

BIOGRAPHICAL SKETCH
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NAME: Maher, John M.

eRA COMMONS USER NAME (credential, e.g., agency login): JOHNMAHER

POSITION TITLE: Vice President for Research

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Cornell University	A.B.	1976	Chemistry
Harvard University	M.S.	1981	Chemistry
Harvard University	Ph.D.	1986	Chemistry

A. Personal Statement

The COBRE proposal, focused on cellular transport physiology of obesity related conditions, requires scientific and managerial leadership at the institutional, state and inter-institutional level to develop the collaborative and participative atmosphere necessary for effective performance. I have a broad background in scientific leadership and management of cross-functional programs that will facilitate Marshall's successful growth through the project and the successful achievement of multi-institutional project objectives. My expertise in strategic planning and management of large, complex projects will be applied at the steering team level, by serving on the Internal Advisory Committee (IAC) as well as the Executive Committee of the IAC, to assure that the organizational foundation of the project components is properly designed and executed.

B. Positions and Honors**Positions and Employment**

2007-present Vice President for Research at Marshall University
2003-present Founding Partner, Rampant Technology Partners, LLC
2003-2007 Executive Director, Chemical Alliance Zone, Inc.
2001-2003 Senior Technical Leader, Corporate R/D, Dow Chemical Company
1995-2001 Senior Technology Manager, Solvents and Intermediates Division Union Carbide Corporation
1994-1995 Senior Technology Manager, Acrylates and Acetyls, Solvents and Intermediates, Union Carbide Corporation
1991-1994 Group Leader/Technology Manager, Vinyl, Acetate and Acrylics, Union Carbide Corporation
1989-1991 Group Leader/Technology Manager – Photoresist and Advanced Coatings R/D, Union Carbide Corporation
1987-1989 Research Scientist, Union Carbide Corporation
1984-1987 Project Scientist, Union Carbide Corporation
1981-1984 Senior Chemist, Union Carbide Corporation

Other Experience and Professional Memberships

Member, American Chemical Society; Member, AAAS

Honors

1995 Recipient, Chairman's Award for Technology Excellence – Union Carbide's highest technical award for discovery, development and commercialization of a new class of hydroformylation catalysts.

C. Contribution to Science

1. My early investigations focused on the structure and reactivity of highly reduced transition metal complexes bearing pi-acceptor ligands. An interesting array of unprecedented atom-transfer and ligand reduction patterns were discovered, as well as some path-breaking structural characterization of the parent metal anions.
 - a. Maher, J. M., & Cooper, N. J. (1980). Reduction of carbon dioxide to carbon monoxide by transition metal dianions. *Journal of the American Chemical Society*, 102, 7604.
 - b. Maher, J. M., Lee, G. R., & Cooper, N. J. (1982). Evidence for oxide transfer from coordinated carbon dioxide to coordinated carbon dioxide in an anionic carbon dioxide complex. *Journal of the American Chemical Society*, 104, 6797.
 - c. Maher, J. M., Beatty, R. P., & Cooper, N. J. (1985). Preparation of dianions of molybdenum and tungsten. *Organometallics*, 4, 1354.
 - d. Maher, J. M., Beatty, R. P., Lee, G. R., & Cooper, N. J. (1986). Preparation of dianions of molybdenum and tungsten. In R. B. King and J. J. Eisch (Eds.), *Organometallic syntheses: Vol. 3*. Amsterdam: Elsevier.
2. At Union Carbide Corporation, I contributed as an inventor on a project to develop novel ligands for rhodium catalysis of hydroformylation. The discoveries led to several generations of new catalysts for the hydroformylation of unreactive internal olefins and means of stabilization of those catalysts in continuous operation.
 - a. "Transition Metal Complex Catalyzed Reactions", E. Billig, A. G. Abatjoglou, D. R. Bryant, R. E. Murray, J. M. Mather (sic), United States Patent 4,599,206 to Union Carbide Corporation.
 - b. "Transition Metal Complex Catalyzed Reactions", J. M. Maher, D. R. Bryant, United States Patent 4,774,361 to Union Carbide Corporation.
 - c. "Process for Purifying Tertiary Organophosphites", J. M. Maher, E. Billig and D. R. Bryant, United States Patent 4,835,299 to Union Carbide Corporation.
 - d. "Calixarene bisphosphite ligand for use in hydroformylation processes". Brammer; Michael A.; Peng; Wei-Jun ; Maher; John M. ; United States Patent 7,906,688 to Dow Global Technologies.
3. Continuing research in this manifold led to the discovery of highly selective catalysts for producing n-aldehydes from terminal and internal olefins, and their mixtures. Catalyst stabilization technology was also developed that allowed the commercial operation of these catalysts.
 - a. "Hydroformylation Process", J. M. Maher, J. E. Babin, E. Billig, Bryant D. R., T. W. Leung, United States Patent 5,288,918 to Union Carbide Corporation.
 - b. "Process for Stabilizing Phosphite Ligands in Hydroformylation Reaction Mixtures", J. E. Babin, J. M. Maher, E. Billig, United States Patent 5,364,950 to Union Carbide Corporation.
 - c. "Stabilization of Phosphite Ligands in Hydroformylation Process", A. G. Abatjoglou, D. R. Bryant, J. M. Maher, United States Patent 5,756,855 to Union Carbide Corporation.
 - d. "Stabilization of Phosphite Ligands in Hydroformylation Process", A. G. Abatjoglou, D. R. Bryant, J. M. Maher, United States Patent 5,929,289 to Union Carbide Corporation.
4. Extension of this work to the hydroformylation of functionalized olefins led to catalysts and separation methods to produce nylon intermediates.
 - a. "Metal-Ligand Complex Catalyzed Processes", J. C. Nicholson, D. R. Bryant, J. R. Nelson, J. R. Briggs, D. L. Packett, J. M. Maher, United States Patent 5,874,639 to Union Carbide Corporation.
 - b. "Metal-Ligand Complex Catalyzed Processes", D. R. Bryant, T. W. Leung, E. Billig, T. C. Eisenschmid, J. C. Nicholson, J. R. Briggs, J. M. Maher, United States Patent 5,874,640 to Union Carbide Corporation.

