



FOR IMMEDIATE RELEASE

Yumanity Therapeutics Launched by Tony Coles, M.D. to Identify and Develop New Therapies for Neurodegenerative Diseases Caused by Protein Misfolding

Company Formed on Foundational Science of Protein Folding Pioneer, Susan Lindquist, Ph.D., to Discover Disease-Modifying Therapies for Alzheimer's Disease, Parkinson's Disease and Amyotrophic Lateral Sclerosis

Yumanity's Platforms Reveal Potential New Target for Treatment of Parkinson's Disease and Identify New Chemical Lead Series to Advance in Discovery

December 15, 2014 – Cambridge, Mass. – Renowned biotech industry leader Tony Coles, M.D. today announced the launch of [Yumanity Therapeutics](#), a company focused on transforming drug discovery for diseases caused by protein misfolding. Formed by Dr. Coles, founding investor, chairman and chief executive officer, and Susan Lindquist, Ph.D., scientific founder and award-winning protein folding expert, Yumanity seeks to identify and develop new, disease-modifying therapies that address several illnesses with critical unmet medical needs. The initial focus of the company will be neurodegenerative diseases, including Alzheimer's disease, Parkinson's disease and amyotrophic lateral sclerosis (ALS). The company's proprietary platforms have already identified one potential new target for treating Parkinson's disease, and the team will begin work immediately on advancing its new chemical lead series for this condition, as well as identifying additional compounds for Alzheimer's disease and ALS.

Diseases affecting the brain and central nervous system represent one of the largest global healthcare challenges and greatest medical needs due to the devastating personal and economic consequences for patients, caregivers and society. An estimated 50 million people worldwide suffer from neurodegenerative diseases^{1,2}, with no currently approved disease-modifying therapies available. As modern therapeutic interventions increase life expectancy, the number of patients suffering from these diseases is expected to double every 20 years.¹ Costs for treating these diseases are currently estimated at \$650 billion and expected to grow to more than \$1 trillion by 2030.^{1,2}

"I am thrilled and inspired to be at the forefront of innovation in an area of real, global medical need," said Dr. Coles. "We believe the time is now to translate the remarkable advances in protein folding science achieved by Sue and her colleagues into a drug discovery engine that we believe can have a rapid and transformational impact on neurodegenerative diseases. While no cures exist and currently available therapies only address the symptoms of these devastating illnesses, our unique approach overcomes the fundamental limitations of today's target-based drug

discovery by exploiting the power of phenotypic screening in yeast and human stem cell-derived neurons. This approach is the Yumanity advantage and enables us to identify potential new therapies to modify the cause of these diseases at the cellular level.”

Protein Misfolding and Yumanity’s Integrated Discovery Platforms

DNA, the foundational code for all proteins, is initially decoded into long, linear strands of amino acids. These simple strands must fold into precise and highly distinct shapes to form functional proteins. When folding goes awry, the consequences can be disastrous, causing disruption of basic cellular processes. Most neurodegenerative diseases – including Alzheimer’s disease, Parkinson’s disease and ALS – are caused by protein misfolding. Current research and drug discovery efforts have been stymied by a lack of adequate tools to study the protein folding defects that are at the heart of these diseases and discover new drugs that will correct them.

Yumanity’s three discovery platforms are comprised of:

- Several proprietary ultra high-throughput, phenotypic screening (uHTS) platforms, in which different protein misfolding pathologies are modeled in yeast and compounds to correct these pathologies are discovered;
- A human neuronal platform, in which neurons produced from the stem cells of patients with disease-causing genetic mutations are used to validate the molecules discovered in yeast; and,
- A drug-target identification platform that exploits the power of yeast genetics and protein network analyses to elucidate mechanisms of action for pathology correcting molecules as new chemical entities are discovered.

The three integrated platforms, which originated in the lab of Dr. Lindquist at the Whitehead Institute and the Howard Hughes Medical Institute (HHMI), have been described in multiple, [peer-reviewed publications](#).

About the Founding Team

Yumanity’s scientific founder, [Dr. Lindquist](#), is a member of the Whitehead Institute at the Massachusetts Institute of Technology, an HHMI investigator and a pioneer in the field of protein folding. Her seminal work on heat-shock protein 90 (Hsp90), a chaperone protein that assists other proteins in folding, led to new understandings of evolution, including the emergence of cancer and the evolution of microbial drug resistance. Dr. Lindquist co-founded FoldRx (acquired by Pfizer), a company that developed tafamidis, a first-in-class drug now approved to combat hereditary peripheral amyloidosis, another important genetically-based protein misfolding disease of the nervous system. In 2009, she was awarded the National Medal of Science, our nation’s highest honor for scientific research.

Dr. Coles is an esteemed leader in the biotech industry who brings more than 20 years of experience in drug discovery and development to the company. Prior to his

role as founding chairman and CEO of Yumanity, [Dr. Coles](#) was chairman and CEO of Onyx Pharmaceuticals, Inc., which was acquired by Amgen in late 2013 for \$10.5 billion. Under his leadership, Onyx introduced two new innovative cancer medicines to patients and established the company's international presence. Prior to joining Onyx in 2008, he was president, CEO and a member of the board of directors of NPS Pharmaceuticals, Inc.

Joining Dr. Coles on the Yumanity leadership team is [Kenneth Rhodes, Ph.D.](#), chief scientific officer. Dr. Rhodes will oversee the scientific work of the company's integrated platforms in addition to its drug discovery research programs. Dr. Rhodes was previously vice president, neurology discovery at Biogen Idec, where he led an organization focused on discovery and early development of protein and small molecule drugs in the neurology therapeutic area. He brings to Yumanity more than 20 years of biopharmaceutical R&D experience and a career highlighted by a focus and commitment to finding new therapies for neurodegenerative diseases, including Alzheimer's disease, Parkinson's disease and ALS. Several new drug candidates identified by Dr. Rhodes and his teams for the treatment of neurodegenerative diseases are currently in clinical development.

Yumanity's three integrated platforms were developed in close collaboration with the company's [scientific co-founders](#), Vikram Khurana, M.D., Ph.D., Chee-yeun Chung, Ph.D. and Daniel Tardiff, Ph.D. Together, they helped pioneer the integration of yeast and human neuronal systems, coupling genetic and protein-network analyses to accelerate the identification of promising new drug leads and their molecular targets. These three outstanding scientists will join Yumanity from Massachusetts General Hospital and the Whitehead Institute and form its founding research team, ensuring the successful transition of the technology and rapid advancement of the company's lead programs.

About Yumanity Therapeutics

Yumanity Therapeutics is transforming drug discovery for neurodegenerative diseases caused by protein misfolding. Formed in 2014 by renowned biotech industry leader, Tony Coles, M.D., and protein folding science pioneer, Susan Lindquist, Ph.D., the company is initially focused on discovering disease-modifying therapies for patients with Alzheimer's disease, Parkinson's disease and amyotrophic lateral sclerosis (ALS). Leveraging its three integrated platforms, Yumanity's innovative new approach to drug discovery and development concentrates on reversing the cellular phenotypes and disease pathologies caused by protein misfolding. For more information, please visit yumanity.com.

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1. UBS, Alzheimer's Report, July 2014; Industry Research.
2. Parkinson's Disease Foundation. http://www.pdf.org/en/parkinson_statistics