**Amanda S. Willoughby**

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**Education and Relevant Experiences**

**Academic Degrees**

*Ph.D. Chemistry Pending December 2015 Old Dominion University, Norfolk VA*

*Current GPA: 3.86*

M.S. Chemistry May 2010 Old Dominion University, Norfolk VA

GPA: 3.83

M.S. Thesis: *Molecular Characterization of the Soluble Fraction of Atmospheric Particulate Matter Obtained by Chemical Oxidation with Nitric Acid*

B.S. Biochemistry December 2006 Old Dominion University, Norfolk VA

GPA: 3.56

**Volunteer Work**

Career Day, 1st – 5th Grades October 2007, 2008 Newcastle Elementary School

*Guest Scientist* Virginia Beach, VA

Lesson on Matter, 1st Grade May 2007, 2008 Newcastle Elementary School

*Guest* *Scientist* Virginia Beach, VA

National Ocean Sciences Bowl February 2011 Virginia Institute of Marine Science

*Room Runner* Gloucester Point, VA

National Ocean Sciences Bowl March 2012, Old Dominion University

*Time Keeper* February 2014 Norfolk, VA

Virginia State Science and Engineering Fair April 2012 Old Dominion University

*Chemistry Judge* Norfolk, VA

York County Science Fair January 2014 Grafton High School

*Chemistry Judge* Yorktown, VA

**Professional Societies**

American Chemical Society 2008 – 2009, 2010 – 2011

ACS – Division of Environmental Chemistry 2008 – 2009, 2010 – 2011

American Geophysical Union 2010 – present

Association for the Sciences of Limnology and Oceanography 2012 – present

**Awards and Fellowships**

EPA STAR Fellow 2011-2014 U.S. Environmental Protection Agency

Ciba Fellow 2009 – 2011 Old Dominion University

2010 Outstanding Laboratory Teaching Assistant 2010 Old Dominion University

**Publications and Presentations**

**Publications**

Willoughby, A.S., Wozniak, A.S., Hatcher, P.G. (2014) A molecular-level approach for characterizing water-insoluble components of organic aerosols using Fourier transform ion cyclotron resonance mass spectrometry. *Atmospheric Chemistry and Physics Discussions,* **14**, 10393-10427.

Wozniak A.S., A.S. Willoughby, S.C. Gurganus, and P.G. Hatcher (2014) Distinguishing Molecular Characteristics of Aerosol Water Soluble Organic Matter from the 2011 Trans-North Atlantic US GEOTRACES Cruise. *Atmospheric Chemistry and Physics Discussions*, **14**, 6427-6470.

Antony, R., A.M. Grannas, A.S. Willoughby, R.L. Sleighter, M. Thamban, and P.G. Hatcher (2014) Origin and Sources of Dissolved Organic Matter in Snow on the East Antarctic Ice Sheet. *Environmental Science and Technology*, **48**, 6151-6159.

Sleighter, R. L., Chen, H.M., Wozniak, A.S., Willoughby, A.S., Caricasole, P., Hatcher, P.G. (2012) Establishing a measure of reproducibility of ultrahigh-resolution mass spectra for complex mixtures of natural organic matter. *Analytical Chemistry*, **84**, 9184-9191.

**Posters**

Wozniak, A.S., Shelly, R.U., Willoughby, A.S., McElhenie, S.D., Landing, W.M., Hatcher, P.G. “Aerosol water soluble organic matter molecular characteristics and iron solubility from the 2011 US GEOTRACES cruises in the North Atlantic Ocean.” Feb 2014. Association for the Sciences of Limnology and Oceanography 2014 Ocean Sciences Meeting; Honolulu, HI.

Wozniak, A.S., Sleighter, R.L., Willoughby, A.S., Gurganus, S.C., McElhenie, S.D., Hatcher, P.G. “Molecular characterization of aerosol water soluble organic matter from the 2011 US GEOTRACES cruise in the North Atlantic Ocean.” Dec 2013. American Geophysical Union Fall Meeting 2013; San Francisco, CA.

Antony, R., A.M. Grannas, A.S. Willoughby, R.L. Sleighter, M. Thamban, and P.G. Hatcher (Dec. 2012) Microbial and long-range terrestrial contributions of organic matter to Antarctica. American Geophysical Union Fall Meeting 2012; San Francisco, CA.

Willoughby, A.S., Mazzer, P.A. "Characterization of the organic components of particulate matter in the urban atmosphere using Fourier transform ion cyclotron resonance mass spectrometry." Aug 2008. 236th National ACS Meeting; Philadelphia, PA.

**Oral Presentations**

Willoughby, A.S., Wozniak, A.S., Abdulla, H.A., Hatcher, P. G. “Chemical characterization of chromophoric organic matter in ambient aerosols using UV-VIS, NMR and ESI-FTICR-MS.” Feb 2013. Association for the Sciences of Limnology and Oceanography 2013 Aquatic Sciences Meeting; New Orleans, LA.

\*Priest, A.S., Wozniak, A.S., Hatcher, P.G. “A Molecular-level Approach for Characterizing Water-insoluble Components of Organic Aerosols Using Fourier Transform Ion Cyclotron Resonance Mass Spectrometry.” Dec 2011. American Geophysical Union Fall Meeting 2011; San Francisco, CA.

Hatcher, P.G., Sleighter, R.L., Willoughby, A.S.; Mazzer, P.A., Wozniak, A.S., Bauer, J. “Molecular Characterization of Atmospheric Particulates Using Fourier Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometry” Jun 2009. Goldschmidt 2009 Conference; Davos, Switzerland.

*\*Amanda S. Willoughby is formerly Amanda S. Priest*