

20 ground-breaking research projects receive grants totaling SEK 640 million

Press release

2019-10-01

New therapies for MS and aggressive brain tumors, development of solar cells and alternative fuels are just a few of the topics covered by the 20 projects in receipt of funding from Knut and Alice Wallenberg Foundation.

Knut and Alice Wallenberg Foundation has awarded a total of SEK 640 million to 20 pre-eminent basic research projects in the fields of medicine, natural sciences and technology – projects seen as offering potential for future scientific breakthroughs.

“For a number of years now the Foundation has been working to increase the proportion of female principal investigators. So it is highly gratifying to see that 30 percent of the projects approved after undergoing the international review process this year are led by women. We hope this trend will continue. It is the stated aim of the Foundation that at least 40 percent of our projects will be led by women by 2022,” says Peter Wallenberg Jr, Chairman of Knut and Alice Wallenberg Foundation.

Some other examples of project topics are: the way plants communicate, targeted drugs, new insights into the universe and dark matter, and development of a vaccine against rheumatoid arthritis.

Grants in 2019:

(More information about the projects is available on the relevant university website)

Medicine:

Project: **“An ultra-fast system for mechanical pain signaling”**

Grant: SEK 34,500,000 over five years

Principal investigator: **Professor Håkan Olausson, Linköping University**

Project: **“Changing the view on autoimmune disease based on positional cloning of the Ncf1 gene”**

Grant: SEK 36,500,000 over five years

Principal investigator: **Professor Rikard Holmdahl, Karolinska Institutet**

Project: **“Breaking barriers to efficient immunotherapy of brain tumors”**

Grant: SEK 31,500,000 over five years

Principal investigator: **Docent Anna Dimberg, Uppsala University**

Project: **“Epigenomic states underlying aggressive inflammation and brain tissue loss in Multiple Sclerosis”**

Grant: SEK 28,000,000 over five years

Principal investigator: **Docent Maja Jagodic, Karolinska Institutet**

Project: **“Insights on the role of oligodendroglia in the origin and progression of multiple sclerosis”**

Grant: SEK 34,000,000 over five years

Principal investigator: **Docent Gonçalo Castelo Branco, Karolinska Institutet**

Project: **“Mitochondrial Methyltransferases – From discovery to disease”**

Grant: SEK 36,000,000 over five years

Principal investigator: **Dr Anna Wredenberg, Karolinska Institutet**

Natural sciences:

Project: **“Photofunctional Iron Complexes”**

Grant: SEK 35,000,000 over five years

Principal investigator: **Professor Kenneth Wärnmark, Lund University**

Project: **“The obligate respiratory supercomplex – augmented biological energy conversion”**

Grant: SEK 38,000,000 over five years

Principal investigator: **Professor Martin Högbom, Stockholm University**

Project: **“Function of small RNAs as intra- and inter-organismal communication signal”**

Grant: SEK 28,000,000 over five years

Principal investigator: **Professor Claudia Köhler, Swedish University of Agricultural Sciences**

Project: **“Unexplored Approaches to Organic Photoredox Catalysis”**

Grant: SEK 35,000,000 kronor over five years

Principal investigator: **Professor Sascha Ott, Uppsala University**

Project: **“Access to potent medical drugs through polymorph-specific crystallization enabled by ionic liquids”**

Grant: SEK 33,000,000 kronor over five years

Principal investigator: **Professor Anja-Verena Mudring, Stockholm University**

Project: **“Molecular evolution and design of G protein-coupled receptors with tailored ligand specificity”**

Grant: SEK 28,000,000 over five years

Principal investigator: **Docent Jens Carlsson, Uppsala University**

Technology/physics/mathematics:

Project: **“Dynamic Quantum Matter”**

Grant: SEK 28,000,000 over five years

Principal investigator: **Professor Alexander Balatsky, Stockholm University**

Project: **“Active Matter Goes Smart”**

Grant: SEK 37,000,000 over five years

Principal investigator: **Docent Giovanni Volpe, University of Gothenburg**

Project: **“Light Dark Matter”**

Grant: SEK 26,000,000 over five years

Principal investigator: **Professor Torsten Åkesson, Lund University**

Project: **“Multidisciplinary Design of Lead-Free Double Perovskite Alloys for Future Optoelectronics”**

Grant: SEK 34,000,000 over five years

Principal investigator: **Docent Feng Gao, Linköping University**

Project: **“Towards CO₂-neutral energy conversion using advanced laser diagnostics and modeling – COCALD”**

Grant: SEK 34,000,000 over five years

Principal investigator: **Professor Marcus Aldén, Lund University**

Project: **“Gravity Meets Light”**

Grant: SEK 33,500,000 over five years

Principal investigator: **Professor Stephan Rosswog, Stockholm University**

Project: “**Designed for UPDATE: Next-Generation Embedded Systems**”

Grant: SEK 25,000,000 over five years

Principal investigator: **Professor Yi Wang, Uppsala University**

Project: “**Plasmon-exciton coupling at the attosecond-subnanometer scale: Tailoring strong light-matter interactions at room temperature**”

Grant: SEK 25,000,000 over five years

Principal investigator: **Professor Eva Olsson, Chalmers University of Technology**

Contact persons:

Peter Wallenberg Jr, Chairman, Knut and Alice Wallenberg Foundation

Phone: +46 (0)8 545 01780

E-mail: kaw@kaw.se

Göran Sandberg, Executive Director, Knut and Alice Wallenberg Foundation

Phone: +46 (0)8 545 01780

E-mail: kaw@kaw.se

Knut and Alice Wallenberg Foundation was established in 1917. The Foundation's aim is to benefit Sweden by supporting Swedish basic research and education, primarily in medicine, technology and the natural sciences. This is achieved by awarding grants to excellent researchers and projects.

SEK 30 billion in grants has been awarded since the Foundation was established, with annual funding of SEK 1.8 billion in recent years, making the Foundation the largest private funder of scientific research in Sweden, and one of the largest in Europe.