

## CURRICULUM VITAE

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### **BINDESH SHRESTHA**

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### **EDUCATION**

- 2004 – present** **PhD. Candidate** in Chemistry, Department of Chemistry, The George Washington University, Washington DC, Research Director: Professor Akos Vertes
- 1999 – 2003** **Bachelor of Science in Chemistry and Bachelor of Arts in Economics**, Moravian College, Bethlehem, PA, Advisor: Professor R. Daniel Libby

### **RESEARCH EXPERIENCE**

- 2005 – present** **Research Assistant**, Vertes Research Laboratory, Department of Chemistry, The George Washington University, Washington DC. Research Director: Professor Akos Vertes
- 2002 – 2003** **Undergraduate Research**, Department of Chemistry, Moravian College, Pennsylvania. Research Director: Professor Carl Salter

### **TEACHING EXPERIENCE**

- 2004 – 2007** **Graduate Teaching Assistant**, Department of Chemistry, The George Washington University, Four laboratory sections for 25 students each for an introductory chemistry class.

### **PROFESSIONAL AFFILIATION**

American Society for Mass Spectrometry (ASMS)  
American Chemical Society (ACS)  
American Society of Nepalese Engineers (ASNEng)

### **PEER REVIEWED PUBLICATIONS**

- [6] **B. Shrestha**, and A. Vertes, “Panoramic Metabolic Profiling of a Live Single Cell by Ambient Mass Spectrometry,” **2008**, *In preparation*.
- [5] **B. Shrestha**, P. Nemes, J. Nazarian, Y. Hathout, E. P. Hoffman, and A. Vertes, “Direct analysis of lipids and other metabolites in mouse brain tissue by AP IR-MALDI and reactive LAESI mass spectrometry,” **2008**, *Submitted*.
- [4] **B. Shrestha**, Y. Li, and A. Vertes, “Rapid analysis of pharmaceuticals and excreted xenobiotic and endogenous metabolites with atmospheric pressure infrared MALDI mass spectrometry,” *Metabolomics*, **2008**, *4*, 297-311.
- [3] A. Vertes, P. Nemes, **B. Shrestha**, A. A. Barton, Z. Chen, and Y. Li, “Molecular Imaging by Mid-IR Laser Ablation Mass Spectrometry,” *Applied Physics A*, **2008**, *93*, 885-891.

- [2] Y. Li, **B. Shrestha**, and A. Vertes, "Atmospheric Pressure Infrared MALDI Imaging Mass Spectrometry for Plant Metabolomics," *Analytical Chemistry*, **2008**, *80*, 407-420.
- [1] Y. Li, **B. Shrestha**, and A. Vertes, "Atmospheric Pressure Molecular Imaging by Infrared MALDI Mass Spectrometry," *Analytical Chemistry*, **2007**, *79*, 523-532.

#### CONFERENCE PROCEEDINGS\*

- [7] A. Vertes, P. Nemes, A. A. Barton, **B. Shrestha**, and Y. Li, "In vivo analysis and imaging of biological tissue with infrared laser ablation mass spectrometry," *236th American Chemical Society National Meeting*, Philadelphia, PA, August 17-21, **2008**.
- [6] **B. Shrestha**, P. Nemes, J. Nazarian, E. P. Hoffman, and A. Vertes, "Direct analysis of lipids and other metabolites in mouse brain tissue with infrared laser ablation and mass spectrometry," *Proceedings of the 56th ASMS Conference on Mass Spectrometry and Allied Topics*, Denver, CO, June 1-5, **2008**; DVD-ROM.
- [5] **B. Shrestha**, Y. Li, and A. Vertes, "Rapid Analysis of Pharmaceuticals and their Metabolites with Atmospheric Pressure Infrared MALDI Mass Spectrometry", *Proceedings of the 55th ASMS Conference on Mass Spectrometry and Allied Topics*, Indianapolis, IN, June 3-7, **2007**; DVD-ROM.
- [4] Y. Li, **B. Shrestha**, and A. Vertes, "Atmospheric Pressure Infrared MALDI Mass Spectrometry: Imaging and In Vivo Studies of Metabolites in Plants", *Proceedings of the 55th ASMS Conference on Mass Spectrometry and Allied Topics*, Indianapolis, IN, June 3-7, **2007**; DVD-ROM.
- [3] **B. Shrestha**, Y. Li, and A. Vertes, "Direct analysis of drugs and their metabolites by infrared atmospheric pressure matrix-assisted laser desorption ionization mass spectrometry", *33<sup>rd</sup> The Federation of Analytical Chemistry and Spectroscopy Societies (FACSS) Conference*, Lake Buena Vista, FL, September 24-28, **2006**.
- [2] Y. Li, **B. Shrestha**, and A. Vertes, "A. Imaging at Atmospheric Pressure by MALDI Mass Spectrometry", *Proceedings of the 54th ASMS Conference on Mass Spectrometry and Allied Topics*, Seattle, WA, May 28-June 1, **2006**, DVD-ROM.
- [1] J. Nazarian, **B. Shrestha**, Y. Hathout, A. Vertes, and E. P. Hoffman, "Proteomic Analyses of *Torpedo Californica* Electroplaque as a Model for the Neuromuscular Junction", *Proceedings of the 54th American Society for Mass Spectrometry (ASMS) Conference on Mass Spectrometry and Allied Topics*, Seattle, WA, May 28-June 1, **2006**, DVD-ROM.

\* The presenting authors are underlined.