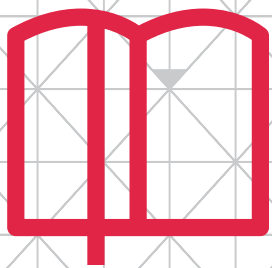
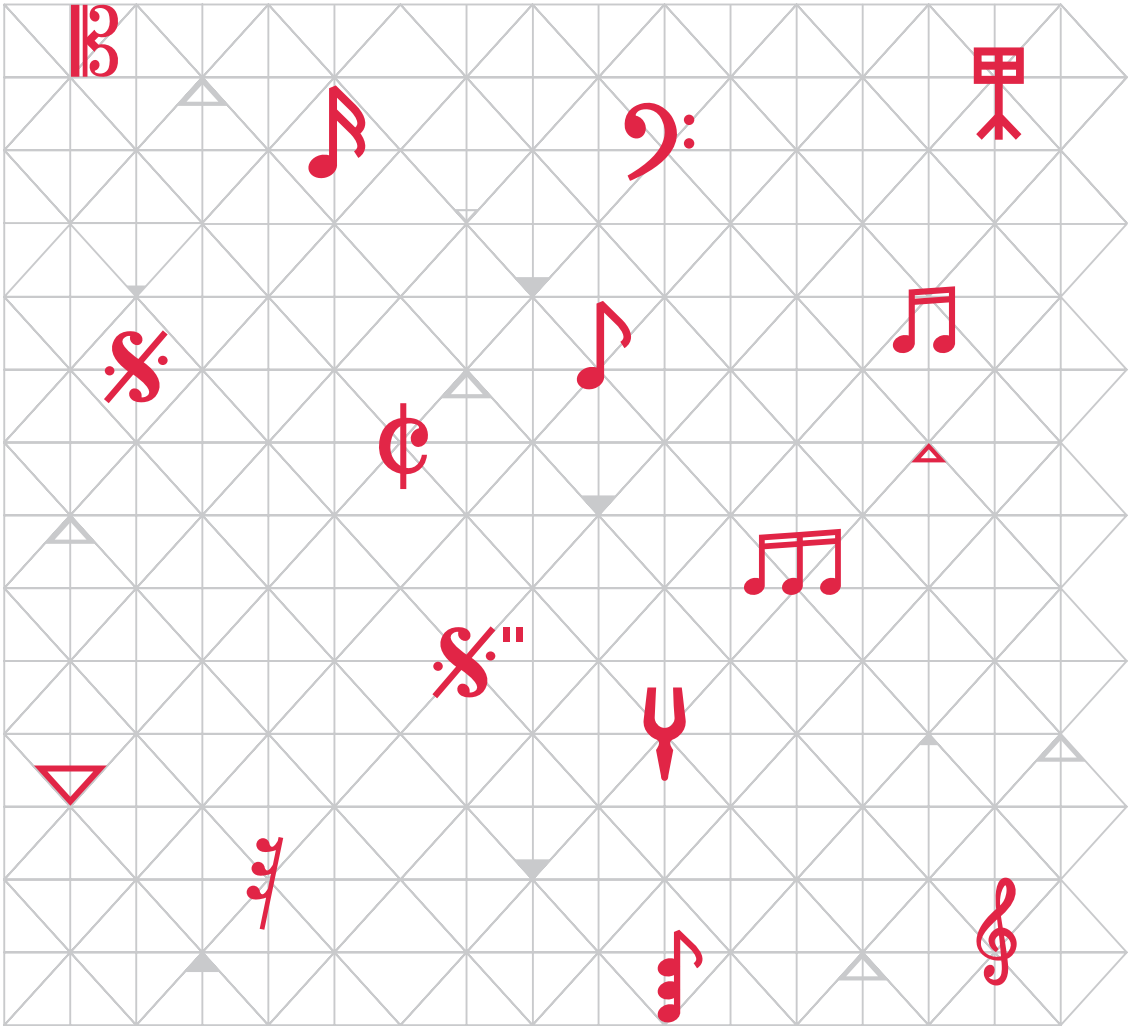
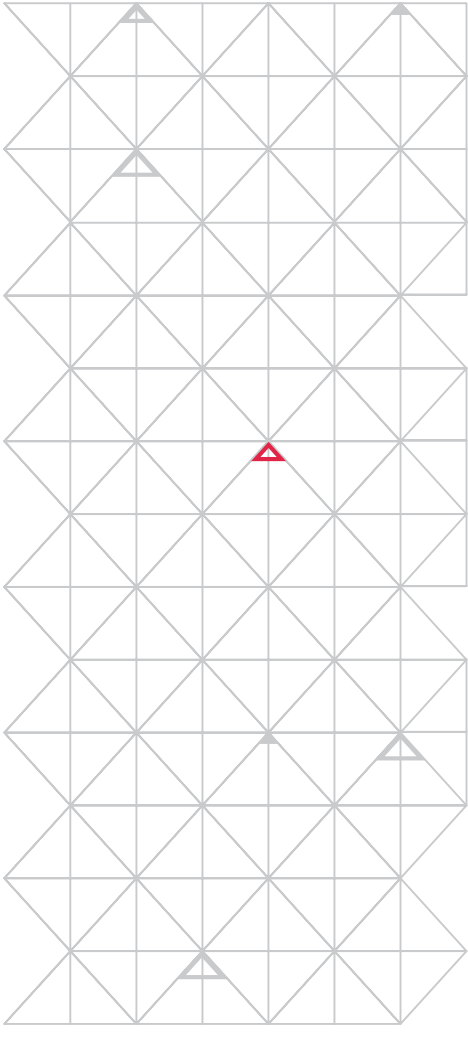
INFORMATION BROCHURE



NATIONAL SCIENCE CENTRE
POLAND





THE NATIONAL SCIENCE CENTRE

The National Science Centre (NCN) is a government executive agency set up to fund basic research. Thanks to this institution, researchers themselves can now decide how a substantial portion of research funds is allocated from the state budget.

Basic research is original experimental or theoretical research work that strives to expand knowledge of the fundamentals of phenomena and observable facts. It is not intended to have any direct commercial application or use.

NCN in numbers

(March 2011 – December 2016)

REGULAR CALLS

74

CALLS ANNOUNCED

65

CONCLUDED CALLS

12 985

PROJECTS AWARDED FUNDING

1,3

BN EUR

ALLOCATED FOR RESEARCH PROJECTS

INTERNATIONAL CALLS

27

CALLS ANNOUNCED

20

CONCLUDED CALLS

39

PROJECTS AWARDED FUNDING

5,3

M EUR

ALLOCATED FOR RESEARCH PROJECTS

THE STRUCTURE OF RESEARCH FUNDING IN POLAND

National budget for research 2017: PLN 7.4 bn (€1.8 bn including EU structural funds)

Strategic & executive level

MINISTRY OF SCIENCE AND HIGHER EDUCATION (MNISW)

MINISTRY'S PROGRAMMES AND AWARDS

Executive agency level

BASIC RESEARCH

NATIONAL SCIENCE CENTRE

Budget 2017: 1,2 BN PLN (€285.6 M)

APPLIED RESEARCH

NATIONAL CENTRE FOR RESEARCH AND DEVELOPMENT

MANAGEMENT

Zbigniew Błocki

is the director of the National Science Centre and the professor at the Faculty of Mathematics and Computer Science of Jagiellonian University in Krakow. His main research areas are complex analyses of several variables and partial differential equations. He has worked in research centres all over the world, for example in the USA (as a recipient of the Fulbright senior grant), Sweden and Germany, also giving invited lectures and conducting courses. In the years 2010-2015 he was a member of the Council of the National Science Centre (NCN). In the years 2011-2012 he held the office of the director of the Institute of Mathematics, Jagiellonian University; he was also a Vice Chair of the Executive Organising Committee of the 6th European Congress of Mathematics in Krakow, in 2012. He received the Zaremba Prize of the Polish Mathematical Society in 2007, the Polish Prime Minister Award for exceptional scientific achievements in 2008 and the Jagiellonian Laurel in 2014.

Janusz Janeczek

is the Chair of the NCN Council as well as mineralogist and geologist. He graduated from the University of Wrocław in 1976, where he worked until 1984. Since 1985 he has been a faculty member of the University of Silesia and held the position of Rector for two terms in the years 2002-2005 and 2005-2008. He was the Vice-Rector for research, international cooperation and promotion of the university (1999-2002). During his second term as rector he was elected Vice-President of the Conference of Rectors of Polish Universities. In the years 1993-1999, he acted as the Vice-Dean of the Faculty of Earth Sciences, the University of Silesia, where he currently is the head of the Chair of Geochemistry, Mineralogy and Petrography. Between 1998 and 2002 he was the president of the Mineralogical Society of Poland. He is the chairman of the Mineralogical Committee of the Polish Academy of Sciences; a member of the Mineralogical Society of Poland, the Mineralogical Society of America and the Russian Mineralogical Society. He has received scholarships from the British Council (University of Manchester), the Fullbright Scholar Program (University of New Mexico) and the Japanese Association for the Promotion of Science at Hiroshima University. Laureate of the Polish Academy of Sciences' Ignacy Domeyko Award (1986). He was a Polish representative in the Selection Board of the Erasmus Mundus Joint Master Courses and Joint Doctorate Programs.

ORGANISATION CHART

D

THE NCN DIRECTOR

The National Science Centre is managed by a director selected by the NCN Council in an open competition process. The Director acts as NCN's representative, oversees the completion of NCN tasks and its financial management. The Director is authorised to act as an independent legal representative on behalf of NCN.

R

THE NCN COUNCIL

The National Science Centre Council consists of distinguished researchers representing different academic fields. The Council sets out priority basic research areas that match the Polish state development strategy, specifies call regulations, allocates funding, publishes calls for doctoral scholarships and post-doctoral internships. The Council also selects members of the Expert Teams who are responsible for research proposal evaluations.

K

THE NCN COORDINATORS

NCN Coordinators are scientific officers responsible for launching calls for proposals for research projects and project evaluation process management. Their responsibilities also include evaluation of the impartiality of the peer review process. In particular cases, the Coordinator, following consultation with the opinions of the Expert Teams, may change the order of research proposals on the ranking list.

B

NCN OFFICE

The NCN Office is a structure combining the efforts of a number of the NCN's departments and teams. On a day-to-day basis, the Office is responsible for processing calls for proposals and organising meetings for experts at the peer review evaluation stage. The Office also provides support to the applicants and answers their queries. Furthermore, its major responsibilities include administrative and financial management of grant agreements and fostering international cooperation.

GRANTS

The National Science Centre finances basic research carried out in the form of research projects, PhD scholarships and postdoctoral internships. One of the priorities of the Centre is to support and develop the scientific careers of pre-doctoral and doctoral researchers about to embark on a career in research (maximum 7 years since PhD award). The Centre allocates more than 20% of its budget towards grants for this group of researchers.

The NCN offers ten funding schemes which take into account the varied needs of academia ranging from researchers at the outset of their career to the most prominent academics. Furthermore, the NCN, in cooperation with foreign partners, jointly announces international calls.

The NCN finances some research equipment, however large-scale research infrastructure is financed by the Ministry of Science and Higher Education. The funding programmes are open to a wide range of applicants and the proposals must be written both in Polish and English. Although parties signing contracts with the NCN are required to be Polish institutions, their research teams may include foreign researchers.

NCN SUBJECT AREAS

HS – ARTS, HUMANITIES AND SOCIAL SCIENCES

HS1 Fundamental questions of human existence and the nature of reality

HS2 Cultures and cultural creativity

HS3 The study of the human past

HS4 Individuals, institutions and markets

HS5 Norms and governance

HS6 Human nature and human society

ST – PHYSICAL SCIENCES AND ENGINEERING

ST1 Mathematics

ST2 Fundamental constituents of matter

ST3 Condensed matter physics

ST4 Physical and analytical chemical sciences

ST5 Materials and synthesis

ST6 Computer science and informatics

ST7 Systems and telecommunications engineering

ST8 Products and processes engineering

ST9 Astronomy and space research

ST10 Earth system science

NZ – LIFE SCIENCES

NZ1 Molecular biology, structural biology, biotechnology

NZ2 Genetics, genomics

NZ3 Cellular and developmental biology

NZ4 Biology of tissues, organs and organisms

NZ5 Human and animal noninfectious diseases

NZ6 Human and animal immunology and infection

NZ7 Diagnostic tools, therapies and public health

NZ8 Evolutionary and environmental biology

NZ9 Applied life sciences and biotechnology

FUNDING SCHEMES

PRELUDIUM

Aimed at pre-doctoral researchers starting their career in research. Projects carried out within the PRELUDIUM scheme last from one to three years and are executed with the assistance of a supervisor. Research financed under this scheme does not have to be related to the applicant's PhD dissertation.

SONATINA

Call for research projects carried out by researchers with a doctoral degree obtained within the last 3 years prior to the submission of the proposal. Funding under the programme includes full-time employment in Polish research institutions and a visiting fellowship at an institution abroad for 3 to 6 months. The call's awardee receives funding allowing them to carry out their research at the employing institution.

ETIUDA

This funding opportunity is addressed to doctoral candidates. Awardees receive a scholarship covering the time needed to prepare their PhD dissertation, i.e. from six to twelve months. They should also plan a research stay abroad lasting from three to six months which will be funded solely by the NCN. The awardee is obliged to obtain their doctoral degree within twelve months of completing the scholarship, but not earlier than six months since the commencement of the funding.

SONATA

Targeted at emerging researchers with a doctoral degree. This funding opportunity hopes to support Principal Investigators to embark on an innovative basic research project using modern research facilities and/or methodology. Researchers within two to seven years of the award of their doctoral degree are eligible to apply.

SONATA BIS

This funding scheme gives researchers the incentive to build a new research team run by academics with a doctoral degree or academic title within five to twelve years since their PhD award. This scheme is primarily addressed to associate professors and professors. SONATA BIS supports the creation of teams which conduct the most innovative research projects.

MINIATURA

A funding opportunity financing single activities that serve as parts of larger basic research. Intended to help researchers in applying for future funding projects under other NCN programmes. It is addressed to individuals who have obtained their doctorate degree within 12 years of submitting their application, and who have not been principal investigators to any research projects, nor have been NCN grantees. Additionally, a prospective MINIATURA candidate is expected to hold a contract of employment with the host institution acting as the applicant..

UWERTURA

Funding opportunity for fellowships in international research teams conducting ERC grants. Addressed to researchers with a doctorate, planning to apply for an ERC grant. The programme seeks to support researchers working in Polish host institutions to successfully apply for European resources, and to increase their share among laureates of ERC grants.

MAESTRO

Designed for advanced researchers wanting to conduct pioneering research, including interdisciplinary research important for the development of science. Projects within this funding scheme should surpass the current state of knowledge, lead to the creation of new paradigms, or forge pathways to new frontiers in the field. Researchers with at least a doctoral degree, at least five publications in renowned academic journals in the past ten years and those who have managed to complete at least two research projects selected through a call for proposals procedure are eligible to apply.

TANGO

Open to projects that plan to put into economic and social application the results of basic research showing significant innovative potential. Eligible to apply are Principal Investigators or investigators in projects in basic research awarded funding under national or international calls, or researchers who have acted as main researchers/supervisors/scientific tutors upon the consent of the Principal Investigator. TANGO is a joint initiative of the National Science Centre and the National Centre for Research and Development (NCBR), designed to support research institutions and universities in commercialising their research output such as innovative technologies, products and services and foster cooperation between academia and industry.

OPUS

This funding scheme is intended for a wide range of applicants, irrespective of their research experience. Research proposals may include the purchase or construction of necessary research equipment. Projects are carried out individually by a Principal Investigator or a research team composed of a Principal Investigator and any number of researchers.

HARMONIA

Aimed at applicants wanting to carry out international projects which are not co-financed from foreign sources. Research proposals may include projects conducted directly in cooperation with foreign partners as part of international programmes/initiatives or using large-scale international research infrastructure. The purchase of research equipment is not allowed under this scheme.

POLONEZ

A funding scheme addressed to incoming researchers who may apply for 12-24-month fellowships in host institutions in Poland. Applicants must hold a doctoral degree or have at least four years of full-time research experience, and on the condition that they have not resided or carried out their main activity (work, studies, etc.) in Poland for more than 12 months in the period of 3 years preceding the call deadline.

This scheme has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 665778.

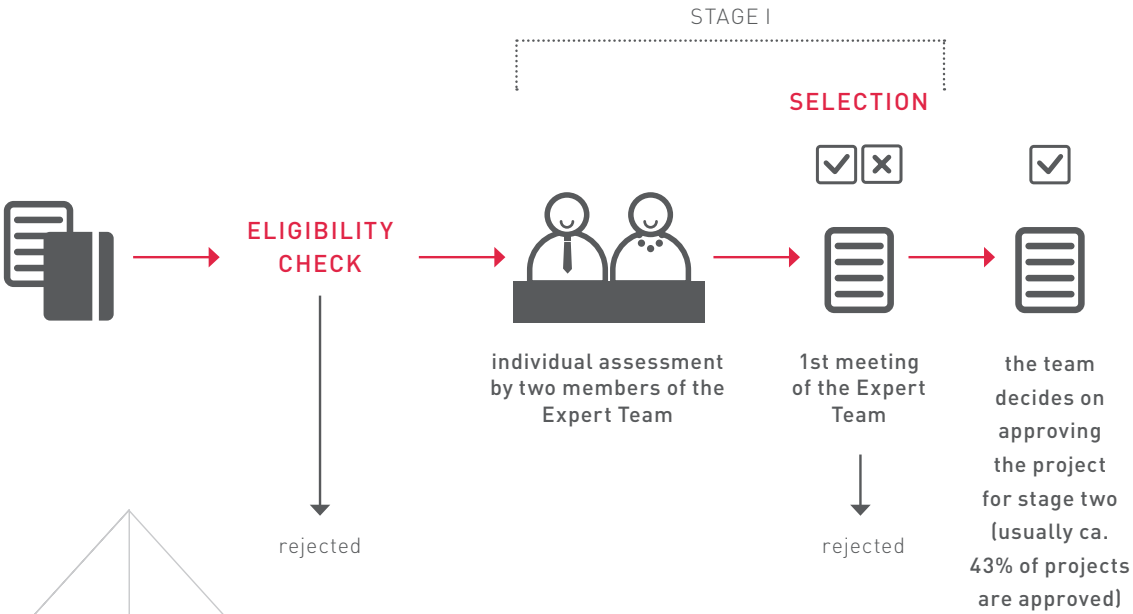
PROPOSAL EVALUATION PROCESS

In order to select the very best proposals, the NCN employs an evaluation procedure based on a two-stage peer review procedure. The NCN Council adopted a general rule of taking into account, in carefully considered proportion, both the quality of the proposal and the achievements of the researchers. The evaluation procedure starts with an admissibility and eligibility check performed by the NCN Coordinators which covers assessing the proposal for completeness and accuracy of submission. The projects are afterwards peer reviewed by members of the NCN Expert Teams (groups of experts selected by the NCN Council among distinguished academics appointed by the NCN Director for the purpose of proposal evaluation) and consists of two stages.

STAGE ONE – the members of the Expert Teams prepare individual assessments of the proposals. Their assessments are a starting point for discussion of the proposals during the first panel session. The decision to reject or approve a proposal for stage two is taken collectively by the team, preceded by a discussion. The Expert Teams prepare a shortlist of proposals to be sent to stage two of the evaluation.

STAGE TWO – proposals are evaluated by External Reviewers, including foreign-based ones, whose reviews are discussed by the Expert Teams during the second panel session. External Reviewers are selected by coordinators, based on the recommendations of the Expert Teams. The final evaluation score for individual proposals and drawing up a final ranking list of projects approved for funding is in the hands of the Expert Teams. In some calls, an interview is organised at the second stage of evaluation.

PROPOSAL EVALUATION PROCESS



STAGE II

ETIUDA, SONATINA, SONATA,SONATA BIS, UWERTURA, POLONEZ

interview

OPUS, PRELUDIUM, MAESTRO, HARMONIA

individual assessment by two members of the Expert Team

FINAL LIST OF QUALIFIED PROPOSALS

2nd meeting of the Expert Team

rejected

ca. 26% qualified for funding

RESULTS

SIGNING OF THE GRANT AGREEMENT

Due to the different evaluation procedures, the diagram does not include MINIATURA and TANGO calls.

STATISTICS

Under the calls concluded in 2016, excluding TANGO, 9572 applications were submitted totalling ca. € 1.14 billion, out of which 2371 were awarded funding ca. € 273,5 million.

Chart: Number of proposals submitted and grants awarded* in calls concluded in 2014 by research domain, including success rate**

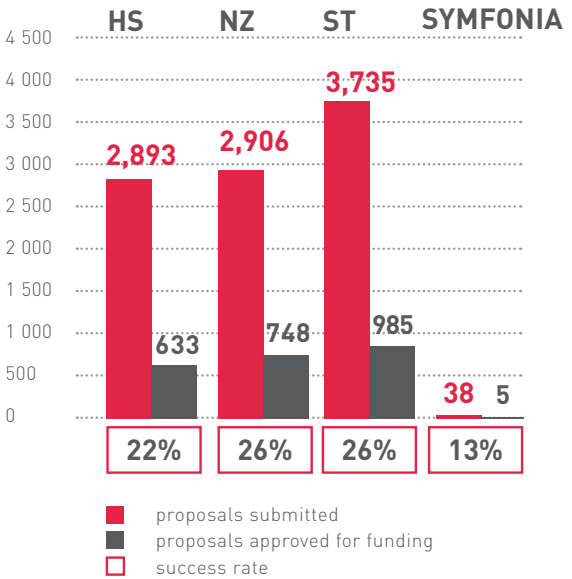
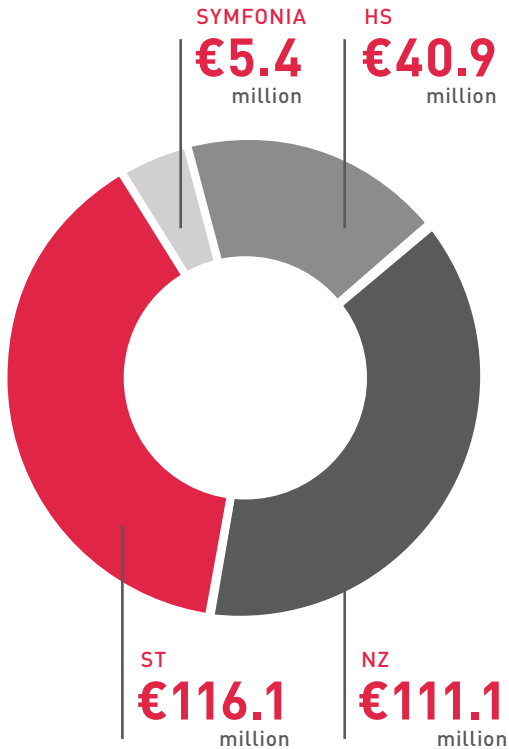


Chart: Resources awarded under funding schemes concluded in 2016, by research area*



* Data does not include the TANGO funding scheme.

** Success rate is the percentage of proposals that were awarded funding; it is calculated as the ratio of the number of proposals awarded to the number of proposals submitted.

INTERNATIONAL COOPERATION

Among its priorities, the National Science Centre supports collaboration of Polish researchers with international partners. Once every year, the NCN publishes the HARMONIA call for international research projects. The Centre also participates in multilateral initiatives, supported by the EU framework programmes, and launches calls for research projects carried out jointly by international research teams. Since 2016 the NCN has been the coordinator of the QuantERA programme in Quantum Technologies, co-financed by the EU, involving 32 research funding organisations . The NCN also enters into bilateral activities with international research funding organisations. Beginning in 2014, the Centre has cooperated with Deutsche Forschungsgemeinschaft (German Research Foundation, DFG); the relationship has resulted in two editions of BEETHOVEN, a funding opportunity for Polish-German projects in Social Sciences and Humanities and selected fields of Physical Sciences. In 2016, the NCN signed an agreement with Lietuvos mokslo taryba (Research Council of Lithuania, LMT) preparing ground for the launch, in the second half of 2017, of a call for Polish-Lithuanian projects in all disciplines supported by the NCN. The Centre also cooperates with the European Research Council (ERC), an institution funding groundbreaking research projects in Europe. The Centre is also a member of Science Europe (SE), a network of research funding agencies and research institutions from all across Europe.

The NCN's international cooperation (2015/2016)

NAME	SCOPE
HERA (Humanities in the European Research Area)	Humanities
NORFACE (New Opportunities for Research Funding Agency Co-operation in Europe)	Social Sciences
BEETHOVEN call for proposals for Polish-German teams	Arts, Humanities and Social Sciences, selected disciplines of Physical Sciences and Engineering
PIRE (Partnerships for International Research and Education) we współpracy z National Science Foundation	All disciplines financed by NCN and National Science Foundation
ERA-NET Smart Urban Futures SUGI (Sustainable Urbanisation Global Initiative)	Urban Studies
BiodivERsA (Consolidating the European Research Area on biodiversity and ecosystem services)	Biodiversity
JPI-EC- AMR: ERA-NET COFUND on Antimicrobial Resistance	Antimicrobial Resistance
ERA-CAPS (ERA-Net for Coordinating Action in Plant Sciences)	Molecular biology of plants
CHIST-ERA (European Coordinated Research on Long-term Challenges in Information and Communication Sciences & Technologies)	Information and Communication Technologies
M-ERA.NET (ERA-NET for Materials Research and Innovation)	Materials sciences and engineering
Quant-ERA (ERA-NET COFUND on Quantum Technologies)	Quantum Technologies

2016 NCN AWARD

The National Science Centre Award is given to young researchers for considerable achievements in basic research. Laureates are selected from amongst principal investigators of research projects carried out in Polish host institutions, documented with publications. The award was established by the Council of the National Science Centre in February 2013. The distinction in three research domains (Arts, Humanities and Social Sciences; Life Sciences; Physical Sciences and Engineering) is conferred by a committee comprising the Director and Council of the Centre as well as representatives of the award's sponsors.

It was the fourth edition of the award for young researchers. The award gala took place on 12th October 2016 at the Gallery of 19th-century Polish Art at the Cloth Hall in Krakow. The award gala took place on 12th October 2016 at the Gallery of 19th-century Polish Art at the Cloth Hall in Krakow. The 2016 NCN Award in the HS research domain was funded by GRUPA AZOTY S.A. In the ST research domain the Award was funded by EDF Polska S.A., while in NZ – BIPROSTAL S.A. and KOKSOPROJEKT BIS Sp. z o.o.

ARTS, HUMANITIES
AND SOCIAL SCIENCES

LIFE
SCIENCES

PHYSICAL SCIENCES
AND ENGINEERING

ARTS, HUMANITIES AND SOCIAL SCIENCES

DR HAB. MARCIN SZWED

Institute of Psychology,
Jagiellonian University

Research achievement: large-scale research on the plasticity of the human brain in people with impaired eyesight and hearing, disproving some long-standing theses on the division of the brain into separate sense--related parts.

It was believed that the brain is divided into separate parts, each processing information from a separate sense. The research conducted by dr hab. Marcin Szwed and his team question this theory, contributing to a change in our understanding of the way the human brain works. This discovery was made thanks to a series of experiments in which people with normal eyesight learnt to read Braille. Although the activity draws on the sense of touch, it was found that during months of learning, changes in the brain were taking place not in the sensory but in the visual cortex. Thus dr Szwed's team proved that a healthy adult's brain can to some extent reorganise itself. The results of the research have been published in prestigious scientific journals and enjoyed considerable interest from both scientific circles and popular media at home and abroad.

LIFE SCIENCES

DR HAB. KATARZYNA STAROWICZ-BUBAK

Institute of Pharmacology,
Polish Academy of Sciences

Research achievement: determining the role of the endocannabinoid system in the development and therapy of chronic pain; developing a new pharmacological approach to the therapy of osteoarthrits-related pain.

Dr hab. Katarzyna Starowicz-Bubak develops new strategies of treating chronic pain. The chief goal of her research is to increase the effectiveness of neuropathic and osteoarthritis-related pain treatment by homing in on the endocannabinoid system. The researcher's important achievements include describing a new, complex mechanism of body-generated anandamide in neuropathic pain. A better understanding of the interactions between cannabinoid and vanilloid receptors during the disease allowed for identifying urea piperazine derivatives as the substances showing higher therapeutic effectiveness and a more favourable profile than currently used compounds, which target selectively the one receptor system. Dr hab. Starowicz-Bubak and her team's results may contribute to improving the effectiveness of analgesic treatment in patients diagnosed with chronic pain syndromes.

PHYSICAL SCIENCES AND ENGINEERING

PROF. DR HAB. MIKOŁAJ BOJAŃCZYK
Institute of Informatics,
University of Warsaw

Research achievement: outstanding contribution to automata theory and logic

Prof. Mikołaj Bojańczyk in his work in the field of theoretical computer science, logic and automata theory has solved several well-known open problems, and developed a general method allowing for translating problems of automata theory into algebra. In his most important works, he has compared the computational powers of different computational models, e.g. the variants of tree automata and formalisms interpretable in tree structures.

PERFORMING
FOR POLISH RESEARCH

2017

The National Science Centre, Królewska 57 street, 30-081 Kraków, phone: +48 12 341 90 03, fax: +48 12 341 90 99,
e-mail: biuro@ncn.gov.pl, www.ncn.gov.pl