Candidate for Dean, College of Agricultural Sciences: Dr. Maureen McCann

Dr. Maureen McCann is the Director of the Center for Direct Catalytic Conversion of Biomass to Biofuels (C3Bio), an Energy Frontier Research Center funded by the US Department of Energy's Office of Science; Director of Purdue University's Energy Center, representing over 200 affiliated faculty with energy-related research interests; and Director of Purdue's NEPTUNE Center for Power and Energy, funded by the Office of Naval Research.

At the national level, she has served on the USDA-DOE Biomass Research and Development Technical Advisory Committee and the DOE Office of Science, Council for Chemical and Biochemical Sciences. This year, McCann is participating, as one of 14 nominated individuals, in the US Department of Energy's *Oppenheimer Science and Energy Leadership Program* to provide future leaders with an overview of the Department of Energy and the National Laboratory system.

McCann obtained her undergraduate degree in 1987 in Natural Sciences from the University of Cambridge, U.K., and a Ph.D. in 1990 in Botany from the University of East Anglia, UK. She was a postdoctoral researcher at the John Innes Centre Norwich, U.K., a government-funded research institute for plant and microbial sciences, and remained there as a project leader from 1995, funded by The Royal Society with a University Research Fellowship. She moved to Purdue in 2003, where she is a Professor in the Department of Biological Sciences. McCann served as Assistant Department Head from 2007-2011, drafting the five-year departmental strategic plan for 2009-2014. As an active researcher in plant biology, McCann has 128 publications, 104 of which are in peer-reviewed journals, and an h-index of 54 (Google scholar), with over 13,000 citations (Orcid 0000-0001-6956-4216, Researcher ID T-9258-2017). Since 2009, McCann has personally brought over $45M in research funding to Purdue, enabling support both of her own lab and research projects of over 30 Purdue faculty. Under her leadership, the Energy Center has received direct proposal credit from its affiliated faculty for over $50M of funded awards in the past five years.

The goal of her research is to understand how the molecular machinery of the plant cell wall contributes to cell growth and specialization, and thus to the final stature and form of plants. Plant cell walls are the source of lignocellulosic biomass, a sustainable resource for fuels and chemicals with the potential to improve US energy security and independence and boost rural economies. Within C3Bio, McCann's lab explores synthetic biology and genetic engineering approaches to optimize cell wall and biomass structure for chemical conversion processes. The C3Bio is a team of chemical engineers, chemists and plant biologists focused on building the scientific knowledge base to convert plant materials (fast-growing trees, crop residues, dedicated bioenergy crops) into liquid hydrocarbon fuels and high-value chemicals. Though C3Bio was funded to conduct grand challenge science at the atomic and molecular scale, the Center has also produced 11 patent applications, the start-up company Spero Energy, and engaged over 100 early career scientists in interdisciplinary research.