Department of Psychiatry –
Annual Report 2020–2021
I am enormously proud that the Department of Psychiatry has been at the forefront of research into the mental health impact of COVID-19, worked on the frontline to support our NHS services, and adapted our excellent teaching programmes to provide our students with the very best education and support.

COVID-19 is impacting every country, population, individual livelihood, and the dreams of both the young and old. Mental health research is critical in all stages of the pandemic – from the effects of acute COVID-19 to longer term sequelae, to bereavement and trauma, and the economic and human effects of measures to control the spread of the virus, such as lockdown. We also have to continue our existing research studies, find the time and inspiration to develop new studies and support our developing students to work in this ‘new world’. We must focus on the benefits of our work to patients, human society, as well as supporting our own staff.

It’s been quite a challenge, but the Department of Psychiatry will continue to thrive. Especially in these difficult times we remain committed to ensuring a diverse and inclusive working environment for students and staff. We have learned rapidly, sharing our collective knowledge, skills, and capabilities. We continue to change our culture, attitudes and behaviours. I look forward to continuing this critical work in the years to come as we celebrate our differences while working towards shared aspirations and ambitions for transforming mental health research, clinical practice and innovation in services.

This year we have seen the power of collaborative working, speedily leading to major new studies into the impact of COVID-19, and developing interventions to help people recover. Working alongside NHS colleagues and other researchers we are investigating a wide range of aspects of COVID-19 and how it affects people across the age range. We have also continued our research in other areas of mental health, adapting patient studies using online and web-based procedures, and adjusting laboratory situations to be safe and COVID-secure.

We are deeply appreciative of our funders for their welcomed flexibility around grants and deadlines.

Finally, I would also personally like to thank every member of our department, and our partners and collaborators, for their incredible stamina, adaptability, good humour, and willingness to meet the extraordinary challenges presented in 2020. Thank you.

Professor John Geddes
The Department of Psychiatry Team

We are privileged to have shared in some wonderful celebrations this year, including the incredibly well deserved CBE awarded to Professor Keith Hawton in the Queen’s Birthday Honours List 2020 for services to Suicide Prevention.

Professor Daniel Freeman received the 2020 British Psychological Society’s President’s Award following his innovative work in the research and treatment of psychosis. Val Paulley, a Senior Administrator at the Clinical Research Facility, received the Outstanding Member of Support Staff award for supporting the work of the National Institute for Health Research (NIHR) Clinical Research Network Thames Valley and South Midlands, which helps deliver research studies in the NHS, public health and social care.

This year we welcomed Professor Kam Bhui to our department. His work focuses on researching socio-cultural risk and protective factors, to prevent and reduce inequalities in population mental health and suicide.

Professor Bhui is the Director of Synergi Collaborative Centre, which is a national five-year initiative focused on eradicating ethnic inequalities in severe mental illness. We have seen the recognition of two team members who have been conferred the title of Associate Professors: Jacinta O’Shea, whose work aims to advance cognitive and brain stimulation treatment approaches to depression, and Alejo Nevado-Holgado who leads Artificial Intelligence in the Translational Neuroscience and Dementia Research team.

The joint winners of the Department of Psychiatry award for Public Engagement with Science Communications included two exciting projects, with budgets at either end of the scale. The Oxford Dementia and Ageing Research (OxDARE) team and the My Resilience in Adolescence (MYRIAD) project team both presented excellent examples of public engagement.
Professor **Cathy Creswell**, who leads research on the development, maintenance and treatment of anxiety disorders in children and young people, has received an Enriching Engagement Award from UK Research and Innovation (UKRI) and NIHR for research to evaluate an online therapy programme for children with anxiety problems, to see if it is an effective remote alternative to existing mental health treatment services and could help treat anxiety problems during the COVID-19 pandemic.

Professor **Andrea Cipriani** became the Director of the Oxford cognitive health Clinical Research Facility (CRF) this year. The CRF is unique in the UK as a resource for conducting high intensity early phase and experimental studies focused on mental health and dementia. An aim of the CRF is to continue to work collaboratively and strengthen both understanding and skills across organisations and departments. A new collaboration between Professor **Catherine Harmer**’s Psychopharmacology and Emotion Research Laboratory (PERL) group, the CRF and Associate Professor **Rupert McShane**’s Ketamine Clinics will enhance capability for novel experimental medicine protocols using ketamine to investigate mood disorders.

The Dementias Platform UK (DPUK) led by Professor **John Gallacher** has been successful in the multi-million pound renewal of funding from the Medical Research Council for the next phase of the project, which is to build on its achievements in three key areas: the DPUK Data Portal, Trials Delivery Framework, and Experimental Medicine Incubator.

Professor Daniel Freeman and team have secured funding of over a million euros from the International Foundation to develop a new virtual reality therapy for young patients with psychosis. The automated VR therapy will be designed with young people, programmed by our VR team, and tested in a series of clinical trials. The project starts in January 2021.
Oxford VR, the University of Oxford spin-out company founded by Professor Daniel Freeman, was successful in a £10 million investment round led by Optum Ventures and supported by Luminous Ventures.

The investment is being used to accelerate its expansion in the US and strengthen its treatment pipeline of VR therapies for mental health conditions.

Professor Catherine Harmer and Dr Susannah Murphy received an investigator-initiated grant from Zogenix, a US based pharmaceutical company, to explore the effect of fenfluramine on cognition in healthy young people. Fenfluramine has recently been licensed for the treatment of Dravet Epilepsy by Zogenix and has been noted to improve cognition in children receiving this treatment. However, it is not clear if this has a direct effect on cognition or is mediated by reductions in seizure frequency. Volunteers between the ages of 18–21 years will be recruited and randomised to seven daily doses of fenfluramine vs placebo in a double-blind designed trial to test the effects of this drug.

A team led by Professor Noel Buckley, Dr Andrey Kormilitzin and Associate Professor Alejo Nevado-Holgado was awarded £1.4 million by GlaxoSmithKline (GSK) as part of their Functional Genomics partnership with the University of Oxford. The partnership aims to develop ambitious ideas to transform our understanding of how genetics influences disease and enable the identification of novel and high quality genetically validated targets for the development of novel therapeutics. Professor Buckley and his team have proposed a novel cellular model of Alzheimer’s disease that uses Artificial Intelligence to rapidly identify molecular or genetic perturbations that control the switch between protected and disease states to identify novel therapeutics to treat Alzheimer’s disease.

Associate Professor Mina Fazel is leading work at Oxford University with Sage Bionetworks and an international group of researchers on the Global Mental Health Databank, a feasibility study that hopes to find ways to encourage young populations in the UK, South Africa, and India to access digital mental health interventions and use the data gathered to better understand how young people can manage their own mental health. The project is funded by the Wellcome Trust as part of their work to identify the next generation of treatments and approaches to prevent, intervene, manage, and stop relapse of anxiety and depression in young people.
Public Engagement with Research

With public need at an all-time high for mental health awareness and support, the department has worked on a number of public engagement with research activities – most recently the Understanding Mental Health online conversation series, which features leading mental health researchers and well-known celebrities.

The series explores the important areas of mental health research, where science and investigation is at the forefront of new developments in understanding, treating and preventing mental illness. It aims to tackle mental health topics of great societal importance, presenting what we know from existing research and highlighting the most urgent research priorities. The films are located on the Department of Psychiatry YouTube Channel with information at #OxfordMentalHealth on Twitter.

The NEUROSEC (Neuroscience, Ethics and Society) group launched Tracing Tomorrow, a bioethics game, which investigates young people’s values and preferences in the context of digital phenotyping for mental health in schools. The game has been played by more than 20,000 people since its launch in January 2020. The data are currently being analysed and the game is being used in follow-up studies on moral reasoning in young people and research methodology.

A series delving into the work of Robert Burton who published The Anatomy of Melancholy in 1621, was aired on BBC Radio 4 this year. Head of Department John Geddes was the series consultant and spoke in several episodes. The series looked into how far we have come and what can be learnt 400 years on from the original publication, at a time when clinical depression is stated to be the leading cause of global disability.

As part of a Wellcome Public Engagement Grant, and running in parallel to a larger Wellcome-funded research programme, the My Resilience in Adolescence (MYRIAD) project research team designed a range of public engagement activities. These activities included the Teenage Brain Workshop aimed at young people to inspire them to learn more about the science of the brain. The team took the workshop into schools to introduce young people to the research tools used by scientists to investigate changes in the brain during the teenage years and their link to emotional and behavioural regulation. More than 800 students across the UK attended workshops (before COVID-19) and the resources have now been made available to young people, teachers and families. These resources also include the MYRIAD Young People’s Analysis of Data (MYPAD), which was designed to help young people learn about research methods and provide an opportunity to analyse real data.

Although the pandemic prevented much of the face-to-face engagement work members of the department had planned, a number of virtual meetings and events have taken place. A series of mindfulness sessions and podcasts facilitated by Professor Willem Kuyken, Director of the University of Oxford Mindfulness Centre, was developed and made freely available, designed to offer support during a time of crisis.
The 19,000 students from 237 schools who completed the survey have helped to reveal vital information about risks to adolescents in terms of isolation, online behaviours, and anxiety, as well as patterns of seeking support during the COVID-19 crisis.

Talking to children about illness and the death of a loved one has become a part of many families’ lives during 2020. Communicating effectively with children involves both tailoring the factual information to their developmental understanding, and including the emotional implications of the news. Professor Alan Stein, Dr Elizabeth Rapa and Dr Louise Dalton produced a series of guides and advice for families, care staff and healthcare professionals on how to talk to children about the serious illness or death of someone they cared about. This information has been translated into a number of languages including Urdu, Tagalog, Spanish and Portuguese, and these free communication resources are being distributed globally by the Pan American Health Organization (PAHO), UNICEF, the Intensive Care National Audit and Research Centre (ICNARC) and the International Society for Quality in Health Care (ISQua).

A collaboration from researchers at the Department of Psychiatry, Oxford University, Imperial College London and two third-sector organisations, Youth Era and The McPin Foundation, has co-designed, delivered and tested online peer support training for young people aged 16-18 in the UK.
‘It is very important that mental health and neurological problems are being assessed alongside other health outcomes. We will then be able to develop and test new ways of preventing and treating these problems to make sure that people recover as quickly as possible.’

Professor John Geddes

This study on links between COVID-19 and psychiatric diagnosis, published in The Lancet Psychiatry is officially the all-time #1 paper in psychiatry in terms of the number of media outlets in which it was featured. #2 in terms of the Altmetric score.

COVID-19 – Impact on Adults

The PHOSP-COVID study is investigating the long-term health impacts of COVID-19 on hospitalised patients. A consortium of leading researchers and clinicians from across the UK is working together to share expertise and help assess the impact of COVID-19 on patient health and recovery. The True Colours platform, developed over a decade ago in the Department of Psychiatry, has been adapted for the PHOSP-COVID study to collect health outcomes over time. Oxford investigators are at the forefront in progressing this study with lead investigators in the NIHR Oxford Health Biomedical Research Centre (BRC).

The largest study so far on links between COVID-19 and psychiatric diagnosis, led by Professor Paul Harrison and Dr Max Taquet, used the electronic health records of 69 million people in the USA, including over 62,000 cases of COVID-19. The study suggests that having COVID-19 increases a person’s risk of developing psychiatric disorders, and that having a psychiatric disorder increases the chance of getting COVID-19. The study shows that almost 1 in 5 people diagnosed with COVID-19 receive a psychiatric diagnosis within the next three months. More than 800 mentions in international coverage, reaching an audience of more than 900 million, helped to raise awareness of the real impact of COVID-19 on people’s mental health.

During the first lockdown in April 2020, Professor Catherine Harmer, Dr Susannah Murphy and Dr Amy Gillespie from the Psychopharmacology & Emotion Research Laboratory (PERL) launched the Oxford COSIE (COvid-19, Social Isolation and Emotion) study. The aim was to identify factors associated with risk and resilience, as well as depression and anxiety during the pandemic, using cognitive tests of emotional bias to capture early vulnerability and explore mechanisms. Members of the NIHR Oxford Health Biomedical Research Centre (BRC) Patient and Public Involvement community contributed to the potential risk and resilience factors. In September, early results were presented at the European College of Neuropsychopharmacology (ECNP) Congress. Taking a statin, having access to outdoor space and high levels of behavioural activation (e.g. engaging in enjoyable activities or having a routine) were all associated with lower levels of negative emotional bias – i.e. protective of later depression. High levels of loneliness, being at risk of COVID-19, and current symptoms of depression were all associated with higher levels of negative bias – i.e. risk factors for later depression.

A study exploring the effects of online cultural experiences on mental health used the opportunity of the first lockdown in the UK and social distancing to gather new evidence. Online Active Community Engagement for Mental Health and Wellbeing (O-ACE) is a series of studies aiming to optimise online cultural resources for mental health. The first was a survey of online culture and mental health on the Ashmolean Museum website. Dr Rebecca Syed Sheriff, study lead, then conducted a series of qualitative studies examining the ways in which online culture could be enhanced for mental health in people aged 16–24. The team has now developed an intervention and aims to test it using scientifically rigorous methodologies in young adults.

Researchers from the Precision Psychological Therapies theme in the NIHR Oxford Health BRC, led by Professor Anke Ehlers, have published guidelines and free resources for treating patients experiencing post-traumatic stress disorder (PTSD) following admission to an intensive care unit (ICU) during the COVID-19 pandemic.

Professor Daniel Freeman led research into coronavirus conspiracy beliefs, mistrust, and compliance with government guidelines in England, during the first lockdown in May 2020. The findings showed that a high number of adults in England did not agree with the scientific and governmental consensus on the coronavirus pandemic, with those who believe in conspiracy theories less likely to follow government guidance – for example, staying 2m apart from other people – as well as less likely to accept a vaccination, take a diagnostic test, or wear a facemask. The second Oxford Coronavirus Explanations, Attitudes, and Narratives Survey (OCEANS II) ran later in the year, focusing on the important issue of COVID-19 vaccine hesitancy.
COVID-19 Impact on Students

This year’s U-Flourish Student Wellbeing and Academic Success survey launched in the autumn and is available to all students at Oxford, with the aim of better understanding the factors that contribute to student wellbeing, mental health, and academic success, and particularly how the COVID-19 pandemic has affected students and their learning. The results will be shared next year with the University and the local NHS to help inform how they develop resources and services for Oxford students.

The Social and Psychological Impact of COVID-19 on Medical Students (SPICE-19) is a multicentre prospective cohort study that systematically explores the impact of the crisis on medical students. Data gathered will guide current strategy, resource allocation and wellbeing support within medical schools and foundation training, and inform policy for future pandemics and epidemics. This project was student-led, using a network of students across the country with participation from most medical schools. The main publication is currently under review.

‘Medical students have faced an enormous disruption to their lives and studies as a result of the COVID-19 pandemic. Many are volunteering in the NHS, and those in their final years have foregone electives and graduated early in order to take up interim foundation doctor roles.’

Associate Professor Kate Saunders

Funding Research

Quality robust research into mental health has a significant impact on the understanding of illnesses and the development of evidence-based treatments and interventions, which all lead to improved health outcomes.

This research would not have been possible without the significant investment from our funding partners including UK Research and Innovation (UKRI), the National Institute for Health Research (NIHR) and the NIHR Oxford Health Biomedical Research Centre, the Westminster Foundation, Oxford University’s COVID-19 Research Response Fund, and the Higher Education Innovation Fund – Research England.
The NEUROSEC (Neuroscience, Ethics and Society) team, led by Professor Ilina Singh, received funding from UK Research and Innovation for a UK Ethics Accelerator (EA) for Pandemic Emergencies, worth more than £1.4 million.

The project includes eight co-investigators from Oxford, the University of Edinburgh, University College London, Bristol University and Nuffield Council on Bioethics. In coordinating and focusing existing national investments in ethics research, the EA will add value and scale up the potential impacts of ethics research in science, medicine, policy, and society. The main outcomes will be decision-making that is informed by ethics expertise, and is more transparent and accountable, thereby improving public trust.

The team has also received funding from the Global Challenges Research Fund (GCRF) for the Ethics for Mental Health Digital Innovations for Young People in Africa (EMDIYA) project – a research network involving multiple African partners, which seeks to advance and integrate ethics in global mental health research and intervention.

Professor Ilina Singh and Dr Gabriela Pavarini, University of Oxford, and Professor Sheila Murta, University of Brasilia, launched a project in April 2020 to support Brazilian young people’s sense of agency and responsibility in promoting mental wellbeing. The project aims to advance understanding of youth agency in mental health and contribute to the achievement of a sustainable and healthy future for Brazilian youth.

Forty-two researchers from around the world, including Professor Keith Hawton, Director of the Centre for Suicide Research, formed the International COVID-19 Suicide Prevention Research Collaboration. This international group has produced two important publications, Suicide Research, Prevention, and COVID-19 and Suicide risk and prevention during the COVID-19 pandemic, and holds regular webinars to ensure the latest information and important updates are shared.

DPUK is a foundational partner of the Alzheimer’s Disease Data Initiative (ADDI), funded by Gates Ventures. The goal of ADDI is to accelerate the discovery of new treatments for dementia by improving data access. The ADDI Workbench provides interoperability across national data platforms, linking DPUK to its North American, European, and Asian counterparts.

Associate Professor Alejo Nevado-Holgado is co-leading the first programme of research on Artificial Intelligence–guided drug discovery for rare and cardio-metabolic diseases, with other scientists from the Centre for Medicines Discovery (Nuffield Department of Medicine), the Department of Statistics, and the Nuffield Department of Population Health at Oxford and researchers from King Abdulaziz University (KAU). The partnership launched in October 2020 between the University of Oxford and KAU to create a new Centre for Artificial Intelligence and Precision Medicine.

Associate Professor Morten Kringelbach has taken up the Erel Shalit Carlsberg Foundation Research Fellowship in Behavioural Neuroscience (endowed by donation from the Pettit and Carlsberg Foundations), and will become the first Director of the new interdisciplinary Centre for Eudaimonia and Human Flourishing. The collaborative goal of the Centre is to clarify psychological, cultural and philosophical issues pertinent to human flourishing and to connect these insights to contemporary investigation of the neural correlates of emotional and cognitive states.
Nearly five years since it was established, we are now approaching renewal for the NIHR Oxford Health Biomedical Research Centre (BRC), a partnership between Oxford Health NHS Foundation Trust and the University of Oxford.

This will be an opportunity to build on what has already been achieved, expanding and developing our research themes, increasing opportunities for patient and public involvement and creating improved mental health treatments and services.

The innovative Brain Health Centre opened this year. Developed with the involvement of members of the public with lived experience of memory problems, the centre is a combined clinical and research service which has the potential to revolutionise NHS memory services. A six-month pilot is under way involving 150 patients. By embedding research in the NHS service, the Centre aims to help prepare the health system for the future of dementia treatment and prevention. This ambitious approach could become a model that can be adopted throughout the NHS.

BRC research this year has adapted significantly both to focus on COVID-19 and to allow for research studies to continue despite lockdowns and delays. Researchers within the Informatics and Digital Health theme, led by Professor Andrea Cipriani, have responded to the pandemic on multiple projects. One project summarised the best available guidance on benzodiazepines and z-drugs (zopiclone and zolpidem), clozapine treatment, digital technologies and telepsychiatry, end-of-life care, inpatient wards, lithium treatment, and long-acting injectable (LAI) antipsychotics. Freely available on the web, the evidence-based guidance has been translated into French, Turkish, Italian, Japanese and Chinese.

Another digital project focused on the evaluation and implementation in the NHS of telepsychiatry and remote consultation during the pandemic. Collecting information from clinicians, patients and mental health services across mental health Trusts in Oxford and Southampton, the study now involves an additional four Trusts in Veneto and Lombardy, the two regions in Italy which have been most impacted by the COVID-19 pandemic.

A new evidence-based mental health treatment programme called SHAPE Recovery, which helps frontline healthcare workers at risk from post-traumatic stress disorder (PTSD) and depression, has been developed by researchers in the Precision Psychological Therapies theme led by Professor Anke Ehlers. It provides 1:1 support, including fast-track access to PTSD or depression treatment. The programme is working with 3,300 frontline healthcare workers across England and 8,000 London Ambulance employees and staff.

Associate Professor Jennifer Wild, Programme Lead, said: ‘If needed, SHAPE could be incorporated within NHS services within 12 to 24 months. The aim is to support staff to stay well, to recover if unwell, and to continue to be able to work, providing much-valued patient care.’

The BRC patient and public involvement (PPI) team is designing, delivering and evaluating projects to widen participation, involvement and engagement in research. Its focus includes reaching people with intersectional vulnerabilities, such as religious minorities, BAME communities, socio-economic groups, and LGBT+, and include different age groups.

When in-person research with patients at the BRC’s mental health clinics was suspended, the NIHR Oxford Clinical Research Facility (CRF) became the main location for the vaccine trials. It helped with the delivery of the Urgent Public Health England (UPHE) first COVID-19 vaccine trial in the UK, which was delivered at sites nationally and internationally. More than 900 participants came through the doors for Phase I/II of the study. The CRF is being used to support another COVID-19 vaccine UPHE trial, alongside the Oxford Health NHS Foundation Trust (OHFT), which will continue for a year, with a team of 100+ drawn from the Oxford Vaccine Group, the CRF, OHFT Research & Development team and the Clinical Research Network. So far, nearly 500 participants have taken part.
Teaching

The Oxford Medical School has been voted the world’s best institution for medical and health teaching and research for the ninth consecutive year (Times Higher Education), and training the next generation of psychiatrists forms a central part of our department’s activity.

We teach medical students at all stages of their training and our Year 5 course in Clinical Psychiatry is highly rated by students. This is reflected in the continued high rates of recruitment into core training in psychiatry.

This year we launched the Brain and Behaviour course, which integrates neurosciences and psychiatry. This has been accompanied by an innovative humanities and medical professionalism thread funded by a Wellcome Institutional Strategic Support Fund (ISSF) grant. This represents an exciting collaboration between the Nuffield Department of Clinical Neurosciences, the Department of Psychiatry, a number of humanities faculties, as well as the Ashmolean Museum. In addition we have continued to build interdisciplinary links with the Nuffield Department of Primary Care Health Sciences in the co-development of a highly rated communication skills course.

Members of the department also contribute to teaching in Biomedical Sciences, Experimental Psychology and the MSc in International Health and Tropical Medicine. At postgraduate level we run the Oxford Postgraduate Psychiatry Course, which provides a stimulating and thorough grounding in the basic and clinical sciences relevant to psychiatry and prepares candidates for the MRCPsych examinations. In collaboration with the Oxford University Clinical Academic Graduate School, we support a number of academic foundation doctors and Academic Clinical Fellows.

MSc Clinical and Therapeutic Neuroscience

We are now in the second year of our innovative MSc course in Clinical and Therapeutic Neuroscience. The class of 2019/20 successfully completed the course and five class prizes were awarded. The emergence of COVID-19 this year led to some quick changes to our programme and we are grateful to all Principal Investigators (PIs) for their swift provision of excellent data analysis projects that substituted the practical experiments our students were unable to perform over the summer of 2020. Further changes include a mix of online and face-to-face teaching, with all lectures being live-streamed with interactive and/or Q&A sessions. Small group face-to-face journal clubs in large teaching rooms, chaired by postdoctoral researchers from both our department and the Nuffield Department of Clinical Neurosciences. PIs throughout the Medical Sciences Division have provided projects for our students that can either be run remotely or have practical elements with appropriate safeguards and contingency plans in place as we continue through the challenges of living with COVID-19.

Training

A new Leverhulme Doctoral Training Programme in BioPsychosocial Studies on Childhood Inequalities has received funding of £1.2 million. This cross-departmental programme is led by Professor Jane Barlow, Department of Social Policy and Intervention, with co-investigators in the Department of Psychiatry including Professor Ilina Singh and Associate Professor Liz Tunbridge, as well as Professor Melinda Mills, Department of Sociology, and Associate Professor Lucy Bowes, Department of Experimental Psychology. The Programme has the goal of reducing the impact of social inequalities in early childhood through the ethical application of biological science.

Professor Morten Kringelbach will direct the Carlsberg Foundation-Oxford Visiting Fellows Programme, supported by the Carlsberg Foundation, a competitive programme that supports excellent postdoctoral scholars becoming Junior Research Fellows at Linacre College and working for two years with an Oxford academic in a University Department.
Our year in figures

**Research**

- **£62m** Total grant value
- **£11.8m** Research spend
- **40** Funding bodies
- **492** Research publications and outputs
- **25** Countries researchers collaborating in
- **125** Research grants

**Major funding from National Institute for Health Research, Medical Research Council and Wellcome Trust**

**Staff**

- **237** Staff
- **80** Professional and Support staff
- **37** Principal Investigators
- **20** MSc taught Students
- **34** Staff nationalities
- **31** Honorary Senior Clinical Lecturers
- **157** Research staff
- **10** Associate Professors
- **77** DPhil/MSc Students

**Research grants**

- **125**

**Countries researchers collaborating in**

- **25**