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News Release

Prestigious award from the Bayer Science & Education Foundation:

2017 Hansen Family Award goes to Professor Jens Brüning and Professor Matthias H. Tschöp

- Prof. Brüning of Max Planck Institute for Metabolism Research in Cologne is awarded for groundbreaking insights into the physiology of insulin action and the pathophysiology of insulin resistance.
- Prof. Tschöp of Helmholtz Centre Munich receives the prize for turning paradigm shifting gut-brain signal discoveries into drug candidates, which are now in clinical trials for obesity and diabetes.

Leverkusen, March 30, 2017 – The award-winners of the 2017 Hansen Family Award have been named: the Board of Trustees of the Bayer Science & Education Foundation and the Scientific Committee for this award have presented both Professor Jens Brüning and Professor Matthias H. Tschöp with prize money of EUR 75,000 each, one of Germany's most prestigious scientific accolades. The award is in recognition for their groundbreaking insights and paradigm shifting discoveries in the area of diabetes and obesity. The award will be officially presented by Bayer CEO Werner Baumann at a ceremony in Berlin on May 15, 2017.

The Hansen Family Award honors scientists who have conducted pioneering research in innovative areas of biology and medicine. It has been presented since 2000 in memory of its endower Professor Kurt Hansen. The late, former Bayer AG Board of Management and Supervisory Board Chairman established the award in 1999 in "gratitude for a fulfilling life as a natural scientist and businessman."

Prof. Dr. Jens Brüning of Max Planck Institute for Metabolism Research in Cologne is awarded for groundbreaking insights into the physiology of insulin action and the pathophysiology of insulin resistance. His fundamental discoveries about the role of

insulin action in the CNS and his research on systemic feeding control signals and obesity-induced deregulation of these pathways paved the ground for novel treatment options in obesity and type-2-diabetes mellitus.

Prof. Dr. med. Matthias H. Tschöp of Helmholtz Diabetes Center Munich receives the prize for paradigm shifting discoveries about gut-brain communication pathways related to hunger signals. His pioneering combination of physiology research with human biology and peptide-based pharmacology has led to break-through discoveries resulting in multiple novel drug candidates with unprecedented potential to stop the worldwide obesity and type-2-diabetes pandemic.

Prof. Ernst-Ludwig Winnacker, Chairman of the Board of Trustees of the Bayer Science & Education Foundation, said: "Diabetes is on the increase all over the world, and one major risk factor is obesity. Understanding the metabolic and hormone-related pathways and signals in the body has the potential to lead to urgently needed new prevention and treatment options. Both Jens Brüning and Matthias Tschöp are pioneers in this field of research and therefore deserving this prestigious award."

The 2017 Hansen Family Award is being given in recognition of an important field of research: Prof. Brüning is director at the Max Planck Institute for Metabolism Research: His research focusses on elucidating the CNS-dependent regulation of energy and glucose metabolism through the use of genetically modified mice. These studies revealed a previously unappreciated role for insulin action in the central nervous system (CNS) to control organismal glucose homeostasis and insulin sensitivity. His group has defined distinct Agouti-related peptide (AgRP)-expressing neurons in the hypothalamus as critical mediators of insulin's metabolic actions, revealed the molecular mechanisms of insulin action in these neurons as well as their alterations in obesity. More recently, through the use of neurocircuitry mapping techniques his group defined the projections of these AgRP-neurons within the CNS, which govern insulin-dependent control of systemic insulin sensitivity via the regulation of autonomic innervation.

Prof. Tschöp is Scientific Director of the Helmholtz Diabetes Center, Biomedicine Director of the new Helmholtz Pioneer Campus and Chair of the Metabolic Diseases Division at Technical University Munich. His research focuses on dissecting the molecular underpinnings of diabetes and obesity in order to discover new preventive and therapeutic approaches. One of his areas of interest is the role of gut-brain communication as a key

circuitry that regulates adiposity, glucose homeostasis and energy metabolism. Currently, his team is aiming to develop innovative interdisciplinary approaches in collaboration with physicists, engineers and chemists for the personalized prevention and treatment of obesity, diabetes and concomitant diseases.

“Our future will be shaped by advances in basic and applied research. We want to promote science and strengthen excellence,” said Kemal Malik, member of the Bayer Board of Management for Innovation and Chairman of the foundation. “Research plays a central role for the innovation company Bayer. The knowledge, acceptance and application of future technologies in the life sciences are key framework conditions in our society, and Bayer AG wants to contribute to establishing them among other means through its foundations and by awarding this prize,” Malik continued.

The prize is awarded by the Bayer Science & Education Foundation. The primary objectives of the foundation are the recognition of outstanding research achievements, the promotion of talented scientists and support for important school science projects. In terms of content, the sponsorship activities focus on natural science and medicine. The foundation honors outstanding research achievements every two years with the Hansen Family Award and in alternate years with the Otto Bayer Award, each of which carries a cash award of EUR 75,000. The program is rounded off by two prizes for up-and-coming researchers: The international Bayer Early Excellence in Science Award is presented annually in the categories biology, chemistry and medical science, each with prize money of EUR 10,000, while the Bayer Thrombosis Research Award, which supports scientists in the German-speaking region whose work focuses on basic and clinical research into thrombosis, is presented every two years and has prize money of EUR 30,000.

Jens C. Brüning studied Medicine at the University of Cologne. After graduating in 1992, he worked as a postdoctoral fellow in the laboratory of C. Ronald Kahn at Harvard Medical School, and continued his residency in Internal Medicine at the University Hospital in Cologne. In 2003 he was recruited as a full professor to the Institute for Genetics at the University of Cologne, where he also serves since 2007 as the scientific coordinator of the Cologne Excellence Cluster on „Cellular Stress Responses in Aging-Associated Diseases“ (CECAD). In 2011 he became Director of the Max Planck Institute for Metabolism Research in Cologne and Director at the Center for Endocrinology, Diabetes and Preventive Medicine at the University Hospital in Cologne.

Prof. Tschöp received his M.D. from Ludwig-Maximilians-Universität in Munich. In 1999 he accepted an invitation for a postdoctoral fellowship at the Eli Lilly Research Laboratories in the U.S. After establishing his independent research laboratory at the German Institute of Human Nutrition Potsdam-Rehbrücke in Germany in 2002 and 2003, he returned to Cincinnati where he led a research institute as a tenured Professor of Endocrinology and Diabetes at the University of Cincinnati Metabolic Diseases Institute. Until 2009, Prof. Tschöp was named the Arthur Russell Morgan Endowed Chair of Medicine and Research Director of the University of Cincinnati's Metabolism Center of Excellence for Diabetes and Obesity. Matthias Tschöp, an elected member of the National Academy of Science (Leopoldina) is Scientific Director of the Helmholtz Diabetes Center, Director of the Institute for Diabetes and Obesity and Director of Biomedicine of the new Helmholtz Pioneer Campus at Helmholtz Zentrum München. He also holds the Chair of the Division of Metabolic Diseases at Technische Universität München, an Honorary Doctorate of the University Leipzig and an Adjunct Professorship at Yale University.

Bayer: Science For A Better Life

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 2016, the Group employed around 115,200 people and had sales of EUR 46.8 billion. Capital expenditures amounted to EUR 2.6 billion, R&D expenses to EUR 4.7 billion. These figures include those for the high-tech polymers business, which was floated on the stock market as an independent company named Covestro on October 6, 2015. For more information, go to www.bayer.com.

Note to editors:

Photos are available for download at <http://www.press.bayer.com>.

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Forward-Looking Statements

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