



NEWS RELEASE

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DISTINGUISHED DIABETES RESEARCHER NAMED 2021 HAMM PRIZE LAUREATE

OKLAHOMA CITY – Andrew T. Hattersley, CBE, FMedSci, FRS, has been named the recipient of the 2021 Harold Hamm International Prize for Biomedical Research in Diabetes. Hattersley, Professor of Molecular Medicine, University of Exeter Medical School, U.K., was nominated by Alvin Powers, M.D., Vanderbilt University; and Juleen Zierath, Ph.D., Karolinska Institute, Sweden, and University of Copenhagen, Denmark.

The Hamm Prize recognizes and encourages lasting advances in the field of diabetes research. It is awarded to an individual who has either demonstrated lifelong contributions to the field or realized a singular advance, especially one that promotes curative potential. The honor includes a \$250,000 award - the largest of its kind in the world - and will be awarded by OU Health Harold Hamm Diabetes Center at the University of Oklahoma Health Sciences Center.

“This unprecedented international research prize was established as a means to fuel global scientific interest and innovation. Its purpose is to drive discovery of a cure for diabetes in this generation,” said Harold Hamm, chairman and CEO of Continental Resources Inc., headquartered in Oklahoma City.

Following his lead gift in 2007 to create Harold Hamm Diabetes Center, Hamm also provided the endowment to establish the prize. Provisions of the endowment include awarding the prize every other year in perpetuity. The endowment represents a unique private/public partnership that leverages philanthropic contributions as a catalyst for medical advances where needs are acute. It is particularly significant in an environment marked by the decline of federal funding for medical research.

“This award puts an international spotlight on essential research to address this terrible disease, and helps attract the most brilliant minds in diabetes research and treatment to the OU Health Harold Hamm Diabetes Center,” said University of Oklahoma President Joseph Harroz Jr. “It is with deep gratitude, once again, that I thank Mr. Hamm for his generosity and commitment to our important work. We’re ever hopeful that these efforts will bring to an end the pain and negative impact of diabetes.”

“It is a distinct honour to be selected as the recipient of the 2021 Harold Hamm Diabetes International Prize for Biomedical Research in Diabetes,” Hattersley said. “As I consider previous applicants and recipients, it’s clear that I follow in the footsteps of some real giants of diabetes research. I’m still in grateful shock that I was chosen to join this elite company.”

The recipient is selected by an international jury of diabetes scientists. Jury members who gathered in Oklahoma City for final deliberation are: David A. D’Alessio, M.D., Duke University; David M. Nathan, M.D., Harvard Medical School; Alvin C. Powers, M.D., Vanderbilt University; Philipp E. Scherer, Ph.D., University of Texas Southwestern Medical Center; and Juleen R. Zierath, Ph.D., University of Copenhagen, Denmark.

Jury member Alvin Powers, M.D., physician scientist and active researcher, directs the diabetes center at Vanderbilt University, and nominated Hattersley for consideration as a prize recipient.

“It’s exciting to hear that Andrew Hattersley from Exeter has been chosen as this year’s Hamm scientist. Professor Hattersley’s work makes a huge impact on how we think about diabetes and how we begin to approach and individualize therapies,” Powers said. “He and his team have collaborated with people around the world to identify individuals with certain forms of diabetes, and then to individualize therapy based on their unique forms of diabetes. His work provides great insight into the mechanisms that cause diabetes at an individual level.” He explained that Hattersley’s findings will drive scientific

exploration at the molecular level, and that clinicians and patients will benefit from better testing and diagnostic tools, and treatments that more specifically target diabetes.

Powers said the increasing frequency of diabetes and its complications constitute a global problem. “We lack the ability to treat diabetes as effectively as we’d like. Unless we have better therapies, more and more people will face these terrible problems.” Part of the challenge, he said, is the language used to discuss diabetes, as if it were a single disease. “We don’t yet have the diagnostic tools to be more specific in our language. Current practice, then, is to treat almost everyone with diabetes in the same way.” He said we need greater understanding of why a certain person develops a form of diabetes and create more personalized therapies.

The importance of the Hamm Prize lies not only in the recognition of outstanding work, but also as it serves to call attention to the disease itself. Despite vast numbers of people affected, Powers said diabetes is not taken as seriously as it should be, and there’s a persistent tendency to minimize the impact of this major health problem, which merits greater attention at all levels.

“We need government-funded research, and we need people with diabetes to participate,” Powers said. We also need philanthropic support - people like Mr. Hamm - who decide to make a difference by investing in people and programs that can change the trajectory of diabetes and how it impacts society.”

Juleen Zierath, Ph.D., professor of physiology, Karolinska Institute, Sweden, and executive director of Novo Nordisk Foundation Center for Basic Metabolic Research, University of Copenhagen, also nominated Hattersley for the Hamm Prize. She said the COVID-19 pandemic has brought the damaging health consequences of obesity and Type 2 diabetes into sharp focus, showing more clearly that diabetes is more than a state of glucose dysregulation, but also a multi-faceted syndrome, driven by a variety of medical and social risk factors, often associated with patho-physiological changes throughout the body.

“Professor Hattersley has truly excelled, as evidenced by a clear, fundamental discovery of human genetics and developing paradigm-shifting clinical applications to improve the quality of life of people living with diabetes. That’s monumental,” Zierath said. “With his profound knowledge and clinical expertise in managing patients with monogenic forms of diabetes, he’s also a global reference for diagnostic and therapeutic questions related to what we call MODY - mature-onset diabetes in youth - and neonatal diabetes. It’s a great illustration of understanding the genetic forms of some cases of diabetes and using it to personalize treatment and care for these patients. It’s an elegant display of clinical and experimental research.”

Hattersley’s career began as a research student working at Oxford. His early work at Exeter included establishing a lab that now leads the world in the study of MODY and neonatal diabetes research and diagnosis. Here, a major breakthrough occurred with genome-wide analysis; the collaborative approach paved the way to discovery of new susceptibility polymorphism, a predisposition for Type 2 diabetes.

For nearly three decades, Hattersley has continued to make fundamental discoveries in diabetes research in both basic and clinical sciences, and his prolific work includes more than 600 peer-reviewed publications. Directing his research into the area of monogenic beta-cell diabetes, Hattersley has pushed beyond gene discovery to explore development and function of the human beta-cell, providing the clinical research that has become the basis of clinical care worldwide. One major advance has been the incorporation of beta-cell science into patient treatment. Recent work has revealed new insights into the beta-cell potassium channel.

Hattersley said the work of his research team in rare patients with genetic diabetes has shown that defining the cause of a person's diabetes can lead to dramatic improvements in treatment, including thousands of patients coming off insulin therapy. “This has led to testing for genetic diabetes throughout the world. The challenge for future generations of researchers is to define the different subtypes of Type 1 and Type 2 diabetes and to develop improved treatment specific for these subtypes.”

Hattersley’s work continues to exert influence on clinical care on a global scale. The monogenic genes discovered at Exeter are currently tested in routine diagnostic laboratories worldwide. In neonatal diabetes, pharmacogenetic findings that allow insulin to be avoided have made it possible to perform genetic testing immediately after a diabetes diagnosis. In MODY, which varies from both Type 1 and

Type 2 diabetes, Hattersley's research guides recognition of cases clinically and by biomarkers as well as treatment, including treatment during pregnancy.

An active researcher and clinician, Hattersley continues to identify new and important genes for beta-cell development, function and destruction with particular work on monogenic cause of monogenic autoimmunity, causing early diabetes. He has established that routine, clinical features may be used to individualize the treatment of Type 2 diabetes, and has developed new diagnostic tools that have proven particularly helpful to diagnose Type 1 diabetes in adult patients.

In addition to research and scholarly activities, Hattersley has a passion for the education and development of young researchers. His success in this endeavor is seen in the performance of the students and fellows he has supervised and mentored. Many are successful and independent academics leading their own research teams.

Hattersley is a Fellow of the Royal Society, Academy of Medical Scientists and Royal College of Physicians, London, U.K. He has presented and more than 400 national and international meetings for diabetes, endocrinology and islet biology. He is the recipient of numerous national and international research awards, including the 2020 Baillet Latour Health Prize, Belgium's highest scientific award for outstanding achievement in biomedical research.

"Professor Hattersley's discoveries continue to propel us toward a cure. The goal – to conquer diabetes in this generation - is a step closer because of his relentless exploration," said Jacob E. "Jed" Friedman, Ph.D., director of OU Health Harold Hamm Diabetes Center. "Untold numbers of people throughout this nation and the world will benefit from Professor Hattersley's brilliant work."

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OU HEALTH HAROLD HAMM DIABETES CENTER

OU Health Harold Hamm Diabetes Center is committed to curing diabetes and ending the diabetes pandemic in the 21st century. It is among the world's largest and most comprehensive institutions of its kind, integrating top-flight academic research with clinical care and disease prevention. The center oversees the world's top research prize in the diabetes field. It has facilities in Oklahoma City and Tulsa as well as affiliated sites across the state, including partnerships with Native American communities. An innovative range of services includes support groups, cooking classes, lifestyle-intervention programs, and a summer camp for children and teens. For more information, visit hammdiabetescenter.org.

OU HEALTH

OU Health is the state's only comprehensive academic health system of hospitals, clinics and centers of excellence. With 11,000 employees and more than 1,300 physicians and advanced practice providers, OU Health is home to Oklahoma's largest doctor network with a complete range of specialty care. OU Health serves Oklahoma and the region with the state's only freestanding children's hospital, the only National Cancer Institute-Designated OU Health Stephenson Cancer Center and Oklahoma's flagship hospital, which serves as the state's only Level 1 trauma center. ***Becker's Hospital Review* named University of Oklahoma Medical Center one of the 100 Great Hospitals in America for 2020. OU Health's oncology program at OU Health Stephenson Cancer Center was named Oklahoma's top facility for cancer care by U.S. News & World Report in its 2020-21 rankings.** OU Health also was ranked by *U.S. News & World Report* as high performing in these specialties: Colon Surgery, COPD and Congestive Heart Failure. OU Health's mission is to lead healthcare in patient care, education and research. To learn more, visit ouhealth.com.