

Finnish Centre of Excellence Programme: impact through research funding



**CENTRES OF EXCELLENCE
IN RESEARCH**



**ACADEMY
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CENTRES OF EXCELLENCE IN RESEARCH

The Academy of Finland's Centre of Excellence Programmes are a success story in Finnish research. Centres of Excellence (CoE) are at or near the international cutting edge of research in their field. They carve out new avenues for research, develop creative research environments and innovations, and train new talented researchers for the Finnish research and business sectors.

The Academy of Finland asked the Centres of Excellence of the 2014–2019 programme for a self-assessment of impact in connection with their final reporting.

The quotes in this brochure have been taken from the impact stories prepared by the CoEs.

International impact lays foundation for national influence



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International impact lays foundation for national influence

Atmospheric science – from molecules and biological processes to global climate research

“Our researchers have actively participated in the social debate in this field of research with a view to strengthening the role of scientific knowledge in policymaking. It’s also essential to form ways of working in which the latest research data and best practices are widely adopted internationally.”

Director: **Markku Kulmala**, Academician of Science



Biomembrane research: from lipid-protein interactions to biological functions

“We have developed new research technologies and tools with significant commercial potential. In addition, we have boosted the international appeal of our host universities by increasing expertise and attractiveness in this field of research and by investing significantly in the development of research infrastructures.”

Director: Professor **Elina Ikonen**



Research into cardiovascular and metabolic disease

“Scientific observations and discoveries can influence, for instance, the content of international treatment protocols. In the case of new diagnostics, we have been able to develop genetic tests for use in clinical practice as well as new diagnostic imaging methods. For example, new significant information has been uncovered on the mechanisms and effects of medicines used to treat diabetes.”

Director: Professor **Juhani Knuuti**



Impact produces growth



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Impact produces growth

Research on solar long-term variability and effects

“Our results have created new lines of inquiry for forecasting the space climate and its impacts on the climate system. These research results will have concrete social and economic significance in the future.”

Director: Professor **Kalevi Mursula**



Molecular engineering of biosynthetic hybrid materials

“The growing interest of consumers and industry in biosynthetic materials generates long-term business opportunities.”

Director: Professor **Olli Ikkala**



Translational cancer biology

“We have improved the training of students, researchers and clinicians, and thus had a direct impact on society. The discovery of new treatments and development of new technologies have led to numerous patent applications and cooperation with pharmaceutical companies, which has directly boosted the economy.”

Director: **Kari Alitalo**, Academician of Science



Continuing impact



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Continuing impact

Analysis and dynamics research

“We have trained a new generation of mathematicians with a more versatile background and who are capable of monitoring the development of pure and applied mathematics and better at addressing their scientific and societal applications.”

Director: Professor **Antti Kupiainen**



Research on mitochondria, metabolism and disease (FinMIT)

“One of the desired effects is to attract the smartest and most creative young people to study science and ultimately the molecular pathology of mitochondria.”

Director: Professor **Howard Jacobs**



Experimental and computational developmental biology research

“Successful multidisciplinary means not only cooperation between people in different fields, but also new ideas that result in something that does not clearly fall in a specific field. Using computational modelling in teaching development biology is at a very early stage, and the models of our CoE are among the very few that are also suitable for teaching purposes.”

Director: Professor **Jukka Jernvall**



Laser scanning research

“We have achieved significant societal impact, multidisciplinary and close cooperation with business companies and other societal partners. We have trained laser scanning experts who are able to respond to the needs of a society in which problems are increasingly solved with the help of laser scanning and virtual reality. Finland has become a leading country in this field.”

Director: Professor **Juha Hyypä**



Impact on human activities and knowledge to support policy



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Impact on human activities and knowledge to support policy

Reason and religious recognition research

“The spread of right-wing populism and polarisation, especially since 2016, has strongly highlighted the other side of the coin in terms of ideologies that support democracy and multiculturalism, such as radical identities, filter bubbles and various forms of radicalisation. We have deliberately sought to take a stand on these issues guided by our own expertise.”

Director: Professor **Risto Saarinen**



Molecular biology of primary producers

“Our Centre of Excellence has systematically made use of fundamental research into photosynthesis in the development of applications. The better we understand the genetic basis for tree growth and development, the better we can use tree breeding to prepare for the challenges and opportunities brought about by the changing climate and the bioeconomy.”

Director: **Eva-Mari Aro**, Academician of Science



Changes in sacred texts and traditions

“We have influenced public debate by sharing information on historical changes in sacred texts and traditions, by fighting against misunderstanding and prejudice, and by demonstrating the beneficial and harmful consequences of interpreting them, especially in matters relating to gender equality and the status of sexual and gender minorities.”

Director: Professor **Martti Nissinen**

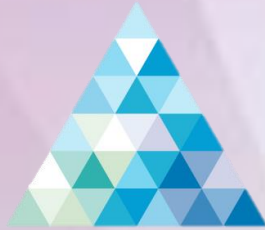


Research on the relational and territorial politics of bordering, identities and transnationalisation

“Thanks to the activity of the CoE’s researchers, the main conclusions and observations of the team’s work on regional development have been actively disseminated to policymakers through, for example, the preparation of national programmes for regional and urban policy. The effects of this dissemination work will be observed in the coming years.”

Director: Professor **Anssi Paasi**





CENTRES OF EXCELLENCE IN RESEARCH

Finnish Centres of Excellence in Research

The units granted CoE status by the Academy of Finland are scientifically first-rate research communities that have capacity for renewal and high societal impact. Thanks to the long-term funding provided by the Academy in collaboration with CoE host organisations, the funding instrument effectively facilitates risk-taking and new initiatives in research.

CoEs are jointly funded by the Academy of Finland, universities and research institutes. Funding is also made available through other sources.

The 2014–2019 Centre of Excellence Programme included 14 centres. They were composed of research teams from a total of twelve universities or research institutes. The Academy of Finland's funding for the programme totalled 97.5 million euros.

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#CentresOfExcellence





ACADEMY OF FINLAND

The Academy of Finland funds high-quality scientific research, provides expertise in science and science policy and strengthens the position of science and research in society.

We work to contribute to the renewal, diversification and increasing internationalisation of Finnish research. We support and facilitate researcher training and research careers, internationalisation and the utilisation of research results.

Our activities cover the full spectrum of scientific disciplines.

In 2021, our funding for research amounts to 437 million euros. We are a government agency within the administrative branch of the Finnish Ministry of Education, Science and Culture.

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