



Bayer AG
Communications and
Public Affairs
51368 Leverkusen
Germany
Tel. +49 214 30-1
media.bayer.com

News Release

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Precision cardiovascular research

Bayer expands strategic alliance with Broad Institute of MIT and Harvard

- Joint Precision Cardiology Laboratory will focus on using innovative technologies to better understand cardiovascular diseases on a molecular level and to pursue new drug targets
 - Additional investment of up to \$22 million over 5 years
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Berlin, June 29, 2018 – Bayer and the Broad Institute of MIT and Harvard today announced the launch of the joint Precision Cardiology Laboratory, which will pursue novel scientific insights to enable the development of new therapies for patients with cardiovascular diseases such as heart failure. Heart failure – a general diagnosis given when the heart doesn't pump effectively – is a composite of multiple factors, and as such requires new tools and methods to gain deeper knowledge to benefit patients. The scientists at the joint laboratory will combine Broad Institute's innovative methods for basic science discovery such as single cell sequencing and clinical expertise with Bayer's long experience in drug development to discover new potential therapeutics.

"The Broad Institute is an important and strategic partner for Bayer enabling us to deepen our understanding in the area of cardiovascular diseases and we are looking forward to extending our collaboration even further", said Dr. Joerg Moeller, Member of the Executive Committee of Bayer AG's Pharmaceuticals Division and Head of Research and Development. "Joint laboratories are a novel partnering model for industry and academia and will bring Bayer and Broad Institute cardiovascular research to the next level."

Located at the Broad Institute in Boston, the Precision Cardiology Laboratory will bring scientists from both organizations into one laboratory working side by side, enabling the joint team to faster translate concepts from the lab into clinical trials and bring new

therapeutic treatments to patients more quickly than traditional research partnerships. The Precision Cardiology Laboratory's goal is to develop high-resolution, single-cell maps of cardiovascular tissues in human and animal models. Using tissue samples donated by healthy individuals as well as people suffering from cardiovascular disease, researchers will build datasets to accelerate insights into heart failure.

"Such high-resolution maps of cells and tissues will be a profound asset for understanding heart failure and for developing new and better drugs," said Patrick Ellinor, scientific lead of the Precision Cardiology Laboratory and director of the Cardiac Arrhythmia Service at Massachusetts General Hospital. "I am extremely excited by the potential of this expanded partnership to benefit patients."

Under the terms of the agreement, Bayer is investing up to \$22 million to joint research projects over the next five years. Ultimately, the lab will involve about 20 people with affiliations divided between the two organizations. The partners will build on established structures of their existing collaboration including joint review processes of individual projects endorsed by the joint steering committee. The rights to the research findings are shared equally between the partners. Upon reaching predefined decision points, Bayer can exercise an option, triggering predefined milestone and ultimately royalty payments.

The Broad-Bayer partnership first began in 2013 with a recently prolonged oncology program. In 2015, the organizations launched a cardiovascular-specific collaboration to leverage insights from human genetics to help create new cardiovascular therapies.

About the Broad Institute of MIT and Harvard

The Eli and Edythe L. Broad Institute of MIT and Harvard was launched in 2004 to empower this generation of creative scientists to transform medicine. The Broad Institute seeks to describe all the molecular components of life and their connections; discover the molecular basis of major human diseases; develop effective new approaches to diagnostics and therapeutics; and disseminate discoveries, tools, methods and data openly to the entire scientific community.

Founded by MIT, Harvard and its affiliated hospitals, and the visionary Los Angeles philanthropists Eli and Edythe L. Broad, the Broad Institute includes faculty, professional staff and students from throughout the MIT and Harvard biomedical research communities and beyond, with collaborations spanning over a hundred private and public institutions in

more than 40 countries worldwide. Further information about the Broad Institute are provided at <http://www.broadinstitute.org>.

About Cardiovascular Diseases at Bayer

Bayer is committed to delivering science for a better life by advancing a portfolio of innovative treatments. Cardiovascular diseases have become a severe problem in our society. Bayer is working in a wide range of therapeutic areas on new treatment approaches for cardiovascular, lung and kidney diseases. The cardiology franchise at Bayer already includes a number of products and several other compounds in various stages of preclinical and clinical development. Together, these products reflect the company's approach to research, which prioritizes targets and pathways with the potential to impact the way that cardiovascular diseases are treated.

About Bayer

Bayer is a global enterprise with core competencies in the Life Science fields of health care and agriculture. Its products and services are designed to benefit people and improve their quality of life. At the same time, the Group aims to create value through innovation, growth and high earning power. Bayer is committed to the principles of sustainable development and to its social and ethical responsibilities as a corporate citizen. In fiscal 2017, the Group employed around 99,800 people and had sales of EUR 35.0 billion. Capital expenditures amounted to EUR 2.4 billion, R&D expenses to EUR 4.5 billion. For more information, go to www.bayer.com.

Contact:

Sarah-Christine Wanner, phone +49 30 468-193178

Email: sarah-christine.wanner@bayer.com

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Forward-Looking Statements

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