

Contact: Diana Gonzalez

**FACULTY PRESENTATION AT IOWA STATE UNIVERSITY:
“BIOSCIENCES, ECONOMIC DEVELOPMENT, AND NEW TECHNOLOGIES”**

Action Requested: Receive the presentation.

Executive Summary: Professor Martin Spalding will provide a brief overview of bioscience programs at Iowa State University and discuss their significance to basic and applied research, education, and economic development. He will also highlight the innovative TALEN¹ technology development at ISU that enables rapid and precise editing of genomes and how the technology enables research both in Iowa and worldwide.

Professor Spalding has been at ISU since 1984; he holds bachelor's degrees in environmental science and biochemistry and a master's degree in botany from Washington State University; and a doctorate in plant physiology from the University of Wisconsin – Madison. He participated in postdoctoral programs at the University of Illinois – Champaign Urbana, the Australian National University, and Michigan State University.



Dr. Spalding served as chair of the Interdepartmental Plant Physiology Program at ISU from 1992 until 2000. He was named chair of the Department of Genetics, Development, and Cell Biology in 2003, and became Associate Dean for Research and Graduate Studies in the College of Liberal Arts and Sciences in 2011. His research interests include photosynthetic carbon metabolism and metabolic regulation of gene expression in plants and photosynthetic microbes. A particular focus of his research has been understanding the acclimation response of microalgae to changes in CO₂ availability, using *Chlamydomonas reinhardtii* as a model system. In recent years, he has used his knowledge and experience to improve the biofuel potential of algae and develop bioengineering technology for algae and plants.

¹ Transcription Activator-Like Effector Nuclease.