to produce a new generation who will help strengthen Switzerland's research into occupational health and, better still, contribute on an international platform

**DESPITE HUGE EFFORTS** being made in European countries to prevent occupational diseases and injuries, the cost of these afflictions is still worryingly high and continues to rise. To combat this alarming trend, drastic action must be taken. However, the pitfalls of occupational health (OH) are not simply finance-related. In order to effect a shift in expenditure, general understanding and treatment of OH needs to improve. Many believe that it should now be considered one of the main public health problems – a social, as well as an economic need. Indeed, the most common OH problems range widely, from musculoskeletal injury to mental health problems. Furthermore, continuing demographic developments, as well as the intensification and acceleration of the working society and the increasing competitiveness of the global economy, accentuate the importance of health, work ability and workforce performance.

It is paramount, therefore, that employers and governments analyse the situation for their own workforce. For example, it must be established whether all employees have access to an OH service and, if so, whether it is functional in responding to people's needs. Such basic, preemptive measures are fundamental in early recognition of occupation-caused and related health problems. Overall, access to and quality of OH services has to be improved. One way of ensuring that the necessary improvements are made is to provide better research and education surrounding OH. These very needs are being diligently tackled by a group of academic institutions, led by Professor Dr Brigitta Danuser-Nideröst.

## PRODOC HEALTH@WORK

For Danuser-Nideröst, OH research should be interdisciplinary, covering epidemiology, chemistry, physics, engineering, medical, psychological and organisational research. Her team considers their OH research to be need-driven, taking into account the economic structure as well as the social and medical systems of each particular country.

To ensure that this approach to OH research is implemented at the earliest possible stage, the participating institutions have implemented 'ProDoc Health@Work' for PhD students. This initiative offers a formal programme in which OH PhD students can acquire basic skills and knowledge, as well as being given the opportunity to network with other PhD students and researchers working in similar fields. However, most importantly of all, the programme produces a number of students who, in future, will help strengthen existing research groups and consolidate OH research in Switzerland, in an internationally competitive environment.

The course offers modules which target special research and methods skills. Specifically, they cover overviews of occupational, organisational and public health transdisciplinary skills. Furthermore, students complete exposure assessments, epidemiologic OH research and qualitative research, and must also consider research method triangulation, gender studies and company epidemiology.

Beyond health, the programme and its leaders hope to stress that OH research should

enlarge its focus to 'a working life participation perspective'. This means incorporating factors such as work ability, quality of working life, motivation and engagement, as well as micro- and macroeconomics, management and the societal perspective.

### THE IMPORTANCE OF COLLABORATION

Three universities contribute to the scheme – the University of Zurich, ETH Zürich and the University of Lausanne. This collaborative aspect has certainly informed the success of the programme. The research centres are localised in the two dominant language areas of Switzerland and all three offer the opportunity to obtain a PhD in OH. The Zurich partners and the Institute for Work and Health (IST) of the University of Lausanne have been collaborating on the MAS in Work and Health since 1993. "Partnerships are important everywhere today, but especially when resources are sparse – as is the case with OH in Switzerland," Danuser-Nideröst explains.

The central ideas of ProDoc were created by various researchers from the three institutions. Since then, the programme has continued to be collaboratively developed. This method successfully brings together different OH research approaches and topics. The PhD students therefore profit from experiencing the advantages and avoiding the pitfalls of these different approaches, through knowledge of a wide range of previous PhD student projects. Additionally, the collaboration gives the programme depth, as different researchers represent a variety of OH research methodologies and networks.

### COMPLEX RESEARCH AND THE PROJECT'S CHALLENGES

The successful implementation of a new collaborative PhD programme is not without its challenges. For instance, the spectrum of OH research in Switzerland currently being conducted – including mixed chemical and physical exposures to newly emerging nanoparticles and research into the interactions between physical, psychosocial and health system factors in work-related disorders – is difficult to incorporate into a single programme. More complex still is the investigation of psychosocial factors and mental health issues. This necessitates precise research questions, as well as integrated intervention approaches that meet the needs of a fast-changing, increasingly complex and service-driven economy.

Despite the difficulties and wide scope of research interests, Danuser-Nideröst maintains that the project should continue along its current path: "ProDoc should contribute to the most important research domains, such as physical harm due to work or working conditions, psychosocial risk and intervention and prevention studies". The meticulous effort that the team puts into investigating different aspects of OH is vital as, without it, the necessary qualifications and training in OH would be rendered merely superficial –

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especially concerning postgraduate training and ever-evolving professional qualifications. Overall, those behind the project hope to achieve a holistic understanding of the work and health relationship, an especially challenging feat in light of the ultimate aim of transferring and implementing the results and knowledge internationally.

Unfortunately, ETH Zürich has decided to discontinue its OH research, and will cease its support of the collaborative project at the end of 2013. The University of Zurich will take over the work conducted on the formation of Work and Health specialists, but research jobs are not guaranteed. Countries such as Canada, or those in Scandinavia, have rightly acknowledged the high relevance of OH, and have subsequently created national research centres with funding designated specifically for OH research. Such a sensible approach is envied by Danuser-Nideröst, who worries that Switzerland may lose its competitive edge: "OH research, more generally, does not seem 'sexy' enough for our universities".

### LOOKING FORWARD

In terms of ProDoc, the team has already planned and realised two summer schools, one on societal questions and existing indicators, and the second on the topic of mixed methods in OH, both lasting four days. They have invited a Canadian expert and the PhD students profited strongly from the interactive teaching which supplemented their own research endeavours.

Complementary to the ProDoc teaching module will be research modules for the PhD dissertation projects. It is hoped that these will cover four main domains of OH research: exposure to mixed chemical hazards, exposure to psychosocial factors, organisational health interventions and return to work research. These domains will consider the main, internationally acknowledged, research needs and academic potential, as well as the core competency areas of the applicants.

Overall, during the first three years of ProDoc Health@Work's existence, 15 PhD projects have already been planned. It is hoped that in the coming years the programme will be able to increase this number substantially. With this in mind, it would seem that the good work of ProDoc so far and its great breadth of investigation will continue to strengthen.

## INTELLIGENCE

### PRODOC PROPOSAL HEALTH@WORK

#### OBJECTIVES

To provide the next generation of occupational health (OH) professionals the best possible PhD training for their future role as scientists and experts.

#### KEY COLLABORATORS

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is Professor of Occupational Medicine at the University of Lausanne. Since 1993, she has been involved in the creation and continuous improvement of the MAS Work and Health, which qualifies occupational physicians, hygienists and new OH management specialists. Her personal research domains are occupational respiratory health, psychophysiology of emotions and cognitive aspects of work demands, as well as return to work research.

The IST is an OH Collaboration Centre of the World Health Organization and contributes to national and international OH research and implementation strategies. It also offers practical advice to organisations to find solutions for OH problems.

