

BIOGRAPHICAL SKETCH

NAME Mary F. Lopez	POSITION TITLE Director, BRIMS Biomarker Research in Mass Spectrometry ThermoFisher Scientific		
CURRENT AFFILIATION ThermoFisher Scientific			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Massachusetts, Amherst, MA Thesis advisor: Dr. J.G. Torrey, Harvard University, Petersham, MA	Ph.D. in Botany	1980-1985	Doctoral Thesis: Biochemistry and physiology of carbon metabolism in <i>Frankia</i> , an actinomycete that forms symbiotic nitrogen-fixing nodules analogous to those of <i>Rhizobium</i> .

List of five recent publications by the candidate:

1. Lopez MF, Kuzdzal S, Mikulskis A, Golenko E, Petricoin III EF, Liotta LA, Patton WF, Lynch C, Gordon R, Whiteley GR, Rosenblatt K, Gurnani P, Nanda A, Neill S, Cullen S, O’Gorman M, Sarracino D, Fishman D. 2007. A novel, high-throughput workflow for discovery and identification of serum carrier protein-bound peptide biomarker candidates in ovarian cancer samples. *Clinical Chemistry* 53: 1067-1074.
2. Liu, C., Shea, N., Rucker, S., Harvey, I., Russo, P., Saul, R., Lopez, M.F., Mikulskis, A., Kuzdzal, S., Golenko, E., Fishman, D., Vonderheid, E., Booher, S., Cowen, E.W., Hwang, S.T., Whiteley, G.R. 2007. Proteomic patterns for clarification of ovarian cancer and CTCL serum samples utilizing peak pairs indicative of post-translational modifications. *Proteomics*. 7:4045-4052.
3. Fisher, W.G., Rosenblatt, K.P., Fishman, D.A., Whiteley, G.R., Mikulskis, A., Kuzdzal, S., Lopez, M.F., Tan, N.C., German, D.C., Garner, H.R. 2007. A robust biomarker discovery pipeline for high-performance mass spectrometry data. *J. Bioinform. Comput. Biol.* 5:1023-1045.
4. Lopez MF, Mikulskis A, Golenko E, Melov S, Bennett D, Cherkasskiy A, Kuzdzal S, Kramer S, Sissors D. 2004. Microscale fractionation facilitates detection of differentially expressed proteins in Alzheimer’s disease brain samples. *Electrophoresis*, 25:2557-2563.
5. Lopez MF, Mikulskis A, Kuzdzal S, Golenko E, DiCesare J, Denoyer E, Patton WF, Ediger R, Sapp L, Lynch C, Bennett D, Wall MR, Mannion DP, della Cioppa G, Wolfe G. 2005. High-Resolution serum proteomic profiling of Alzheimer’s Disease samples reveals disease specific carrier-protein bound mass signature. *Clinical Chemistry*, 51: 1946-1954.

Please indicate in 200 words or less the reason(s) why you would be a suitable candidate for the HUPO Council elections.

I have focused my career on proteomics and, most recently, in the area of quantitative proteomics. My career has been primarily in industry rather than academia and therefore I have had the opportunity to work with many cutting edge technologies. In addition, a focus of my career path has been the development of broad collaborations that unite industry and academia and result in novel products and approaches to the resolution of biological problems. I believe it is time for HUPO to help deliver on the promise and hype of proteomics. A clear direction would be to encourage and foster the development of methods and standards for quantitation and application of proteomic assays to the clinical environment. The application of mass spectrometry in this area provides many opportunities. There is a great need in the clinical world for robust assays that can provide early detection for many diseases and pathologies. In addition, the development of assays for protein and peptide biomarkers will allow the more rapid development and validation of critical new drug therapies. HUPO can play a role in hastening this very needed and timely application of proteomics. I would be very excited to be a member of the council and help promote and establish these new directives and in effect, give HUPO more relevance in real world (and not just academic) applications.