



*Foundation
for Polish Science*

*Annual Report
2010*

*Supporting only the best,
so that they can become even better*

The programmes WELCOME, International PhD Projects (MPD), TEAM, VENTURES, HOMING PLUS and PARENT-BRIDGE are co-financed from the European Regional Development Fund within the Innovative Economy Operational Programme.



INNOVATIVE ECONOMY
NATIONAL COHESION STRATEGY



Foundation for Polish Science

EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FUND



The Foundation for Polish Science is a non-governmental, apolitical, non-profit organization active since 1991. Its mission is to support science in Poland. The Foundation fulfils its statutory role by financing individual projects of scientists and research teams, as well as initiatives serving Polish science. As the largest Polish non-budgetary source of funding scientific research, the Foundation also tries to propagate throughout society an understanding of the significance of science in the development of Poland.

The Foundation presents individual awards, scholarships and research grants to the best scholars, while actively supporting international scientific cooperation and the development of initiatives that foster greater academic independence among young researchers. Beneficiaries of the Foundation's programmes are selected through competitions. All the applications for competitions are assessed by way of the peer-review system; the review body working with the Foundation comprises several thousand scientists from Poland and abroad, who are renowned specialists in their fields. The most important criterion for awarding financial support is the quality of the candidate's scientific knowledge and achievements, in accordance with the Foundation's guiding motto: *Supporting only the best, so that they can become even better.*

The Foundation's founding capital of 95 million zlotys originated from the Central Fund for the Development of Science and Technology, which was liquidated in 1990, whereupon the capital was directed to the FNP by a decision of the Polish parliament. For twenty years, these funds have been effectively increased by way of investment on the capital market, allowing the Foundation to create a stable and secure financial base. Thanks to the funds raised from such investments, the Foundation had allocated a total of approximately 450 million zlotys to science by the end of 2010. The value of the Foundation's funds is currently almost 370 million zlotys.

In 2003 and 2004, the Foundation received extra funding for supporting science on the basis of the privatization law of 29 March 2000, "On amendments to the law on the privatization of enterprises...". The law stated that 2% of the revenue obtained from privatizing State Treasury companies was to be added to the Foundation's assets. The resulting amount of 51.7 million zlotys was used to form a separate fund earmarked solely for financing domestic stipends for young scientists (the START programme).

In 2007, the Foundation received supplementary funding for its POWROTY/HOMING programme from the European Economic Area Financial Mechanism. In 2008, it launched programmes financed by the structural funds available under Measure 1.2 "Strengthening the human resources potential of science", a part of the Innovative Economy Operational Programme. Six of its programmes are currently financed this way. In 2010, the Foundation began preparations for launching a new project – SKILLS and applied for European structural funds from the Human Capital Operational Programme.

Since 2005, the Foundation has held the status of a public benefit organization, which entitles it, among others, to accept donations from private individuals of 1% of their personal income tax for its statutory activity. The funds used from such donations are directed towards supplementing the stipends for beneficiaries of the competitions for young scientists – from 2006 to 2009, these were stipends for scientists returning from abroad (the POWROTY/HOMING programme), and from 2010 – stipends for the most outstanding beneficiaries in the START programme's competition.

In an attempt to match its programme offer to the current needs of the scientific community, the Foundation systematically evaluates its programmes. The evaluation is conducted in order to measure the effectiveness, quality and results of FNP's initiatives.

In order to ensure that its activities remain transparent, the Foundation publishes extensive information on its activity in the form of Annual Reports and hires renowned auditing companies to have its financial statements audited. The Annual Reports are available on the Foundation's website.



Authorities of the Foundation for Polish Science

The Foundation's Council

Term of office from 1 September 2008
to 31 August 2012

Chairman

Prof. Andrzej Członkowski, PhD hab.

Deputy Chairman

Prof. Tomasz Jasiński, PhD hab.

Members:

Prof. Maciej W. Grabski, PhD hab. eng.

Prof. Andrzej Jerzmanowski, PhD hab.

Prof. Henryk Koroniak, PhD hab.

Prof. Irena E. Kotowska, PhD hab.

Prof. Marek Z. Świtoński, PhD hab.

The Executive Board of the Foundation

President of the Board, Executive Director

Prof. Maciej Żylicz, PhD hab.

Deputy President

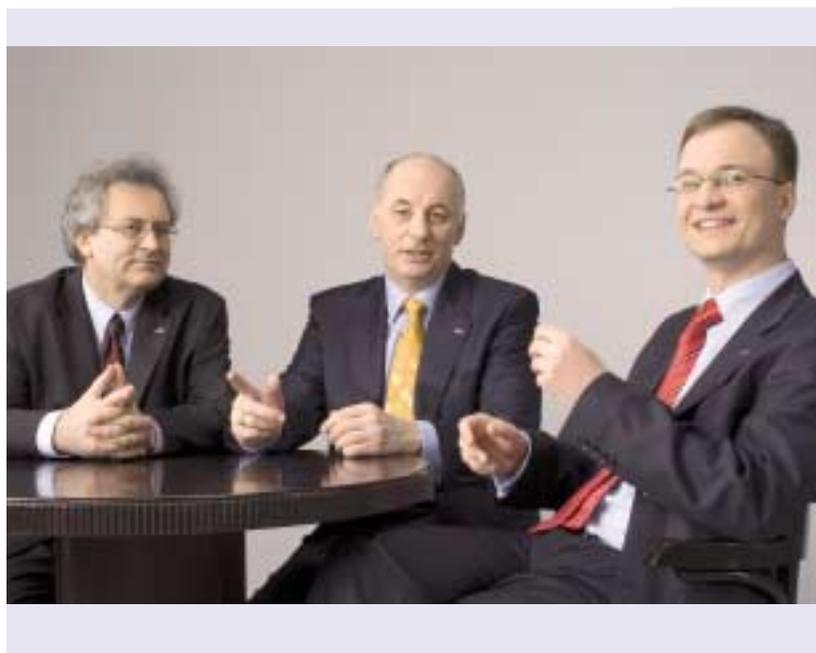
Prof. Włodzimierz Bolecki, PhD hab.

Deputy President

Dr. Tomasz S. Perkowski

*The Foundation's Council (from left):
Professors T. Jasiński, A. Członkowski,
H. Koroniak, I. E. Kotowska, M. W. Grabski,
A. Jerzmanowski, M. Z. Świtoński.*

*The Foundation's Executive Board (from left):
Prof. W. Bolecki, Prof. M. Żylicz, Dr. T. S. Perkowski.*



The Foundation for Polish Science Staff

Status on 31 December 2010

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Director – Programme Division

Magdalena Zuberek-Wąsińska

Deputy Director – Programme Division

Domestic Programmes

Krystyna Frąk

Dr. Anna Jeż

Piotr Laskowski

Dr. Tomasz Poprawka

Ewa Śliwowska

Małgorzata Świtalska-Bury

International Programmes

Anna Chmielewska

Lidia Rachocka

Programme Evaluation

Marta Łazarowicz-Kowalik

Wanda Krzezińska

Director – Finance and Administration,

Chief Accountant

Małgorzata Pieńkowska

Deputy Director – Finance and Administration

Accounting

Dorota Komosa

Iwona Pachnowska

Katarzyna Siemieńczuk

Małgorzata Zawłocka

Administration

Rafał Flis

Wojciech Janikowski

Piotr Urbaniak

Michał Pietras

Director – Division Implementing Programmes

Financed from Structural Funds

Adam Zieliński

Deputy Director – Division Implementing

Programmes Financed from Structural Funds

Programmes financed from Structural Funds

Dr. Monika Biłas-Henne

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Danuta Pawlak

Mirosław Serwaczyński

Dorota Sierak

Irmina Sitnicka

Piotr Siwiecki

Kinga Słomińska

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Emilia Wysoczańska

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Anna Bergiel

Katarzyna Bojańczyk, lawyer

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Krystyna Akacka

Aneta Antolak

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Agata Szostakiewicz

Public Relations

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Dominika Wojtysiak-Łańska

Dr. Grażyna Żebrowska

Letter from the Chairman of the Foundation's Council



The year 2011 marks twenty years since the establishment of the Foundation for Polish Science, so this year's annual report is being published in a jubilee year. This presents an opportunity not only to celebrate, but also to look back at the Foundation's achievements, to remember the most important events in its history, as well as its overall activity.

This publication, however, is dedicated to the Foundation's activities in 2010. We are glad to report that it was a successful year. This was confirmed not only by the report of the independent auditor of the Foundation's financial statements, but also by the end of year report drawn up by a team of eleven experts from prestigious European institutions who evaluated all of our programmes. The FNP's President, Maciej Żylicz, writes about this in detail in his letter.

At this point, I would like to focus on one of the most important decisions that we took in 2010 regarding the rules for awarding the FNP Prize, which rewards outstanding achievements and scientific discoveries, and is particularly valued by our community, as well as probably being the Foundation's most recognizable activity. The world of science has experienced many changes over the last twenty years. We therefore recognized that the time had come to verify some of the rules related to the awarding of the FNP Prize. The changes we have introduced reflect the Foundation's preference for an evolutionary rather than a revolutionary approach. We believe that the new competition rules are more in tune with the current state of science and its application in reality.

In my opinion, the most essential change was to remove the restriction whereby only those with outstanding scientific achievements confirmed within the last four years prior to the application deadline could apply to enter the competition. Such stipulation, introduced in the original regulations of the FNP Prize twenty years ago (therefore on the eve of great systemic changes), was an expression of our objection to the custom of rewarding scientists for their "lifetime scientific achievements" (which sometimes meant rewarding the vast, but not always valuable output of someone no longer conducting active research work). Since we had been aware of the arbitrariness of the four-year (and not other) period criterion, and of the fact that it would often take much longer than that to appreciate the true significance of a scientific discovery, we decided that the new Foundation Prize rules would allow competition entry to those who had demonstrated specific, precisely defined scientific achievements, regardless of the date of their execution. We also require that their scale, originality and significance for the development of science (whether e.g. opening up new fields of research, contributing to the development of new research methodologies, being cited or implemented with greater frequency, etc.) is relevant in practice today. Therefore the Foundation will continue to award its prize for a candidate's scientific achievement, rather than for his or her general output. The newly-worded preamble articulates this as a "recognized achievement that stretches the limits of our knowledge and opens up new cognitive perspectives, contributes to the cultural and civilizational progress of our country and puts Poland on the map as a country that takes on today's most pressing challenges".

The new regulations also express the conviction that modern science should not be limited by territorial boundaries, since it functions within a network of extensive contacts and international cooperation. Therefore the current rules state that the Foundation Prize competition is open not only to Polish scholars working in Poland, but also to those working abroad, provided they remain in touch with Poland on

an academic level, and carry out permanent and fruitful research culminating in scientific publication. Candidates may also be foreign scholars working in Poland, provided their achievements were realized in Poland, as well as foreign scholars studying Poland-related issues.

Another significant change concerns the definition of the fields in which the Foundation Prize is awarded. Up until now the categories (humanities and social sciences, natural science and medicine, exact sciences and technical sciences) have become less and less applicable to today's highly interdisciplinary academic world. Increasingly, we encounter incoherence in distinguishing accomplishments within one field, because it is very difficult today to precisely specify the boundaries between the different divisions of science, e.g. to determine the borderline between exact and technical sciences. The current divisions therefore now comprise:

- Life and Earth Sciences;
- Chemical and Material Sciences;
- Mathematical, Physical and Engineering Sciences;
- Humanities and Social Sciences.

We use this division across the board in other programmes and use the same categories, for example, in the new rules for the MISTRZ Programme.

The FNP Prizes are often quoted by the media as the “Polish Nobel Prizes”, although they are quite distinct. Nevertheless, admittedly, the competition procedures developed by the Nobel Foundation over decades have inspired the FNP to implement changes to the competition rules for the Prize. One of these is complete confidentiality of candidate applications for the Foundation Prize. Under the new rules, scientists will not be informed about the fact that they have been selected as a candidate for the award at any stage of the competition procedure. This should render the procedure of assessment of candidates for the Prize even more objective. The same should be attained by further specifying the review criteria and preventing conflicts of interest at each stage of the competition (concerning individuals putting forward nominees, reviewers, Foundation authorities and employees), as well as increasing the number of people proposing candidates for the Prize and the rotation of nominators over subsequent years.

I would like to draw your attention to a reflection of another kind. In our current discussions on establishing a programme for the Foundation's activity over forthcoming years, we also have to take into account financial issues, including the need to preserve the real value of FNP's own funds, because the final form and scope of assistance contributed each year by the FNP to Polish science results from two basic factors – a diagnosis of the current needs of the scientific community and an assessment of the Foundation's actual budgetary possibilities in a given year, taking into account the forecast for the next few years.

It is with great satisfaction that I am able to confirm that the Foundation's Board and its Council agree on the two aforesaid issues.

Finally, on behalf of the Foundation's Council, I would like to thank the FNP Board and all of its employees and collaborators for their work, to which the Foundation owes its success.

We are glad to report that it was a successful year. This was confirmed not only by the report of the independent auditor of the Foundation's financial statements, but also by the end of year report drawn up by a team of eleven experts from prestigious European institutions who evaluated all of our programmes.

Andrzej Członkowski



Letter from the President of the Board

Dear Sir/Madam,

Last year was an exceptional and important one for the scientific community, because work began on a number of acts implementing reform of the system of financing science and the organization of higher education in Poland. Although the government-proposed changes are the result of much compromise between the need for changes facilitating the rapid development of science and the need for stability for thousands of scientists, lecturers and almost two million students, they constitute a huge step toward improving the quality and broadening the competitiveness of scientific research carried out in Polish institutions.



The Foundation for Polish Science has been very involved in preparing the drafts for some of the acts, particularly the Act on the National Centre of Science. The February 2010 conference “The Foundation’s Debates on Science” was one of our initiatives devoted to the scientific reforms.¹ Participants included policymakers, including the Minister of Science and Higher Education, Barbara Kudrycka, the creators of two strategies for the development of higher education until 2020, and many figures from the scientific community who are actively engaged in shaping the draft law.

We are convinced that the effects of the changes implemented will be visible soon, while the new rules concerning researchers, lecturers and higher education institutions will bring forth significant scientific advances before long.

At the same time, we at the Foundation are aware that the reforms introduced, including in particular, the establishment of the National Centre for Science (NCN), as well as the changes to the rules of operation of the National Centre of Research and Development (NCBiR), will present new challenges for our institution. The Foundation needs to redefine its role towards the scientific community in Poland in light of the new possibilities for funding basic research and applied research through the National Centre of Science and the National Centre of Research and Development. We also see the need for the Foundation to find new and unique fields and forms of activity. At the same time, it is important for our institution, which in 2011 celebrates its twentieth anniversary and two decades since it awarded its first research grant, that its activity over the next few years becomes a continuation of the best practices developed over the last twenty years.

The year 2010 signified further development of the Foundation’s activities and new programme offers for scientists. The first of them – HOMING PLUS – is a continuation of the programme previously known as POWROTY/HOMING, partly financed from the Finance Mechanism of the European Economic Area until 2009. The new programme is an expansion of the previous one, and aims to encourage young Polish researchers working abroad, as well as foreign scientists, to continue their professional careers in Polish laboratories. The second programme – POMOST (PARENT-BRIDGE) – is a novel and hitherto unknown form of assistance for women-scientists who are pregnant or for parent-scientists returning to intensive research work after maternity or paternity leave or parental leave. We offer them stipends and grants allowing them on the one hand to remain in active contact with scientific research, and on the other – to pave the way for their return to the laboratories and lecture halls.

The objective of employing the best scholars in Poland – both Poles and foreigners – is particularly important for us. Only outstanding scholars guarantee real and rapid growth in the quality of scientific work in Polish research centres. Therefore, in addition to the HOMING PLUS programme, since 2009, we have offered scientists the IDEAS FOR POLAND programme, aiming to encourage laureates of the prestigious European Research Council Starting Grants by awarding them a generous scientific grant to implement projects in Poland singled out by the ERC. And we have been succeeding. There are currently six researchers, prizewinners with this distinction working in our country. The leading institution employing them is the University

¹ We write about this in greater detail further on in the Report (p. 27).

of Warsaw where four of them work; three out of the four work in the Faculty of Mathematics, Information Technology and Mechanics.

We were able to develop our activity in 2010 thanks to the use of European Union structural funds. This year, for the first time in the Foundation's history, the programme expenses from external sources exceeded the value of those financed from FNP's own budget. Within the programmes financed from structural funds, we were able to allocate PLN 44 million to the best researchers and PLN 23 million from our own resources. However, the total value of all the contracts concluded to the end of 2010 with prizewinners of the programmes financed from the structural funds was more than 236.6 million zlotys.

For a few years now, our Foundation has been trying to ensure that a significant percentage of resources dedicated to scientific research reach the youngest scientists. For this reason, we address the programmes mainly to those just starting out in scientific work (START, VENTURES programmes) and to those who stand to gain from independent research and setting up their own research teams (FOCUS, TEAM programmes), because we hope that those young scholars, being familiar with good international standards for research work and having a critical attitude to our reality, can bring to fruition the main ideas behind the Polish reform of science and higher education.

The Foundation's flagship mission of "supporting only the best, so that they can become even better" has remained unchanged over the years and the effects of making this a priority have always been very clear. The results of research into the careers of the prizewinners of the START Programme dedicated to the youngest scholars, which the Foundation has implemented since 1992, show that on average they obtain their postdoctoral degrees [*PhD hab.*] 9-10 years earlier than people who did not use this grant programme. It is also evident that the strict selection characterizing this competition (only 10-13% of the applicants are successful) ensures that the prizewinners are indeed the most talented young researchers, and that the awarding of grants encourages (as well as allows) them to increase their efforts. It should be emphasized that in this competition we distinguish people who have documented scientific accomplishments despite their young age, where the quality of a given achievement counts for more than the number of scientific papers or their overall impact factor. In this way we want to introduce new standards to our scientific community, supported by the conviction that it is better to be the leading author of one, original and significant scientific work than often contributory papers that do not bring anything particularly new to science. Such assumption is a challenge for our reviewers, which is why we try to engage the best possible scholars in the application assessment procedure.

In connection with the approaching jubilee of our Foundation, in 2010 its Management Board decided to conduct an external assessment of FNP's activity, delegating the task to an international group of experts and scientists of world renown. The head of the assessment team was Professor Frank Gannon, former director of the European Molecular Biology Organization and head of the Science Foundation Ireland, currently director of the Queensland Institute of Medical Research. We also invited representatives from other European organizations funding science, such as the European Science Foundation, Alexander von Humboldt Stiftung, Research Council of Norway and many others,² to become acquainted with our activity. The reviewers had the opportunity to analyze all of the programmes and become acquainted with the national context of our activity during meetings with representatives of the Ministry of Science and Higher Education and the Polish Academy of Sciences (PAN), as well as with representatives from several scientific institutions; they also had the chance to hold discussions with FNP prizewinners and employees of the Foundation.

A substantial report was drawn up on the basis of the gathered materials and talks, encompassing the assessments, opinions and recommendations of the Foundation's Board and Council concerning further

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² Detailed listings and more expansive information on the evaluation can be found later on in this Report (p.30).

forms for the Foundation's activity and suggesting future policy. This highly interesting material is accessible on FNP's website. The conclusions and opinions contained in the report have become some of the most important points of reference for our planning process over the forthcoming years, including, for example, the suggestion of limiting the number of programmes in order to increase the value of the stipends and grants awarded and to improve the quality of the review process.

The year 2010 was unique for us for two reasons. In May of that year we held a conference in Warsaw as part of the *Science & Art in Europe* cycle. This type of conference was the brainchild of Professor Klaus Hahlbrock from the Max Planck Society (MPG). In taking on this initiative, we organized – in cooperation with other institutions, such as MPG, the Polish Academy of Sciences (PAN) and the Polish Academy of Arts and Sciences (PAU), as well as the Royal Castle in Warsaw and the Centre for Contemporary Art Ujazdowski Castle – a two-day cycle of meetings, exhibitions, discussions and debates devoted to the perception in art and in science of current world challenges such as climate change, protection of the environment and dwindling energy resources. It was one of the first opportunities for scientists and artists to mutually present and confront their positions and opinions, as well as for joint discussion.³

The second unique and significant event for us was the work on the development and launch of a new type of programme addressed to scientists, namely the SKILLS project, which we will implement from the funds of the Human Capital Operational Programme from 2011 to 2015. Not only will the programme offer joint research grants, but above all, we will support the development of scientists' skills and qualifications in the field of project and research team management, as well as in matters related to the transfer of technologies to economic practice. We would like participants in this programme to learn how to understand and appreciate the necessity of building up collaborative networks essential for the implementation of joint scientific projects.

The commemorations of the Foundation's twenty years will take place in the autumn of 2011. Acknowledgements for the large group of friends and co-workers who have supported us throughout various stages of FNP's work will be presented in next year's Report. In this letter I would like to extend my heartfelt gratitude, as every year, to those who dedicated 1% of their tax to helping the most outstanding prizewinners of the START programme. Thanks to their decision, supported by the conviction that among the many important social objectives to which 1% of income tax can be awarded, it is precisely science that is most deserving of support, we were able to raise a total of 31,890.86 zlotys in 2010. Thanks to these funds, we will be able to increase the stipends for the most outstanding prizewinners of the START competition in forthcoming years. Since 2005, thanks to those allocating 1% of their taxes to us, we have managed to raise over 200,000 zlotys (and over 303,000 zlotys including donations).

Many years ago, Albert Einstein wrote that compared to reality, our entire science is primitive and childish, but nevertheless it remains the most valuable thing that we possess. We therefore look to 2011 and subsequent years with hope. After twenty years of experience, we know that our activity has a great and deep purpose for it gives the most outstanding individuals a chance to increase our wisdom and knowledge about the world – which is what we value the most.

Warsaw, June 2011

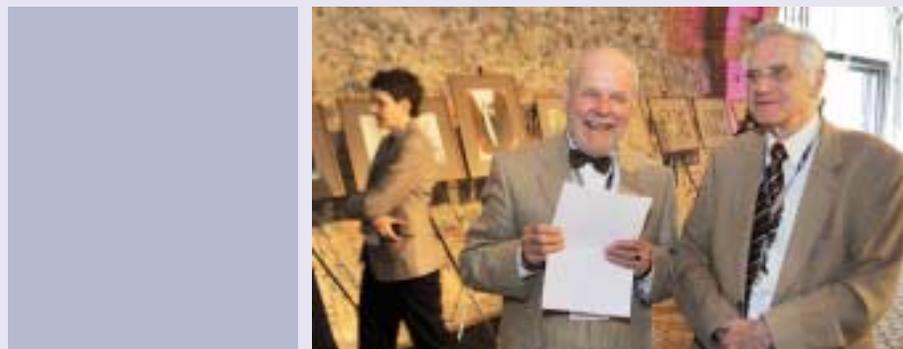
Maciej Żylicz



³ A broader account of the conference can be found later on in the Report (p. 31).



*Programmes
of the Foundation
for Polish Science*



In 2010, the Foundation implemented sixteen programmes financed from its own funds and six programmes financed from European Union structural funds, i.e., under Measure 1.2 “Strengthening the human resources potential of science”, a part of the Innovative Economy Operational Programme 2007–2013.

The majority of the Foundation’s programmes were the continuation of previous years’ projects. A new project was IDEAS FOR POLAND, a programme announced in 2009 and implemented for the first time in 2010. In addition, the scope of programmes financed from European funds was broadened: i.e. VENTURES, TEAM, International PhD Projects and WELCOME, as well as the launch of two new ones – PARENT-BRIDGE and HOMING PLUS. Work also began on the SKILLS training project.

During this period, the Foundation’s authorities decided on a change to the rules and mechanisms for realizing certain programmes, above all, two of the Foundation’s most prestigious initiatives, such as the Foundation’s Prize and the MISTRZ programme (academic grants for professors). In addition, with the aim of implementing the new guidelines pertaining to the MONOGRAPHS programme, the decision was taken to initiate cooperation with a new publisher, Wydawnictwo Uniwersytetu Mikołaja Kopernika w Toruniu [Nicolaus Copernicus University Press in Toruń].

In 2010, a competition within the FOCUS programme was held for the last time. Considering the reduced access to EU structural funds allocated for small libraries, the Foundation also decided to discontinue the Funds for Libraries programme. Detailed information on the competitions carried out and the beneficiaries of the programmes is presented further in this Report.

In 2010, the Foundation spent a total of over 67.3 million zlotys on its programme activities.

PRIZES AND STIPENDS

FNP Prize

The Foundation’s Prize has been awarded since 1992 and serves to distinguish those scholars whose achievements contribute significantly to spiritual life and the advancement of civilization in Poland, and to the promotion of Polish science worldwide. Up until 2010, there were eighteen editions of the competition, in which a total of 65 honourable mentions were awarded.

The selection procedure involved two stages. A total of 52 candidates were nominated for the 2010 competition. The scientific value and originality of each work or achievement, as well as their significance in a given discipline, was assessed by 54 reviewers and experts, including many from abroad. Three beneficiaries were selected on the basis of the presented assessments and the opinions of the Prize committee. These were:

in the field of human and social sciences

- **Prof. Anna Wierzbicka, PhD hab.** from the Australian National University in Canberra for developing the theory of the natural semantic metalanguage and discovering a set of elementary meanings common to all languages;

in the field of natural sciences and medicine

- **Prof. Tomasz Guzik, PhD hab.** from the Faculty of Medicine, Collegium Medicum of the Jagiellonian University in Kraków for demonstrating the importance of the immune system in the pathogenesis of hypertension;

in the field of exact sciences

- **Prof. Tadeusz Marek Krygowski, PhD hab.** from the Faculty of Chemistry of the University of Warsaw for creating a method for quantifying the aromaticity of organic compounds.



2010 FNP prizewinners
(from left): Professors
Tomasz Guzik, Anna Wierzbicka,
Tadeusz M. Krygowski.

No prize was awarded in the field of technical sciences.
Each winner was awarded 200,000 zlotys.

In 2010, the Foundation's Council, constituting the FNP Prize committee, approved changes to the rules and procedures for awarding the prize, which will be obligatory from 2011. The changes included abolishing the requirement that scientific achievements could only be proposed for an award if they had been attained or confirmed within the last four years, and instead making the subject of the award "scientific achievements opening up new perspectives for research that were strictly defined and confirmed in recent years". In addition, a new division of awards categories was introduced.¹ Changes were also made to ensure higher confidentiality during the awards procedure.

MISTRZ Programme

ACADEMIC GRANTS FOR PROFESSORS

The aim of the programme established in 1998 is to support outstanding scholars by way of awarding 3-year subsidies to help them continue ongoing research work or to enable them to take on a new area of research.

The programme is addressed to those scholars with the title of professor or with a post-doctoral degree [*PhD hab.*], who successfully combine their research work with teaching young scholars. The subsidies are awarded in a closed competition (the candidates are nominated by outstanding scholars invited by FNP), which comprises a different scientific field every year. An important element of the programme rules is to give the prizewinners the freedom to choose how to spend the money awarded.

In 2010, the competition included the field of social and human sciences. Forty-nine people were nominated to take part. The procedure for assessing results is currently underway and the competition results will be announced in Q3 2011.

¹ The Chairman of the FNP Council, Prof. A. Członkowski provides more details in his letter (p. 6).



Beneficiaries of the 2009 MISTRZ programme – representatives of the technical sciences during the diploma award ceremony in June 2010, with the Noble Prize winner Prof. Richard Schrock (6th right) and Prof. M. Żylicz, President of the FNP (1st right).

Prof. Richard Schrock, winner of the Noble Prize, guest of honour at the ceremony.



In June 2010 the diploma award ceremony was held for nine prizewinners of the previous edition of the programme – for scholars representing the technical sciences. The guest of honour was Prof. Richard Schrock, the winner of the 2005 Noble Prize in Chemistry.

International PhD Projects Programme (MPD)

A programme financed from structural funds under Measure 1.2. “Strengthening the human resources potential of science”, as part of the Innovative Economy Operational Programme 2007-2013.

The programme is addressed to scientific consortia, including at least one Polish and at least one foreign institution conducting joint PhD projects. The programme aims to improve the quality of scientific research conducted by young scientists in Poland writing their PhD papers, and to intensify international cooperation among Polish research units.

The programme includes funding PhD research and the costs of international cooperation, which are borne by the consortium. PhD students are awarded stipends and individual research grants.

Out of 28 applications submitted for the third competition, 6 projects were granted subsidies. The following were the beneficiaries:

Beneficiary	Institution	Academic field	Project	Award in zloty
Prof. Jerzy Axer, PhD hab.	University of Warsaw	history, philology	<i>The Traditions of Mediterranean Humanism and the Challenges of Our Times the Frontiers of Humanity</i>	3,539,000
Prof. Magdalena Boguta, PhD hab.	Institute of Biochemistry and Biophysics, Polish Academy of Sciences	molecular biology	The PhD Programme in Molecular Biology Studies of Nucleic Acids and Proteins – from Basic to Applied Research	6,293,000
Prof. Stefan Jurga, PhD hab.	Adam Mickiewicz University	nanoscience and nanotechnology	The PhD Programme in Nanoscience and Nanotechnology	6,520,000
Prof. Stanisław Kryszewski, PhD hab.	University of Gdańsk	physics	<i>Physics of Future Quantum Based Information Technologies</i>	4,056,000
Prof. Jacek Radwan, PhD hab.	Jagiellonian University	environmental sciences	<i>Environmental Stress, Population Viability and Adaptations</i>	4,093,000
Prof. Marek Trippenbach, PhD hab.	University of Warsaw	physics	International PhD Studies in Nano and Bio Science at the Faculty of Physics, University of Warsaw	5,857,900

In the fourth competition, out of 30 applications submitted, the following 8 projects were singled out:

Beneficiary	Institution	Academic field	Project	Award in zloty
Prof. Zbigniew Błocki, PhD hab.	Jagiellonian University	mathematics	<i>Geometry and Topology in Physical Models</i>	4,578,100
Prof. Bohdan Grządkowski, PhD hab.	University of Warsaw	physics	International PhD studies in Fundamental Problems of Quantum Gravity and Quantum Field Theory	2,715,200
Prof. Artur Jarmołowski, PhD hab.	Adam Mickiewicz University	functional genomics	<i>From Genome to Phenotype – a Multidisciplinary Approach to Functional Genomics</i>	3,296,000
Prof. Elżbieta Malinowska, PhD hab.	Warsaw University of Technology	chemistry	<i>Towards Advanced Functional Materials and Novel Devices - Joint UW and WUT International PhD Programme</i>	5,156,000
Prof. Jarosław Marszałek, PhD hab.	Intercollegiate Faculty of Biotechnology UG-MUG	biochemistry	<i>Bio-molecular Chemistry an Interdisciplinary Approach to Protein Structure-Function Relationships</i>	3,230,000
Paweł Moskal, PhD hab.	Jagiellonian University	physics	International PhD Studies in Applied Nuclear Physics and Innovative Technologies	5,293,600
Prof. Krzysztof Nawotka, PhD hab.	University of Wrocław	ancient history	<i>The Eastern Mediterranean from the 4th c. BC until Late Antiquity</i>	5,064,700
Sławomir Zadrozny, PhD hab.	Systems Research Institute, Polish Academy of Sciences	information and tele-communications technology	International PhD Projects in Intelligent Computing	4,738,125

START Programme

STIPENDS FOR YOUNG RESEARCHERS

Young scientists (up to 30 years old), who have recorded achievements in their own respective fields, can apply to the Foundation for an annual stipend. The stipends are a token of recognition for the young researchers' achievements to date and are to motivate them towards further development and scientific research. The stipends also fund short study trips to foreign research institutes to develop international cooperation and to become acquainted with their working methods, which can be helpful in finding the best place for a post-doctoral internship.

Candidates are assessed on the basis of their documented scientific achievements and the research plans submitted. Beneficiaries from the previous year applying for an extension of their stipends for another year can also enter the competition.

FNP initiated the START stipend programme in 1993. Between 1993 and 2010, eighteen competitions were held. By a decision of the Minister of Science and Higher Education, the START stipends are exempted from personal income tax.

In 2010, 998 candidates entered the 18th competition. Upon the reviewers' assessment of the applications, 157 annual stipends of 24,000 zlotys were granted (including extensions to previous stipends) and one special award of 36,000 zlotys, received by Radosław Adamczak, PhD from the Faculty of Mathematics, Information Technology and Mechanics at the University of Warsaw, who had received the highest commendations. In addition, 12 beneficiaries received special travel stipends.

Pursuant to an agreement of 2006, between the Foundation for Polish Science and the Council for the Lindau Nobel Laureate Meetings (Germany), each year the Foundation nominates young scientists, beneficiaries of the START programme, to participate in those meetings. In 2010, six awardees of the Foundation's stipends took part in an interdisciplinary meeting dedicated to natural and medical sciences, chemistry and physics.

KOLUMB Programme

POSTDOC OUT-GOING FELLOWSHIPS

The best young scholars can apply for a stipend for a post-doctoral fellowship in a world-renowned scientific centre (from 6 to 12 months), but not later than within four years from receiving their PhD degree. The stipends are awarded for a stay in one or, under justified circumstances, a few research centres. Those wishing to extend their stay abroad can also apply once for additional funds for that purpose (for a maximum of 3 months), however, the stipend is awarded for a maximum of 15 months.

The sum of the stipend corresponds to the value of the stipend awarded in the institution selected by the candidate and is approximately 3,500 euros per month (or an equivalent sum in another currency).

The first competition was held in 1995. Since then there have been 21 competitions with a total of 188 stipends awarded.

Thanks to agreements concluded between the FNP and prestigious foreign higher education institutions and centres (including Clare Hall, INSERM and INRA), the stipend recipients are able to travel to those centres, which can be a source of additional benefits for their research.

Since 2010, applications for the KOLUMB Programme stipends are accepted twice a year. 101 applications were submitted this year and the following 7 were awarded stipends:

Stipend recipient	Institution	Duration of internship
Dr. Maciej Borodzick	University of Warsaw	eight month internship at the Hungarian Academy of Science (Hungary)
Dr. Ireneusz Grulkowski	Nicolaus Copernicus University	twelve month internship at the Massachusetts Institute of Technology (USA)
Dr. Dagmara Hering	Medical University of Gdańsk	twelve month internship at the Baker IDI Heart and Diabetes Institute (Australia)
Dr. Marcin Jasiński	University of Łódź	twelve month internship at Freie Universität Berlin (Germany)
Dr. Krzysztof Kazmierczuk	University of Warsaw	seven month internship at the University of Gothenburg (Sweden)
Dr. Wojciech Michowski	International Institute of Molecular and Cell Biology	twelve month internship at the Dana-Farber Cancer Institute (USA)
Dr. Dominik Mierzejewski	University of Łódź	ten month internship at the Chinese Academy of Social Science (China)

Support grants for FNP stipend beneficiaries returning from fellowships abroad

Winners of the previous editions of the KOLUMB Programme (until 2009) could also benefit from support grants which were to help stipend beneficiaries returning from abroad to use the knowledge and skills attained while attending the best academic centres in the world. After returning to Poland they could apply for a grant of 40,000 zlotys for creating or modernizing their research facilities and for continuing cooperation with the foreign centre where they had enjoyed their stay.

From 2002 to 2009, such grants were awarded to 87 beneficiaries, 8 of which were 2009 stipend beneficiaries.

HOMING Programme

REINTEGRATION GRANTS FOR POLISH RESEARCHERS

The aim of the programme, carried out since 2006, was to encourage young Polish scholars to return to Poland after long-term foreign internships. The Foundation offered the beneficiaries support in improving their work conditions and facilitating their cooperation with foreign institutions. The HOMING Programme was subsidized as part of the European Economic Area Financial Mechanism.

Subsidies for beneficiaries, granted for two years, comprised individual stipends and funds to carry out research projects and continue cooperation with a foreign institution. The programme beneficiaries were entitled to enter the competition in an attempt to extend their subsidies for another year.

In 2010, the programme was replaced by the HOMING PLUS Programme financed from European Union structural funds in the *Bio, Info, Techno* categories, and from the Foundation's own funds in the case of programmes in other fields. Previous beneficiaries of the HOMING Programme also have the right to apply for the extension of their subsidies for another year.

The 2008 beneficiaries sent 11 applications for extending their funding, to be assessed by the reviewers. In October 2010, the Foundation's Management Board awarded 8 scholars extensions of their stipends.

HOMING PLUS Programme

The programme for the *Bio, Info, Techno* categories is co-funded from structural funds under Measure 1.2 "Strengthening the human resources potential of science" as part of the Innovative Economy Operational Programme 2007–2013. Projects in other categories are financed from the Foundation's own funds.

The programme is a direct continuation of the HOMING Programme, though with a few modifications regarding entry conditions and funding principles.

The aim of the programme remains to encourage young Polish scholars staying abroad to return to Poland and continue their research work in the country, while young PhD students of other nationalities are able to obtain funding to take up post-doctoral internships in Poland.

The duration of the projects cannot exceed two years. Beneficiaries receive research subsidies of up to 80,000 zlotys per annum and study stipends of 5,000 zlotys per month. In addition, they can grant study stipends (1,000 zlotys per month) to students preparing their masters' dissertations under their supervision. The first awards were granted in July 2010. Out of 46 applications for funding, 15 projects were short-listed in the *Bio, Info, Techno* categories, as well as in three other fields. The awards of the second edition, announced in August 2010, were awarded in the first quarter of 2011.

Beneficiaries of the first competition (projects in the Bio, Info, Techno categories)

Beneficiary	Foreign institution from which the beneficiary is returning	Polish centre to which the beneficiary is returning	Academic field	Award in zloty
Dr. Katarzyna Bandurska	Biotechnology Foundation Laboratories at Thomas Jefferson University, USA	Faculty of Mathematics and Natural Sciences, Jan Długosz University in Częstochowa	biotechnology	298,713
Dr. Angelika Baranowska	Departamento de Quimica Fisica, Universidade de Santiago de Compostela, Spain	Faculty of Mathematics, Physics and Technology, Kazimierz Wielki University in Bydgoszcz	physics	292,600
Dr. Jarosław Byrka	Centrum Wiskunde & Informatica (CWI), Amsterdam, Netherlands	Faculty of Mathematics and Computer Science, University of Wrocław	computer science	288,800
Dr. Joanna Gałęzowska	University of Göttingen, Inorganic Chemistry Institut, Germany	Faculty of Pharmacy, Wrocław Medical University	chemistry	222,000
Dr. Krishendu Ganguly	Indian Institute of Chemical Biology, Kalkuta, India	Nencki Institute of Experimental Biology, Polish Academy of Sciences	biotechnology	292,000
Dr. Joanna Grzyb	Weizmann Institute of Sciences, Israel	Institute of Physics, Polish Academy of Sciences	biochemistry	320,000
Dr. Marta Kolasińska	Max Planck Institute of Colloids and Interfaces, Germany	Institute of Catalysis and Surface Chemistry, Polish Academy of Sciences	chemistry	288,000
Dr. Barbara Kremer	Department of Earth and Environmental Sciences, LMU Munich, Germany	Institute of Paleobiology, Polish Academy of Sciences	paleobiology	226,000



*The 2010 FNP award ceremony held at the Royal Castle in Warsaw:
(top, from left) Prof. T. Guzik and his wife;
Prof. T. M. Krygowski being congratulated.
(opposite) General view of the Great Assembly Hall.*



*Prof. Barbara Kudrycka, Minister of Science and Higher Education congratulating the prizewinners;
(from left) Prizewinners during the ceremony.*



*Members of Prof. Anna Wierzbicka's NSM research team.
Prof. Anna Wierzbicka conducting a seminar on semantics at the National Australian University in Canberra.*

Beneficiary	Foreign institution from which the beneficiary is returning	Polish centre to which the beneficiary is returning	Academic field	Award in zloty
Dr. Michał Matuszewski	Australian National University, Canberra	Institute of Physics, Polish Academy of Sciences	physics	248,500
Dr. Filip Murlak	University of Edinburgh, Scotland	Faculty of Mathematics, Informatics and Mechanics, University of Warsaw	informatics	321,000
Dr. Adam Sikora	Medical College of Wisconsin, Department of Biophysics, USA	Faculty of Chemistry, Technical University of Łódź	chemistry	321,900
Dr. Mirosław Szczepański	University of Pittsburgh Cancer Institute, Hillman Cancer Center, USA	Faculty of Medicine I, Poznań University of Medical Sciences	medicine (oncology)	320,000
Dr. Joanna Wojtera	University of Osnabrueck, Germany	Faculty of Biology, Adam Mickiewicz University	biotechnology	297,800
Dr. Mariusz Zdrojek	Institut Català de Nanotecnologia, Barcelona, Spain	Faculty of Physics, Warsaw University of Technology	nanotechnology	328,000
Dr. Michał Zieliński	Institute for Microstructural Sciences, National Research Council of Canada	Institute of Physics, Astronomy and Applied Informatics, Nicolaus Copernicus University	physics	236,000

Beneficiaries of the first competition - other fields

Beneficiary	Foreign institution from which the beneficiary is returning	Polish centre to which the beneficiary is returning	Academic field	Award in zloty
Dr. hab. Anna Brożek	Department of Philosophy, University of Salzburg, Austria	University of Warsaw	philosophy/logic	304,000
Dr. Anna Plisecka	Amsterdam Center for Law Economics at the University of Amsterdam, Netherlands	Adam Mickiewicz University	law	223,500
Dr. Marzena Zawadowska	Goldstein-Goren Diaspora Research Center, Tel Aviv, Israel	Marie Curie-Skłodowska University	Jewish studies	145,500

FOCUS Programme

ESTABLISHING NEW RESEARCH GROUPS

The programme is addressed to young researchers having considerable scientific achievements, who intend to take up new, promising research directions. The Foundation's aim is to support such initiatives, in particular those that help them establish their own research teams. Each year, the programme focuses on a different field of research. The theme of the 2010 edition was nano and microtechnologies in medicine.

There were 19 entries in the competition, and four 3-year subsidies of 300,000 zlotys each were awarded (100,000 per year). In addition, the beneficiaries can apply for grants to improve and modernize their



Prof. Jan Holnicki-Szulc, beneficiary of the 2008 TEAM programme, with his team.

research facilities. Under the 2010 programme, 1.4 million zlotys were earmarked for that purpose. This was the last competition of the FOCUS Programme. Next year, applications for financing one's own research team can be submitted under the TEAM Programme.

TEAM Programme

FINANCING OF PROJECTS CONDUCTED BY YOUNG SCIENTISTS TO BE IMPLEMENTED
BY THE BEST RESEARCH TEAMS IN POLAND

The programme is realized under Measure 1.2 "Strengthening the human resources potential of science" as part of the Innovative Economy Operational Programme 2007 – 2013.

The aim of the programme is to increase the engagement of young scientists in research work conducted by the best teams in the best scientific laboratories in Poland. The programme also extends to those scholars who wish to continue or open new competitive teams on an international level, featuring young researchers: students, doctoral students or recent PhD graduates.

Beneficiaries receive research grants (35 – 80,000 zlotys per annum each) and stipends for students, PhD students and recent PhD graduates (respectively: 1,000, 3,500 and 5,000 zlotys per month). Participating projects should be completed within a period of two to four years.

Out of 123 applications for the fourth and fifth edition of the programme, a total of 18 projects were awarded financing.

During the sixth competition of the TEAM Programme, 59 applications were received for assessment. The beneficiaries were to be announced in the first quarter of 2011.

WELCOME Programme

The programme was implemented under Measure 1.2. "Strengthening the human resources potential of science" as part of the Innovative Economy Operational Programme 2007–2013.

The programme aims to involve outstanding foreign scientists (as well as Polish scholars working abroad) in establishing research teams in Poland and to intensify international cooperation among Polish scientific units. The programme comprises projects in the *Bio, Info, Techno* categories.

The projects can be implemented over a period of three to five years and have to be completed by mid 2015. Beneficiaries receive annual academic stipends and research grants of 1 million zlotys each, as well as individual stipends for participants in the project (from 1,000 to 5,000 zlotys per month).

In the third competition in 2010, there were 35 applications and at the end of a long selection procedure, the Foundation's Board decided to fund 4 recommended projects. One of the beneficiaries (Prof. Ignacy Gryczyński from the University of North Texas Health Science Center in the USA) withdrew for personal reasons. The beneficiaries were:

Beneficiary	Beneficiary's institution abroad	Polish centre where the project will be undertaken	Project title	Award in zloty
Prof. Leszek Roszkowski	Department of Physics and Astronomy, University of Sheffield, UK	Institute for Nuclear Studies, Warsaw	<i>Bayesian Approach to Multi-parameter Problems in Physics and beyond Involving Parallel Computing and Large Data-Sets</i>	5,360,480
Prof. Wiesław Staszewski	Department of Mechanical Engineering, University of Sheffield, UK	AGH University of Sciences and Technology, Kraków	<i>Universality of Non-classical Approaches in Mechatronics – from Physics to Smart Structures</i>	6,777,000
Dr. Maciej Wiznerowicz	Merck Research Laboratories, Boston, USA	Poznań University of Medical Sciences	<i>Role of KAP1 and KRAB Zinc Finger Proteins in Epigenetic Mechanisms Involved in Reprogramming and Self-Renewal of Induced Pluripotent Stem Cells</i>	4,954,000

From mid 2010, applications were accepted for the fourth competition of the WELCOME Programme. All 37 applications were sent for review and the awards were due to be announced in the Q1 2011.

IDEAS FOR POLAND Programme

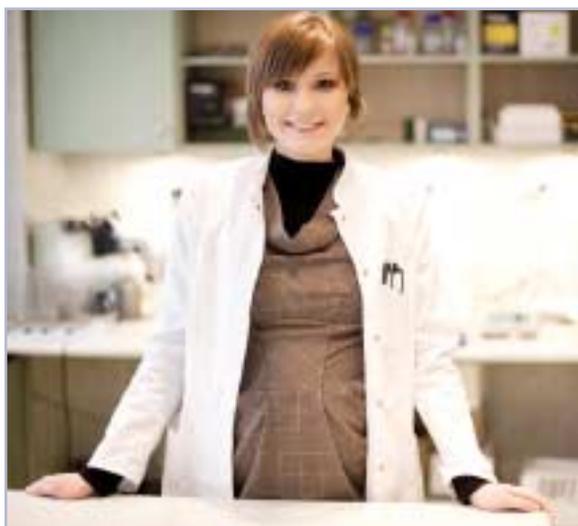
FELLOWSHIPS FOR ERC STARTING GRANTS WINNERS

The programme was launched in 2009 with a view to encouraging Polish and foreign winners of the prestigious Starting Grants, awarded by the European Research Council, to implement their distinguished research projects in Polish research institutions. Beneficiaries receive individual stipends and research subsidies.

In 2010, the results of the 2009 competition were settled. A stipend of 9,000 zlotys per month over a five-year period will be awarded to **Mikołaj Bojańczyk, PhD hab.** from University of Warsaw, for his project *The Expressive Power of Tree Logics* and **Natalia Letki-Garner, PhD** from University of Warsaw, for her project *Public Goods through Private Eyes*. Both recipients also received a subsidy of 100,000 zlotys each.



*Beneficiaries of the PARENT-BRIDGE programme (top, from left):
Dr. Dorota Pierścińska
with her son, Anna Hebda MA;
Dr. Katarzyna Pernal with her son;
Magdalena Niemira, MA;
Katarzyna Mączyńska, MA;
Dr. Barbara Michalec with her children.*



Four applications have been submitted for the latest competition of the programme and have been sent for review. The competition results were to be announced in February 2011.

PARENT-BRIDGE Programme

REINTEGRATION GRANTS FOR PARENTS

The programme within the Bio, Info, Techno categories is co-financed from structural funds under Measure 1.2. "Strengthening the human resources potential in science" as part of the Innovative Economy Operational Programme 2007–2013. Projects in other scientific fields are financed through the Foundation's own funds.

The programme aims to enable the best scientists raising small children to return to advanced research work and to assist pregnant women in the continuation of their research projects (in the case of scientific work that specifies any onerous side-effects during pregnancy).

The programme offers two types of support:

- **Grants for returnees** – the financing of the projects of researchers returning to their scientific work after parental leave (men and women);
- **Support for women conducting research projects while pregnant.**

Grants for returnees

Grants are allocated for those with at least a PhD degree, who submit applications within four years from the birth of their child. Projects implemented under this programme can last from one to three years. Beneficiaries receive research grants of up to 140,000 zlotys per year and are entitled to research stipends for their masters and PhD students.

The first awards were granted in September 2010. Out of 79 applications, financing was granted to 10 projects in the *Bio*, *Info*, *Techno* categories and one application in the field of law. The results of the second competition, announced in August 2010, were to be announced in the first quarter of 2011.

Support for women conducting research projects during pregnancy

The aim of the subsidy is to support women during pregnancy and directly after giving birth, to ensure that pregnancy does not become an obstacle to the development of their academic career. The financing is mainly in respect of covering the costs of employing a stand-in for a woman who is pregnant, to carry out the necessary tasks for the research project that she herself cannot conduct due to their potential health hazards.

Applications can be submitted at any time.

In 2010, out of 45 applications submitted 39 qualified for financing (including two financed from the Foundation's own funds).

KWERENDA Programme

GRANTS FOR ARCHIVE SEARCHES ABROAD

The programme, launched in 2002, aims to help scholars seeking source materials in the field of humanities and social sciences that are not available in Poland, but essential for the completion of their ongoing research work, in carrying out specialist archive searches abroad. The programme also includes research in national libraries and archives by foreign scholars researching Poland-related themes.

The grants are awarded each year but the same beneficiary can receive the grant every two years for a period of up to two-months to visit one or more archives abroad. In 2010, 14 out of 52 applicants were awarded grants.

Conference Grants

The aim of the programme is to enable Polish scientists (below the age of 35) to take part in international congresses, symposia and conferences in Poland or abroad. Eligible applicants are those intending to present a paper, communiqué or poster and who have documented scientific achievements in a field corresponding to the conference topic.

The competition is organized by the Warsaw Scientific Society, while the Foundation finances the stipends and covers the running costs of the programme.

In 2010, in accordance with the regulations, four competitions were held. Out of a total of 582 applications received, stipends were awarded to 128 individuals.

SUPPORT FOR TECHNOLOGY TRANSFER

VENTURES Programme

SUPPORTING INNOVATIVE PROJECTS REALIZED BY YOUNG RESEARCHERS

The programme is implemented under Measure 1.2. "Strengthening the human resources potential of science" as part of the Innovative Economy Operational Programme 2007 – 2013.

The programme aims to increase the number of innovative projects carried out by students, graduates and PhD graduates, as well as to encourage them to take up research work whose results can be applied in the economy. An application can be submitted by an academic centre in which a given project is to be conducted, as well as by the relevant student or PhD student who will be the project manager.

Beneficiaries receive an individual stipend and a research grant of 35,000 zlotys per year to cover the costs of implementing the project (as well as general expenses, management costs, information and promotion, etc.). The projects can be implemented over a period of from one to three years.

During the fourth and fifth editions of the competition, 262 applications were submitted, out of which 16 projects were funded, including one project in the student competition.

In autumn 2010, applications were accepted for the sixth edition of the programme. 105 submissions were received, and were sent for review. The competition results were due to be announced in the first quarter of 2011.

PUBLICATIONS AND CONFERENCES

MONOGRAPHS Programme

The aim of the programme is the publication of the best monographs in the field of social sciences and the humanities that emerge from the permanent competition. The programme has been running continuously since 1994. FNP released 139 titles by the end of 2010.

In 2010, the FNP's Publishing Committee, comprising a panel of experts, reviewed 86 works submitted, which were evaluated according to the peer review system. Eleven were selected for publication.

The following 12 titles were printed in the FNP's MONOGRAPHS series:

Piotr Celiński: *Interfejsy. Cyfrowe technologie w komunikowaniu* [Interfaces. Digital technologies in communications];

Anna Dzedzic: *Antropologia filozoficzna Edwarda Abramowskiego* [The philosophical anthropology of Edward Abramowski];

Piotr Filipkowski: *Historia mówiona i wojna. Doświadczenie obozu koncentracyjnego w perspektywie narracji biograficznych* [Spoken history and war. The experience of the concentration camp from the perspective of biographical narratives];

Maciej Grczyński: *Prace u podstaw. Polska teoria literatury w latach 1913–1939* [Organic work. Polish literary theory in the years 1913–1939];

Krzysztof Hubaczek: *Bóg a zło. Problematyka teodycealna w filozofii analitycznej* [God and evil. The theodicean problem in analytical philosophy];

Krzysztof Jaskułowski: *Nacjonalizm bez narodów. Nacjonalizm w koncepcjach anglosaskich nauk społecznych* [Nationalism without nations. Nationalism in Anglo-Saxon concepts of social sciences];

Monika Małek: *Liberalizm etyczny Johna Stuarta Milla. Współczesne ujęcia u Johna Graya i Petera Singera* [The ethical liberalism of John Stuart Mill. The contemporary approach of John Gray and Peter Singer];

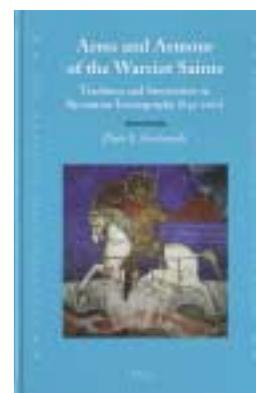
Ireneusz Piekarski: *Z ciemności. O twórczości Juliana Strykowskiego* [Out of darkness. On the work of Julian Strykowski];

Marek Słoń: *Miasta podwójne i wielokrotne w średniowiecznej Europie* [Duel and multiple cities in Mediaeval Europe];

Tomasz Tiuryn: *Boecjusz i problem uniwersaliów* [Boethius and the problem of universals];

Marcin Trzęsiok: *Pieśni drzemią w każdej rzeczy. Muzyka i estetyka wczesnego romantyzmu niemieckiego* [Songs are intrinsic in all things. Music and aesthetics of the German Early Romantic Period];

Jan Wasiewicz: *Oblicza nicości. Z dziejów nihilizmu europejskiego w XIX wieku* [Faces of nothingness. A history of European nihilism in the nineteenth century].



The translation of both these books was financed by the Foundation under the aegis of the MONOGRAPHS programme.

As part of the MONOGRAPHS Programme, entrants can also apply for financing of the translation of an academic work into a chosen congress language, previously published in Polish, under the condition that a renowned foreign publisher is interested in its publication and distribution.

In 2010, the following five books were granted subsidies for translation:

Wojciech Wrzosek: *Cultural dimensions of the historical truth* (publisher: Krug, Moscow);

Mirosława Ołdakowska-Kuflowa: *Stanisław Vincenz – pisarz, humanista, orędownik zbliżenia narodów. Biografia* [Stanisław Vincenz – writer, humanist, advocate of closer relations between nations. Biography] (publisher: Knyhy XXI, Czerniowce, Ukraine);

Przemysław Urbańczyk: *Trudne początki Polski* [Poland's difficult beginnings] (publisher: BRILL, Leiden, Netherlands);

Andrzej Grabowski: *Prawnicze pojęcie obowiązywania prawa stanowionego. Krytyka niepozytywistycznej koncepcji prawa* [Legal understanding of the application of common law. A critique of the non-positivist concept of law] (publisher: Springer Verlag, Heidelberg, Germany);

Józef Szykulski: *Pradzieje południowego Peru. Rozwój kulturowy Costa Extremo Sur* [The ancient history of Southern Peru. The cultural development of Costa Extremo Sur] (publisher: Municipalidad Provincial de Arequipa, Peru).

In 2010, foreign publishers published three books translated with the support of the Foundation:
Józef Szykulski: *Prehistoria del Perú Sur (Costa Extremo Sur)* [The ancient history of Southern Peru (Costa Extremo Sur)], Municipalidad Provincial de Arequipa, Arequipa;
Barbara Szmigielska: *Children's Dreams*, Nova Science Publishers Inc., NY;
Piotr Ł. Grotowski: *Arms and Armour of the Warrior Saints. Tradition and Innovation in Byzantine Iconography (843-1261)*, BRILL, Leiden-Boston.

Publishing Projects

In addition to the MONOGRAPHS Programme, the Foundation also pursues a programme supporting the publication of periodicals – publication series of key significance to research in Polish history and culture. In 2010, financing continued in respect of the publication of subsequent volumes of the *Polski Słownik Biograficzny* [Polish Biographical Dictionary] by the Institute of History of the Polish Academy of Sciences. As a result, volumes 192-194 were issued. Other publication series supported by the programme:

Słownik polszczyzny XVI w. [Dictionary of 16th Century Polish], (Vol. 33-37), publisher: Institute of Literary Research of the Polish Academy of Sciences;

Słownik historyczno-geograficzny ziem polskich w średniowieczu [Historical-geographical dictionary of Medieval Poland], publisher: the Institute of History, Polish Academy of Sciences.

The work *Archiwum Ringelbluma – konspiracyjne archiwum getta warszawskiego* [The Ringelblum Archives – the clandestine archive of the Warsaw ghetto], published by the Jewish Historical Institute also qualified for the programme. However, funding of subsequent volumes will be granted after publication is completed, i.e. in 2011.

Since 2005, the costs of publication of a series comprising several monographs under the common name *Origines Polonorum* have also been financed. The monographs were written as part of the archaeological research programme “Ziemie polskie na przełomie tysiącleci” [Poland at the turn of the millennia]. The third volume in the series came out in 2010: *Przemysł wczesnośredniowieczny* [Early Medieval Przemysł], edited by Ewa Sosnowska; the fourth volume titled *Płock wczesnośredniowieczny* [Early Medieval Płock], edited by Andrzej Gołębniak, was issued at the beginning of 2011.

FNP Conferences

The next conference organized by FNP within the “Foundation’s Debates on Science” series took place in February 2010 and was devoted to presenting to the scientific community strategies for the development of the Polish system of science and higher education. The conference entitled *Contentious issues in the development of science and higher education* created an opportunity for representatives of various circles to take part in a discussion on solutions aimed at improving the quality of higher education and research.

The starting point for the discussion were two recent draft changes in the science and higher education sector – *A development strategy for higher education until 2020*, commissioned by the Ministry of Science and Higher Education and carried out by the consultancy firm Ernst & Young and the Institute for Market Economics, as well as the *A development strategy for higher education 2010-2020. Academic project*, prepared under the patronage of the Conference of Vice-Chancellors of Polish Schools of Higher Education (KRASP).

Over 120 representatives from the academic and scientific community attended the conference, including experts working on the draft development strategy for higher education under discussion, representatives of the Ministry of Science and Higher Education and institutions supporting science.

After both strategies had been presented, a discussion was started in specific thematic blocks that touched upon models to be followed by research institutes, the financing of higher education and scientific research, the management of universities, the transparency of decisions in science and the evaluation of scientific units. The conference concluded with a discussion panel.

Conference materials were published in a brochure entitled *Sporne kwestie rozwoju nauki i szkolnictwa wyższego* [Contentious issues in the development of science and higher education] published by the FNP as Volume XIV of the series "Fundacji dyskusje o nauce" [The Foundation's Debates on Science]. They are also available (in Polish only) on the Foundation's website.

INTERNATIONAL COOPERATION

The Polish-German COPERNICUS Scientific Award

In 2010, the COPERNICUS Scientific Award was awarded for the third time, as a joint project of the Foundation for Polish Science and Deutsche Forschungsgemeinschaft (DFG). The award aims to distinguish the most active participants of Polish-German scientific cooperation, who can demonstrate outstanding research achievements of such cooperation and who successfully promote young researchers. The prize is conferred every two years by way of competition – one prize being awarded to a scholar from Poland and the other to a scholar from Germany, irrespective of their scientific field. The value of the award is 100,000 euros.

The beneficiaries of the COPERNICUS Award in 2010 were: **Prof. Alfred Forchel** from the University of Würzburg and **Prof. Jan Misiewicz** from Wrocław University of Technology. The two scientists have cooperated for over 10 years in the field of the physics of semi-conducting nanostructures. One of the results of their cooperation was the groundbreaking discovery concerning the quantum electrodynamics of microcavity (2004).

Each beneficiary was awarded 50,000 euros to be used, among others, for their further co-operation.

The awards ceremony was held at the Berlin-Brandenburg Academy of Sciences in Berlin on 10 May 2010.

Alexander von Humboldt Polish Honorary Research Fellowship

Under an agreement signed with the Alexander von Humboldt Foundation in 1995, the Foundation for Polish Science awards the Honorary Research Fellowship to German scholars irrespective of their specialization in recognition of their research output to date, as well as their contribution to the development of scientific cooperation between both countries.

The fellowship is the equivalent of the *Humboldt-Forschungspreise*, a prestigious award conferred on foreign scholars, awarded by the Humboldt Foundation. It aims to honour the winners' scientific achievements and to stimulate long-term cooperation between researchers from Poland and Germany.

Only Polish scholars can nominate candidates for the award. Stipends for German research scientists, taking up internships in one or several Polish institutions, are awarded for a period of four to six months. The stipend is the equivalent of 4,000 euros per month.

In 2010, eight candidates applied. They were submitted to the reviewers for assessment and the results of the competition were announced at the beginning of 2011.



The ceremony for the 2010 COPERNICUS Scientific Award: the prizewinner, Prof. Alfred Forchel, receiving his diploma from Prof. M. Żylicz.

The prizewinners of the 2010 COPERNICUS Award – Professors Alfred Forchel and Jan Misiewicz.

Research fellowships for scientists from CEE countries

This grant programme for foreign scientists, mainly from Central-Eastern Europe, interested in conducting research in Polish scientific institutes, is implemented jointly by FNP and the Józef Mianowski Fund – A Foundation for the Promotion of Science.

Candidates can obtain fellowships for a stay in Poland of one month to a year. In 2010, the fellowships was awarded to 56 people, and 79 fellowships awarded in 2009 were taken up.

In 2010, FNP allocated over 520,000 zlotys for this purpose.

OTHER INITIATIVES

EXTERIUS Programme

Under this programme FNP provides financial support for projects of particular significance for science in Poland that are not supported by any of the Foundation's other programmes. Applications for funding can be submitted by academic institutions and organizations supporting the development of science in Poland, as well as individual scientists and research teams.

In 2010, 128 applicants entered the competition. Eleven subsidies were awarded.

Funds for Libraries Programme

The programme aimed to help libraries apply for subsidies, in particular from EU structural funds, available to institutions in Poland from 2007 to 2013.

The programme – launched in 2008 – was addressed to libraries and archives whose collections are of great historical and scientific significance. The programme offered libraries assistance in writing their applications (expert advice and covered the costs related to preparing the necessary documentation when applying for EU structural funds).

In 2010, six applications were submitted, including one (Towarzystwo Przyjaciół Nauk in Przemyśl), which though assessed positively in the EU competition, did not obtain financing from EU aid funds. This programme has been discontinued.

On the initiative of, and according to an idea put forward by FNP, since 2010 the National Library of Poland had been carrying out the “ACADEMICA project – a digital lending library of academic publications”. The value of the programme is 35 million zlotys.

Evaluation of the FNP's Programmes

In March 2010, the Foundation commissioned an external evaluation of its programmes, aimed at providing an impartial analysis of FNP's current programme offer, as well as suggestions and recommendations for its further development.

Foreign experts from prestigious institutions providing funds for science in other countries were invited to conduct the evaluation. These included representatives of both private and public institutions from countries including the USA, Great Britain, Hungary, Czech Republic, Ireland, Germany, Finland and Norway.

Participants in the evaluation panel:

- Prof. Frank Gannon, General Director of the Science Foundation Ireland (chairing the panel);
- Sven Baszio, PhD, European Team Director in the Alexander von Humboldt Foundation;
- Iain Cameron, PhD, Director of the Team for the Development and Diversity of Scientific Careers at the UK Research Council;
- Prof. Reinhard Grunwald, former Secretary General of DFG;
- Prof. Axel Horstmann, Team Director in the Department of Social Sciences and Humanities in Volkswagen Stiftung;
- Rüdiger Klein, PhD, Managing Director of ALLEA (European Federation of National Academies of Science and Humanities);
- Kari Kveseth, PhD, Director of the International Division of the Research Council of Norway, Board Member of Norsk Vekst AS, former Board Member of Nordic Industrial Fund;
- Prof. Gábor Makara, former Chairman of the Hungarian Foundation of Sciences (OTKA);
- Alexis-Michel Mugabushaka, PhD, Analyst in the Department of Programme Strategy at the European Research Council Executive Agency;
- David Stonner, PhD, Director of the European Office of the National Science Foundation;
- Prof. Josef Syka, former Chairman of the Czech Science Foundation;
- Prof. Eero Vuorio, former Vice-Chancellor of the University of Turku.

The results of the evaluation indicated the importance of FNP's role in the Polish system of funding science and its place among European institutions supporting science. The panellists rated particularly highly the Foundation's contribution in creating a transparent system of financing science by way of award competitions and external, to a large degree foreign, reviews.

The panellists also formulated several proposals and recommendations concerning strategic directions for the development of the Foundation for Polish Science over the next few years.

The results of the external evaluation provide crucial material for the Foundation in preparing the programme policy and development directions in forthcoming years, which in light of the changes taking place in the scientific sector in Poland (the reform of the system of science and higher education, the financing of projects from EU funds, the creation of the National Centre of Science and the National Centre of Research and Development), will require the Foundation to redefine its position and role in the system of funding science in Poland.

The 2010 external evaluation report is accessible on FNP's website.

THE SCIENCE & ART IN EUROPE conference, Warsaw 2010



(top, from left)

- Speech by Prof. Krzysztof Żmijewski
- Lecture by Prof. Jerzy Vetulani
- The originator of the Science & Art cycle, Prof. Klaus Hahlbrock of the Max Planck Society
- Press conference before the Warsaw edition of Science & Art (from right: Prof. Maciej Żylicz, Krzysztof Dudek, Prof. Klaus Hahlbrock and Prof. Günter Hasinger)
- Concert by the Polish-German double quartet
- Lecture given by Prof. Jacek Oleksyn
- The opening of the Mirosław Maszlancko exhibition entitled "Falowanie" [Waving] at the Centre for Contemporary Art.



Science & Art in Europe Conference

In May 2010, the Foundation organized an international conference entitled *Science & Art in Europe*. The Warsaw conference was the third in a cycle of the *Science & Art* events; the previous one took place in Kraków, Berlin and Dresden, simultaneously. The conference series is a Polish-German venture, which on the one hand facilitates the exchange of scientific thought between researchers from Germany and Poland, presents the achievements of the most outstanding artists from both countries and initiates new cooperation, and on the other hand popularizes achievements in the sciences and arts that are dedicated to important social issues.

The venues were the Kubicki Arcades adjoining the Royal Castle in Warsaw and the Centre for Contemporary Art in the Ujazdowski Castle in Warsaw, where conference guests took part in lectures, discussions, exhibitions, concerts and other events whose common purpose was to try to look at the three areas challenging global civilization today – energy, ecology and climate change. These areas constitute research fields for scientists and can inspire artists.

The co-organizers and partners of the conference were: the Polish Academy of Sciences, the Polish Academy of Arts and Sciences (PAU), the Max Planck Society, the Volkswagen Foundation, the Academy of Otzenhausen and Greenpeace. The Speaker of the Parliament, Bronisław Komorowski and the Mayor of Warsaw, Hanna Gronkiewicz-Waltz were the honorary patrons of the conference.

Inspections of core activities

During the reporting year, in accordance with the 2010 inspection plan approved by the Board of FNP, the team responsible for programme financing from structural funds conducted 16 inspections of programmes financed from such funds, including those financed from the Innovative Economy Operational Programme. The inspections were carried out at the locations where individual programmes had been implemented.

In 2010, three additional external inspections were carried out to check the degree of implementation of programmes financed by structural funds. The inspections were carried out by the following institutions:

- the Institute of Management (Ministry for Regional Development), which checked the degree of implementation of the VENTURES, TEAM, International PhD (MPD) and WELCOME programmes;
- the Audit Institution (General Inspectorate of Tax Inspection), which conducted the inspection of the International PhD (MPD) and WELCOME programmes;
- the European Commission, which inspected and confirmed the correctness of the audit conducted by the Audit Institution.

None of the inspections conducted revealed any irregularities.

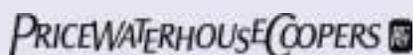
Abridged Financial Information and the Independent Registered Auditor's Opinion

The full version of the Foundation's Activity Report for 2010, available in Polish language, drawn up in accordance with the ordinance of the Minister of Justice of 8 May 2001 on the general scope of reports submitted by foundations (Journal of Laws No. 50 of 2001, item 529), has been submitted to the Minister of Science and Higher Education.

A copy of the Activity Report of the Foundation, which was granted the status of a registered public benefit organization on 31 December 2004, has also been submitted to the Minister of Labour and Social Policy.

In compliance with the Law on Foundations of 6 April 1984 (Journal of Laws No. 21 of 1984, item 97 as amended) and the Law on Public Benefit Activities and on Voluntary Service of 24 April 2003 (Journal of Laws No. 96 of 2003, item 873 as amended), the Foundation enables all those interested to access the full version of the Foundation's Activity Report for 2010 in Polish which is available at the Foundation's headquarters in Warsaw, ul. Grażyny 11.

The abridged version of the Foundation's activity report and financial information for 2010 (in Polish only), together with an independent registered auditor's opinion, in accordance with art. 70 of the Law on Accounting, has been published on the website <http://bopp.pozvtek.gov.pl> under the number KRS 0000109744.



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INDEPENDENT REGISTERED AUDITOR'S OPINION
ON THE ABRIDGED FINANCIAL INFORMATION
TO THE BOARD OF FOUNDATION FOR POLISH SCIENCE

The accompanying abridged financial information of the Foundation for Polish Science with its registered office in Warsaw, ul. Grażyny 11 (hereinafter referred to as "the Foundation"), which contains the balance sheet as at 31 December 2010, the income statement, the statement of changes in the statutory fund, the cash flow statement for the year ended 31 December 2010 and a note on the policies for preparing this information, has been prepared on the basis of the Foundation's audited annual financial statements as at and for the year ended 31 December 2010.

On 23 March 2011, we issued an unqualified opinion on the Foundation's annual financial statements prepared in accordance with the Accounting Act of 29 September 1994 (consolidated text – Journal of Laws of 2009, No. 152, item 1223, as amended, hereinafter referred to as "the Accounting Act").

The abridged financial information and the financial statements on the basis of which it has been prepared do not cover any events which occurred after the date of the audit opinion on the Foundation's annual financial statements being issued.

The abridged financial information does not contain all of the disclosures required by the Accounting Act of full annual financial statements and, therefore, in order to gain a full understanding of the Foundation's financial position and its results of operations as at and for the year ended 31 December 2010 the Foundation's full financial statements, as well as the independent registered auditor's opinion and report on the said financial statements should be read.

Responsibility of the Management Board

The Management Board of the Foundation is responsible for preparing the abridged financial information in accordance with the policies specified by the Foundation in the note accompanying the abridged financial information.

PricewaterhouseCoopers Sp. z o.o. is entered in the National Court Register maintained by the District Court for the Capital City of Warsaw, with the reference number KRS 0000044655, Tax Identification Number (NIP) 526-021-02-28. Its share capital amounts to PLN 10,363,900. The Company's registered office is in Warsaw, Al. Armii Ludowej 14.

Responsibility of the registered auditor

Our responsibility was to express an opinion on the accompanying abridged financial information on the basis of the procedures carried out in accordance with International Financial Reporting Standard No. 810.

We conducted the audit of the Foundation's financial statements which formed the basis for the preparation of the abridged financial statements in accordance with the provisions of Chapter 7 of the Accounting Act and the national auditing standards issued by the National Council of Statutory Auditors.

Opinion

In our opinion, the accompanying abridged financial information prepared on the basis of the audited financial statements of the Foundation for Polish Science as at and for the year ended 31 December 2010 is in compliance with the said financial statements in accordance with the policies contained in the note to the abridged financial information, in all material respects.

Person conducting the audit on behalf of PricewaterhouseCoopers Sp. z o.o., registered audit company no. 144:

Wojciech Maj
Key Registered Auditor
No. 6128

Warsaw, 20 May 2011

This financial information contains the Foundation's balance sheet as at 31 December 2010, income statement, statement of changes in the statutory fund and cash flow statement for the year ended 31 December 2010 and has been prepared on the basis of the Foundation's audited annual financial statements prepared in accordance with the policies specified in the Accounting Act of 29 September 1994 (consolidated text – Journal of Laws of 2009, No. 152, item 1223, as amended).

BALANCE SHEET

ASSETS

(in thousand PLN)	31.12.2010	31.12.2009
Non-current assets	12 155	11 964
Intangible assets	33	35
Other intangible assets	30	32
Prepayments for intangible assets	3	3
Tangible fixed assets	12 122	11 929
Fixed assets	944	1 055
Buildings, offices, apartments, civil and marine engineering facilities	730	858
Plant and machinery	154	123
Other fixed assets	60	74
Fixed assets under construction	11 178	10 874
Current assets	364 561	364 506
Inventories	17	18
Materials	17	18
Short-term receivables	381	493
Receivables from other entities	381	493
Trade receivables, due:	8	6
- within 12 months	8	6
Tax, subsidy, customs duty, social security and health insurance and other benefits receivable	298	480
Other receivables	75	7
Short-term investments	364 132	363 973
Short-term financial assets	364 132	363 973
In other entities	325 149	350 432
- shares	71 975	43 470
- other securities	253 174	306 962
Cash and cash equivalents	38 983	13 541
- cash in hand and at banks	7 112	5 212
- cash equivalents	31 871	8 329
Short-term prepayments and deferred costs	31	22
TOTAL ASSETS	376 716	376 470

BALANCE SHEET (cont.)

LIABILITIES AND EQUITY

(in thousand PLN)	31.12.2010	31.12.2009
Equity	368 978	370 281
Capital Fund	95 000	95 000
Statutory Fund	268 225	268 225
Revaluation Fund	0	0
Reserve Fund	27 615	27 615
Accumulated losses	(20 559)	(18 568)
Net loss for the year	(1 303)	(1 991)
Liabilities and provisions for liabilities	7 738	6 189
Provisions for liabilities	1 206	995
Provision for pensions and similar benefits	1 186	955
- long-term	388	302
- short-term	798	653
Other provisions	20	40
- long-term	0	0
- short-term	20	40
Short-term liabilities	1 826	5 193
To other entities	1 826	5 189
Trade payables, due:	127	77
- within 12 months	127	77
Tax, customs duty, social security and other benefits payable	1 040	4 344
Wages and salaries payable	188	71
Other	470	697
Special Funds	1	4
Accruals and deferred income	4 706	1
Other accruals and deferred income	4 706	1
- short-term	4 706	1
TOTAL LIABILITIES	376 716	376 470

INCOME STATEMENT

(in thousand PLN)	2010	2009
Revenue from statutory activities	44 081	19 667
Other contributions	44 081	19 667
Costs of statutory activities	67 345	44 793
Loss on statutory activities	(23 264)	(25 126)
Administrative expenses	6 529	5 803
Depreciation and amortization	289	279
Consumption of materials and energy	127	133
External services	1 720	1 363
Taxes and charges	28	18
Wages and salaries	3 417	3 000
Social security and other benefits	605	555
Other costs by type	343	455
Loss on statutory and administrative activities	(29 793)	(30 929)
Other operating income	4	12
Gains on disposal of non-financial non-current assets	0	0
Other	4	12
Other operating expenses	237	206
Loss on disposal of non-financial non-current assets	0	0
Other	237	206
Operating loss	(30 026)	(31 123)
Financial income	28 977	29 194
Dividends and shares in profits	1 392	575
Interests income	7 393	9 483
Gains on disposal of investments	11 372	6 594
Revaluation of investments	8 789	12 542
Other	31	0
Financial expenses	212	39
Interest expense	17	0
Other	195	39
Loss on overall activities before tax	(1 261)	(1 968)
Loss before tax	(1 261)	(1 968)
Income tax expense	42	23
Net loss	(1 303)	(1 991)

STATEMENT OF CHANGES IN OWN FUNDS

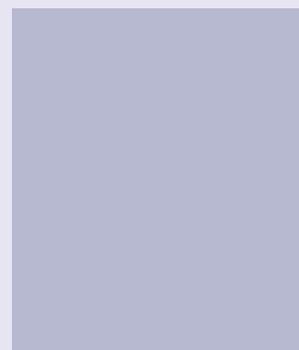
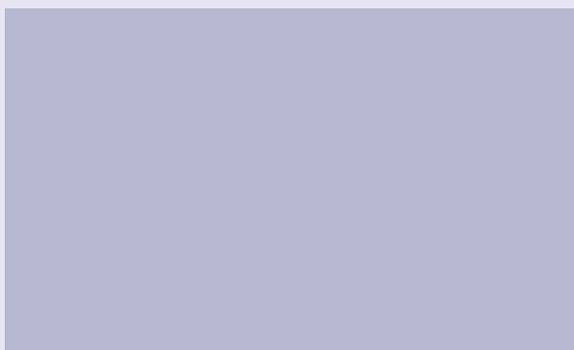
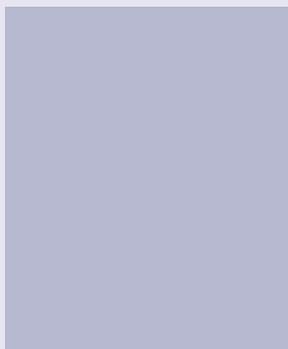
(in thousand PLN)	2010	2009
Equity as at the beginning of the period	370 281	372 272
Equity as at the beginning of the period, after adjustments	370 281	372 272
Capital Fund at the beginning of the period	95 000	95 000
Capital Fund at the end of the period	95 000	95 000
Statutory Fund at the beginning of the period	268 225	268 225
Statutory Fund at the end of the period	268 225	268 225
Other Reserve Fund at the beginning of the period	27 615	27 615
Other Reserve Fund at the end of the period	27 615	27 615
Retained earnings/ (Accumulated losses) at the beginning of the period	(18 568)	61 635
Retained earnings at the beginning of the period	-	61 635
Retained earnings at the beginning of the period, after adjustments	-	61 635
Decrease (due to)	-	80 203
- Loss offset	-	80 203
Accumulated losses at the beginning of the period	(18 568)	-
Accumulated losses at the beginning of the period, after adjustments	(18 568)	-
Increase (due to)	(1 991)	-
- accumulated losses brought forward to offset	(1 991)	-
Accumulated losses at the end of the period	(20 559)	(18 568)
Net profit or loss	(1 303)	(1 991)
Net loss	(1 303)	(1 991)
Equity as at the end of the period	368 978	370 281
Equity, taking into account the proposed loss offset	368 978	370 281

CASH FLOW STATEMENT

(in thousand PLN)	2010	2009
Cash flows from operating activities	(28 121)	(27 796)
Net loss	(1 303)	(1 991)
Total adjustments	(26 818)	(25 805)
Depreciation and amortization	289	279
Interest and shares in profits (dividends)	(8 764)	(10 056)
Losses on financing activities	(19 996)	(19 136)
Increase in provisions	211	85
Decrease in inventory	1	-
Decrease / (increase) in receivables	112	(95)
(Decrease) / increase in short-term liabilities, except for loans and credits	(3 367)	3 317
Increase / (decrease) in prepayments, accruals and deferred income	4 696	(199)
Net cash flows from operating activities	(28 121)	(27 796)
Cash flows from investing activities	53 563	34 693
Cash inflows	2 051 619	250 932
From financial assets, including:	2 051 619	250 932
In other entities	2 051 619	250 932
- disposal of financial assets	2 042 854	240 876
- dividends and shares in profits	1 389	575
- interest received	7 376	9 481
Cash outflows	(1 998 056)	(216 239)
Acquisition of intangible assets and tangible fixed assets	(480)	(79)
On financial assets, including:	(1 997 576)	(216 160)
In other entities	(1 997 576)	(216 160)
- acquisition of financial assets	(1 997 576)	(216 160)
Net cash flows from investing activities	53 563	34 693
Net increase in cash and cash equivalents	25 442	6 897
Change in cash and cash equivalents in the balance sheet	25 442	6 897
Cash and cash equivalents as at the beginning of the period	13 541	6 644
Cash and cash equivalents as at the end of the period, including:	38 983	13 541
- of restricted cash and cash equivalents	1	4



*Appendix:
About our Beneficiaries,
Initiatives, Projects*



POLITYKA, 4.12.2010

The Alphabet of Human Thought

Interview with Professor Anna Wierzbicka from the National Australian University in Canberra, a linguist, winner of this year's Foundation for Polish Science Prize.

AGNIESZKA KRZEMIŃSKA: - *Where does your interest in languages come from?*

ANNA WIERZBICKA: - My childhood. My father was an engineer, but linguistics was his passion. He used to show me big dictionaries (e.g. phraseological or etymological) and I was fascinated with words – where they came from and how their meanings changed. In secondary school, I came across a little book by Witold Doroszewski,



Kryteria poprawności językowej [Criteria of linguistic correctness], which I found very interesting. Later on, in the 1950s, I started to study Polish Philology, because I thought that studying a language would be free from the ideology that penetrated everything at that time. I absorbed everything, particularly his-

torical grammar (which many of my fellow students found extremely boring) and the Old Church Slavonic language, whose differences and similarities compared with Polish fascinated me.

Did the study of the meaning of words, i.e. semantics, absorb you?

I was inspired by the lecture "On the assumptions of semantics" given in 1964 at the University of Warsaw by Professor Andrzej Bogusławski. The main thesis was extremely radical – that language must contain simple elements of meaning, from

which all other meanings are made up, and those simple elements (indefinibilia) can be identified. This was the idea of Leibniz, who believed that languages are the best reflection of the human mind and that we should look for indefinibilia, which he called an alphabet of human thought. Bogusławski brought it up again after 300 years and said that linguistics could work on the identification of those simple elements of meaning that are common to all languages. I thought then that I could devote my life to studying this idea.

And that was the beginning of the Natural Semantic Metalanguage?

Yes, although the name appeared later in Australia, where I arrived in 1972. I met many researchers there studying languages from various parts of the world, including the languages of Australian Aborigines. I particularly value my cooperation with Cliff Goddard, who started off being a very critical student contesting my theories and turned into my scientific partner. With the cooperation of many colleagues, we obtained a broad empirical base and were able to compare languages in a systematic manner, trying to define a set of universal concepts.

NSM has evolved – it began with less than twenty common meanings, and now there are more than fifty.

When I still lived in Poland, in 1972 I published *Semantic Primitives*, in which I proposed 14 universal elements of meaning. At that time, however, my hypotheses were based on European languages only. After coming to Australia and after several

years of study of various languages, this number grew to more than sixty. Now I think there will be no more, we have found all of them.

In the 1960s, a renowned linguist Noam Chomsky came up with a theory that people have an innate ability to learn a complex system of symbols, i.e. language, because linguistic expressions in all languages have a common structural background. You agree with his opinion that universal linguistic structures exist, but at the same time you are very critical about his grammar. Why?

Mainly because Chomsky's grammar was too formal and focused on syntax too much, while it disregarded semantics. Chomsky and his followers are, in my opinion, blind to the meaning of words, which makes them blind to culture, whereas the view I share with my colleagues is that language is a tool for getting to know the world, people and human societies, a starting point for anthropological, sociological and psychological enquiry.

You and Chomsky have one more thing in common – you both take part in discussions that transcend linguistics. Chomsky comments on the political reality and you talk about euthanasia and explain how the New Testament should be understood. Does the study of language help you better understand the world?

In my opinion, nothing is far from linguistics, since language is the basic tool of communication and thinking. However, in the case of Chomsky, linguistics and politics are two separate things, whereas for us semantics is the key to understanding people and the world. Our Natural Semantic Metalanguage makes it possible to analyze the meaning of words and content of utterances and, consequently, the sense of even the most complicated ideas. NSM is a tool for the interpretation of meaning, which can be used in theology, psychology, ethics and any other field. Our methodology is based on simple and universal concepts and allows one to arrive at meanings in every language and every field.

But not everybody agrees with your theory.

Every radical theory is controversial, that is beyond doubt. The most important thing is that our theory is being discussed and appears in academic books and encyclopaedias as one of the main directions in semantics. Science is not about universal agreement, it is about dialogue and argument, otherwise it would not develop.

You study the roots of human speech. What do you think about the so-called speech gene, which is sought by geneticists?

I am not a geneticist, but we must remember that the word "gene" is often used to describe things that are innate, an inherent part of human nature. We say that everybody has an imprint of those sixty-odd semantic metalanguage components, plus an inherent grammar which rules them.

Since we have this base in the form of NSM and live in a global world, will we all at some point begin to speak a common language and forget our national languages?

Of course not, national languages will survive, although English has already conquered many areas of life. Therefore, it seems particularly important to understand the meanings it conveys. Many people believe that English is now a neutral language, in which the whole of mankind can communicate in a manner which is free from the influence of one culture or another. In my opinion, however, it is not true, because English, like any other language, has its background, i.e. the Anglo-Saxon cultural heritage. I think that it is very important to study and explain this cultural background. My two latest books deal with this subject: *English. Meaning and Culture* published in 2006 and *Experience, Evidence and Sense: The hidden cultural legacy of English*.

Since English is conquering the world, is it still worth learning other languages? I have the impression that if you want to get to know France, you must know French.

Definitely. This is another area of my interest. With my daughter Marysia (Mary Besemer), who studies autobiographies of people who emigrated to another language and culture, we prepared a book *Translating Lives. Living with two languages and cultures*. It is a collection of autobiographical essays of several Australian immigrants or children of immigrants (from such countries as China, Singapore, Portugal, Russia and Korea), who write about their personal experience of living with two languages and two cultures.

Science is not about universal agreement, it is about dialogue and argument, otherwise it would not develop.

Could you give an example?

The thing is that different languages carry different concepts, feelings, types of interpersonal relations. In her essay, Mary writes about the Polish concept of “mieć do kogoś żal” (to have a grudge against someone) and the feelings associated with it. This concept combines emotional closeness with certain expectations towards loved ones. In the Anglo-Saxon culture, such expectations are defined as emotional blackmail and have negative connotations. The Polish expression “mieć do kogoś żal” has no English equivalent, just as *emotional blackmail* has no Polish equivalent (or it didn't have one until recently). A person who lives in two languages and two cultures must find a way to deal with such differences in expectations and values. One can say that in the Anglo-Saxon culture, many people would place personal autonomy above emotional closeness in the hierarchy of values (if there is emotional closeness, someone might expect another person to do things they don't want to do), whereas in the Polish culture the order is reversed. This is reflected in the language.

Do you mean that after 30 years in Australia you still translate from English into Polish and vice versa in your head?

Every day and all the time. In Polish different things are considered self-explanatory. Furthermore,

expectations, ways of thinking and the so-called cultural scripts are different. When you use another language from time to time, you may have an impression that you are a different person when you speak Polish and different when you speak English. This duality is even deeper when you live with two languages permanently. My husband, John Besemer, is a native Australian who speaks perfect Polish. To make our daughters bilingual, we spoke mainly Polish at home, because they were surrounded by English anyway.

Bilingualism seems to be a cure for dementias. Recent research has shown that bilingual persons less frequently develop Alzheimer's and even if they do, they develop it on average 5 years later than persons who use one language only.

Bilingualism definitely makes the mind more flexible. Perhaps translating from one language to another, more or less knowingly, is a good exercise for your brain and helps it stay fit longer. However, this is not my field and it is hard for me to speak about it.

Do your studies of language and linguistics also comprise the study of feelings?

They do. I cooperate closely with psychologists who write for *Emotion Review*, which is nowadays a very important magazine. For me, the essential question is how to study human feelings through the English language without putting them in the Anglo-Saxon context, how to look at them from the perspective of different languages and cultures.

Wait a minute, do you mean that depending on the language we love differently?

You could say so. The whole repertoire of feelings is different, because they depend on how you think about what is happening to you, and therefore they, to a certain extent, depend on the tools that your native language has provided you with. If the ways of conceptualizing events are different, the resulting feelings or emotions cannot be the same.

Besides, we interpret what we see on the faces of other people through our language and culture, which means that we read people's faces in different ways. Of course, there are certain common features, but we need a certain conceptual tool to find out what is universal and what depends on the language and culture. Our metalanguage works very well here. Considering the fact that the estimated number of linguists in the world totals less than 1% of the number of psychologists (and less than 10% of the number of anthropologists), considerable interest in NSM among psychologist and anthropologists is a very good thing.

Do you stay in touch with Poland?

I come to Warsaw and Lublin for lectures and conferences, I keep in touch with Polish linguists, including Professor Andrzej Bogusławski. I also owe a lot to the Rev. Prof. Waław Hryniewicz, a professor at the Catholic University of Lublin. In my book *What does Jesus say?* I tried to analyze the meaning of Jesus' teachings using NSM as a tool. I found Professor Hryniewicz's ideas very helpful in finding out what Jesus had in mind.

Interview by AGNIESZKA KRZEMIŃSKA

Original published in Polish in POLITYKA weekly. Reprinted with the kind permission of the editors.

GAZETA WYBORCZA, 29.03.2011

When the Pressure Grows

It is worth fighting chronic infections. They can lead to hypertension.

INTERVIEW WITH PROFESSOR TOMASZ GUZIK*

SŁAWOMIR ZAGÓRSKI: *Why are you interested in hypertension?*

PROF. TOMASZ GUZIK: Because it is an fascinating common condition. As many as a third of us will develop it.

Why is that so?

– There are three theories. To put it simply, some say it is due to vessels that do not properly contract, others blame kidney dysfunction, and still others – brain dysfunction. Interestingly, the supporters of these three theories rarely communicate, they meet in separate rooms at conferences.

And you managed to demonstrate that these three theories could have one thing in common – T cells, i.e. a certain type of white blood cells. Is it true that the most important observation was accidental?

– Yes, in a sense. First, we wanted to check whether T or B cells affect the development of

hypertension complications, i.e. the incorrect functioning of the vessels, kidneys and nervous system. We studied mice. Let me mention that a mouse doesn't get hypertension by itself, it must be induced with the use of substances such as angiotensin II or ordinary table salt. For our experiments we used genetically modified mice which are unable to produce T cells. A laboratory assistant took the blood pressure of our mice again and again and we found out that it was close to the correct level all the time even though the mice were given salt or angiotensin. How could we study hypertension complications when the disease hadn't even started? We were worried at first,

*PROF. TOMASZ GUZIK is the head of the Department of Internal Diseases and Rural Medicine, Collegium Medicum of the Jagiellonian University in Kraków, the winner of the 2010 "Polish Nobel" in natural and medical sciences.

but then we concluded that it would be a very interesting observation if it proved to be true.

How do you take a mouse's blood pressure?

– First we placed a small sleeve wrapped around the mouse's tail. This method was not sensitive enough, because it is hard to tell a mouse not to move; additionally, a mouse gets nervous when its tail is wrapped in a sleeve. Much more precise readings were obtained when a special transmitter was placed directly on the mouse's carotid artery. We demonstrated our effect, but then we waited a year for someone else to repeat our experiments. You cannot be sure that the effects observed are not accidental until other researchers notice the same phenomenon. Fortunately, two independent teams, one from Germany and one from the States, confirmed that there is no severe hypertension without lymphocytes.

Does it mean that our own blood cells are harmful to us?

– These cells are absolutely essential for us to live! They protect us against viruses and bacteria. On the other hand, it seems that in the case of a prolonged inflammation in the body, e.g. an infection with *Helicobacter pylori* or periodontitis, continuous activation of lymphocytes can lead to hypertension. We are now studying these relationships intensively in cooperation with scientists from the Department of Dental Medicine of the Jagiellonian University (UJ) working under the leadership of Professor Bartłomiej Loster.

So we won't get rid of lymphocytes to avoid hypertension?

– It would be too dangerous. However, it is worth fighting chronic infections. It has been observed that getting rid of *Helicobacter* lowers blood pressure. Research conducted in Kraków in cooperation with my mentor, Professor Ryszard Korbut, from the Department of Pharmacology of the Jagiellonian University has also demonstrated that the fat surrounding vessels plays a role in the

development of hypertension. This is where lymphocytes travel across to the vessels. We are trying to prevent it.

Could you tell us more about the fat surrounding vessels? Do larger people have more of it or can you be quite slim and still have a lot of fat around your vessels?

– I am not a thin person, to put it mildly, and some people joke that we have chosen the fat surrounding vessels as our research topic to show thin people that they don't have it so good after all. Even when you are thin, it doesn't mean that your fat is healthy. It is a well-known fact, for example, that the so-called visceral fat, i.e. fat accumulated in the abdominal area, is dangerous to the heart. The fat surrounding vessels seems to be even more dangerous, at least as far as hypertension is concerned.

Will your work lead to the development of medicines for this disease?

– It is difficult to say. As many as 90% of basic discoveries do not lead to the development of medicines. This case might be different, but it is somewhat beyond our control.

Last year you received the highest Polish science prize for your achievements associated with hypertension. How does it feel to win the "Polish Nobel" at the age of 36?

– Believe me, the Foundation for Polish Science Prize was a great surprise for me. In my work, I try to observe interesting things and seek answers to important questions. I have never pondered over when will I become a professor, or whether I will get some prize or another.

I don't believe you have never thought about becoming a professor.

– Of course I have, but becoming a professor has never been my aim. In fact, the time when you achieve something depends on your mentors, to a large extent. I have been lucky – I have met wonderful people. The first were my parents who

passed their love of science onto me. I simply love doing research.

Did your parents work as researchers?

– My mother was a physician and she also worked as a scientist. My father is an engineer, he used to work as a scientist at the University of Science and Technology in Kraków. My mother was an exceptional doctor, medicine was her true vocation. She died three years ago, and her patients still come to meet me and sometimes they even shed a tear. I have always wanted to do something practical. At school I loved mathematics, chemistry and biology, but I chose medicine, because I wanted to apply science in practice.

Was it a good choice?

– Yes. The beautiful thing about medicine is that you can serve people and conduct research at the same time. I have never been able to separate the need to work as a scientist and the need to work with patients. These two things give you quite different kinds of satisfaction and a sense of purpose. Medicine is a service. You can use your knowledge to help another human being get better in a very short time, and this feeling cannot be appreciated enough. On the other hand, scientific work is very painstaking. At first, experiments usually don't work. Tens of unsuccessful experiments lead to one successful one. When you look at publications, you see the ultimate result – beautiful drawings, photographs, diagrams. You don't see how many hours of unsuccessful experimenting were needed to arrive at this one diagram. In my case, the things that eventually led to particularly interesting observations always went dramatically wrong in the first few months. Which means that persistence is rewarded. On the other hand, you must know when to stop. This is a secret I haven't quite mastered yet.

After your studies in Poland you went to Oxford.

– It was shortly after my graduation, I was 24 years old. I learnt that Aleksander Gudzowaty's foundation Crescendum Est–Polonia supported young



graduates. Poland was not in the European Union at that time, and Oxford was very expensive. This foundation helps young people at the start of their scientific career to this day.

Was Oxford a giant step in your career?

– Yes. I finished postgraduate studies in molecular medicine. I have always been deeply interested in allergology and clinical immunology. In Oxford, I joined Professor Keith Channon's team, which worked on vascular biology and cardiology. Channon was 32 years old and already a professor. We got to like each other very much. He was and still is a model scientist for me. I have fantastic memories of my work in his laboratory.

How many people work for you now?

– I would rather ask how many people I work for (*laughs*). Seriously though, I am in favour of the approach where we all do something together, as partners. I try to take care of my MA and PhD students, as my mentors took care of me (and still do).

In Poland we don't like successful people. Do you experience this attitude?

– I am a sensitive person. I always try to help others; I have never harmed anyone, although perhaps there are people who don't like me. It probably cannot be avoided. I try to focus on those who support me, and there have always been many such people around me, and I thank them for their support all the time.

Interview by SŁAWOMIR ZAGÓRSKI

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A Scientist Must Be Open to Discussion

Seeking a definition of aromaticity has been a challenge for contemporary science. A Pole has now accomplished this. Professor Tadeusz Marek Krygowski, PhD hab., from the Department of Chemistry of the University of Warsaw, has won the Foundation for Polish Science Prize in exact science, for developing a method for quantifying the aromaticity of organic compounds. His discovery has been recognized by the international scientific community.

Aromatic organic compounds are used not only in chemistry (for the production of polymers, detergents, explosives) or medicine (pharmaceuticals), but they also have biological significance (basic DNA and RNA components are aromatic).

Aromaticity is not a single property of chemical compounds, and to date its definitions have been mainly based on arbitrarily selected criteria.

The HOMA (Harmonic Oscillator Model of Aromaticity) aromaticity index developed by Professor Krygowski makes it possible to precisely determine a given molecule's aromaticity, and, consequently, its physical, chemical and biological properties. Online news bulletin Nauka w Polsce [Science in Poland] talks to the Foundation for Polish Science prizewinner and asks him how "aromaticity" should be understood in daily life and how important it is for economic practices to be able to measure it.

NAUKA W POLSCE: *Should the concept of aromaticity be associated with scent? Is it the same thing?*

PROF. TADEUSZ KRYGOWSKI: The concepts of aromaticity and scent could be considered equivalent at the time when the concept of aromaticity first appeared in chemistry. In the mid-nineteenth century it was noted that benzene derivatives, i.e. benzoic acid esters, have a very pleasant scent. At that time, benzene compounds started to be called "aromatic", even though not all of them smell, and even if they do, the smell is not always pleasant.

In the course of further research, it was discovered that there are more chemical compounds with

chemical properties similar to that of benzene, although they do not form fragrant esters. Since then, the term "aromaticity" has been used to indicate that a given chemical compound and its molecules have similar chemical and physical properties to that of benzene. Therefore, the meaning of this term is no longer associated with scent. Let me mention here that pyridine, a poisonous compound with a terrible smell, is aromatic. In minute quantities (micrograms) it is added to certain fragrances to add a touch of "wildness".

NwP: *Can we speak of aromaticity in the case of a compound with no smell at all, pleasant or otherwise?*

TK: Aromaticity understood as a set of physical and chemical properties can be a property of various chemical compounds, also those in the form of crystals and those which are totally fragrance-free.

NwP: *Why measure a property which seems immeasurable?*

TK: When we say that someone is tall, it means something different in Central Africa among Pygmies, where tall people are 150 cm, and something different in Sweden, where you need to be more than 180 cm to be considered tall. Therefore, quantification, i.e. a measurement of a certain (any) quality in quantitative terms, is necessary for classification purposes.

NwP: *What is the significance of such a "scientific game of mathematical measurement of aromaticity"? What is its practical purpose?*

TK: It does not have a direct application. It should be noted, though, that it is rare in science that a

relationship or a chemical compound has a practical application immediately after it has been discovered. For example, Fleming's discovery that certain moulds have bactericidal properties found its practical application over ten years later.

At the same time, no theory or classification is an objective on its own. When a classification or a theory is developed, it becomes valuable if the research associated with it provides new information, opens new worlds. A "sterile" theory, i.e. one that does not trigger new ideas, is dead. A renowned British scientist, Professor Charles A. Coulson, said that primitive patterns of understanding, which are intuitive, are very important in chemistry. Every chemist, when he or she comes across such terms as "aromaticity", "electro-negativity" or "hydrogen bond", knows what they are about. To define them, however, is not so simple. For example, is it easy to define a table?

NwP: *Intuitively – yes.*

TK: But it does not work like this in practice. Looking for a definition of aromaticity led to an enormous number of studies, which greatly contributed to the general pool of knowledge on chemistry and chemical reactions. For example, genetic transmission is associated with the DNA helix, which consists of aromatic nitrogenous bases. Once a helix is damaged or mutated (e.g. as a result of external influence), it can give rise to a tumour. We can improve our understanding of chemical reactions by studying something which does not seem to be associated with cancer at all, such as aromaticity.

The human mind is capable of making analogies and these analogies can be creative and useful and can open up new horizons. Therefore, I have no doubts that a practical application will appear. Eventually.

NwP: *How did it come to pass that among all these studies that you have mentioned, a Pole's work was groundbreaking?*

TK: When I was considering the subject for my PhD, which my supervisor Professor Wiktor Kamula [Professor Krygowski points to a photograph on



the wall of his study] asked me to choose myself, I came across the increased durability of certain systems and the related concept of aromaticity. It fascinated me so much that I started to think about it. Aromaticity, as my long-time friend and competitor, Professor Paul von Rague Schleyer used to say, is like beauty. How can you define a beautiful woman?

NwP: *The one you like is beautiful.*

TK: Exactly. Someone will say: I like this one, but not this one. And someone else will say: man, this is the one who is beautiful, not that one. It is impossible to quantify beauty.

Aromaticity, however, is characterized by certain properties, namely bond lengths, i.e. the distances between atoms in a molecule. At the time I was thinking about all this, I was friends with Dr. Jerzy Kruszewski, who died two years ago. We spent hours and hours in discussion. During the few years he used to visit me at home, we would talk until midnight, despite my wife possibly not being too happy about it. And then we came up with the idea that different bond lengths should be treated as a property which can be characteristic of aromaticity. If the differences are big, the system is not highly aromatic; if they are small – it is aromatic. In the case of benzene, which is a bench-

mark, there are no differences between bond lengths. As a result, we invented the HOMA method, which is now the most important index based on geometry (there are also indices based on energy, magnetic properties and reactivity).

NwP: *Did the scientific community accept your index without any reservations?*

TK: Yes, generally, and the papers have had several thousand citations. I know many professors who have had 500 citations in their lifetime, and this subject alone has had four thousand. The world

When a classification or a theory is developed, it becomes valuable if the research associated with it provides new information, opens new worlds.

has bought it, which is why I have received invitations to give lectures and teach in various parts of the world. Though I don't like to boast, it has certainly been a success. Again, I would like to stress the

contribution of my friend who later gave up scientific work for personal reasons. Our creative discussions led to results which are fairly rare in Poland; I mean an accomplishment which has been accepted by the scientific world.

NwP: *Among the many awards for this achievement and your entire work, you have now received the "Polish Nobel". How important is it to you? Is it one of many or something quite special?*

TK: If you are asking about something special, please look at this diploma [the professor points to a framed diploma with a handwritten date – 1955]. It was my first and one of my biggest achievements: first place in two consecutive chemistry competitions for school pupils in Stalinogród (as Katowice was called then).

The first competition took place in 1954, but I've lost the diploma. I was at school then and I also had to learn Polish, Latin and many other subjects. Chemistry was just one of them, but it fascinated me so much that it became my *alter ego*.

Then I started to study, got various awards, and became a professor and an honorary member of various organizations. But I was a professional by

that time. I see the Foundation for Polish Science Prize as my biggest professional achievement, I wasn't expecting it. A few years ago, when my colleague Professor Jeziorski got the "Polish Nobel", my other colleague, Michał K. Cyrański, PhD hab., asked me: "When will you get the Polish Nobel, Professor?" I replied: "You know, I might get a dog called Nobel instead of the prize". As it turned out, I was wrong.

NwP: *Being wrong can sometimes be surprisingly nice.*

TK: Yes, it is a great achievement. But it wouldn't have happened without the many people I worked with. My parents, and then my older sister, taught me certain values – an extremely important thing which keeps me on the right path.

My family plays a very important role: my wife Maria, my daughters Kinga and Ola, their husbands and my grandchildren. They offered me support whenever something went wrong, which was quite often. I could come home then and live a different life.

Six of the prizewinners of the Foundation for Polish Science Prize graduated from my secondary school, the Karol Marcinkowski secondary school in Poznań. Six out of 68! The school was quite strict, the teachers were hard on their students – if you knew something, it was fine; if not, there was no mercy. If you didn't behave, you were thrown out of the classroom and had to report to the class tutor. I believe it was a good school. It gave you a certain backbone, so that later on it was easier to deal with the often chaotic influences of the external world. I appreciate this very much.

NwP: *And how do you see your own "school" yourself, as an academic teacher?*

TK: It was very important for me when, after my PhD, the dean offered me the position of Head of the Crystallography Unit. I didn't know much about it then, but one of the employees of that unit was Dr. Romana Anulewicz, who was a crystallography expert. With her help, we offered good teaching, found good topics for research and as a result we educated four outstanding crystallogra-

phers. Sławomir Grabowski is a professor in San Sebastian, the Basque Country, Spain; Ilona Turowska-Tym is a professor at the Wrocław Technical University; Professor Krzysztof Woźniak stayed at our Chemistry Department and is now head of the unit; and Professor Michał Cyrański is the leader of the team in which I have been working since my official retirement. Of the many students I have had, I am particularly proud of these four. I have learnt a lot from them, too. If you talk science every day, both parties benefit.

NwP: *At school you learned many different subjects. Can you say that in science, too, there is a variety of disciplines? It seems that a chemist must also be a mathematician, a physicist, a biologist and a medic. Are you looking for future applications of your research in these areas?*

TK: I believe that it is enough to be a good chemist and to know the possible applications, without disregarding other subjects (to use school terminology).

NwP: *How can experts in other fields, who may be locked into their disciplines, learn about the results of your work and perhaps find some practical applications for them?*

TK: A scientist must be open to discussion on just about every subject. I am no longer an active professor, in the sense that I no longer lead a research team. However, I have a group of five young people I work with. We meet and talk. They are younger, their starting point is different, and therefore they might be able to find some possible applications. Halina Szatyłowicz, PhD hab., from the Technical University of Warsaw, is trying to apply my methodology to bases which make up DNA, the essence of life. The biochemist Arkadiusz Ciesielski has a very creative mind, he is the author of innovative applications of the graph theory and topology to issues associated with aromaticity. I believe that biochemistry will be the next step. Arkadiusz Ciesielski and Michał Cyrański are co-authors of one of my major papers, which derives two main aromaticity principles, Hückel's rule and Clar's rules, from simple mathematical delibera-

tions. The paper has already been accepted for publication.

Applications will be found as a next step, when people specializing in aromaticity will talk to experts on systems characterized by aromaticity, even though they may not be too aware of it. As a result of such discussions, completely new ideas may appear, which may lead to, say, improvements in some medicines or substances used in the food industry. To achieve this, researchers must be open and willing to cooperate.

NwP: *Is this the case in Poland?*

TK: Not quite, it is not a common approach in Poland, although it is stimulated by the system of financing "borderline" studies. It is easier to get money for a project which combines a number of disciplines or sometimes science and industry. Such projects can be more successful, which, I must say, is not appreciated in our country. Example? Poles are regularly ranked in the top three positions in the international chemistry competition. Hardly anyone writes about it!

NwP: *Our bulletin "Nauka w Polsce" does, although this issue belongs to the sphere of education and higher education.*

TK: I am very glad, but it is still not enough. In the States, when American pupils took fifth place once, it was on the news! In Poland, we don't appreciate some things that are very important. Isn't the fact that two pupils got a gold or silver medal more important than the fact that a goat with two heads was born somewhere or other and a murder was committed somewhere else? It worries me very much, because it has a very negative effect on the intellectual level of society. I could say quite brutally: the excess of information we experience today can sometimes make wise people even wiser, but it usually makes stupid people even more stupid.

NwP: *Thank you for the interview.*

KAROLINA OLSZEWSKA (PAP)

Source: *Nauka w Polsce*, a website of the Polish Press Agency (PAP). Original (in Polish) published on 23.12.2010.

Discovering Planets and Weighing Stars

The Successes of Polish Astronomers

When in early 1992, the prestigious magazine “Nature” informed us of the discovery of the first planet outside the Solar System, it was a global sensation. The person who discovered three planets revolving around a pulsar (PSR B1257+12) in the constellation of Virgo was Aleksander Wolszczan, Professor of Astrophysics at Pennsylvania State University. In 1992, Professor Wolszczan received the Prize of the Foundation for Polish Science for his discovery. The fact that millions of planets orbit the stars around us has been hinted at for a long

Over almost twenty years, Polish scientists have made many groundbreaking discoveries, including around twenty extra-solar planets, several hitherto unknown planetoids in the Solar System and hundreds of thousands of stars.

time. However, until Wolszczan’s discovery, science had not been able to locate them. The Polish scientist’s achievement resulted in the division of a new field of research – the astronomy of extra-solar planetary systems. Science has already identified over 500 planets orbiting more or less distant stars. Scientists carry the hope that eventually they will come across a planet similar to Earth, with conditions similar to those on Earth, allowing for some form of life. Polish astronomers – among them prizewinners of the Foundation for Polish Science programmes: Andrzej Udalski, Maciej Konacki and Grzegorz Pietrzyński, have been achieving significant successes in this field for many years.

Four telescopes on three continents

In 2002, Dr. Maciej Konacki, from the Nicolaus Copernicus Astronomical Centre of the Polish Academy of Sciences, currently Professor at the Adam Mickiewicz University in Poznań, developed

a bold observational programme. It required the use of a 10-metre Keck telescope in Hawaii, built on an extinct volcano at a height of 4,200 m above sea level. After three months, a painstaking analysis of the data revealed the first planet the size of Jupiter. This paved the way for a NASA grant to look for further planets with the help of this telescope. In 2005, he discovered the next giant planet in a triple-star system. The HD188753 stellar system in the constellation of Cygnus (the Swan) is approximately 149 light years from Earth. This discovery shed new light on the theory of the formation of great planets known as hot Jupiters. In that same year, the scientist also contributed to the discovery of a fourth planet in a system discovered earlier by Professor Wolszczan. From that moment, the graduate from the Nicolaus Copernicus University in Toruń became an astrophysicist of world renown. Professor Konacki, the prizewinner of the 2007 edition of the FOCUS programme, was one of the winners of the 2010 European Research Council’s (ERC) Starting Independent Research Grant. His participating project in the ERC competition *Eclipsing binary stars as cutting edge astrophysics laboratories of stellar structure, stellar evolution and planet formation*, known as “Solaris”, received the highest commendation from the voting panel of 17 European astrophysicists and won a 5-year grant of 1.5 million euros. The project’s objective is the discovery of planets orbiting binary stars. Work is underway on a network of four telescopes dispersed across South America, Africa and Australia, which will constantly automatically gather observational data. The first of these global network instruments was financed by the Foundation for Polish Science.

The biggest review of the sky

A Polish astrophysicist working in the USA since the 1980s, Professor Bohdan Paczyński, although



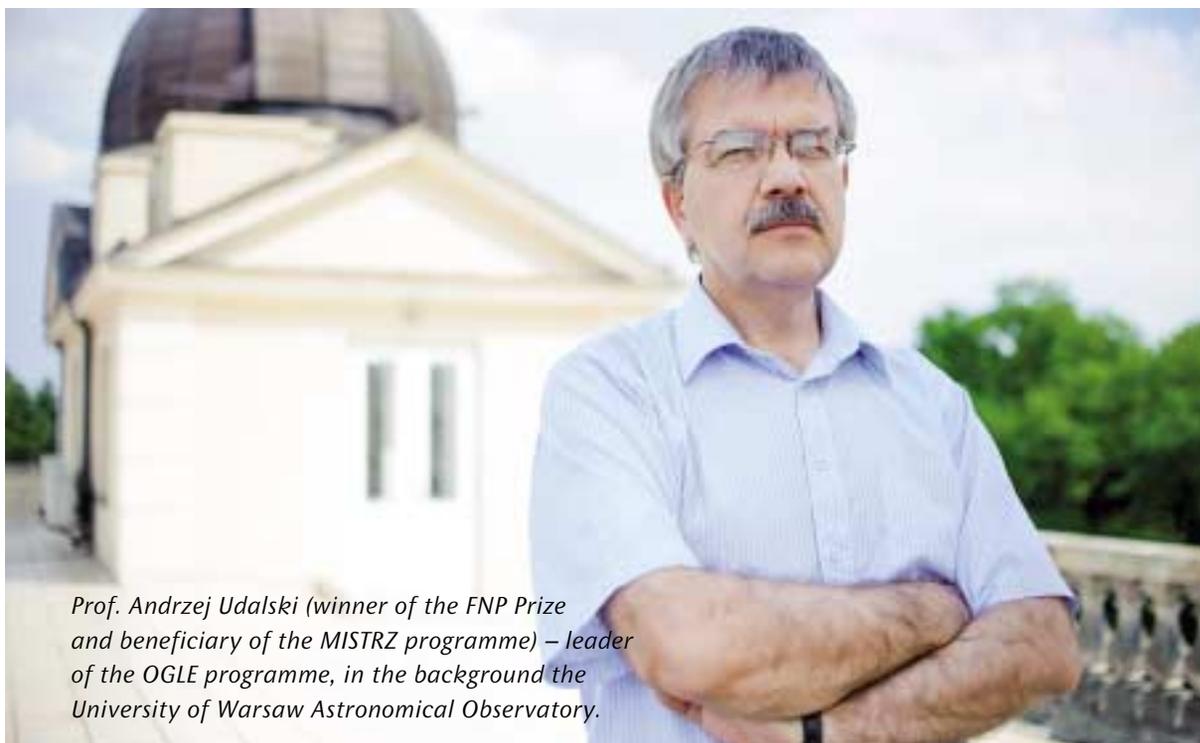
*The Polish telescope at the Las Campanas
Astronomical Observatory (Chilean Andes).*

*General view of the observatory,
the Irenée du Pont telescope can be seen
in the distance.*



he has not discovered any planet himself, has developed ways of finding them through the gravitational microlensing method. This phenomenon can be observed when an object (a star or a planet) comes close to a distant star shining in the background. According to Einstein's theory of relativity, the gravitation of such object bends the star's light. From Earth, it is visible as a characteristic change in the star's brightness. Inspired by Professor Paczyński (the prizewinner of the 1996 Foundation for Polish Science Prize), the "Optical

Gravitational Lensing Experiment" (OGLE) research team and programme was established. Since 1992, the research project has endeavoured to discover and observe the phenomenon of gravitational microlensing. It is conducted by scientists from the University of Warsaw's Astronomical Observatory with the aid of a telescope in the Warsaw Southern Observatory in Las Campanas in Chile. The OGLE programme is headed by Professor Andrzej Udalski – the prizewinner of the 2002 Foundation for Polish Science Prize and the MISTRZ (academic grants for professors) programme in 2003.
– *OGLE is one of the largest photometric views of the sky*, Andrzej Udalski says about the OGLE programme. Over almost twenty years, Polish scien-



Prof. Andrzej Udalski (winner of the FNP Prize and beneficiary of the MISTRZ programme) – leader of the OGLE programme, in the background the University of Warsaw Astronomical Observatory.

tists have made many groundbreaking discoveries, including around twenty extra-solar planets, several hitherto unknown planetoids in the Solar System and hundreds of thousands of stars. Professor Udalski constructed the mosaic camera for the telescope in Las Campanas. The work of Professor Udalski together with the OGLE team has opened the door for other research around the world.

During the first phase of the project, in 1992-1995, the OGLE team discovered the first cases of gravitational microlensing in the centre of the Milky Way and the first case of microlensing by a binary star. During the course of the second phase (1997-2000), the team managed to calibrate several so-called cosmic distance ladders (Cepheid variable stars), which led to a revision of the scale of distances in the Universe. The biggest achievement in phase III of the OGLE project was the discovery of unknown globes in distant planetary systems. In 2005, the OGLE team, in co-operation with the international PLANET project and the MOA team, discovered the planet OGLE-2005-BLG-390L b, the

smallest, most Earth-like planet of all the extra-solar planets known thus far. In 2006, the team discovered the OGLE-2006-BLG-109 configuration – an extra-solar planetary system similar to the Solar System, located almost 5,000 light years from Earth in the constellation of Sagittarius.

The fourth phase of OGLE consisted in the installation in 2010 of a unique scientific instrument – a 32-detector mosaic CCD camera in the observation station in Las Campanas. More than one quarter of a billion pixels cover a 30cm-diameter telescope and register in one frame an area of sky corresponding to more than seven faces of the Moon. Every year the OGLE-IV camera registers approximately 50 terabytes of data, making the project amongst the biggest in the world.

The scientists are observing hundreds of millions of stars and are in a position to register very small, distant planets that are similar to Earth. – *This top-notch instrument is the envy of scientists all over the world. Our instrument dwarfs the huge mosaic camera of the Kepler satellite used for looking for planets* – adds Professor Andrzej Udalski.

Measuring the Universe

In 2010, Professor Grzegorz Pietrzyński from the University of Warsaw's Astronomical Observatory, prizewinner of the 2007 FOCUS programme, as well as the TEAM V/2010, together with his colleagues abroad, returned to the calibration of distance scales (cosmic distance ladders) and published an article on the subject in the prestigious "Nature" magazine.

The team's discovery led to a better understanding of some of the most important objects in the universe. They are used for determining distances and testing theories of the evolution of the Universe.

The mass of a Cepheid variable star, which is closely related to its actual brightness, allowed for a precise determination of distance scales. The star whose mass was measured by the Poles, is one in a binary star system and is named OGLE-LMC-CEP-02227. Two large stars revolve around their common centre of mass in a cycle of 310 days. This is the first known eclipsing binary star system to include the classical Cepheid.

The name "Cepheid" comes from one of the first stars of its type to be discovered in the Cepheus constellation. When a star achieves a size several dozen times greater than the Sun, it creates conditions that speed up the pulsation of the outer layers. The star's radius and its surface temperature undergo periodic changes. Characteristic, periodic changes in the brightness of the stars can be observed. The best-known Cepheid variable star is the Polar Star.

In 1968, scientists noticed that the Cepheid masses, which are the basic parameters determining their properties and future fate, are different from the assumptions underlying the theories of evolution and pulsation of the stars. This incompatibility puzzled astronomers.

The only solution was a direct measurement of the Cepheid masses. Attempts thus far had come up with as much as a 30% error rate. The Cepheid



Dr. hab. Igor Soszyński, beneficiary of the 2006 HOMING programme, member of the OGLE team.

mass determined by the Polish scientists turned out to be over four times bigger than the Sun's mass. The accuracy is to one percent, which more or less corresponds to the accuracy with which we measure our weight on the bath-

room scales, though the scientists "weighed" the star from a distance of 160,000 light years! The measurements were achieved through the use of telescopes equipped with the most precise spectrographs in the world in Las Campanas and La Silla in Chile.

Also involved in researching this discovery were Igor Soszyński, PhD hab., from the University of Warsaw's Astronomical Observatory, a prizewinner of the Foundation's 2006 HOMING programme, as well as Dr. Dariusz Graczyk, and Dr. Bogumił Pilecki, working in the Araucaria team at the University of Concepción in Chile. The Araucaria programme is co-financed by the Ministry of Science and Higher Education and by the Foundation for Polish Science.

Determining the Cepheid mass is the first step in the direction of new research. Further observations should reveal more details and allow for an accurate calibration of the relationship between a star's brightness and its age. This is a basis for measuring distance in the Universe. Polish astronomers will continue to weigh and determine other parameters over the next few years. The OGLE project team is preparing a catalogue of its newly discovered variable luminosity stars. The entire catalogue will comprise over one million new variable stars.

KRZYSZTOF URBAŃSKI

Mums Can Do More

Science and motherhood does not appear to be a match made in heaven. Nevertheless, Polish science is gaining many talented researchers thanks to the fact that in spite of this, more and more women are trying to combine both. It is important to support such women, for to lose talents to nappies would be a terrible waste!

When the young Charles Hirshberg uttered the words: *My mother is a scientist* – the whole class fell silent. It was 1966, the United States, and to have a scientist mother caused a huge stir. Today, in Poland, even though 50 years have passed, the situation still does not look much better. Few chil-

laboratory work as the requirement of availability, long and frequent trips and engagement in team-work, are not compatible with raising children.

I have three children. And sometimes I prefer not to reveal that I am a mother to so many children, said Dr. Joanna Łojewska, from the Faculty of



Dr. Joanna Łojewska, beneficiary of the PARENT-BRIDGE programme.

dren have the honour of a professor or researcher mother such as the astrophysicist Joan Feynman, Charles Hirshberg's mother.

In our country, barely 20% of women rise to the top of their scientific career. A significant majority of promising women-scientists give up scholarly or

Chemistry at the Jagiellonian University in Kraków. *I fear the stereotype mindset. I have noticed that women with children are rarely thought of as professionals, researchers. As if motherhood was supposed to discredit us. Men often display the attitude of "a women studying exact sciences, and a mother to boot – what can she possibly know?"*

In 2004, when the bulletin of the Ministry of Science and Higher Education, "Sprawy Nauki" [Matters of

Science], first raised the issue of women in science, progressive heads of institutions spoke effusively about their female employees, but... they did not see a pressing need to support the most talented women or to do anything to keep them in science while allowing them the chance of a normal family life. Today, there is still a long way to go, for young researchers often find themselves in a situation where they are forced to sign a declaration that they are not planning to get pregnant. Heads of scientific institutions also tend to employ less talented male candidates, while proposing administrative positions to fledgling female PhD graduates, with the justification that after all, men have a family to provide for.

Returning to Science

Motherhood causes many impediments to a career in science because at the very time when men are usually focused on their postdoctoral degrees, many women are taken up with raising children. On returning from their maternity leave, they usually have so much catching up to do that they often fall behind their male colleagues.

Luckily, this situation is beginning to change. Initiatives offered by the Foundation for Polish Science, such as PARENT-BRIDGE programme – a programme for parent-scientists and pregnant women conducting scientific research in conditions that may be hazardous to their health – are helpful. This is a unique financial support programme that helps researchers make a smooth transition to scientific work after parental leave. Pregnant women carrying out scientific projects within the PARENT-BRIDGE programme can apply for funding to hire assistants who can substitute them when carrying out research that is inadvisable for women in pregnancy.

On the other hand, parents with at least a PhD degree, who have interrupted their scientific work to look after their offspring can apply for a research grant that will help them carry out an independent project, as well as science stipends for their individual Masters or PhD students.



Dr. Andrea Lipińska, beneficiary of the PARENT-BRIDGE programme, with her son Franek.

One of the PARENT-BRIDGE prizewinners is Dr. Aleksandra Biedrzycka, from the Institute for the Protection of the Environment of the Polish Academy of Sciences in Kraków. – *Thanks to this project, I will be able to develop cooperation with excellent scientific centres, with a view to creating my own research group. At the same time, thanks to the great number of people whom I will be able to involve in my project, I will have enough time to spend with my daughter Florka during these particularly important years of her life, throughout the terrible twos, and to nurture her growing interest in nature,* says Aleksandra Biedrzycka.

Thanks to PARENT-BRIDGE project, I will be able to develop cooperation with excellent scientific centres, with a view to creating my own research group.

The FNP subsidy was also awarded to Dr. Anna Kicińska, from the Faculty of Biology at the Adam Mickiewicz University in Poznań. She conducts research into the influence of STAT proteins on the bioenergetic analysis of cells. It is known that these

proteins play a significant role in many disease processes: they can adversely impact the immune system and can cause cancer. The recognition of various mechanisms of their activity in the organism therefore paves the way for conceiving new methods of treatment.

After the birth of my child, I had to take a two-year break from work, the first time after defending my doctorate and the second time after post-doctoral studies, the researcher recalls. – The problem is that during PhD studies, we only have three months of leave and when they are used up, we become practically unemployed if we want to look after our children, because as a PhD student, I did not have full-time employment. Likewise, the traineeship was only a part-time contract.

Funds from the PARENT-BRIDGE programme will help Anna Kicińska to return to science. The grant funds will allow for the financing of research costs and her own remuneration for the three years of the project's duration.

Mums are better organized

Professor Alina Ciach, who works at the Institute of Physical Chemistry, is convinced that assistance for female scientists brings measurable benefits.

She remembers the time in the 1980s when she was starting her doctoral studies. She had a one-year old child who was often sick. She managed to get her PhD thanks to the favourable attitude of her supervisor and the authorities of the Institute of Physical Chemistry of the Polish Academy of Sciences who allowed her to come to work two to three times a week and work from home on the remaining days. – *I am a theoretical physicist, I don't need apparatus or experiments. I got results and even though such an arrangement was approved on a trial basis, it worked out. Later, my female colleague worked using the same system and it was effective for her, too. I was told that the institute would benefit from keeping me on, even if I would have to work less intensively for some time. I got good research results. I had my second child, and I still managed to become a full professor at*

the age of 47 – not that late considering the conditions in Poland. Right now, I am coordinating international PhD projects thanks to the Foundation for Polish Science; I have achieved professional success. Everyone is happy.

Professor Ciach believes that women who remain in science today must be determined and well organized. Paradoxically, motherhood often helps foster this.

You need to plan the research and experiments well, in such a way that they cut into your personal life as little as possible. I am a master at this! – admits Dr. Joanna Łojewska. – And the PARENT-BRIDGE programme helps with this tremendously. Oriented towards researcher-mothers, it breaks down the stereotype of the woman-scientist who sacrifices her private life for a career in science. This simply makes me happy as a mother of three children – including little Zosia who suffers from diabetes. And money? It means a lot of work with young people, whom I will employ in a fantastically equipped research unit that I organized myself, at the Faculty of Chemistry at the Jagiellonian University. There we will fulfill our dream of “looking at atoms”. My personal gains from the grant will be contact with people, including some from the best centres in the world, who like me work on the borderline of engineering, surface science and spectroscopy.

Because of her children, Joanna Łojewska has not been away on a scholarship yet. – *Now I'll be able to visit my colleagues at the University of Bath and Lehigh, even if just for a couple of months. This is a change for me. Of course, the whole family will go. It is hard to leave the children – they are growing up so fast. You can't make up for that time, she says.*

So, is it the sandpit or the laboratory? Reading bedtime stories or supervising the scheduled morning research? It is possible that such dilemmas will become less prevalent among Polish researchers and that children with scientist-mothers will be nothing unusual.

OLGA WOŹNIAK

ACADEMIC FORUM, No. 5/2011

In Search of Inducement

High earnings and research grants are not enough to attract world-class scientists to Poland. At least not in the short term – according to the Foundation for Polish Science's experience and the survey it carried out.

According to one of our respondents, what distinguishes research work abroad from that in Poland is “the motivation for intensive research work, the willingness to take up new projects using new methods, scientific discussion, the independence of young researchers, the hope of gaining interesting results guaranteeing publication in renowned periodicals...”. Similar opinions were expressed by a decided majority of both Polish and foreign scientists – participants in the survey that we carried out in order to better understand how to encourage scientists abroad to come to work in Poland.¹

There and Back

For years we have been concerned that the most able Polish scientists are leaving Poland and going abroad for research work, to the detriment of science in Poland. Although the scale of this phenomenon is not known, we know that the more inviting research work conditions attract the best scientists to the United States and (particularly after Poland's accession to the EU) to Western Europe countries. The Foundation for Polish Science supports young scientists' trips abroad in the belief that it is an essential development in their career. At the same time, however, they hope to woo them back to Poland.

Until recently, those efforts were concentrated on a group of young scientists – the HOMING Programme, launched in 2006, was oriented towards fresh PhD graduates (up to four years after achieving their doctorates). It transpired from the Foundation's observations that it is during this very stage – as they build up independence, without having any stable employment – that scientists are most tempted to return home to

their country. Co-financed by the Finance Mechanism of the European Economic Area's funds, the programme was fairly small-scale – each year around 16 two-year grants were awarded, comprising individual stipends and other funds for the continuation of foreign cooperation and the implementation of research projects. The funds allocated for research were rather symbolic, but above all, were to encourage young Polish researchers to return to Poland by offering improved living and working conditions.

The evaluation of the HOMING programme indicated that in fact the programme did not have much influence over the decision to return home, but that it played a huge role in facilitating such returns. The questionnaire and interviews with programme prizewinners bore witness to the extraordinarily difficult situation faced by those returning to their home country, who suffer what we might term “post-return depression”. The unclear status of home-comers (usually returning to the same research institute or centre where they obtained their PhDs), low salary, lack of recognition of their new competence and lack of independence all posed serious problems. The less-than-enthusiastic attitudes of employers towards scientists returning from abroad would often add to their material difficulties. One of the recommendations of the international experts who evaluated the programme was that prizewinners be granted adequate working conditions in the employing institution.

New opportunities

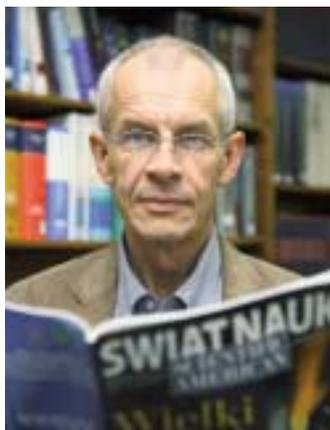
Both the rather limited funds available for home-comers, as well as scientists' trips to Poland, increased rapidly in 2008, when the FNP launched

¹ Survey report available on the Foundation's website www.fnp.org.pl



Prof. Wiesław Staszewski, beneficiary of the WELCOME programme.

new programmes financed by the European structural funds. This great financial injection sparked activity which would not have been possible earlier. The WELCOME programme offered state funds of almost 6 million zlotys per research project, remuneration for prizewinners (between 200,000 to 350,000 zlotys per year) and members of the



Prof. Leszek Roszkowski, beneficiary of the WELCOME programme.

team, and the TEAM programme provided research grants of 2 million zlotys (depending on the number of PhD students and young doctors in the team) and research stipends for members of the team. Under the HOMING programme (currently HOMING PLUS financed from IEOP funds), the research grants, as well as prizewinners' individual stipends, have gone

² There are two foreigners among the prizewinners of the fourth edition of the competition from the spring of 2011.

up significantly. Our initial assumption was that we were now, happily, in a position to overcome the problem that had always been the main obstacle to attracting world-class scientists to Poland - money.

This turned out to be premature, since despite intensive promotion of the programmes abroad, there were few takers. What is more, they were predominantly Polish scientists, who for various reasons (e.g. family) had been planning to return to Poland anyway. In the first three editions of the WELCOME programme there was not a single foreigner among the eight prizewinners², and only one foreigner out of 48 prizewinners selected within the TEAM. Hence the idea of the survey to

give us a better understanding of the willingness of scientists abroad (including Poles) to carry out research work in Poland and of their perceptions of scientific research in Poland and abroad.

Poor image of Polish science

As FNP's objective is to attract world-class researchers to Poland, it was important to reach scientists enjoying recognition in the scientific community throughout the various stages of their career. For that reason, the questionnaires were sent out mainly to FNP reviewers who were foreign or based abroad (650 people), as well as selected individuals (e.g. those working in prestigious foreign institutions). A total of 836 questionnaires were sent out, but only 160 were completed and returned. This rate of return (approximately 20%) does not seem so disappointing when taking into account the issues covered up by the research.

For many respondents, working conditions in Poland are probably not a burning issue and therefore not worth reflecting upon. One might expect that the respondents who decided to complete the questionnaires were those favourably inclined towards the Foundation, ones who had good contacts with or a friendly outlook towards Poland. When analyzing the research results, it had to be taken into consideration that the majority of individuals who are simply not interested in research work in Poland or have such a poor view of it that

*Prof. Stefan Dziembowski,
beneficiary of the 2011 WELCOME
programme, with his team.*

they do not generally treat it as a serious option, simply did not respond. Around half of the respondents comprised Poles, the majority of whom had been abroad for over 10 years, and who generally maintained some cooperation with Poland. The foreign respondents based their opinion on their direct experience of collaboration or work in Poland and on the relations with their collaborators (including Poles), on reviewed projects and publications, on the (small) presence of Polish publications in leading periodicals, and, often by their own admission, on stereotypes. Both groups gave pretty negative assessments of the conditions and quality of scientific work in Poland. Interestingly, the most commonly mentioned differences did not hinge only upon the amount of financing, but on work dynamics, the motivation system and the scientists' degree of engagement. The Polish respondents devoted a lot of space to "the rigid structure of Polish science". The next most commonly appearing complaint was the lack of able collaborators and mobility in Polish teams, as well as research funds. The issue of scientists' salaries came much further down the list. Foreign respondents, on the other hand, pointed out the smaller visibility and prestige of research carried out in Poland.

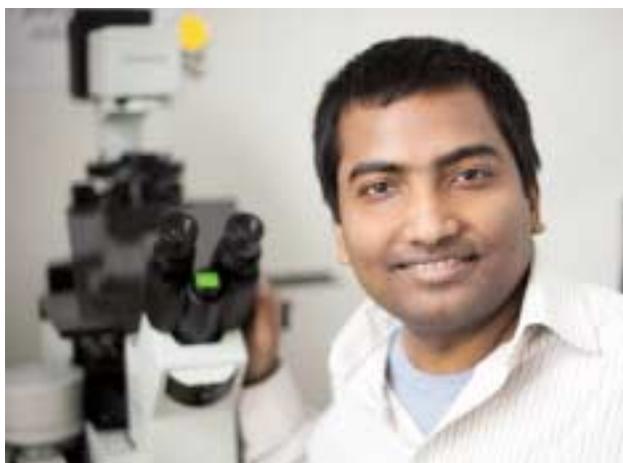
At the same time, as many as 70% of Polish respondents declared a willingness to consider work in Poland. What is striking is that a decided majority are people those under 40 years of age and over 60 years of age. The first group are scientists in the stage of creating their independent position and their first own research teams. The second are scientists approaching retirement age. Those least interested in working in Poland are researchers between 41 and 50 years old, hence at the stage of



building up their own teams and the dynamic development of their career (this group comprised the smallest number of respondents, possibly precisely because of the minimal interest in the idea of working in Poland).

More independence and clear criteria for advancement

The declared interest in research work in Poland does not mean, of course, that our respondents are already packing their suitcases. One of the crucial conditions necessary for them to consider work offers in Poland concerns the research position. Polish scientists who have been successful abroad have no desire to return to an environment in which – for example, due to the lack of a post-doctoral degree – they will be reduced to playing a bit part. They fear fraught access to financing, unclear methods for advancement or rigid, antediluvian structures. Radical demands started appearing ("the abolition of postdoctoral degrees", "automatic recognition of foreign science degrees and rankings", "the replacement of the postdoctoral degree with the US model of the tenure system"), as well as more moderate ones ("making it possible for those working abroad to complete their post-doctoral degree", "a logical application system and rules of fair play during assessment", "legible and transparent criteria for awarding research grants", "open competition", "clear promotion cri-



Dr. Krishendu Ganguly, beneficiary of the HOMING PLUS programme.

teria”, “loosening of the rigid, antediluvian hierarchies in Polish science”).

Polish scientists, if they are fairly advanced in their career, perceive the research community in Poland



Prof. Leslie Kozak, beneficiary of the 2011 WELCOME programme.

as less dynamic, less inspiring and less creative. A return to Poland may therefore threaten their career freedom or limit their chance of participation in world science (e.g. returning to scientific work abroad). That is why the condition of independence, access to funding and setting up their own research teams was stipulated so often. The responses of foreign scientists indicated a similar apprehension about closing off opportunities for returning to research work abroad. Almost 68% of respondents expressed a willingness to consider work in Poland, but more detailed explanations in the research results indicate that this relates to collaboration rather than full time work. They usually want to maintain employment in a foreign

institution and are therefore more interested in short stays supplemented with virtual contact.

What impact does this have for us?

It is distressing to see survey results indicating that neither Polish nor foreign scientists (irrespective of their earlier contact with Poland) hold favourable views of the conditions and quality of research work in Poland compared to other countries they currently work in (particularly North America and Western Europe). However, what does emerge is that the negative opinions were not limited to funding issues, even though the most frequently cited weakness of science in Poland related to the level and system of funding. The old formulas of “excellent people, poor system” or “excellent scientists, the problem is only a financial one” no longer hold. From the opinions expressed by the respondents, a picture emerges in which scientists and their work are shaped by the system: they lack motivation, engagement, openness to cooperation. Respondents homed in on the poor work dynamics and scientists’ lack of involvement, as well as the rigid, antediluvian structure, whereas foreign respondents – on the smaller visibility and prestige. On a happier note, these opinions do not exclude taking up work in Poland. A valuable conclusion from the research is confirmation of a great willingness to return to Poland among young Polish researchers who want to set up their first research teams. Luring them to the country with an attractive offer appears to be fairly feasible. The respondents’ suggestion that those working in Poland need greater flexibility also provides food for thought. As the survey shows, it is certainly worth trying to support cooperation among the best Polish and foreign teams. Not only can such collaboration translate into the quality of research conducted and its presence in prestigious periodicals, but it can also be an effective way of promoting Polish science abroad.

MARTA ŁAZAROWICZ-KOWALIK

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