



# SCIEX Scholarship Fund

a programme  
for science  
enthusiasts

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### **Foundation for the Development of the Education System**

Since 2009, the Foundation for the Development of the Education System has operated as a Contact Point for the SCIEX Scholarship Fund in Poland. The primary goal of FRSE is to support activities leading to the reform and development of the education system in Poland. The FRSE has acknowledged and extensive experience in managing European educational programmes and is the only institution in Poland displaying such expertise. In the years 2007–2013, the Foundation coordinated the implementation of the Lifelong Learning Programme (including Erasmus, Leonardo da Vinci, Comenius and Grundtvig) and the Youth in Action programme in Poland. The FRSE is also the Operator of the Scholarship and Training Fund (EEA/Norway Grants). Thanks to the integrity and reliability of its operations, FRSE has been appointed the Polish National Agency of the Erasmus+ Programme for the years 2014–2020. FRSE is also responsible for other European information and educational initiatives in Poland.

### **SCIEX Scholarship Fund**

Switzerland has been participating in various projects designed to reduce economic and social disparities in the enlarged European Union. The SCIEX Scholarship Fund was launched as part of the Scientific Exchange Programme between Switzerland and 10 new member states of the European Union, SCIEX–NMSch, for the years 2009–2016. The main goal of projects implemented under the SCIEX Scholarship Fund is to pursue cooperation in research and build partnerships that develop capacities of individual scientists and lead to establishment and strengthening of cooperation between scientists from Switzerland and new member states of the EU. The grants allowed fellows to benefit from high standards in research and experimental development, innovative and competitive environments, and strong links between higher education and industry, including private business. The Programme provided a unique opportunity for researchers to boost their scientific careers, develop new skills and competences, gain international experience and extend their scientific networks. Furthermore, research training placements allowed enhancement and establishment of sustainable institutional partnerships.

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**/// A fellowship is an opportunity for a scientist to develop new interests or find solutions to the research carried out for a long time. (...) The work in a new team is essential and always inspiring for a scientist. It is the only genuine and immediate way to broaden scientific horizons.**

DR LUCJAN JANOWSKI

Duration of the SCIEX project 1.10.2010 – 31.03.2011, project *QoHealth – QoE optimisation for health tele-monitoring and tele-treatment systems with constrained QoS*, research area: Engineering Sciences





**MIROSŁAW MARCZEWSKI**  
Director General, Foundation  
for the Development of the  
Education System

**T**he experience of SCIEX, implemented under the Swiss-Polish Cooperation Programme, shows that professional mobility is a challenge taken up willingly and responsibly by Polish researchers who thus contribute to achieving the objectives of the Europe 2020 strategy for social and economic growth in the area of science and higher education in Poland.

Even a short time after their return to their home universities, it is already clear that scholarships and time spent in efficiently functioning research teams, in perfectly equipped and professionally managed laboratories, had enabled the Polish researchers to reach a high level of maturity in their scientific careers. After their return they work more efficiently and motivate younger colleagues to pursue the path they have chosen in science.

I believe that the ideas implemented, the cooperation networks established, and the knowledge and skills acquired by research mobility participants, as well as the wisely invested CHF 12 million, will contribute to increasing the competitiveness of the Polish science in Europe. This substantial group of Polish researchers will have a creative impact on the development of our science culture. And finally, it is to my great satisfaction that the Foundation for the Development of the Education System contributed too - supporting the researchers by e.g. disseminating the information about SCIEX.



**ANDREJ MOTYL**  
Ambassador of Switzerland  
to Poland

**S**witzerland's education system draws its efficiency from the fact that training curricula are constantly being aligned with the societal and market needs. This constant dialectic between science and society/private business is encouraging the applications of innovative ideas and technologies, thus creating the necessary competitive advantages for a country with a relatively expensive workforce and other challenges, like a very highly valued Swiss Franc, making our exports more expensive.

Switzerland prides itself with the highest spending on R&D compared with its GDP. Public funding hinges mainly on the proactive work of researchers, on the principle of competition and on international cooperation. Currently, around 20% of all federal resources for the promotion of education, research and innovation go to international cooperation activities. Moreover, Switzerland is actively involved in international organizations and programmes on education and research. Switzerland's universities are regularly positioned among the best by international rankings and similarly the country makes it over decades to the very top of the lists of the most innovative countries worldwide. We wish to share this success with our partners and are, therefore, offering the possibility to experience scientific exchange with Swiss universities under the SCIEX programme to young and promising research fellows of the countries benefitting from the Swiss Contribution to the enlarged EU. Given the impressive results of this programme, I am confident that the highly skilled and motivated researchers that benefitted from the SCIEX Scholarship Fund will contribute very concretely and significantly to the development of the knowledge-based economy in Poland.



**ROLAND PYTHON**  
Director of the Swiss  
Contribution Office

**T**he scientific exchange programme SCIEX targets both individual achievements of young research fellows as well as institutional partnerships among renowned Polish and Swiss research bodies. This twofold objective makes the SCIEX programme a very attractive instrument financed under the Swiss Contribution to Poland. Indeed, both Polish and Swiss research institutions benefitted from the contribution of competent and motivated Polish research fellows since the SCIEX programme selected applicants who already had a clear vision of the research they wanted to carry out. The young talented Polish scientists had the unique opportunity to pursue their research work in a high-quality research environment with strong academic support, while becoming a decisive member of the international research community. The results achieved by the teams of research fellows and mentors proved that an intensified cooperation would benefit both countries. I am convinced that all 135 Polish research fellows who embarked on the SCIEX programme will successfully pursue their international scientific career, having strong ties with the research community in Switzerland.



**AUDE PACTON**  
Head International Relations  
SCIEX Programme Manager,  
swissuniversities

**T**he SCIEX programme has undeniably been successful in achieving its three missions. It offered a significant stepping stone in the scientific career of the SCIEX fellows, contributed to create scientific progress, and innovation, and finally established long-lasting collaborations that are crucial for an excellent research.

Poland was the largest partner within the SCIEX programme – with the highest budget of 12 million CHF and, consequently, the highest number of granted projects. A total of 135 Polish-Swiss SCIEX projects have been granted.

The projects were gender-balanced and mainly conducted by postdocs (75 vs. 60 by doctoral candidates). The projects were developed in all scientific fields and their average duration was 12 months. Swissuniversities, the Rectors' Conference of Swiss Universities, is proud of having been in charge of the management of the SCIEX Programme and, at the same time, part of this success story.





**KATARZYNA  
ALEKSANDROWICZ**

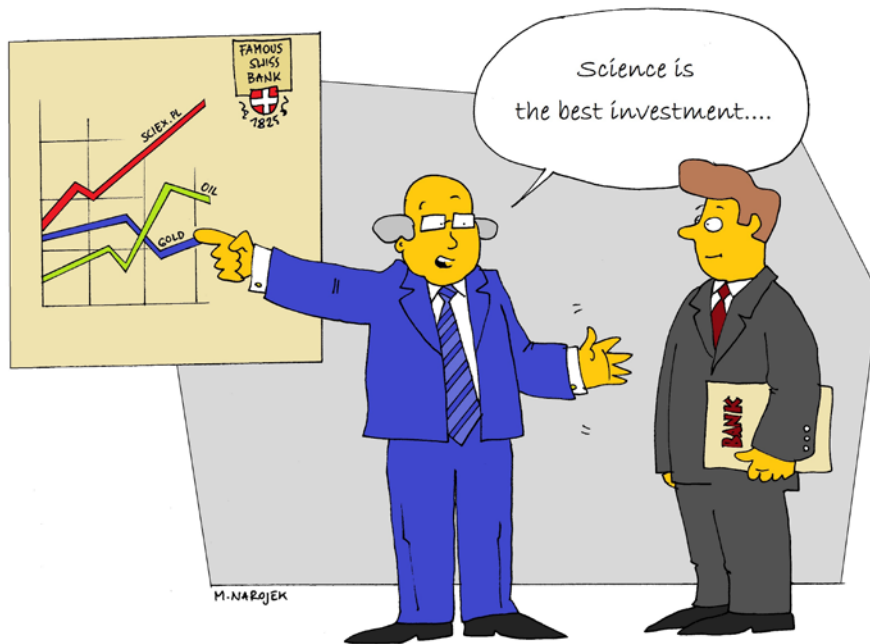
Director of Scholarship  
Programmes, Foundation  
for the Development of the  
Education System

**F**rom its very beginning, the SCIEX Scholarship Fund enjoyed huge interest among researchers offering favourable opportunities for scientific career development in the best research units in the world. The participation in Swiss scholarships paved the way to international careers for numerous Polish researchers. Young Polish doctoral students and PhD fellows conducted research, benefiting from their presence in the international and multicultural environment of Swiss universities, and used the opportunity to consult foreign experts and access extensive research resources.

The projects implemented under SCIEX covered various areas, ranging from advanced technology research to polymers produced by bacteria with the use of biotechnology from renewable resources, psychological study into narcissist personality, to dance studies.

When asked about their impressions from their stay in Switzerland, the SCIEX scholarship fellows emphasize the scientific value of the research conducted. They praise access to highly advanced equipment, libraries and other university resources. They participated in high ranking conferences and seminars. They continue cooperation with their home institutions, for example by preparing joint publications.

This publication sums up six years of SCIEX in Poland. Presenting statistics and hard data, as well as personal reflections of scholarship fellows, it illustrates the challenges and opportunities related to the programme and depicts the notable contribution of mobility to the development of the scientific careers of young researchers from Poland. It proves that the Polish-Swiss cooperation is not confined to several hundred research projects, but constitutes a lasting value fostered everyday by the institutions which established partnerships under the programme.



**// The implementation of this project encouraged me to continue upgrading my qualifications. Moreover, work in an international environment stimulates enthusiasm for academic performance and offers possibilities of extending cooperation network.**

**DR AGNIESZKA KOSIŃSKA-CAGNAZZO**

Duration of the SCIEX project 1.05.2011 – 30.04.2012, project *Absorption and metabolism studies of hydrolysable and condensed tannins with an in vitro Caco2 transwell model*, research area: Chemistry



# ABCs of the SCIEX programme in Poland

**How to concisely describe a scholarship programme for young researchers, which was favourably reviewed? It may be done using figures (as described on p. 14-17 – by presenting programme statistics – and on p. 30-39 – by publishing first conclusions from the SCIEX programme results assessment), by presenting facts (see the calendar of programme-related events on p. 18-25), and finally by outlining the profiles of researchers who benefitted from grants offered within Sciex Scholarship Fund to implement their projects (see interviews with scholarship fellows on p. 42-55). However, it is also worthwhile to outline the idea guiding the authors of the programme and the principles followed in granting the scholarships.**

First, let's have a closer look at the idea. The creators of the Fund aimed at reducing social and economic disparities within the European Union enlarged in 2004. This exercise designed to bridge the disparities was to be implemented by

## developing the potential of researchers from the new Member States

– the authors of the programme came to the conclusion that if Europe is to develop harmoniously and as a whole constitute a serious “brand” in an increasingly competitive world, it must take care of its innovativeness. From there, it needed only a single step to turn to the world of science and define the needs arising from the unequal opportunities of young researchers in different countries of the uniting Europe. It was considered that the best way to remove these inequalities was to take consistent action, create scientific partnerships and undertake joint project work, leading to innovation. Therefore, the SCIEX programme was addressed to researchers from the 10 new EU member states (Bulgaria, the Czech Republic, Estonia, Lithuania, Latvia, Poland, Romania, Slovakia, Slovenia, Hungary) – and its beneficiaries supposed to be young researchers at the beginning of their careers, undertaking scientific work with passion with heads full of fresh ideas, i.e. those who could benefit from the work in a new environment, and also bring valuable ideas and values into this environment.

SCIEX has been implemented in line with the European Charter for Researchers, and the Code of Conduct when recruiting the researchers. The

programme was launched in 2009, under the *Programme of scientific exchange between Switzerland and the new European Union Member States SCIEX-NMSch*. The programme

### was addressed to researchers in all disciplines

– from the ‘hard’ scientific disciplines (chemistry, technical sciences, physics – the largest number of projects were implemented in these areas) through the social sciences (e.g. psychology) to the typically humanistic studies (e.g. literature, history, philosophy). The point was, in fact, to ensure that the scholarship fellows who would work within the projects could develop their skills, make discoveries, but also acquire the soft skills that are so vital nowadays, such as openness, the ability to cooperate, and the skills required for negotiation and communication (including: communication in foreign languages). Upon the completion of their projects, the scholarship fellows were expected to return to their home research units with heads full of new ideas; with valuable new scientific contacts (promising long-term cooperation with foreign institutions in the future); with a specific image about what changes they could introduce in their home institution, in order to improve its functioning and to match European standards; and with projects, topics and solutions that could introduce interesting novelty into their research units.

### consortia of scientific and industrial institutions applied for grants within the SCIEX Scholarship Fund

– the Swiss party (host institution) was always the main applicant. In Switzerland it could be a university, an institution of the federal area of technical universities and technical institutions or any of the research institutes subsidized by the Swiss Confederation.

The host institution in consultation with the sending institution (in Poland it could be: a university, the Polish Academy of Sciences, a national research institute) coordinated the process of completing the application form by the scholarship fellow in order to send the application to *swissuniversities* (the institution responsible for implementation and management of the Fund). The projects to receive funding were identified among the applications presented in this way

#### The SCIEX toolbox

i.e. without whom/which it would be impossible to implement the programme:

**SWISSUNIVERSITIES** – the institution responsible for the implementation and management of the SCIEX Scholarship Fund

**FOUNDATION FOR THE DEVELOPMENT OF THE EDUCATION SYSTEM** – the Contact Point of the SCIEX Scholarship Fund in Poland (before Rectors’ Conference of the Swiss Universities (RCSU))

**MINISTRY OF DEVELOPMENT** – the Polish National Coordination Unit responsible for general management of the Swiss-Polish Cooperation Programme (SPCP) and for identification, selection, planning, implementation, financial management, control and evaluation of projects and programmes, as well as for ensuring the proper use of funds

**OFFICE OF THE SWISS-POLISH COOPERATION PROGRAMME** – the Swiss institution responsible for the implementation of the programme, by the the Embassy of Switzerland

during subsequent call for proposals (there were six enrolment rounds in Poland).

Scholarship fellows had the opportunity to leave for 6–24 months to a Swiss host institution, where under the guidance of their *host mentors* they implemented research projects. Throughout the whole of their stay young scientists received an

### annual scholarship

amounting, for the first twelve months respectively, to: 50 thousand CHF for PhD students and 80 thousand for young scientists with, in addition, reimbursement of the costs of travel between Poland and Switzerland and reimbursement of the costs of participation in scientific conferences and costs incurred in the production of scientific publications.

It is not difficult to guess that scholarship assistance on such terms attracted many applicants. It is also easy to guess that the effects of the programme proved to be impressive. Six years (1.04.2009–31.12.2015) of functioning of the programme in Poland resulted not only in individual successes for each of the 135 Polish scholarship fellows (you can read about some of these success stories in interviews published on pages 46–55 and in the publication “Success stories of SCIEX fellows” – more information about this publication can be found on pages 58–60), but had also more general effects, such as scientific discoveries (for example Joanna Bryś PhD obtaining a substitute for the fat of women’s milk or new materials developed within the project of Dariusz

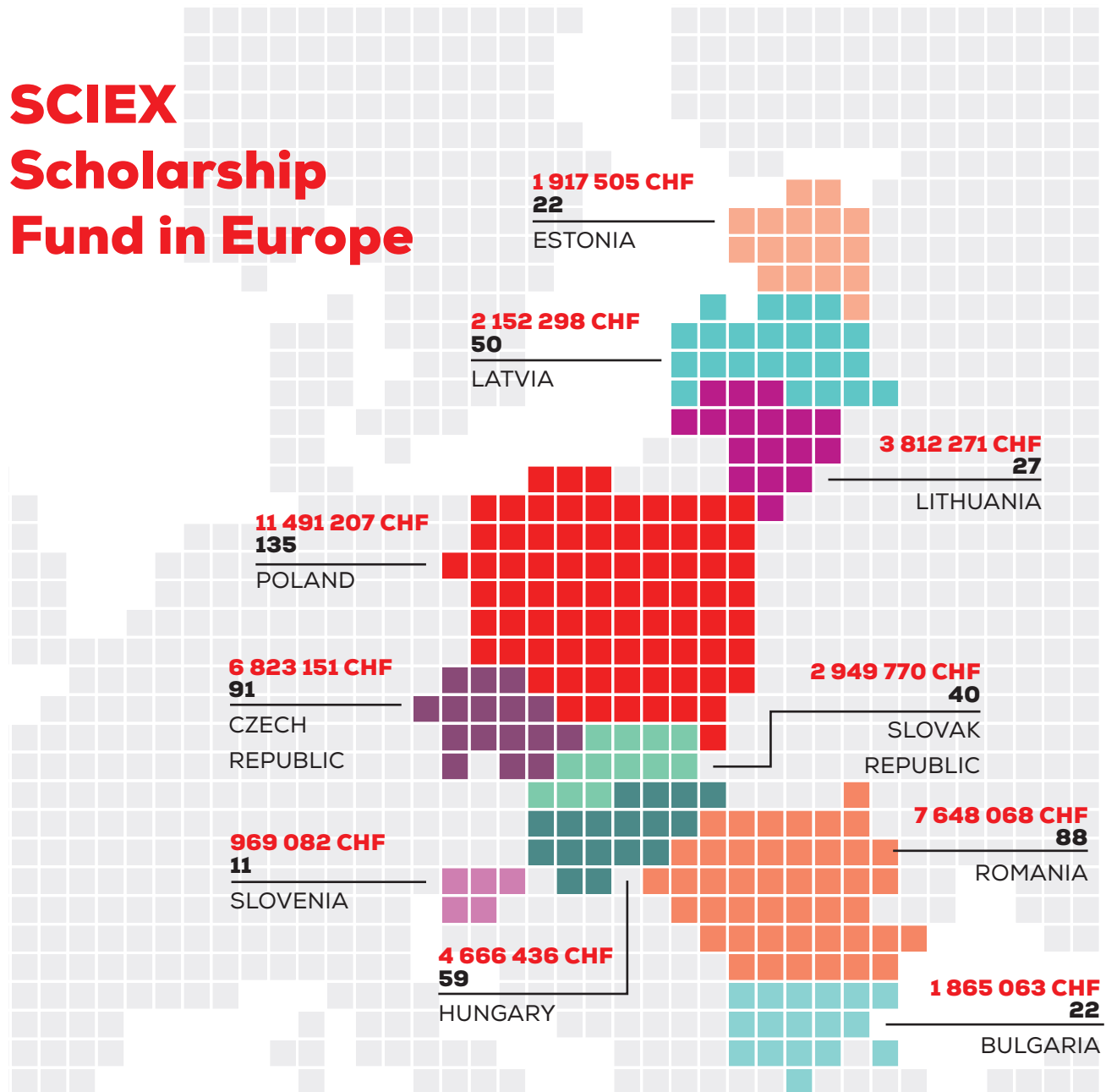
Burnat PhD) or the most desirable effect expected by the programme creators, that is: establishment of permanent Polish–Swiss scientific cooperation. Finally, we cannot overlook the increase in scientific mobility of Polish PhD students and scholars, or the improvement of innovation in our country. To briefly summarize: SCIEX appeared to be a programme with a balance that was only positive, as it brought only benefits.

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How to describe a scholarship programme for young researchers, which has been favourably reviewed? We can do it with sadness (as the programme has already finished), with satisfaction and pride (summing the results of all the completed projects gives, after all, an impressive number) or with hope (thanks to the programme hundreds of young scientists discovered passion for what they do as well as its sense and usefulness). We believe that you will feel all those emotions when reading this publication summarizing SCIEX.



# SCIEX Scholarship Fund in Europe



■ Total budget of the SCIEX programme:

**44 294 849 CHF**

■ Total number of applications accepted and granted:

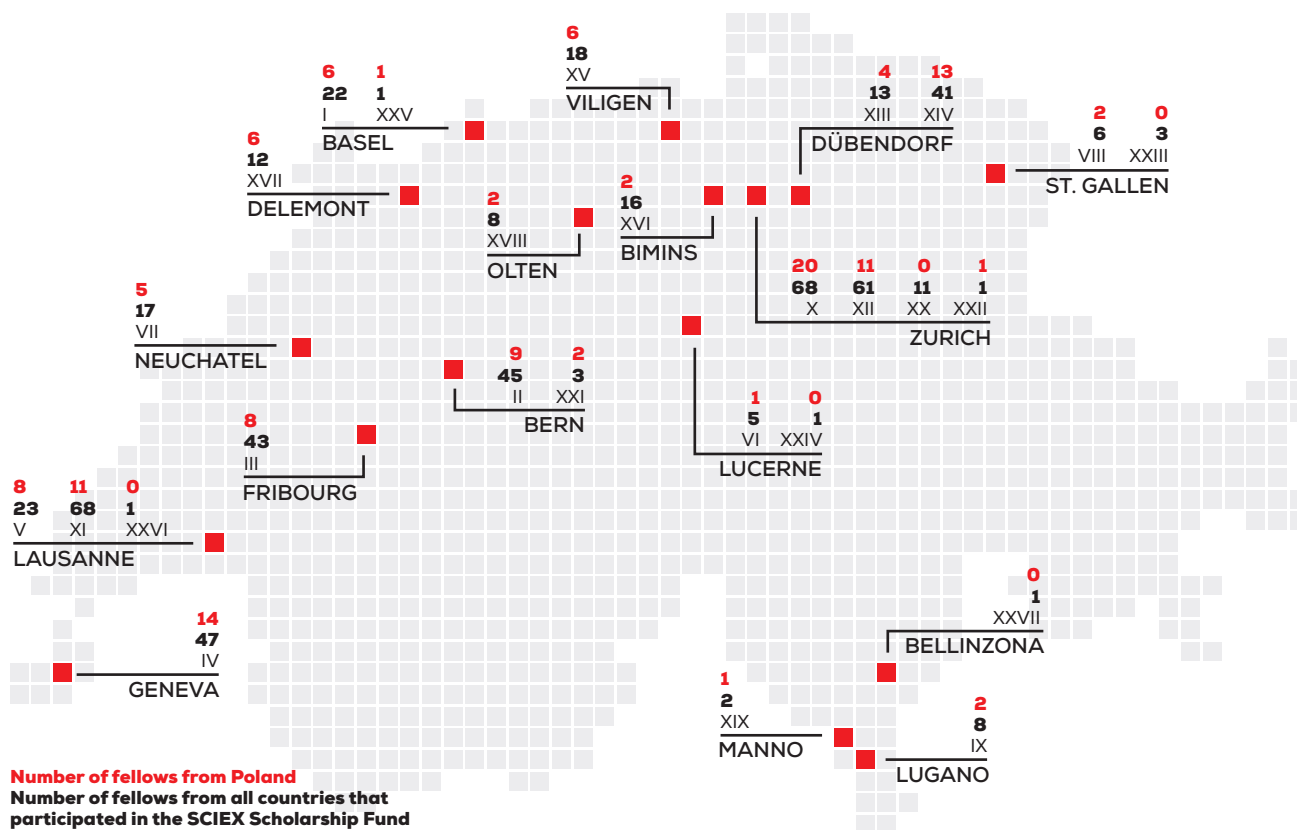
**545**

**Budget**  
Applications accepted





## Swiss universities that hosted SCIEX fellows



## Swiss universities that hosted SCIEX fellows:

<b>I</b>	University of Basel	<b>XVI</b>	Swiss Federal Institute for Forest, Snow and Landscape
<b>II</b>	University of Bern	<b>XVII</b>	University of Applied Sciences and Arts of Western Switzerland
<b>III</b>	University of Fribourg	<b>XVIII</b>	University of Applied Sciences of Northwestern Switzerland
<b>IV</b>	University of Geneva	<b>XIX</b>	University of Applied Sciences and Arts of Southern Switzerland
<b>V</b>	University of Lausanne	<b>XX</b>	The Zürcher Fachhochschule
<b>VI</b>	University of Lucerne	<b>XXI</b>	Bern University of Applied Sciences
<b>VII</b>	University of Neuchâtel	<b>XXII</b>	Zurich University of the Arts
<b>VIII</b>	University of St.Gallen	<b>XXIII</b>	FHO Fachhochschule Ostschweiz
<b>IX</b>	University of Lugano	<b>XXIV</b>	Lucerne University of Applied Sciences and Arts
<b>X</b>	University of Zurich	<b>XXV</b>	Swiss Tropical and Public Health Institute
<b>XI</b>	EPF Lausanne	<b>XXVI</b>	FORS University of Lausanne
<b>XII</b>	Swiss Federal Institute of Technology in Zurich	<b>XXVII</b>	Institute of Oncology Research
<b>XIII</b>	Eawag		
<b>XIV</b>	Swiss Federal Laboratories for Materials Science and Technology		
<b>XV</b>	Paul Scherrer Institute		

# The SCIEX Scholarship Fund in Poland

## Budget

**12 mln CHF**

## Duration period

from

**1 IV 2009**

to

**31 XII 2015**

## Academic title

**60**

Doc.Cand.

**73**

Dr.

**2**

PD Dr.

## Number of fellows

**135**

**69**

Mrs.

**66**

Mr.

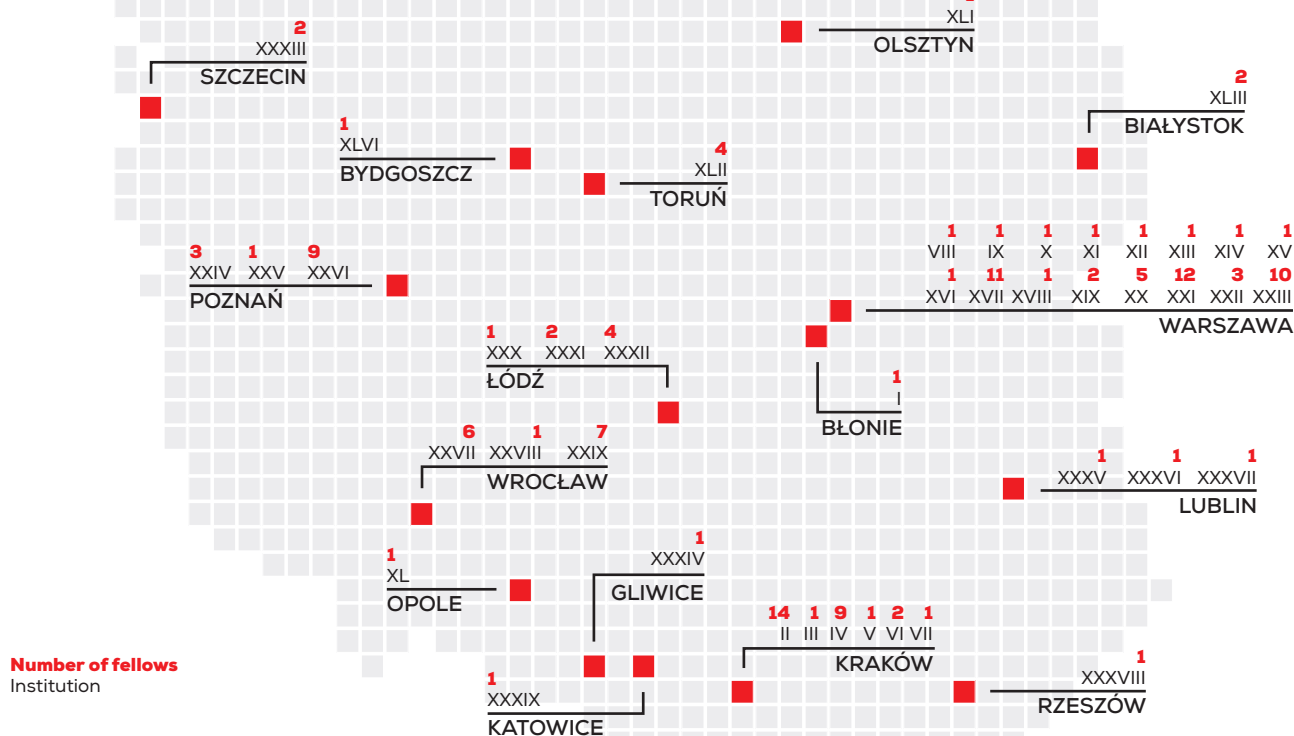
## Research area

Psychology, Educational science and Religious Sciences  
 Legal and Social Sciences, Economics  
 History  
 Archeology, Ethnology and Visual Arts  
 Linguistics and Literature  
 Mathematics  
 Astronomy, Astrophysics and Space Sciences  
 Chemistry  
 Physics  
 Engineering Sciences  
 Environmental Sciences  
 Earth Sciences

**10** Basic Biological Research  
**11** General Biology  
**2** Basic Medical Sciences  
**1** Experimental Medicine  
**5** Clinical Medicine  
**5** Preventive Medicine (Epidemiology Early Diagnosis/Prevention)  
**2** Engineering Sciences  
**15** Human Sciences  
**13** Life Sciences  
**7** Mathematical/Natural Sciences  
**10** Medical Sciences  
**2** Social Sciences

**11**  
**1**  
**1**  
**2**  
**1**  
**1**  
**14**  
**5**  
**1**  
**9**  
**3**  
**3**

## Fellows' cities of origin



## Sending institutions:

<b>I</b>	Plant Breeding and Acclimatization Institute-National Research Institute	<b>XIII</b>	International Institute of Molecular and Cell Biology	<b>XXIX</b>	Wroclaw University of Technology
<b>II</b>	Jagiellonian University in Krakow	<b>XIV</b>	Mossakowski Medical Research Center	<b>XXX</b>	Medical University of Lodz
<b>III</b>	Cracow University of Economics	<b>XV</b>	Nencki Institute of Experimental Biology, Polish Academy of Sciences	<b>XXXI</b>	Technical University of Lodz
<b>IV</b>	AGH - University of Science and Technology	<b>XVI</b>	Nicolaus Copernicus Astronomical Centre	<b>XXXII</b>	University of Lodz
<b>V</b>	Pedagogical Univeristy of Cracow	<b>XVII</b>	Polish Academy of Sciences	<b>XXXIII</b>	West Pomeranian University of Technology in Szczecin
<b>VI</b>	Institute of Nuclear Physics, Polish Academy of Sciences	<b>XVIII</b>	The Fryderyk Chopin University of Music in Warsaw	<b>XXXIV</b>	Silesian University of Technology
<b>VII</b>	Jerzy Haber Institute of Catalysis and Surface Chemistry, Polish Academy of Science	<b>XIX</b>	University of Finance and Management in Warsaw	<b>XXXV</b>	John Paul II Catholic University of Lublin
<b>VIII</b>	European School of Law and Administration	<b>XX</b>	University of Social Sciences and Humanities	<b>XXXVI</b>	Lublin University of Technology
<b>IX</b>	Institute of Biochemistry and Biophysics, Polish Academy of Sciences	<b>XXI</b>	University of Warsaw	<b>XXXVII</b>	Maria Curie-Skłodowska University
<b>X</b>	Institute of High Pressure Physics, Polish Academy of Sciences	<b>XXII</b>	Warsaw University of Life Sciences	<b>XXXVIII</b>	University of Information Techn. and Management in Rzeszów
<b>XI</b>	Institute of Philosophy and Sociology, Polish Academy of Sciences	<b>XXIII</b>	Warsaw University of Technology	<b>XXXIX</b>	Silesian Medical University of Katowice
<b>XII</b>	Institute of Physics, Polish Academy of Sciences	<b>XXIV</b>	Poznan University of Technology	<b>XL</b>	University of Opole
		<b>XXV</b>	Poznan University of Life Science	<b>XLI</b>	The Stanislaw Sakowicz Inland Fisheries Institute
		<b>XXVI</b>	Adam Mickiewicz University in Poznan	<b>XLII</b>	Nicolaus Copernicus University in Torun
		<b>XXVII</b>	University of Wrocław	<b>XLIII</b>	University of Białystok
		<b>XXVIII</b>	Wroclaw University of Environmental and Life Sciences	<b>XLIV</b>	Medical University of Gdansk
				<b>XLV</b>	Institute of Oceanology
				<b>XLVI</b>	University of Technology and Life Sciences in Bydgoszcz

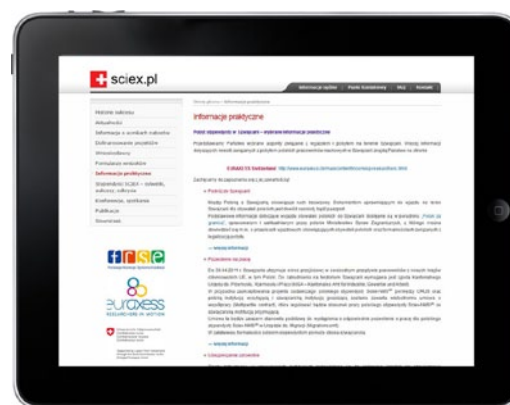
# The calendar of SCIEIX Scholarship Fund

1 IX – 1 XI

I call for proposals  
for fellowships

2 XI

Launching  
the website  
[www.sciex.pl](http://www.sciex.pl)



2009

26 XI

Signing the agreement by the Foundation  
for the Development of the Education  
System (FRSE) and Rectors' Conference  
of the Swiss Universities (RCSU)

## SWITZERLAND

In the Webometrics ranking of world universities published in July, the Swiss Federal Institute of Technology in Zurich (germ. Eidgenössische Technische Hochschule Zürich, ETHZ) occupied 46. position in the world (and the 3. in Europe, next to the University of Cambridge – 22. position in the world – and the University of Oxford – 42. position in the world). The same university occupies also a high position in the Academic Ranking of World Universities (the Shanghai ranking) – in 2009 it occupied the 23. position. Other Swiss universities which occupy high positions in the world prominent rankings are inter alia as follows: University of Zurich, University of Basel, University of St.Gallen (rankings of the best universities in the world educating in the field of finances, published by „Financial Times“) Swiss Federal Institute of Technology in Lausanne and University of Geneva.

## POLAND

The first bilateral middle ear implant placement was performed by a Pole, prof. dr hab. Kazimierz Niemczyk, the Head of the Department of Otolaryngology Medical University of Warsaw. The operation was performed at a 20-year-old patient with a serious hearing damage on 7 July. During the operation American implants were used, and the simultaneous bilateral placement was enabled by a system of objective hearing monitoring developed by specialists from the Medical University of Warsaw in the Independent Public Central Teaching Hospital on Banacha Street in Warsaw.

11 – 1 IV

II Call for proposals

2010

14 IV

**The selection of successful proposals out of the applications submitted under the I call**

**How many?**  
26 proposals

**For how much?**  
CHF 1.9 million

8 IX

**The selection of successful proposals out of the applications submitted under the II call**

**How many?**  
26 proposals

**For how much?**  
CHF 2,2 million

2 III

**1<sup>st</sup> Informational conference under the Programme of scientific exchange between Switzerland and new EU member states SCIEX-NMSch.**

**Where?**

the University of Warsaw

**Who for?**

Young scientists and doctoral students from the biggest Polish academic centres (<80 persons)

**For what purpose?**

The presentation of the SCIEX Scholarship Fund (co-financing and research project implementation rules), system of doctoral studies in Switzerland, as well as practical and legal aspects of the trip to Switzerland.

**How?**

Lectures (inter alia Heinz Kaufmann, director of the Swiss Contribution Office, Michał Lasota, legal consultant from the National Contact Point for EU Research Programmes EURAXESS – Information Centre for Scientists), workshops on filling in applications submitted to the Scholarship Fund.

1 IX – 1 XI

III Call for proposals



## POLAND

A prestigious scientific magazine "Nature" put on its January cover information on the discovery made by young Polish paleontologists: 29-year-old Grzegorz Niedźwiedzki from the Department of Biology of the University of Warsaw and 30-year-old Piotr Szrek from the Polish Geological Institute. The scientists (doctoral students) came across the traces of the first terrestrial tetrapods – the creatures which lived approx. 395 million years ago in the vicinity of present Świętokrzyskie Mountains (the finding in a closed quarry in Zachełm). The results of discovered traces changed the knowledge to date in the field of vertebrates evolution: they prove that tetrapods appeared 18 million years earlier than it has been thought so far and that they came on to the land from salt, not fresh water. The co-author of the research was professor Per E. Ahlberg from the University of Uppsala, the world renown researcher of first tetrapods.

## SWITZERLAND

By signing the Bologna declaration (in 1999), Switzerland declared that the European Higher Education Area would have been established in the country by 2010 – universities would become open for students from other countries, the studies will be based on a two-tier model (bachelor and master) and high schools would introduce a system of diploma recognition. It was possible to implement the reform at an earlier stage: the first university introduced the two-tier system of studies in 2001, and by 2007 all study programmes had been reorganised.

**31 III**

**The selection of successful proposals out of applications submitted under the III call**

**How many?**  
29 proposals

**For how much?**  
2.6 mln CHF

**1 IX – 1 XI**

**IV Call for proposals**

**2011**

**13 IV**

**2<sup>nd</sup> Informational Conference under the Programme of scientific exchange between Switzerland and new EU member states SCIEX-NMSch.**

**Where?**

The University of Warsaw Library in Warsaw

**Who for?**

Young scientists and doctoral students from the biggest Polish academic centres (<100 persons)

**For what purpose?**

The presentation of the SCIEX Scholarship Fund (co-financing and research project implementation rules) and fellowships granted by the government of Switzerland, characteristics of EURAXESS – Information Centre for Scientists and Polish-Swiss Research Programme, presentation of certain aspects of doing research and a longer stay in Switzerland.

**How?**

Lectures (inter alia Katarzyna Aleksandrowicz, director of Scholarship Programmes, FRSE, Elżbieta Dybcio-Wojciechowska, Bureau for Academic Recognition and International Exchange), the speech of the SCIEX fellow (Piotr Bednarz, PhD, Maria Curie-Skłodowska-University), workshops on filling in applications submitted to the SCIEX Scholarship Fund.



**Interesting facts about Polish and Swiss science**

**SWITZERLAND**

In the 23. EU Contest for Young Scientists (EUCYS) in Helsinki, 130 persons from 27 European countries were competing for first prize. It was awarded to three projects, one of which was developed by a Swiss academic, Pius Markus Theiler and was entitled "pi Cam – The Development of a Camming Device for Climbing".

**POLAND**

The history of graphene – a new material which has fascinated physicists and engineers for a long time now – contains a very important Polish element. In April 2011 scientists from the Institute of Electronic Materials Technology and the Faculty of Physics of the University of Warsaw (under supervision of dr inż. Włodzimierz Strupiński) for the first time managed to create fragments of this structure which were large enough to be used for commercial purposes. By using equipment for the production of semi-conductive structures, the scientists were able to create large surfaces of high quality graphene, capable of accommodating many electronic devices. Thanks to their studies, graphene can now be used for the production of computers, replacing silicon.

**25 V****Meeting with the alumni****Where?**

Warsaw

**Who for?**

SCIEX fellows

**For what purpose?**

Integrating the circle of SCIEX Scholarship Fund laureates, providing the scholarship fellows with an opportunity to establish new contacts, exchange opinions, information and experiences, conducting discussions

**How?**

Speeches (inter alia Heinz Kaufmann, head of the Swiss Contribution Office Warsaw), presentation of the Fund's statistical data (Katarzyna Aleksandrowicz, director of Scholarship Programmes, FRSE), presentations of selected scholarship projects, lecture on interinstitutional scientific cooperation (Marek Polak, PhD, head of the International Cooperation Centre of the Warsaw University of Technology)

**14 VI****3<sup>rd</sup> Informational Conference under the Programme of scientific exchange between Switzerland and new EU Member States SCIEX-NMSch****Where?**

NOT Warsaw House of Technology

**Who for?**

Young scientists and doctoral students from the biggest Polish academic centres (<100 persons)

**For what purpose?**

Presentation of the SCIEX Scholarship Fund (co-financing and research project implementation rules) and the work of EURAXESS – Information Centre for Scientists (legal aid provided by this institution), presentation of experiences from the implementation of projects by SCIEX scholarship fellows

**How?**

Conference organised under the auspices of the Embassy of Switzerland and the Ministry of Regional Development. Lectures (inter alia Monika Kotynia, PhD, Department for the Implementation of OPI Scientific Research Support Instruments, Anna Dorodzińska, legal consultant from the National Contact Point for EU Research Programmes EURAXESS – Information Centre for Scientists), speeches by scholarship fellows (Anna Michalska, PhD, Institute of Animal Reproduction and Food Research of Polish Academy of Sciences, Dariusz Burnat, PhD, Faculty of Materials Science and Ceramics at AGH University of Science and Technology), workshops on filling in applications submitted to the SCIEX Scholarship Fund.

**2012****11 IV****The selection of successful proposals out of applications submitted under the IV call****How many?**

21 proposals

**For how much?**

1.8 mln CHF

**SWITZERLAND**

In the middle of the year the scientists from the Federal Institute of Technology in Zurich (under supervision of dr Herve Vanderschuren) announced, that they were able to grow a new variety of manioc – the most important edible plant in Africa after rice and corn. This variety is immune to viruses which attack this plant in Africa (mosaic virus and streak geminivirus) and destroy crops.

**1 IX – 1 XI****V Call for proposals****18 XII****Singing of the Annex prolonging the agreement between FRSE and RCSU****POLAND**

Profesor Agnieszka Zalewska is the first woman and the first scientist from the Central and Eastern European countries to be appointed as the President of the Council of the European Organisation for Nuclear Research (Conseil Européen pour la Recherche Nucléaire, CERN – the initial name of the institution which nowadays is referred to as Organisation Européenne pour la Recherche Nucléaire). The decision was announced on 20 September 2012 – prof. Zalewska was appointed for a one year term of office which began on 1 January 2013. The new President of the CERN Council commented on her appointment in the following way: "I would not have been appointed as the president of the CERN Council if it were not for the fact that Polish particle physics was and is simply very good." Profesor Zalewska is professionally associated with the Institute of Nuclear Physics of the Polish Academy of Sciences, and she received the title of professor of physical sciences in the year 2000. She has been Poland's scientific representative in the CERN Council since 2010.



## 24 VI

### 4<sup>th</sup> Informational Conference under the Programme of scientific exchange between Switzerland and new EU member states SCIEX-NMSch.

#### Where?

NOT Warsaw House of Technology

#### Who for?

Young scientists and doctoral students from the biggest Polish academic centres (ca. 100 persons)

#### For what purpose?

Presentation of the Scholarship Fund (co-financing and research project implementation rules), presentation of experiences from the implementation of projects by SCIEX scholarship fellows

#### How?

Conference organised under the auspices of the Embassy of Switzerland and the Ministry of Regional Development. Lectures (inter alia Katarzyna Aleksandrowicz, director of Scholarship Programmes, FRSE, Marek Polak, PhD, head of the International Cooperation Centre of the Warsaw University of Technology, Dominika Wieczorek, Office of the Swiss-Polish Cooperation Programme), speeches of scholarship fellows (Aleksandra Pelczarska, PhD, The Agency for Health Technology Assessment and Tariff System, Szymon Wichary, PhD, University of Social Sciences and Humanities), workshops on filling application forms for the SCIEX Scholarship Fund.

## 2013

### 28 III

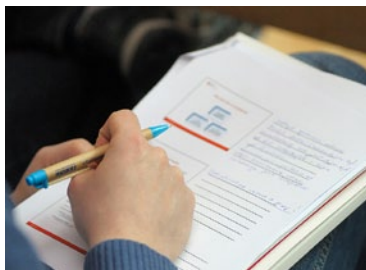
#### The selection of successful proposals out of applications submitted under the V call

#### How many?

23 proposals

#### For how much?

1.8 mln CHF



### 1 IX – 1 XI

#### VI call for proposals

### POLAND

Dr hab. Piotr Sułkowski from the Faculty of Physics of the University of Warsaw received a prestigious research grant awarded by European Research Council (ERC). Starting Grant is awarded to young researchers. For the project Quantum fields and knot homologies Pole received more than EUR 1.3 million for five years – the decision was announced in June. The project involves the studies of the relationship between physics and mathematics, with particular emphasis on quantum field theory and string theory and mathematical knot theory and random matrix theory.

### SWITZERLAND

On 16 February Large Hadron Collider (LHC) was turned off – an accelerator located in European Organisation for Nuclear Research on the outskirts of Geneva and turned on for the first time in September 2008. Decision to turn off LHC was based on the necessity to repair the defects of accelerator and to modernise it. Large Hadron Collider was turned on again in March 2015.





2014

26 III

**The selection of successful proposals out of the applications submitted under the VI call**

**How many?**  
15 projects

**For how much?**  
CHF 1.1 million



### POLAND

Dr Anna Panasiuk-Chodnicka from the University of Gdansk as the first Polish scientist became the scholarship fellow of Commission for the Conservation of Antarctic Marine Living Resources, CCAMLR). Panasiuk-Chodnicka, an assistant professor in Department of Marine Plankton Research of the Oceanography Institute at the University of Gdańsk, was to develop the methods for environmental monitoring of Antarctic waters under the scholarship (in the years 2014–2015). Each year one young scientists receives the CCAMLR scholarship.

### SWITZERLAND

The November issue of "Nature Biotechnology" journal informed that Swiss scientists from the University of Bern led by dr Eduard Babychuk and prof. Annette Draeger have successfully developed artificial liposomes able to entice bacteria dangerous for the body in order to neutralize them. Experiments conducted on mice, which were first infected with sepsis and then implanted with artificial liposomes, proved that scientists are on the track of competitive therapy against antibiotics. The liposomes effectively eliminated toxins from the mice organisms, though – and that is what makes them different from antibiotics – they did not make previously infected mice resistant to disease.



2015

5 X

### The exhibition Success stories of SCIEX fellows



Interesting facts about  
Polish and Swiss science

#### POLAND

Dr Grzegorz Ochała from the Department of Papyrology at the University of Warsaw created a complete database of texts from Nubia (sources originating in 5-15th century). The Database of Medieval Nubian Texts has almost 3000 entries and the work on it lasted for over 10 years.

#### SWITZERLAND

On 28 May the Swiss Experimental Institute of Agroscope (German: Bundesamt für Landwirtschaft) issued a statement that solves the problem of why there are holes in cheese, and above all, it answers the question why there are fewer holes every year. The scientists, who for 130 days observed with the use of radiological equipment, tomography and computer the fermentation process of cheese and confirmed the thesis that excessive hygiene (required during the cheese production in fully automated milk establishments) is responsible for holes disappearing. During traditional milk yield microparticles of hay get to the buckets and produce gas making holes in cheese mass in the process of fermentation.



X-XII

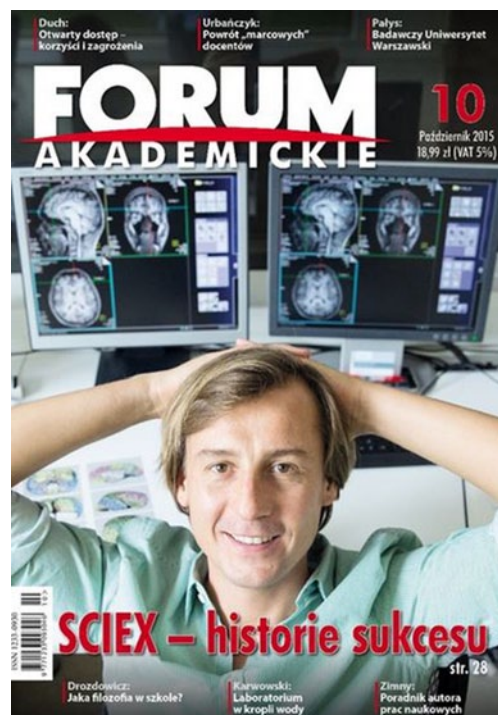
**The Exhibition „Succes stories of SCIEX fellows” was presented in:**

Wroclaw University of Technology, University of Economics in Poznan, Warsaw University of Technology, Ministry of Development and Morena Association in Gdansk



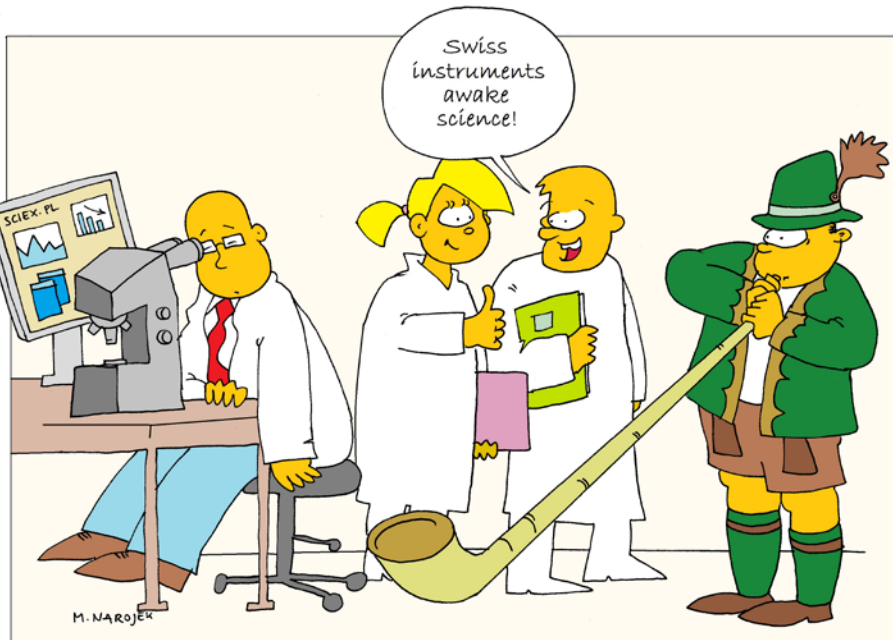
XI

**In 2015 a major article was published on Sciex Scholarship Fund and Sciex fellows in the „Academic Forum” magazine**



### POLSKA

Switzerland can boast of 25 Nobel Prize winners. The Swiss won most Nobel Prizes in the field of medicine and physiology (six prizes: Emil Theodor Kocher – 1909, Paul Herman Müller – 1948, Walter Rudolf Hess – 1949, Tadeusz Reichstein, Polish by birth – 1950, Werner Arber – 1978 and Rolf Zinkernagel – 1996), in chemistry (five prizes: Alfred Werner – 1913, Paul Karrer – 1937, Leopold Ružička – 1939, Vladimir Prelog – 1975 and Richard Ernst – 1991), physics (four prizes: Wolfgang Pauli – 1945, Felix Bloch – 1952, Gerd Binnig and Heinrich Rohrer – 1986 as well as Jack Steinberger – 1988) and literature (two prizes: Carl Spitteler – 1919 and Herman Hesse – 1946). Nobel Peace Prize was awarded five times to people and institutions from Switzerland.



**// My fellowship in Switzerland  
was an ideal opportunity to  
familiarize myself with current  
research trends and with world  
literature**

ANNA KURKOWSKA

Duration of the SCIEX project 1.02.2011 – 31.07.2011, project *Spatial planning and development of bicycle tourism – Polish-Swiss comparison analysis*, research area: Social Sciences



## Results of the SCIEX programme – nothing but strong points

**The aim of an objective study is to present hard data, the strengths and weaknesses of a given programme or project. The aim of such a study is not to praise the analysed item but to thoroughly assess the value of the examined phenomenon. That was our aim: to strive for honest conclusions which would also indicate the weaknesses of the SCIEX programme, aspects that need to be improved – in the future or in the course of implementation of other programmes. However, an overall assessment of the programme is positive.**

Maybe the secret is the legendary Swiss precision and good organization? Many scholarship fellows highlighted this aspect of the implementation of the programme. Young scientists drew attention to good organization, both as a general, or even national, characteristic of the Swiss, as well as of the research units visited.

Could it be the excellent working conditions? This aspect is usually crucial for young scholarship fellows who plan to increase considerably the scope of their earlier research. Scholarship fellows very often mentioned not only the excellent (and made easily available to them) research infrastructure (e.g. innovative equipment, technologies, methods) but also the kindness they met with, and friendly support for their activities and the effective cooperation, both with the mentor and with colleagues from the project team or from the same research unit.

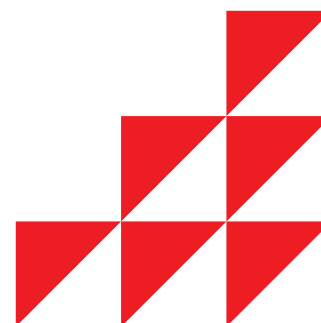
Maybe the explanation lies in the multiple results the scholarship fellows achieved in Switzerland? Young researchers after a few months of the scholarship had a feeling of time well spent and of activities strongly validated by publications in recognized magazines, presentations made during important conferences, or concrete research achievements in the form of discoveries, development of new materials, technologies or research methods. It must be impressive in that research environment. In addition, if one takes into account a wide range of soft skills gained by the scholarship fellows or the opportunity to improve

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language competences / learn a new language, and personal “profits” of all kinds – from discovering a country to cultural aspects – it is no wonder that the young scientists who took part in the scholarship scheme are so enthusiastic about the SCIEX programme.

Or maybe it is the main ideas of the SCIEX programme, which were apt and fit for purpose, that contributed to its positive value? Today the world of science needs efficient cooperation more than ever, with more and more projects being implemented at an inter-institutional level and in multicultural environments; intelligent cooperation and the ability to create partnerships – beyond borders and often of an interdisciplinary nature – determine the future of research and development of our knowledge in a number of fields. We interviewed not only the scholarship fellows but also their mentors (both at sending and host institutions); the latter stressed the advantages the programme offered to their institutions, they emphasized the positive impact the project implementation had on whole research centres, and the long-lasting cooperation with foreign partners established owing to the scholarships, and mutual benefits stemming from this cooperation.

Undoubtedly, every statement mentioned above is, to some extent, true of each project. More arguments confirming that nothing negative can be said about SCIEX are provided in the report on the survey which you will find in the following pages.



# Results of the SCIEX programme in Poland – conclusions from the study

**This report presents the initial results of the study of the impact of the SCIEX projects conducted by the Foundation for the Development of the Education System. The research area was the impact of the SCIEX programme on the development of the scholarship fellows and the scientific units from Poland and Switzerland engaged in the projects.**

The main aim of the SCIEX programme is to establish partnerships which, by supporting the competences of the participants of visits, should also build the institutional potential of the interested scientific units from Poland and Switzerland. And in view of this aim, the study of the results of SCIEX projects, conducted by FRSE, defined the research aims which have helped to analyse the key scientific areas of the programme.

## **Main objective of the study**

Assessment of the importance of the SCIEX programme and its influence on the development of Polish institutions supported by the programme and on the participants who obtained co-financing.

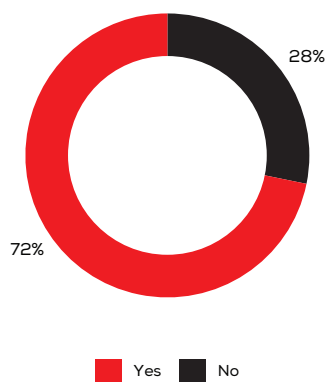
## **Specific objectives**

1. Assessment of the impact of SCIEX programme on development of the competences and the career paths of the participants.
2. Assessment of SCIEX impact on the development of the Polish universities that received financial support under the programme.
3. Assessment of the quality and sustainability of the established partnerships of Polish and Swiss institutions involved in the implementation of the SCIEX project.

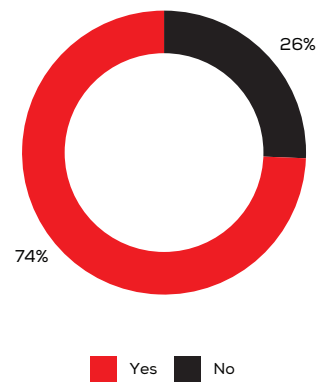
The conclusions gathered in the study have been grouped thematically in order to organize the most important features of the programme mentioned by the persons engaged in the projects.



■ Are you employed at your home university?



■ Is the SCIEX scholarship a follow-up to previously established partnership cooperation?



The statements in the text are authentic quotations from the questionnaires.

### Multiple fields of study, common needs

Based on the information collected from the scholarship fellows during the assessment of the results of the SCIEX projects it can be concluded that for many of them the goal was to intensify and expand the scope of research already in progress. The interdisciplinary nature of the work carried out and of the scholarship fellows' research interests seems to be of utmost importance. Some people stressed the opportunity to develop concrete and necessary scientific solutions; it would be impossible to receive funding for these in Poland.

“ I was responsible for developing and interpreting the theoretical basis needed to implement experiments, which were in line with trends of materials engineering, carried out at that time in Switzerland.

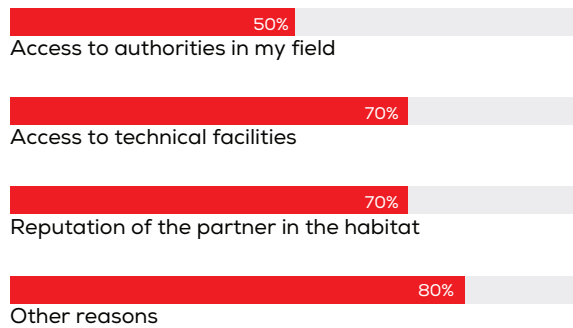
### SCIEX and employability

Unfortunately, it is difficult to assess whether the programme had any clear impact on the employability of the scholarship fellows, and what seems decisive in this respect is the role of the conditions prevailing in higher education in Poland (in order to ensure employment at a university one needs to hold a postdoctoral degree). Almost 30% of the SCIEX scholarship fellows who took part in the survey were not provided with any form of employment (a signed contract of employment or a civil law contract, i.e. a fee-for-task agreement, a specific-task contract). It, nevertheless, should be stressed that almost three quarters of people surveyed declared a relationship with their home academic institution lasting more than five years.

### Quality of cooperation

The scholarship fellows surveyed expressed very positive opinions about their cooperation with research

■ Please explain why you have chosen a given partner or host university. What were the criteria for your choice? (Answers do not total 100% as it was a multiple choice question)

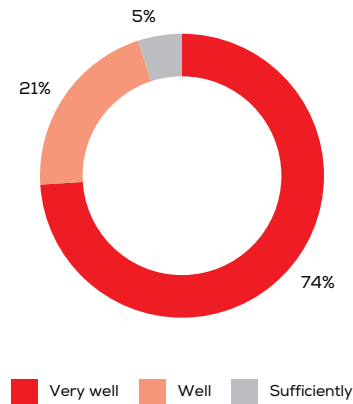


teams at Swiss universities. Only a few respondents mentioned initial problems regarding adaptation. In questionnaires they emphasized the friendliness they experienced at the host university.

- “ We got to know each other, we were on good terms, everyone was very helpful.
- “ People were very kind and friendly to me. At no time did I encounter any hostility or unfriendly behaviour, nor was anyone reserved: not a secretary, member of the technical staff, nor any research worker.
- “ The Swiss are, contrary to popular opinion, very welcoming. I worked in an international environment and the team welcomed me very warmly.

For the majority of young Polish scientists (three quarters of the respondents) the SCIEX scholarship was a follow-up

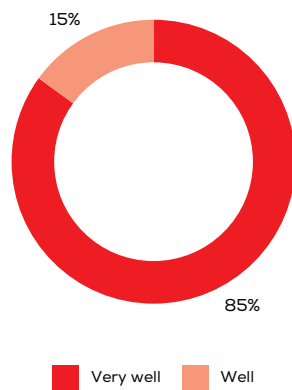
■ How do you assess the clarity of the programme's rules?



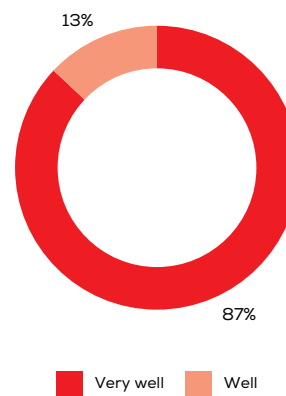
to partnership cooperation previously established with a supervisor or a host university, and only slightly more than one quarter had established no contact related to substantive implementation of the SCIEX project with the Swiss partners before their departure within the framework of the scholarship. For approximately 40% of the scholarship fellows, SCIEX was the very first international exchange programme in their careers. The average age of the respondents was 33, so they were relatively young scientists with only a few years' academic experience at their home universities when they took part in the scholarship. However, it needs to be noted that at the time of the survey 95% of them held at least a doctoral degree.

Everyone stressed the positive experience resulting from the cooperation: above all, the good conditions in Swiss universities in terms of infrastructure were emphasised. It could be inferred from what the respondents said that some of them

How do you assess your host mentor's help and commitment?



How do you assess the organisation of your workplace?



were even jealous of the clearly more comfortable working conditions that scientists at partner universities enjoyed. The scholarship fellows also stressed the fact that they had access to state-of-the-art equipment in carrying out their research.

*“ I learnt how to use an atomic force microscope, how to prepare samples, and all tricks of the trade. I wouldn't have such opportunities in Poland.*

The vast majority of scholarship fellows who took part in the survey stated that the responsibility for individual phases of project implementation was evenly distributed among parties involved. Only one fifth of the respondents were of the opinion that they took more responsibility for the project than their Swiss partners. Interestingly, even though proposals for funding of projects were officially submitted by the Swiss partners, as many as 60% of scholarship fellows declared that the

Polish party was engaged to a greater extent in creating the foundations of the project. It needs to be stressed that all the respondents confirmed that the internship supervisor at the university was accessible and helpful.

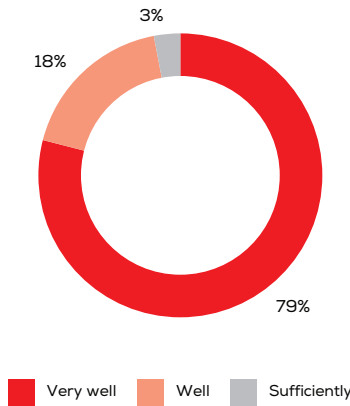
*“ Basically, everything was just as it should be. The project cooperation was impeccable.*

*“ Full cooperation, no conflicts, theoretical support and excellent technical support.*

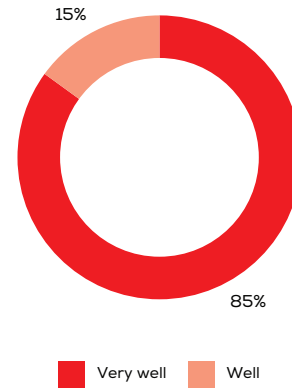
### SCIEX scholarship results:

Analysis of the answers given by the respondents allows us to differentiate between two categories of SCIEX scholarship results. The first comprises results related to the subject matter of the scholarship (both individual and institutional), and the second, development of the scholarship fellows' linguistic competence and soft skills.

How do you assess your cooperation with the research team?



How do you assess the tasks carried out during the exchange within the scholarship?



The first category includes the development of professional competences of the young scientists, their acquisition of knowledge related to the area of their research and conduct of specific research at a Swiss university. When it comes to institutional results, respondents very often pointed out that thanks to the SCIEX scholarship their scientific potential at their home institution increased, for example through establishment of new scientific contacts, formation of research partnerships and sharing the results of the project.

All respondents agreed that the SCIEX scholarship influenced the development of competences relating to the scientific area of their internship. The subject of the scholarship coincided with the scientific interests of scholarship fellows and their research in Poland. Several young scientists indicated that thanks to the stay in Switzerland they were able to better specify, and in some cases even change, their research interests.

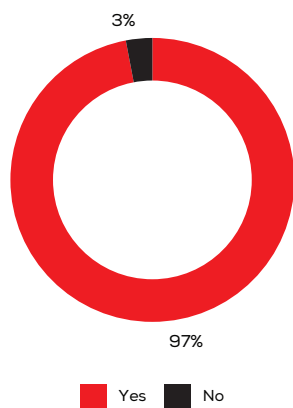
*“The SCIEX project changed my field of research: from plant cell research I switched to human cell analysis, which was impossible in my institution. After returning to Poland a lab was set up researching human cells, where I was able to continue my work.”*

An important physical effect of the SCIEX scholarship projects also includes publications relating to the area of research. The vast majority (almost 90%) of respondents declared that the SCIEX project resulted in scientific articles (often more than one) by the scholarship fellows, and over 15% said that the scholarship had also contributed to the creation of part or the whole of a more extensive publication. This proves that the SCIEX scholarship has a significant impact on the professional development and academic careers of scholarship fellows.

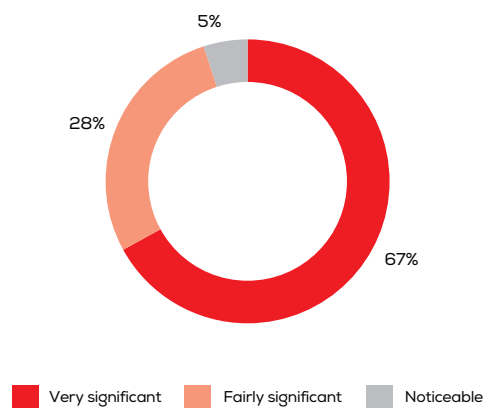
*“I had the opportunity to see how science is done at a world-class”*



■ Has SCIEX influenced your professional development?



■ How would you describe the impact of the SCIEX scholarship on your career in science?



*university, to talk to the best in my field. Besides, I had access to the best possible research equipment, including trips to the synchrotron and to conferences financed by Switzerland.*

All respondents confirmed the impact of SCIEX on the development of their scientific careers, and more than two-thirds of respondents agreed that the impact was substantial, more than one quarter identified it as “quite significant”, and only 5% deemed it merely “noticeable”. Asked what the impact was specifically, the respondents stated that once back in Poland, they became not only the initiators of new research projects, but also acquired new grants for further research for their home institution or research institute in Poland.

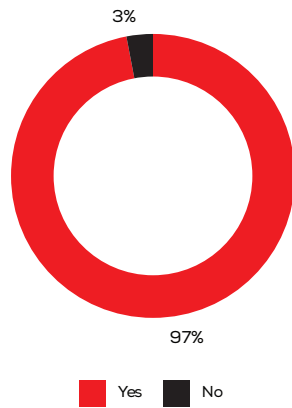
“ Primarily the self-reliance I gained as a result of SCIEX is invaluable. Generally I performed my

*experiments myself from A to Z, which accelerated my professional development very much.*

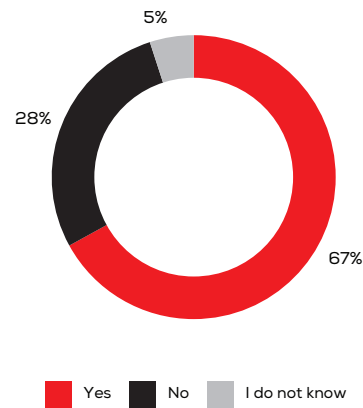
The international nature of SCIEX scholarships is also very important. Respondents appreciated the opportunity to work in diversified research teams, which resulted in establishment of contacts with specialists from abroad and implementation of further projects, even after the scholarship had ended.

SCIEX scholarships yield benefits not only to the researchers who go to Switzerland, but also to the home institutions at which they work. Polish scholarship fellows declared that their home institution expanded its area of research or improved the quality of research. In addition, all respondents agreed with the statement that the stay in Switzerland resulted in development of the scientific potential of their home institution.

■ Has SCIEX contributed to establishment of any scientific contacts?



■ Do partner universities implement any subsequent projects after SCIEX scholarship completion?



Moreover, more than half of the Swiss mentors who took part in the survey said that the project had an impact on the operation of their home institution. They mentioned increased internationalization, higher prestige, and a change in the perception of the institution as a place that engages in new scholarship, scientific, or research projects.

**SCIEX and soft skills**

The second category of results, not related to the research area of scholarships, covers command of foreign languages in both professional and private situations and development of the soft skills of scholarship fellows.

In the framework of SCIEX scholarships, Polish scientists spent between 6 and 24 months in Switzerland. Such a long stay in a foreign and diversified country has led to development of a wide range of skills. Close to 60% of the scholarship

fellows claimed that thanks to the stay in Switzerland they have developed their command of foreign languages. Many respondents also pointed out an increase in soft competences, such as interpersonal and social skills, and the ability to work in an international team. Moreover, the respondents repeatedly stressed that thanks to the SCIEX scholarship they have become much more independent in their own research.

Moreover, the respondents often said that the foreign SCIEX scholarship opened the way to further visits.

“ The scholarship itself has an impact on further professional decisions.

“ I mean the postdoctoral scholarship. SCIEX has given me courage and now I look at such possibilities with more audacity.

■ In what way has the situation at the university changed after you returned from your SCIEX scholarship? (The figure shows the most frequent answers of scholarship fellows. The data do not total 100% as it was a multiple choice question.)



■ What competences (not connected with the scientific area of the scholarship) have you developed?



### Professional plans after completion of the SCIEX scholarship

The professional and research plans of most of the scholarship fellows interviewed remain within the area of their SCIEX scholarship. Some respondents claimed that their academic professional duties changed due to the experience gained from the SCIEX scholarship.

- “ I have started teaching how to use the atomic force microscope. Also, I have learnt to prepare samples and to create different simulations. I wouldn't have such opportunities anywhere in Poland.
- “ Due to the experience gained and the scientific contribution, I have become an independent academic researcher.

### SCIEX – a scholarship to recommend

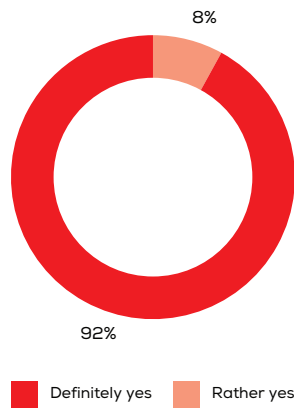
According to the declarations, all respondents would recommend participation in a SCIEX scholarship to other young researchers. What is more, all respondents confirmed that SCIEX met their expectations, both from the scientific and sightseeing perspective.

- “ It is a real shame that SCIEX no longer exists.
- “ It is difficult to find a better place and a better programme in financial terms.
- “ Cooperation between scientists could have also taken place without SCIEX. SCIEX's added value is that it provides funds for the cooperation and facilitates it in terms of funds.

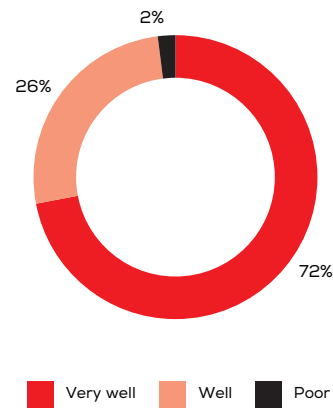
### Switzerland – added value

Many respondents underlined that they would not have been able to fulfill

■ Has the SCIEX scholarship met your expectations?



■ The assessment of free time during the stay in Switzerland



their research aims if the scholarship had not been in Switzerland. They highlighted the opportunity to make contact with the international scientific environment and with international experts, as well as the convenient scheme for financing education, which is not available in other countries. Some respondents also appreciated the proximity of the CERN institute although, SCIEX projects were not carried out there (due to the support of Swiss hosting universities, the Polish scholarship fellows had an opportunity to see this institution). There were also projects which were planned on an *ad hoc* basis, not only as a continuation of the research conducted in Poland but also as an element which was conditional for the success of the research that had already started. In this case, the unique experiences of Swiss partnership institutions related to the scientific area of the research activities carried out were underlined most.

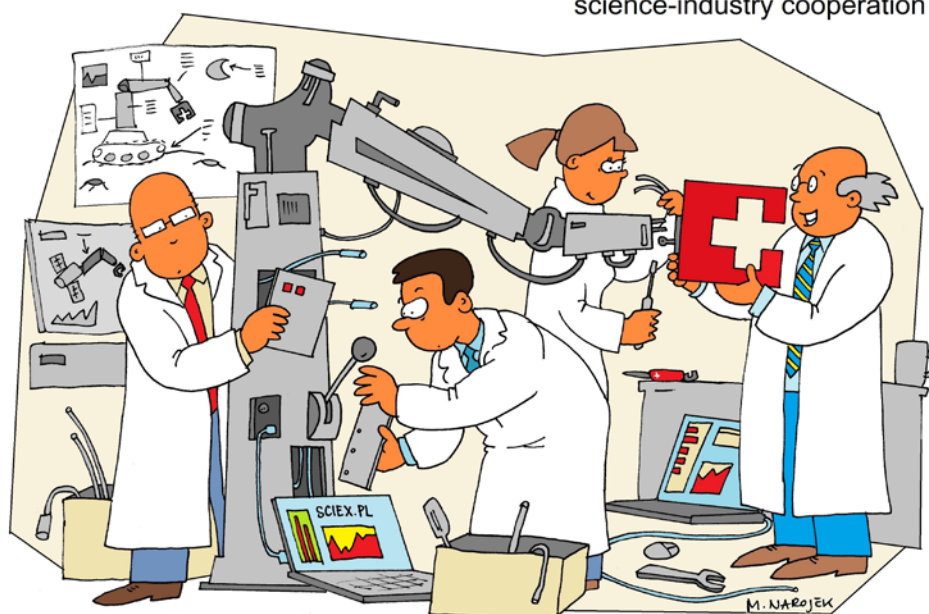
“ The availability of CERN was the reason for the implementation of my project in Switzerland – there was no other alternative

**Free time?**

Long-term foreign mobility schemes give participants the possibility to carry out extra activities in their free time, including the opportunity to become familiar with the traditions and culture of the host country. Almost all scholarship fellows who took part in the survey assessed positively the extra activities in which they participated in their free time. Only 2% of the respondents considered the quality of free time as poor.



science-industry cooperation





**/// For a researcher of literature and culture, a stay of several months in Switzerland is extremely valuable not only because it enables familiarity with new research methods, access to sources and contacts with colleagues, but also because it allows direct contact with the culture and everyday life of Swiss citizens. When experience is gained in this way, it directly translates into teaching work, its variety and fascination which can be passed on to students.**

DR DARIUSZ KOMOROWSKI

Duration of the SCIEX project 1.10.2011 – 31.05.2012, project *The intellectual on the borderlines. Carl Albert Loosli as a columnist in the beginning of the 20<sup>th</sup> century in the medial and cross-cultural context of Switzerland*, research area: Linguistics and Literature



## SCIEX scholarship fellows: outstanding science enthusiasts

*Due to the trip to Switzerland I have developed a passion for learning – says simply Artur Marchewka, PhD. Other scholarship fellows are of a similar opinion, and their responses indicate an unfeigned satisfaction with the projects implemented in the framework of the SCIEX Scholarship Fund. Are these words a confirmation of the exceptional character of the Swiss programme or rather of the originality of the Polish scientists who participated in it? Having read the interviews in this publication we can surely say – both!*

Can we create a profile of a typical Polish SCIEX scholarship fellow? Let's try!

This person is on average a 33-year-old scientist about to start his/her professional career (most often a PhD student or a fellow of a PhD degree), attempting to obtain another degree (PhD or a post-doctoral degree) and this is one of the reasons why he/she is looking for interesting research areas in his/her field of study (note that it is impossible to indicate one or even a few disciplines – SCIEX scholarship fellows represent almost all known research areas, from literature and philosophy to chemistry, physics or astronomy requiring complex scientific calculations). Even this fuzzy outline helps us notice that a typical SCIEX scholarship fellow will be characterised more by enthusiasm for tasks undertaken rather than for routine, by openness for new challenges and interest in scientific developments rather than being limited to one, permanently set scientific aim, by willingness to see how to do real science rather than display



the pride of an experienced (and, in fact, tired of researching) scientist. What differentiates this person from other scientists is the ability to clearly specify research aims, the courage to participate in discussions with internationally recognized specialists, the willingness to try new research methods, the newest world research trends, advanced technologies or the most modern research infrastructure; also the intention to see how R&D institutions elsewhere function differently from those in Poland (e.g. the rules of cooperation in an international environment), and last but not least the persistence to achieve their aims resulting from the fact that those aims are ambitious and valuable. The SCiEX scholarship fellow does not feel like a supplicant because he/she knows that they have something to offer: knowledge and skills, a fresh approach to scientific problems, the readiness to draw inspiration from the achievements of others and mostly the passion for science and an enthusiastic approach to research areas of his/her interest.

Following the implementation of the project, this roughly defined representative of the group of Polish SCiEX scholarship fellows may frankly say: "The scholarship gave me the sense of participating in something important, in living science at its highest level" (Jan Ciecuch, associate professor, see pages: 52-53) or: "If it had not been for the scholarship, I would not have been able to expand my research horizons so much in such a short period of time" (Łukasz Binkowski, PhD, see pages: 54-55) or: "After I returned, I feel more competitive in the world of science

and on the academic labour market" (Monika Reczuga see pages: 50-51). A SCiEX scholarship fellow, stronger due to the cooperation with his/her foreign colleagues, richer in many new experiences, proud of his/her well-regarded publications or participation in international conferences, who has made important scientific discoveries (e.g. Marek Nikolajuk, PhD, and Krzysztof Hryniewicz who have contributed to the discovery of a massive black hole devouring a super Jupiter) are the hope not only for Polish but also European science. High flown talk? It would be impossible without it to talk about the merits of the SCiEX scholarship :-)  
Anyway – you are welcome to read the interviews.

## Selected SCIE X fellows



**Anna Michalska, PhD**

**When?**  
1.11.2009–30.04.2011

**Where from?**  
Polish Academy of Sciences in Olsztyn

**Where to?**  
HES-SO Valais, Institute of Life Technologies

**Subject**  
Influence of processing on bioactive compounds from pomegranate

**Field of science**  
Engineering Sciences



**Dariusz Burnat, PhD**

**When?**  
1.11.2009–30.04.2011

**Where from?**  
AGH University of Science and Technology in Kraków

**Where to?**  
Swiss Federal Laboratories for Materials Science and Technology (EMPA), Dübendorf

**Subject**  
NANO-SOFC – Preparation and characterization of nanostructured, alternative solid oxide fuel cell (SOFC) anodes with focus on carbon containing fuels

**Field of science**  
Mathematical/  
Natural Sciences



**Jacek Wawer, PhD**

**When?**  
1.12.2009–30.11.2010

**Where from?**  
Jagiellonian University in Kraków

**Where to?**  
University of Geneva

**Subject**  
Time and modality. A formal perspective

**Field of science**  
Human Sciences



**Artur Marchewka, PhD**

**When?**  
1.05.2010–30.04.2011

**Where from?**  
Nencki Institute of Experimental Biology, Polish Academy of Sciences

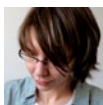
**Where to?**  
Lausanne University Hospital

**Subject**  
AIAD – Advanced imaging in Alzheimer's disease

**Field of science**  
Medical Sciences

**2009**

**2010**



**Izabela Szumska**

**When?**  
1.07.2011–30.06.2012

**Where from?**  
University of Finance and Management in Warsaw

**Where to?**  
Swiss Federal Institute of Technology in Lausanne

**Subject**  
Short and long lived unconscious information processing investigated with two types of EEG analysis: waveforms and microstates

**Field of science**  
Psychology,  
Educational Science  
and Religious Science



**Marcin Kawka**

**When?**  
1.10.2011–30.09.2012

**Where from?**  
Warsaw University of Technology

**Where to?**  
Swiss Federal Institute of Aquatic Science and Technology

**Subject**  
HAWAQIR – hyperspectral assessment of water quality in reservoirs

**Field of science**  
Environmental Sciences



**Associate Professor Borys Wróbel**

**When?**  
1.01.2012–31.12.2012

**Where from?**  
Institute of Oceanology of the Polish Academy of Sciences

**Where to?**  
Institute of Neuroinformatics of the University of Zurich and Swiss Federal Institute of Technology

**Subject**  
MINDBODY – Mind-body coevolution: using evolving artificial gene regulatory networks to direct neuronal development and complex behaviour

**Field of science**  
Engineering Sciences



**Maciej Piskunowicz, PhD**

**When?**  
1.06.2012–30.11.2012

**Where from?**  
Medical University of Gdańsk

**Where to?**  
Lausanne University Hospital

**Subject**  
LEMAN study

**Field of science**  
Experimental Medicine



**Jan Ciecich, PhD, Habilitation**

**When?**  
1.07.2012–30.06.2013

**Where from?**  
University of Finance and Management in Warsaw

**Where to?**  
University of Zurich

**Subject**  
Open questions in the refined Schwartz' theory and measurement of human values

**Field of science**  
Legal and Social Sciences, Economics

**2012**



**Joanna Bryś, PhD**

**When?**

1.11.2010–31.10.2011

**Where from?**

Warsaw University of Life Sciences

**Where to?**

ETH Zurich – Swiss Federal Institute of Technology in Zurich

**Subject**

HMFS – Human milk fat substitute

**field of science**

Mathematical/  
Natural Sciences



**Katarzyna Klimek, PhD**

**When?**

1.11.2010–31.10.2011

**Where from?**

Cracow University of Economics

**Where to?**

University of Applied Sciences and Arts Western Switzerland

**Subject**

DMO Challenges – the role of destination management organizations (DMO) in the commercialization of tourism products: new challenges in an integrated and dynamic global e-market place

**Field of science**

Social Sciences



**Andrzej Gadkowski**

**When?**

1.12.2010–30.11.2012

**Where from?**

Adam Mickiewicz University in Poznań

**Where to?**

University of Geneva

**Subject**

TMPIO – The treaty-making power of international organizations

**Field of science**

Legal and Social Sciences, Economics



**Łukasz Stokłosa**

**When?**

1.05.2011–30.04.2012

**Where from?**

University of Information Technology and Management in Rzeszów

**Where to?**

University of Lugano

**Subject**

eTourism reputation Index

**Field of science**

Legal and Social Sciences, Economics



**Magdalena Żakowska, PhD**

**When?**

16.05.2011–15.01.2012

**Where from?**

University of Łódź

**Where to?**

University of St.Gallen

**Subject**

The "Russian Bear" metaphor in 19<sup>th</sup> century swiss press discourse

**Field of science**

Legal and Social Sciences, Economics

2011



**Karolina Krawczak, PhD**

**When?**

1.07.2013–30.06.2014

**Where from?**

Adam Mickiewicz University in Poznań

**Where to?**

University of Neuchâtel

**Subject**

EMOCOMP – Comparing self-evaluative emotions across languages and language varieties

**Field of science**

Linguistics and Literature



**Michał Parzuchowski, PhD**

**When?**

1.10.2013–30.09.2014

**Where from?**

Higher School of Social Psychology (currently: University of Social Sciences and Humanities)

**Where to?**

University of Freiburg

**Subject**

GRL: DSSL gender representation in language: diminutive suffixes in sexist language

**Field of science**

Psychology, Educational Science and Religious Science



**Izabela Karsznia, PhD**

**When?**

15.02.2014–14.02.2015

**Where from?**

University of Warsaw

**Where to?**

University of Zurich

**Subject**

AutoGenSettleRoad: automation of the generalization process of settlements and road networks for medium and small-scale maps

**Field of science**

Environmental Sciences



**Aleksandra Dziurosz, PhD, Habilitation**

**When?**

1.10.2014–31.03.2015

**Where from?**

Fryderyk Chopin University of Music

**Where to?**

Zurich University of Arts

**Subject**

Tradition dance theatre performance

**Field of science**

Psychology, Educational Science and Religious Science



**Monika Reczuga**

**When?**

1.10.2014–30.06.2015

**Where from?**

Adam Mickiewicz University in Poznań

**Where to?**

University of Neuchâtel

**Subject**

CLI-MIC – Assessing the responses of peatland micro-eukaryotes to climate change using next generation sequencing

**Field of science**

Environmental Sciences

2013

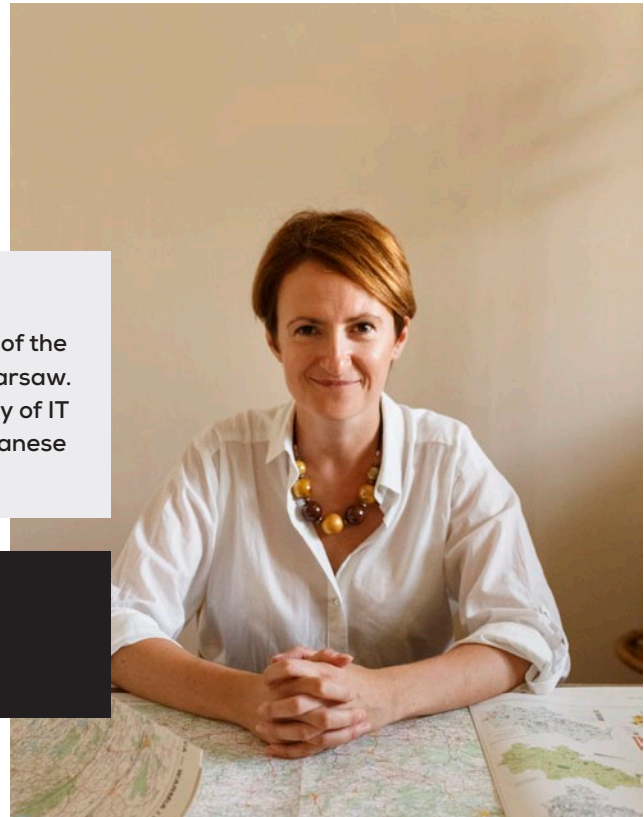
2014



Adjunct at the University of Warsaw. She obtained her master's degree in 2003 at the Wrocław University of Environmental and Life Sciences. She acquired the title of the Doctor of Earth Sciences in 2010 at the University of Warsaw. She also completed post-graduate studies at the faculty of IT systems, applications and databases at the Polish-Japanese Academy of Information Technology.

duration of the SCIEIX project:  
**15.02.2014–14.02.2015**

**PROJECT:**  
**AutoGenSettleRoad: Automation of the generalization process of settlements and road networks for medium and small-scale maps**



## Izabela Karsznia, PhD

### What do you do career-wise?

My teaching duties include classes with students (on i.a. geodesy and cartography, technical drawing), lectures in English for Erasmus students, and topographic and geodesic training in the field. In my research work I focus on research in cartography and geographic information systems.

### What was the objective of your project under SCIEIX?

My task was to develop, for the purposes of small-scale studies, the algorithms for generalisation of settlements and road networks included in the databases of spatial data. The objective was to select and simplify the content of maps.

The project may be divided into stages. The most important one was the

automation of settlement generalisation and the use of machine learning techniques for this purpose. The next stage included the automation and evaluation (assessment) of road network generalisation. The objective of this stage, which will be subject to further analyses, was to develop the algorithms for road network generalisation based on graph theory and to determine the method for automatic assessment of the correctness of road generalisation results.

### What were the results of the project?

The results of the project include research (conducted together with Professor Robert Weibel from the University of Zurich, the head of the group for GIS geographic information) that we want to apply in the process of



streamlining the production process of maps and databases of spatial data. Our goal is to automate selected actions performed thus far manually by the cartographer or the map editor.

Hard results will include two publications. I am working on the first of these, on settlements, together with Professor Robert Weibel. The co-author of the other publication on generalisation of roads is Professor Stefan Leyk from the University of Colorado Boulder, who visited the University of Zurich during my scholarship there. Another hard result will be the knowledge acquired during the course of programming in Python.

#### **What was the impact of the scholarship on your career?**

Participation in the scholarship will allow me to write a much more interesting habilitation thesis. It also gave me an opportunity to expand my network of professional contacts. The scholarship taught me how to be more open in cooperation with other researchers.

#### **And how did your private life change?**

I went on the scholarship with my husband and two 9-year-old children. We all had an opportunity to meet people from around the world and learn about other cultures. It was an extremely valuable experience for my children – they went to school in Zurich and as a result now speak fluent German.

#### **What is the added value of the scholarship?**

For me it was definitely the opportunity to meet interesting, ambitious and intelligent researchers, not only in professional situations, but also privately. The University of Zurich is visited each year by numerous renowned researchers, authors of much studied publications or books, and taking the opportunity to attend their lectures, take part in the conferences they organise or meet them in person is an unforgettable experience.

#### **Is it worth participating in such programmes?**

Absolutely! I must emphasize that the participation in such scholarships is important at various stages of a scientific career. I think that everyone who has such an opportunity should go on an internship already while doing their master's degree. Even a short time spent out of the home university will allow them to learn about global trends and about research, to establish international contacts, find interesting subjects and broaden their horizons.

Institute of  
Oceanology  
of the Polish  
Academy of Sciences

PL

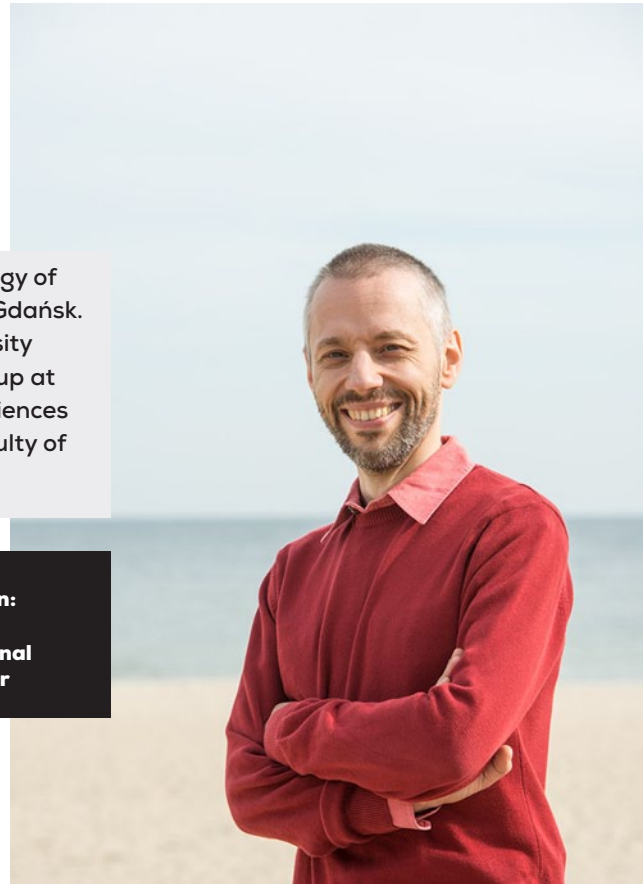
CH

ETH Zurich

A graduate of the Intercollegiate Faculty of Biotechnology of the University of Gdańsk and the Medical University of Gdańsk. He obtained his PhD title and habilitation at the University of Gdańsk. He is the head of the Systems Modelling Group at the Institute of Oceanology of the Polish Academy of Sciences and of the Evolutionary Systems Laboratory at the Faculty of Biology of the Adam Mickiewicz University in Poznań.

duration of the SCIEX project:  
1.01.2012– 31.12.2012

PROJECT:  
**MINDBODY - Mind-body coevolution:  
using evolving artificial gene  
regulatory networks to direct neuronal  
development and complex behaviour**



## Associate Professor Borys Wróbel

### What do you do career-wise?

It is work combining biology and information technology: we create artificial systems the operation of which is inspired by the functioning of living organisms – single cells and multicellular organisms. Our plan is to build artificial systems capable of self-construction and self-repair, whose structure and operation is flexibly dependent on the environment, and which are resistant to damage and distortions. These are the properties of living organisms that are of great interest for science, and in practical terms – for building biologically inspired systems, e.g. robots.

### What was the objective of your project under SCIEX?

I conducted my research during the scholarship at the Institute of Neuroinformatics of the University of Zurich and Swiss Federal Institute of Technology. Thus, the objective of the project was to build new, and modify existing, models inspired by the way in which animal brains develop. I wanted to develop new concepts in the course of discussions with people working in one of the best research centres in the world.

### What were the results of the project?

We did not assume any specific results; the effects of the scholarship were simply subsequent versions of software and specifications, i.e. the

things that are not presented directly e.g. at conferences, but we wanted to find ideas, propose solutions. Of course, the results included scientific publications, a total of nine (written with my co-workers). I also continued mentoring my PhD students who were writing their dissertations in Poland. Undoubtedly, it influenced my application for a professorship later on.

### **What was the value of the scholarship to you?**

First of all, it was the possibility of participant observation – thanks to the stay abroad I got to know the operation of a scientific institution that is so very different from the one in Poland. Much more emphasis is placed on constructive criticism and mutual inspiration there than in Polish institutions. I try to follow this approach in work with my team, with my PhD students. I get the impression that this is lacking in Poland, there is not enough support given in scientific projects by people asking questions, challenging the objectives and ways of achieving them, to help colleagues arrive at other interesting solutions or ideas. In Polish scientific circles people frequently fear asking questions because these may be troublesome or treated as a personal attack. People fear open debate that would involve both criticism and constructive conclusions. Avoidance of debate, our culture of ‘politeness’ prevents us from helping each other. When everyone works individually, we are unable to inspire each other. Although it is not always possible or plausible to transplant all elements of research culture from other countries, I believe that for Polish science it would be beneficial if many people went on

scholarships and internships abroad and learned that it is possible to do research in a way different from that in Poland.

### **Is it worth participating in such programmes?**

Absolutely. Long internships allow us to get to know different approaches to research. These may not always be positive examples: observing solutions and approaches that do not always work perfectly lets us realize which ones would not work for us.

**Adam Mickiewicz  
University in Poznan**

**PL**

**CH**

**University of  
Neuchatel**

She graduated in biotechnology studies at the University of Warmia and Mazury, currently she is a PhD student at the Faculty of Biology of the Adam Mickiewicz University in Poznań. She works at the Faculty of Geographical and Geological Sciences of the Adam Mickiewicz University, where she is inter alia involved in the CLIMPEAT project ([www.climpeat.pl](http://www.climpeat.pl)) implemented with Polish-Swiss cooperation.

duration of the SCIEX project:  
**1.10.2014–30.06.2015**

**PROJECT:**  
**CLI-MIC – Assessing the responses of  
peatland micro-eukaryotes to climate  
change using next generation sequencing**



## Monika Reczuga

### What do you do career-wise?

My research focuses on microorganisms, primarily testate amoebae – microscopic single-celled organisms from the Protista group.

### What was the objective of your project under SCIEX?

To determine the impact of higher temperature and water level fluctuations on eukaryotes. In the project I used next generation sequencing (NGS) – a molecular technique based on determining nucleotide sequences in deoxyribonucleic acid (DNA).

### Where was your scholarship based?

At the University of Neuchatel, at the Laboratory of Soil Biology headed by my host mentor, professor Edward Mitchell.

### Who decided on the project subject?

The idea for a SCIEX project was common: as a biotechnology graduate

I have always been interested in molecular methods, and they are used in my host mentor's laboratory. For me, it was important that the scholarship under the SCIEX project opened up new possibilities for me because in Poland I have no access to a laboratory where I could conduct analyses using molecular methods and there is no one with experience in such analyses.

### What were the results of the project?

I managed to achieve the objectives of the project and now I am working on a publication summarising the research conclusions. But I must say that the SCIEX scholarship was even more beneficial for me: during my scholarship under the SCIEX programme I became involved in another project run by the Laboratory of Soil Biology at the University of Neuchatel and I am writing another publication. My part of the research in this second project

concerned the impact in the context of forensics of decomposing carcasses (pig carcasses were used for the experiment) on soil microorganisms occurring naturally in a given environment. I became involved because the idea behind the SCIEX scholarship was that I was to learn to handle sequencing data while waiting for lab test results. My host mentor suggested that instead of learning in theory (using a training data set) I could do it in practice by becoming involved in the second project. It was beneficial for all parties: I was able to learn and to answer specific research questions at the same time.

#### **What about other hard effects?**

The results of the SCIEX project also included the possibility of attending two important scientific conferences during which I presented the results of my research. They were international conferences: in Germany (34<sup>th</sup> Meeting of the German Society for Protozoology) and in Spain (VII European Congress of Protistology [VII ECOP in partnership with ISOP]).

#### **What was the impact of the scholarship on your career?**

Thanks to the scholarship I was able to orient my research interests. The results of research under the SCIEX project will also form a part of the PhD dissertation I am writing. In the long run, I hope that the relations I established will enable me to continue cooperation also in the framework of subsequent projects. Surely, acquaintances made during such a scholarship allow expansion of one's horizons and this influences further development as a scientist. I met many outstanding researchers from whom

I could draw inspiration for further work since among them were specialists in the molecular research method I am interested in. After I returned, I feel more competitive in the world of science and on the academic labour market. I am aware of the fact that the publications I am working on now, which I have written thanks to the SCIEX scholarship, will be prominent in my scientific output. Besides, as I have learned new research methods, I can think seriously about implementing other research projects based on these methods and about answering new research questions.

It is also important that thanks to the scholarship I have seen a different way in which a scientific institution can function. I think there is much room for improvement in the organisation of the work of research institutions in Poland. For example in Switzerland I had no administrative tasks, thanks to which I was able to devote all my time to research, while in Poland this is not always possible.

#### **And your personal benefits?**

In this respect the SCIEX scholarship was also invaluable: I became a more independent researcher, I am more self-confident and believe in myself more.

#### **If not for the scholarship, I would not have been able to...**

...learn as much as I did. And I would not have had an opportunity to see what life in Switzerland is like, in such an international and multicultural environment, and in such a well-organised country.

University of Finance  
and Management  
in Warsaw

PL

CH

University  
of Zurich

Professor at the Institute of Psychology at the Cardinal Stefan Wyszyński University in Warsaw (UKSW). A graduate of the Faculty of Polish Studies of the University of Warsaw, he also studied at the Faculty of Philosophy and Sociology and the Faculty of Psychology of the University of Warsaw. He obtained the title of the Doctor of Humanities in the field of psychology in 2006, while in 2014 he completed his habilitation at the University of Warsaw.

duration of the SCIEIX project:  
1.07.2012–30.06.2013

PROJECT:  
**Open questions in the refined Schwartz's  
theory and measurement of human values**



## Jan Cieciuch, PhD, habilitation

### What do you do career-wise?

At present the most of my time is dedicated to research and teaching at the Cardinal Stefan Wyszyński University in Warsaw. I conduct research on basic aspects of personality and its development. I write scientific articles on the structure of values, personality and identity. I take part in various conferences, meetings and discussions. And I teach all this to my master's degree and PhD students.

### What was the objective of your project under SCIEIX?

It was about seeking answers to some, still open, questions which arose from Shalom Schwartz's theory of values. I had earlier cooperated with Shalom Schwartz and Eldad Davidov on the modification of that theory, which resulted in a publication in the "Journal of Personality and Social Psychology" in 2012. Certain problems appeared

during our work and the project implemented during the scholarship was to find the solutions. It was a kind of institutionalisation of the earlier cooperation, its strengthening and extension.

The project had several methodological and theoretical objectives. In terms of methodology, we worked on improving the questionnaire for measuring values which could be used in various countries and cultures and provide results for making comparisons. Our research consisted in improving the measuring tool, on the one hand, and on refining the methods of analysis, on the other hand.

### What were the results of the project?

I can say that our work was a success. We provided new tools for measuring values and developed new methods for analysing old data. The cooperation

allowed to specify in detail certain aspects of the theory of values and its consequences, such as the way in some values are included in others, how they develop in children and adolescents, and how they relate to attitudes and political values in different countries.

Hard results of my participation in the scholarship include articles published in major scientific journals from my field of study (including "Journal of Cross-Cultural Psychology", "Annual Review of Sociology", "Political Behavior") and numerous lectures and sessions at international conferences. My book "Kształtowanie się systemu wartości od dzieciństwa do wczesnej dorosłości" [Development of the value system from childhood to early adulthood], in which I summed up my research on values, was also partly the result of the scholarship. The publication was considered the best psychological scientific book of 2013 in Poland by the Theophrastus Award Committee.

#### **What was the impact of the scholarship on your career?**

It gave me the sense of participating in something important, in the living science at its highest level. It motivated me to further research, in particular in cooperation with people specialising in the said subject, since the cooperation is today the key to success and scientific achievement. I try to use the experience gained in conducting research and publication of their results in my research team in Poland. The team conducts research, but also tries to build some bridges to practice, to use the results e.g. in supporting the educational work of schools.

#### **What is the added value of the scholarship?**

It is beyond any doubt the opportunity to establish cooperation with researchers from around the world; although my scholarship ended quite a long time ago, the cooperation continues and brings effects. My own private added value is broadening of horizons and a change of perspective. When I was going on the scholarship, the vision of doing habilitation was as if "hanging over" me. However, during the scholarship I was so preoccupied with my research that I stopped thinking about it. After my return, it turned out that the habilitation was done "on its own", i.e. the research results and publications, along with the book that summed them up, provided sufficient material for habilitation.

#### **If not for the scholarship...**

...my life would certainly be more monotonous. I would have seen less, known less, understood less. I would have been discovering things that had been discovered long ago.

#### **Is it worth to participate in such programmes?**

Today, I think it is not a matter of choice. If you want to do research, you simply take part in such programmes; otherwise, it is impossible. And it is very good.

Pedagogical  
University of Cracow

PL

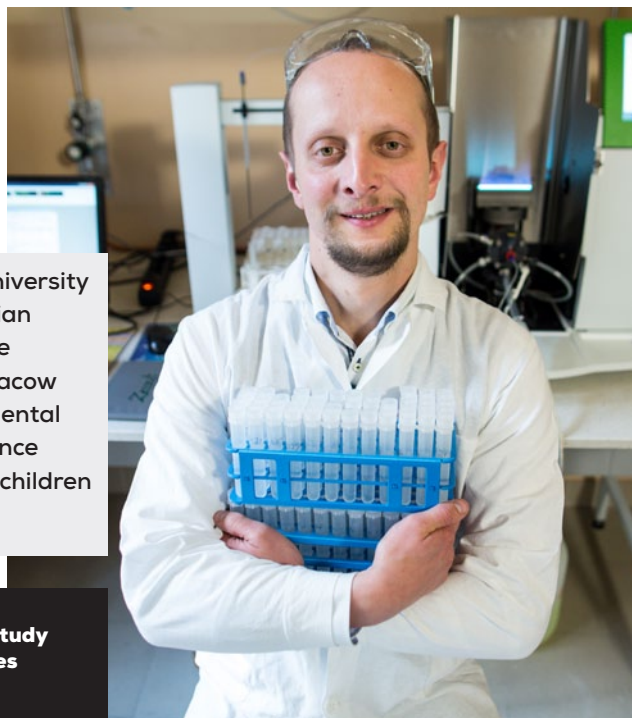
CH

University of  
Bern

Adjunct at the Institute of Biology of the Pedagogical University of Cracow. He obtained his PhD degree at the Jagiellonian University (Institute of Environment Sciences). Earlier, he graduated in biology at the Pedagogical Academy of Cracow and in environmental protection at the JU. An environmental researcher, who he promotes knowledge in popular science articles, during nature walks and university lectures for children and parents.

duration of the SCIEEX project:  
1.07.2012 – 30.06.2013

PROJECT:  
**Passer Ecotox: An ecotoxicological study  
of the impact of agricultural practices  
on the Eurasian tree sparrow**



## Łukasz Binkowski, PhD

### What do you do career-wise?

I conduct research combining ecotoxicology and biomonitoring. I am primarily interested in metals, particularly lead, cadmium, mercury, nickel, and arsenic, and their impact on wild animals. To-date I have worked mostly on water and marsh birds and mammals. I usually collect samples in the environment and analyse them in a lab: I examine metal concentration in tissue and environment materials and look for a link and consequences for the body and the ecosystem.

### What was the objective of your project under SCIEEX?

The project concerned the impact of pollution on the sparrow population: we were interested in metals and pesticides from the neonicotinoid group, commonly considered safe and quickly biodegradable. Our goal was to check whether these pesticides are really

labile and whether they are a threat (aside from metals) to the species under analysis, whose population has been decreasing considerably in Europe for unknown reasons. The project consisted in catching sparrows on farms in Switzerland, collecting material for research (such as blood, feathers, semen), and conducting morphometric measurements (length and weight of body elements). Apart from field studies, we also conducted an experiment at the aviary of the University of Bern. We studied the impact of pesticides on oxidative stress level in sparrows in controlled conditions. We collected samples from nearly 1,000 birds. Now the samples are being analysed: I analyse metals in Poland, while in Switzerland my colleagues analyse neonicotinoids content and measure oxidative stress marker levels.



### Is Switzerland a good place to do such research?

Yes, because farming is very orderly there. Each farm belongs to one of three types: biofarms (farming without the use of pesticides or artificial fertilizers), intensive farms (contrary to biofarms, these use pesticides and artificial fertilizers), and integrated farms (merging the two types). Under our project, we examined sparrows from over 60 farms representing all the three types, thanks to which we will be able to verify our research hypotheses.

### How did you come up with the idea of the project?

It is a bit complicated. When I first heard about SCIEX, I started looking for a place where I could implement a project. I e-mailed a number of universities and usually got the same answer: they would love to accommodate me, but unfortunately several weeks earlier someone had already contacted them and applied, so there is no room for another scholarship fellow. So I wrote to the programme office in Switzerland asking for help. I was referred to professor Fabrice Helfenstein at the University of Neuchatel – it turned out we have a very similar outlook on environmental problems, which is best proven by the fact that we agreed on the outline of the project during a 30-minute conversation.

### Did you need to put your entrepreneurial skills to work?

Yes, but first and foremost I had to be persistent in looking for the right person and for a place for myself.

### What were the results of the project?

We have not yet arrived at any official results because we have

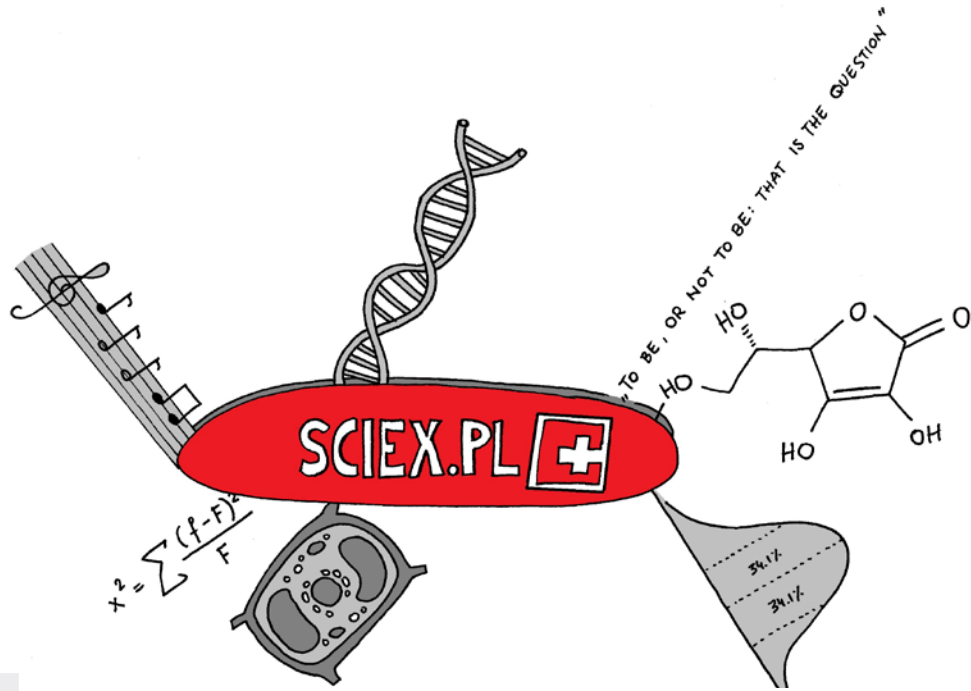
only started analysing the samples. But for me personally, an objective I have already achieved is that of working with a renowned specialist to implement a large scientific project together. Secondly, which is important in research, my objective was to learn how a laboratory I have not known before works. I learned a lot from these observations, now I work differently, more efficiently. I am not talking about expensive things. It is primarily a matter of the atmosphere I worked in, the possibility to see how the head of a lab manages people from around the world, to see how he solves research, purely technical, and communication problems, to watch how team members spend time between their major research tasks – all this was very different than in Poland and inspired me to introduce some changes to the way I work.

### What was the impact of the scholarship on your private life?

It was surely a great opportunity to polish my English at the university and upgrade my German talking to my landlord. There is also the tourist aspect: after half a year of the scholarship I can say I got to know Switzerland well. During field work I headed a team that travelled over 5,000 km in a month, so I have seen a lot. I would also like to mention the many friends I made, not only at the university, but also in everyday life – I frequently write to my landlord and to the people I lived with while on the scholarship.

### If not for the scholarship, I would not be able to...

... expand my research horizons so much in such a short period of time.



"TO BE, OR NOT TO BE: THAT IS THE QUESTION"



**If not for the fellowship**

**I would have never believed**

**that one e-mail could start**

**several-months' international**

**cooperation.**


DR INŻ. ALEKSANDRA PELCZARSKA


Duration of the SCIEX project 1.08.2011 – 31.01.2012, project *Validation of HTS-solubility measurements metod for drug-nanoparticle-solvent systems*,  
research area: Chemistry



## Success stories of SCIEX fellows

For more information about the exhibition, visit: [www.sciex.pl](http://www.sciex.pl)

 See the exhibition: [www.pinterest.com/frsepl](http://www.pinterest.com/frsepl)

 Watch the SCIEX movie: [www.youtube.com/FRSEtv](http://www.youtube.com/FRSEtv)

 Read the publication: [www.issuu.com/frse](http://www.issuu.com/frse)



The cities in Poland where the exhibition Success stories of SCIEX fellows has been presented



Maciej Piskunowicz, PhD

The scholarship fellows of the SCIEX programme represented all fields of study and the research they carried out brought tangible results and had a positive influence on how Polish science is perceived. Among the scientists who carried out their research in Switzerland are e.g. a researcher who was investigating methods of early diagnosis of Alzheimer's disease, a researcher who was running a psychological study on the narcissistic personality disorder, and a scholarship fellow who was carrying out research in the field of dance performance.

Twelve scholarship fellows gave a full account of their projects, sharing how they influenced their private and professional lives and what this experience meant for their academic careers. Their stories were presented during an exhibition and in the brochure *Success stories of SCIEX fellows*. The grand opening of the exhibition took place on 5 October 2015 in Warsaw.

and was attended by Andrij Motyl, the Ambassador of Switzerland in Poland, Mirosław Marczewski, the General Director of the Foundation for the Development of the Education System, Roland Python, the Director of the Swiss Contribution Office, representatives of the Ministry of Infrastructure and Development, SCIEX programme scholarship fellows and journalists. During the grand opening a few scholarship fellows exchanged their opinions about, and impressions of, the programme. Inhabitants of the largest Polish cities (Warsaw, Wrocław, Poznań and Gdańsk) had the opportunity to visit the exhibition in 2015.

Some of the SCIEX Scholarship Fund beneficiaries have also been profiled in a film summing up the programme. The film was prepared in two language versions (in Polish and in English) and presents the stories of four scholarship fellows within the programme: Joanna

Bryś, D.Eng., Marcin Kawka, Artur Marchewka, PhD, Szymon Wichary, PhD. The film tells about their positive feelings related to their stay in Switzerland. The film showed the everyday work of the scholarship fellows, they talked about the research they were carrying out and the invaluable experience they gained.

In the brochure *Success stories of SCIEX fellows* published on the occasion of the grand opening young scientists shared their thoughts related to the project they carried out. Reading the brochure we can learn from Joanna Bryś, PhD an assistant professor at the Chair of Chemistry of the Faculty of Food Sciences at the Warsaw University of Life Sciences and a SCIEX scholarship fellow:

*“ The fellowship has totally changed my professional and private life. It has provided impetus for many activities. My home institution considers it very important to*



Szymon Wichary, PhD



Michał Parzuchowski, PhD



Joanna Bryś, PhD

*have had this opportunity to cooperate with one of the best universities of technology in Europe (Eidgenössische Technische Hochschule Zürich – Swiss Federal Institute of Technology in Zurich) and even in the world.*

Yet another scholarship fellow, Michał Parzuchowski, PhD, whose story has been told in the brochure, said:

*“ My fellowship made me realize that Polish scientists’ knowledge is on a par with that of their colleagues from foreign HEIs. The system of work, however, is what differs. Not only do the Swiss spend more time at their HEIs but their work culture (e.g. popping out together for lunch every day) strengthens integration*

*within a team and their motivation to carry on working. That’s why I think it is definitely worthwhile to participate in such programmes. I hope that in the future my PhD students will have the opportunity to get to know a different way of working, as it has been the most precious experience I gained from my scholarship.*

Who are the other scholarship fellows? What research projects are they carrying out? How has the SCIEX Scholarship changed their lives? Answers to these questions can be found at [www.sciex.pl/Historiesukcesu](http://www.sciex.pl/Historiesukcesu), along with the online version of the exhibition, brochures containing interviews with the SCIEX scholarship fellows and the film summing up the programme.



Katarzyna Klimek, PhD



Lucjan Janowski, PhD



Marcin Kawka



Karolina Krawczak, PhD



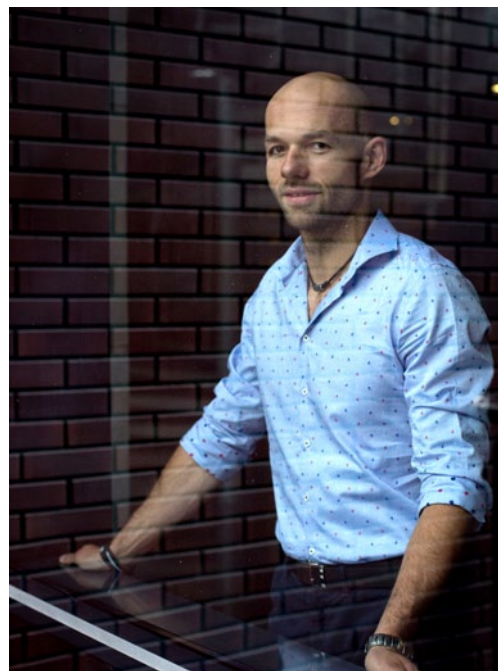
Artur Marchewka, PhD



Andrzej Gadkowski



Aleksandra Dziurosz, PhD



Dariusz Burnat, PhD

## Not only SCIEX

### SCIEX – an element of a broader action

The SCIEX Scholarship Fund was implemented under the Swiss-Polish Cooperation Programme (SPCP), also referred to as the Swiss Fund. The aim of the SPCP is to provide aid to Poland in the form of non-repayable co-financing of projects carried out by both public and private sector institutions, as well as by non-governmental organisations. The total amount of aid for Poland amounts to ca. CHF 489 million. The framework agreement on this issue was signed by the ministers of both countries in December 2007.

The aim of the Swiss Fund is to reduce economic and social disparities between Poland and more developed countries of the EU, as well as the differences within Poland between the dynamic urban centres and structurally weak peripheral regions. The funding covers the following four areas:

1. security, stability and support for reforms,
2. environment and infrastructure,
3. the private sector,
4. social development and human resources.

As the old saying goes: "All's well that ends well". SCIEX – as confirmed by scholarship fellows and their mentors – was a good programme not only because it has ended well (though according to many the fact that it has ended is indeed a great pity), but also because it revealed its strengths during its entire implementation period, i.e. for a full six years.

"Was" – this word still raises questions among young researchers and their mentors. At the Foundation for the Development of the Education System, which served as the Contact Point for the SCIEX Scholarship Fund in Poland, we frequently hear the following questions: "Will there be a new phase for this programme? A new opening? A new pool of funds?". And even though there is currently no news regarding this matter, we hope – indeed, we have lots of evidence to prove it! – that the SCIEX Scholarship Fund, which has already served as an incentive for taking up new challenges in professional life and as an inspiration for greater activity for 135 young researchers and their mentors from Polish home universities and Swiss hosting institution, will incentivise and inspire other researchers to search, to tackle challenges and to act. We hope that we will be able to follow the stories of the scholarship fellows who participated in the SCIEX programme when they participate in other projects – we believe that many other researchers will develop similar stories, and that these stories will not only have a happy ending, but – most importantly – a successful course of events.



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