Mark Stowers, POET

Dr. Mark D. Stowers is the Senior Vice President of Science and Technology for POET, the world's largest ethanol producer. He is responsible for the development and implementation of the company's research and development strategy. Prior to joining POET, Dr. Stowers was President and CEO of the Michigan Biotechnology Institute and has served in executive and senior management positions at Seminis, Monsanto and Eastman Kodak.

Dr. Stowers received his Ph.D. in microbiology from North Carolina State University. He completed post-doctoral studies at the Boyce Thompson Institute, Cornell University and attended Washington University's Olin School of Business in St. Louis.

Dr. Stowers currently serves on advisory boards for the Joint Bioenergy Institute, Great Lakes Bioenergy Research Center, International Center for Advanced Renewable Energy and Sustainability, the Washington University's National Research Advisory Council and as President of the North Carolina Agriculture and Life Sciences Research Foundation. Dr. Stowers also serves on the editorial board of the Journal of Biobased Materials and Bioenergy. He was named North Carolina State University's Distinguished Alumnus in 2003.

Broad Areas of Expertise: Corn ethanol production, cellulosic ethanol production, alternative energy development, cellulosic feedstock collection, storage and processing, life cycle analysis (GREET & BESS), project economic analysis, distillers' grains and other co-product production (w/ethanol), crop agriculture

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Education

Ph.D.	(1982)	Microbiology	North Carolina State University, Raleigh, North Carolina
MS	(1980)	Microbiology	North Carolina State University, Raleigh, North Carolina
BS	(1977)	Biology	Appalachian State University, Boone, North Carolina

- Post-doctoral Studies (1982-1983) Boyce Thompson Institute for Plant Research, Cornell University, Ithaca, New York
- Attended Washington University – St. Louis, Executive MBA Program, John M. Olin Business School (1992-1993)
- PMA/Packer/Cornell University Leadership Symposium (1994), Cornell University
- George H. Wedgeworth Leadership Institute for Agriculture and Natural Resources (1994-1996), Graduate of Class II, University of Florida, Gainesville, Florida
- The Agribusiness Seminar (1996), Harvard University, Graduate School of Business Administration, Boston, Massachusetts
- Various management training courses: finance (University of Michigan/Eastman Kodak), strategic planning (Pennsylvania State University/Eastman Kodak), supervisor training and project planning (Eastman Kodak), diversity training (Monsanto Company)

Employment

POET **Sioux Falls, South Dakota**
Vice President, Science and Technology **(2006 to present)**

Lead development and implementation of science and technology strategy for corn to ethanol, cellulose to ethanol and the production of biochemicals. Also supports the company's strategies in government and regulatory affairs and set science policy.

- Cellulose to ethanol pilot facility designed, built and operating in 2008
- Corn cob collection, storage, transport and processing systems developed in 2008
- Development and semi-works production of two biochemical products in 2008
- Doubled research and development team to 45 team members in 2008

MBI International (Michigan Biotechnology Institute) **Lansing, Michigan**
President and Chief Executive Officer **(2001 to 2006)**

Business and technical leadership of 30+ person technology commercialization team focused on biofuels and bioproducts.

- Completed merger with Michigan State University Foundation to create a direct collaboration with Michigan State University
- Successfully licensed key technologies to major industrial collaborator.
- Managed Lansing Regional SmartZone and Biobusiness Incubator of Michigan – economic development engines of central Michgian.
- Co-founded Draths Corporation, bioproducts company now with series B financing from Khosla Ventures and TPG.

VivoRx **Santa Monica, CA**
Vice President of Business Development **(2000 to 2001)**

Business leadership for research and development stage biopharmaceutical company focused on stem cell therapy for diabetes.

- Developed business plan for the company.

Seminis, Inc. **Oxnard, California**
Vice President, Marketing/Business Development **(1996 to 2000)**

Business leadership for the company's growth strategy based on organic growth and growth through acquisition.

- Directed the execution of a multi-brand strategy to grow world's largest vegetable seed business from $375 million to $530 million in annual sales in three years.
- Led successful initial public offering on NASDAQ "SMNS" for $206 million for 23% of the company. Participated in team that secured over $1.5 billion in corporate debt.
- Led restructuring of company's new product development process leading to $191 million in cost savings over 4 years.

Monsanto Company **St. Louis, MO/Naples, FL**
Business Director **(1989 to 1996)**
New Products Division, Agricultural Group, Monsanto Company

Led business development and mergers and acquisitions effort targeting value capture opportunities from processing improvement and quality traits.

- Successfully licensed key technology for delayed tomato ripening to the largest fresh market tomato producer and led acquisition of a minority stake in that company. Post equity acquisition led the operations of the company in Florida, Puerto Rico, Georgia and Virginia and coordinated operations in Chile, Mexico and California as Vice President, Operations and Information, Gargiluo, LP (concurrent position).
- Led team to secure one of the early approvals for a genetically modified crop, delayed ripening tomato.

Eastman Kodak Company **Rochester, New York**
Technology Manager, BioProducts Division **(1986 to 1989)**

Directed the research and development efforts to produce novel enzymes and bioproducts for industrial applications.

- Directed scientists and engineers in the production of fine and specialty chemicals and enzymes.
- Managed collaborations at Amgen, Genencor, University of Tennessee, University of Mississippi and Biochem Technology Inc.
- Co-founded food ingredients business focused on food and pharmaceutical ingredients produced through biocatalysis.

NPI (Native Plants, Inc.) **Salt Lake City, Utah**
Senior Project Leader **(1983 to 1985)**

Directed research and development activities focused on novel microorganisms to improve the efficiency of food and fiber production.

- Led plant germplasm collection trips in Indonesia.
- Launched reforestation project in Nepal.
- Secured extra-mural funding from the National Science Foundation, US Agency for International Development and Merrill Lynch Capital Markets – Research and Development Limited Partnerships totaling over $2 million.

Honors and Awards

Distinguished Alumnus, College of Agriculture and Life Sciences, North Carolina State University, 2003

Biographical Listings

Who's Who in the World, Who's Who in America, Who's Who in the World, Strathmore's Who's Who, Who's Who World Registry, Who's Who in Finance and Industry, Who's Who of US Executives, 2000 Notable Americans, Who's Who of Worldwide Business Leaders, Who's Who in the South and Southeast, Who's Who in the Midwest, Who's Who Among US Executives, Men of Achievement, Who's Who Among Rising Young Americans

Board Memberships

North Carolina Agriculture and Life Science Research Foundation, Director, 2005 to present; President, 2009 to present

Draths Corporation, Director/Treasurer, 2006-2007

MBI International, President/CEO/Director, Executive Committee, 2001 to 2006

BioBusiness Incubator of Michigan, President/Director, 2002 to 2006

Natura, Inc., President/Director, 2002 to 2006

BioPlastics, Inc., President /Director, 2002 to 2006

Foundation for Pierce College, Director, 2000-2001

Florida Fruit and Vegetable Association, Director, 1995-1996

Associations and Affiliations

Professional Memberships	American Chemical Society American Institute for Chemical Engineers Society for Industrial Microbiology American Association for the Advancement of Science Sigma Xi, the Research Honor Society
Advisory Boards	Washington University – St. Louis, National Research Advisory Council, 2007 to present
	International Center for Advanced and Renewable Energy, 2007 to present
	Joint Bioenergy Institute, DOE Bioenergy Center, 2008 to present
	Great Lakes Bioenergy Research Center, 2008 to present
	Biotechnology Business Consultants, Michigan Life Sciences Corridor Program, 2003 to 2006
	Food Systems Network for the Hale Group, 2003 to 2005
	Michigan Agricultural Innovation Center, 2004 to 2006
	Michigan Partnership for Product Agriculture 2002-2004 (steering committee)
Conference Co-Organizer	International Fuel Ethanol Workshop (steering committee, 2008 and 2009)
	BIO International Convention (executive and program committee, 2006)
	Strategic Partnerships to Successfully Commercialize Agricultural Biotech: Maximizing the Profit Potential of New Output and Input Traits, Chicago, IL 1998
Conference Session Chair	Corn/Cellulose Biorefineries, Corn Utilization and Technology Conference, Kansas City, MO 2008
	Biorefinery of the Future, World Congress on Industrial Biotechnology and Bioprocessing, Orlando, FL 2007
	Early Stage Financing in Industrial Biotechnology, BIO International Convention, Chicago, IL, 2006
Member, Science	International Food Biotechnology Council, 1988-1989

Committee	United Fresh Fruit and Vegetable Association, 1990-1993
Chairman, Review Team	Special Grants for Research on Factors Limiting Symbiotic Nitrogen Fixation for Crop Production in Developing Countries, US Agency for International Development, 1987
Editorial Board	Journal of Biobased Materials and Bioenergy. 2006 to present
Ad Hoc Reviewer:	*Crop Science*, 2006-2008
	National Science Foundation, Metabolic Biology and Ecology and Biotic Systems programs, 1982-1987
	USDA Competitive Grants Program, Biological Nitrogen Fixation, 1982-1987
	US Agency for International Development, Limiting Factors Program, 1982-1987

Grants (serving as Principal Investigator)

Department of Energy, "Integrated Corn Cellulose Biorefinery," $1.47 million, Grant number DE-FG36-08GO8033 (2008-2009)

Department of Energy, "Biomass to Fuels and Chemicals: Building a Bridge to the Corn Ethanol Industry," $3,000,000, Grant Number DE FC36-02G012001 (continuation, 2004-2006).

US Department of Agriculture, "Improved Uses for Dried Distillers Grains and C4 Grass Feedstocks," $556,000, Grant Number 58-5447-2-315, Amendments #1/2 (2004-2006)

US Department of Agriculture, "Bioprocessing for Utilization of Agricultural Resources," $746,000, subcontract under Grant Number 2003-34189-13421 (continuation, 2004-2006)

Department of Defense, Office of Naval Research, "Large Scale Green Synthesis of 1,2,4 Butanetriol," $1,761,000 (2003-2006)

Department of Energy, "Biomass to Fuels and Chemicals: Building a Bridge to the Corn Ethanol Industry," $2,000,000, Grant Number DE FC36-02G012001 (continuation, 2003-2004).

US Department of Agriculture, "Improved Uses for Dried Distillers Grains and C4 Grass Feedstocks," $606,350, Grant Number 58-5447-2-315, Amendment #1 (2003-2004)

US Department of Agriculture, "Bioprocessing for Utilization of Agricultural Resources," $373,716, subcontract under Grant Number 2003-34189-13421 (2003-2004)

Department of Energy, “Integrated Biorefinery Approach,” $1,880,000, Grant Number DE FC36-02G012001 (2002-2003).

US Department of Agriculture, “Bioprocessing for Utilization of Agricultural Resources,” $409,909, Grant Number 2002-06008, (2002-2003).

US Department of Agriculture, “Improved Uses and Values for Dried Distillers Grains and C4 Grass Feedstocks,” $354,000 Grant Number 58-5447-2-315 (2002-2005)

Environmental Protection Agency, “Developing and Demonstrating Environmental Technologies of National Strategic Benefit,” $1,885,000 Grant Number X828670-01-0, (2002-2003)

Department of Energy, “Fibex, Ethanol Co-Products, BioPolymers,” $2,000,000 Grant Number DE-FC36-02GO12001, (2001-2002)

US Agency for International Development, Science Advisor’s Office Grant, “Tissue Culture and Microbial Inoculation Techniques for the Improvement of *Alnus nepalensis* Planting Stock.” $150,000 with collaborators in Nepal. (1985-1986)

Merrill Lynch Capital Partners, Research and Development Limited Partnership, “Development of Nitrogen-Fixing Rosaceae.” $1,600,000. (1984-1989)

National Science Foundation, SBIR Phase II Grant, “Production of Nitrogen-Fixing Inocula for Non-Agricultural Use,” PCM 82-13855. $200,000. (1983-1985)

Selected Publications and Patents Related to Bioenergy, Biofuels and Biochemicals

Steele, D.B. and **M.D. Stowers**. 1991. Techniques for the selection of industrially important microorganisms. Annual Reviews of Microbiology 45: 89-106.

Rajagopalan, S., E. Ponnampalam, D. McCalla and **M.D. Stowers**. 2005. Enhancing profitability of dry mill ethanol plants – process modeling and economics of degermed, defibered corn to ethanol. Applied Biochemistry and Biotechnology 120: 37-50.

Steele, B., S. Raj, J. Nghiem and **M.D. Stowers**. 2005. Enzyme recovery and recycling following hydrolysis of ammonia fiber explosion-treated corn stover. Applied Biochemistry and Biotechnology 121-124: 901-910.

Hanchar, R.L., F. Teymouri, C. Nielson, D. McCalla and **M.D. Stowers**. 2007. Separation of glucose and pentose sugars by selective enzyme hydrolysis of AFEX-treated corn fiber. Applied Biochemistry and Biotechnology 137-140: 313-325.

Geraets, J., M. Heupel, M. Dilts and **M. Stowers.** 2009. Biomass Collecting System. US Provisional Patent Application. 61/150,210.

Stowers, M.D. 2009. The U.S. Ethanol Industry. Federal Reserve Bank of St. Louis, Regional Economic Development 5: 3-11.

Fruin, J., **M.D. Stowers** and K. Tilley. 2009. Biomass Feedstock Collection, Storage and Logisitics. CAST Commentary (manuscript in preparation)

Selected Presentations Related to Bioenergy, Biofuels and Biochemicals (past 2 years)

Stowers, M.D. 2007. Industrial Biotechnology and Agriculture. Invited speaker, Michigan Agribusiness Association Annual Winter Conference, Lansing, MI

Stowers, M.D. 2007. Cellulosic Ethanol. Invited speaker, Michigan Agribusiness Association Annual Winter Conference, Lansing, MI

Stowers, M.D. 2007. Cellulosic Ethanol. Invited speaker, Ethanol: The New Energy Paradigm, San Antonio, TX

Stowers, M.D. 2007. Biotechnology and Agriculture: New Paradigm. Invited speaker, Joint Meeting of the North Carolina Corn Growers Association, Soybean Growers Association and Small Grains Association, New Bern, NC.

Stowers, M.D. 2007. Biotechnology the Game Changer in Agriculture. Keynote speaker, AgExcellence/CoExcellence Annual Meeting, St. Louis.

Stowers, M.D. 2007. Cellulosic Ethanol. Invited panelist, MIT Energy Conference 2.0, Cambridge, MA.

Stowers, M.D. 2007. The Future is Now for Cellulose Ethanol. Invited speaker, USDA-ERS Biofuels Modeling Workshop, Washington, D.C.

Stowers, M.D. 2007. Integrated Corn Cellulose Biorefinery. Session chair and invited speaker, World Congress on Industrial Biotechnology and Bioprocessing, Orlando, FL.

Stowers, M.D. 2007. Integrated Corn Cellulose Biorefinery. Invited speaker, Washington University – St. Louis, MO.

Stowers, M.D. 2007. POET's Cellulose to Ethanol Project with DOE. Invited speaker, Fuel Ethanol Workshop, St. Louis, MO.

Stowers, M.D. 2007. Integrated Corn Cellulose Biorefinery. Invited speaker, Michigan Bioeconomy Summit, Lansing, MI.

Stowers, M.D. 2007. Integrated Corn Cellulose Biorefinery. Invited speaker, International Biofuels Conference, Amsterdam, the Netherlands

Stowers, M.D. 2007. Collection of cellulosic biomass for an Integrated Corn Cellulose Biorefinery. Invited speaker, International Biofuels Conference, Amsterdam, the Netherlands.

Stowers, M.D. 2007. Integrated Corn Cellulose Biorefinery. Invited keynote speaker, E3 Conference, University of Minnesota, Minneapolis, MN.

Stowers, M.D. 2008. Is Ethanol Sustainable? An Integrated Corn Cellulose Biorefinery Solution. Invited speaker, USDA Outlook 2008, Washington, DC.

Stowers, M.D. 2008. Joint Process Development in Biomass: Biomass Collection, Storage and Processing. Invited speaker, World Congress on Industrial Biotechnology and Bioprocessing, Chicago, IL

Stowers, M.D. 2008. Biorefinery of the Future. Invited speaker, International Fuel Ethanol Workshop, Nashville, TN.

Stowers, M.D. 2008. Ethanol, Cellulosic Systems, the Technology and Where We Are. Invited speaker, Michigan Bioeconomy Summit, Lansing, MI.

Stowers, M.D. 2008. Technology Networks in Industrial Biotechnology. Invited speaker, National Association of Agricultural Experimental Station Directors, Traverse City, MI.

Stowers, M.D. 2008. How to Partner with Industry, Government and Regions – Industry Perspective. Invited speaker, USDA REE Energy Summit, Washington DC.

Stowers, M.D. 2008. The US Ethanol Industry. Invited keynote speaker, Economics of Ethanol: Costs, Benefits, and Future Prospects of Biofuels, Federal Reserve Board of St. Louis, Weidenbaum Center at Washington University and International Center for Advanced Renewable energy and Sustainability, St. Louis, MO.

Stowers, M. D. 2009. Integrated Corn Cellulose Biorefinery. Invited speaker, Great Lakes Bioenergy Research Center, Madison, Wisconsin.

Stowers, M.D. 2009. Beyond the Bubble: Building the Pipeline for the Generation of Energy Technologies. Invited speaker, Celebration 2009, Cornell University, Ithaca, NY

Stowers, M.D. 2009. POET's Cellulosic Ethanol Project. Invited speaker. International Fuel Ethanol Workshop, Denver, CO.

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Please submit a CV along with this form

APPLICANT: Mark (First) D (Middle) Stowers (Last)

Employer: POET Research Inc.

Current Job Title: Vice President of Science and Technology

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Broad Areas of Expertise:
Corn ethanol production, cellulosic ethanol production, alternative energy development, cellulosic feedstock collection, storage and processing, life cycle analysis (GREET & BESS), project economic analysis, distillers' grains and other co-product production (w/ethanol), crop agriculture

Years of Relevant Experience: 27

Comments:

***Please return to*:**
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