

Cancer Grand Challenges announces five new teams taking on cancer's toughest challenges

For the first time, the initiative announces five teams in a single funding round to drive team science on a global scale

Washington, D.C. – March 6, 2024 – Cancer Grand Challenges, a global research funding initiative co-founded by Cancer Research UK and the National Cancer Institute, today announces funding for five new global research teams to take on some of the toughest cancer challenges: cancer inequities, early-onset cancers, solid tumors in children and T-cell receptors.

Each team will receive up to \$25 million over 5 years and will unite interdisciplinary researchers from across the world to drive progress in cancer research. This \$125 million investment marks Cancer Grand Challenges' largest funding round to date – with \$50 million funded by the National Cancer Institute and \$75 million funded by Cancer Research UK and its network of partners.

Cancer Grand Challenges brings together diverse international organisations, collaborators and research leaders who share its mission. These include the Scientific Foundation of the Spanish Association Against Cancer, the Bowelbabe Fund for Cancer Research UK, Institut National Du Cancer, the Dutch Cancer Society, The Mark Foundation for Cancer Research and KiKa (Children Cancer Free Foundation). To date, more than \$400m has been invested in the Cancer Grand Challenges initiative.

“Together with our network of visionary partners and research leaders, Cancer Grand Challenges unites the world's brightest minds across boundaries and disciplines and aims to overcome cancer's toughest problems,” said Dr. David Scott, Director of Cancer Grand Challenges. “With this investment, our largest to date, we continue to grow our global research community, and fund new teams that have the potential to surface discoveries that could positively impact cancer outcomes.”

“Cancer Grand Challenges is a leader in promoting novel international collaborations to take on some of the biggest challenges in cancer research. The collaborative nature of Cancer Grand Challenges allows us to develop and support innovation and drive progress on a global scale” said Dinah S. Singer, Ph.D., NCI Deputy Director for scientific strategy and development.

Unveiling the new teams and their research areas

- **Early-onset cancers:** Early-onset colorectal cancer (EOCRC) is an important emerging global problem among individuals younger than 50 years. Team PROSPECT aims to address this by understanding the pathways, risk factors, and molecules involved in its development. Their vision is to understand and ultimately try to reverse the network of causal factors throughout the life course that disrupts normal biological processes to promote EOCRC. *The team is led by Andrew Chan, Massachusetts General Hospital, and Yin Cao, Washington University in St. Louis.*
- **Cancer inequities:** Inequities in cancer prevention, screening, and treatment lead to disparities in cancer incidence and mortality and are a major public health concern. Team SAMBAI aims to

build an unprecedented resource, which will comprise a comprehensive measurement of social, environmental, genetic and biological factors that can be used to help define the causes of disparate outcomes in the selected populations. The team will focus on prostate, breast and pancreatic cancers in the global African diaspora. The team is led by Melissa Davis, Morehouse School of Medicine.

- **Solid tumors in children:** Cancer remains a leading cause of death due to disease among children globally, and outcomes for some childhood cancers have not improved in more than 30 years. Treatments for solid tumors in children still rely on decades-old chemotherapies, and often radiotherapy. Two teams will take on this challenge, KOODAC and PROTECT. The teams will use protein degradation strategies to target previously undruggable drivers of children's cancers. A drug(s) that could emerge from these programs, could revolutionize the field and transform the lives of those affected by that particular cancer type.
 - Team PROTECT is led by Stefan Pfister, Hopp Children's Cancer Center Heidelberg (KITZ).
 - Team KOODAC is led by Martin Eilers, University of Würzburg and Yaël Mossé, Children's Hospital of Philadelphia.
- **T-cell receptors:** T cells are central players in the immune response, and the development of immunotherapies is transforming the treatment landscape for some cancers. Yet, their effects are not universal across cancer types and patients. Understanding how T-cell receptors recognise antigens is critical to help realise the full potential of antigen-specific immunotherapy. Team MATCHMAKERS aim to predict what T cells recognise in a patient's tumour and insights gained could have implications beyond cancer – for example in infectious disease, autoimmunity and allergy. The team is led by Michael Birnbaum, Massachusetts Institute of Technology.

The Selection Process

Every two years, Cancer Grand Challenges invites the global research community, patient advocates and people affected by cancer to submit their views on the greatest obstacles standing in the way of making vital progress against cancer. The Cancer Grand Challenges Scientific Committee, comprising some of the world's most eminent researchers, then meets to discuss and debate the ideas submitted and recommends a set of complex challenges, that it believes can be solved.

International teams are then invited to apply for funding to support innovative, interdisciplinary research to solve them, with the successful teams announced the following year.

Combining Ambition and Innovation

Cancer Grand Challenges employs a unique funding approach centered on challenges, motivating researchers from diverse backgrounds to surpass conventional limits of geography and discipline. These challenges represent persistent obstacles hindering progress in cancer research, which no single scientist, institution, or country can tackle in isolation.

The Cancer Grand Challenges community has grown to more than 1,200 investigators and collaborators with 16 teams from across the world taking on 13 challenges.

For more information on teams, team members and their approach to tackling these challenges, visit <https://cancergrandchallenges.org/>.

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About Cancer Grand Challenges

Co-founded in 2020 by two of the largest funders of cancer research in the world: Cancer Research UK and the National Cancer Institute, Cancer Grand Challenges supports a global community of diverse, world-class research teams to come together, think differently and take on some of cancer's toughest challenges. These are the obstacles that continue to impede progress and no one scientist, institution or country will be able to solve them alone. With awards of up to \$25M, Cancer Grand Challenges teams are empowered to rise above the traditional boundaries of geography and discipline to make the progress against cancer we urgently need.

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Notes to editors:

Team KOODAC, co-led by Martin Eilers, University of Wurzburg and Yaël Mossé, Children's Hospital of Philadelphia, is funded by Cancer Research UK, Institut National Du Cancer and KiKa (Children Cancer Free Foundation) through Cancer Grand Challenges.

Team MATCHMAKERS, led by Michael Birnbaum, Massachusetts Institute of Technology, is funded by Cancer Research UK, the National Cancer Institute and The Mark Foundation for Cancer Research through Cancer Grand Challenges.

Team PROSPECT, co-led by Andrew Chan, Massachusetts General Hospital and Yin Cao, Washington University, St. Louis, is funded by Cancer Research UK, the National Cancer Institute, the Bowelbabe Fund for Cancer Research UK and Institut National Du Cancer through Cancer Grand Challenges.

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Team SAMBAI, led by Melissa Davis, Morehouse School of Medicine (US) is funded by Cancer Research UK and the National Cancer Institute through Cancer Grand Challenges.