Andrew Crowell
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Education:

1. **2012-2015:** Master of Science in Chemistry.
   Dalhousie University. Halifax, N.S.
   Supervisor: Dr. Alan Doucette.
2. **2008-2012:** Bachelor of Science in Chemistry (First Class Honours).
   Dalhousie University. Halifax, N.S.

Publications:

1. **Crowell A.M.**, MacLellan D.L, Doucette A.A. **(2015)** A two-stage spin cartridge for integrated protein precipitation, digestion and SDS removal in a comparative bottom-up proteomics workflow, *Journal of Proteomics,* 140-150
2. **Crowell A.M.**, Wall M.J., Doucette A.A. **(2013)** Maximizing proteome recovery through acetone precipitation, *Anal. Chim. Acta*. 796: 48-54
3. **Crowell A. M.**, Stewart E.J., Take Z.S., Doucette A.A. **(2013)** Critical assessment of the spectroscopic activity assay for monitoring trypsin activity in organic-aqueous solvent. *Anal. Biochem*. 432: 131-136
4. Vieira, D.B., **Crowell, A.M.**, Doucette, A.A. **(2012)** Perfluorooctanoic acid and ammonium perfluorooctanoate: Volatile surfactants for proteome analysis? *Rapid Commun. Mass Spectrom*. 26:523-31
5. Wall, M.J., **Crowell, A.M.**, Simms, G.A., Liu, F., Doucette, A.A. **(2011)** Implications of partial tryptic digestion in organic-aqueous solvent systems for bottom-up proteome analysis. *Anal. Chim. Acta*. 703: 194-203

Conference Presentations:

Underlined names indicate presenting author. Non-presenting conferences is not included.

1. [Poster] **<u>Crowell, A.M.</u>**; Doucette, A.A. (2014) Electrophoretic enrichment and prefractionation of low molecular weight proteins derived from plasma through precipitation, SDS solubilization and GELFrEE separation. 62nd ASMS Conference on Mass Spectrometry and Allied Topics, Balitmore, USA.
2. [Poster] **<u>Crowell, A.M.</u>**; Rudolph, S.; Doucette, A.A. (2014) A two stage filtration cartridge for automated protein preconcentration, digestion and cleanup ahead of MS analysis. Canadian National Proteomics Network 6th Annual CNPN Symposium, Montreal, Quebec.
3. [Poster] **<u>Crowell, A.M.</u>**; Doucette, A.A. (2014) Isolation and prefractionation of low molecular weight plasma proteins through GELFrEE electrophoretic enrichment. Canadian National Proteomics Network 6th Annual CNPN Symposium, Montreal, Quebec.

4. [Poster]. **Crowell, A.M.**; Rudolph, S.; Doucette, A.A. (2013) A Disposable Spin Cartridge for High Efficiency Protein Precipitation: Application to Top-down Proteome Analysis. 96th Canadian Chemistry Conference and Exhibition, Quebec, Quebec.
5. [Oral] **Crowell, A.M.**; Rudolph, S.; Doucette, A.A. (2013) Disposable two-stage spin cartridges for protein purification in a top-down proteomics workflow. 7th International Symposium on Enabling Technologies, Toronto, Ontario.
6. [Poster] **Crowell, A.M.**; Wall, M.; Doucette, A.A. (2012) On the Effect of Combining Salt and Acetone for Improved Recovery through Protein Precipitation. 95th Canadian Chemistry Conference and Exhibition, Calgary, Alberta.

Awards and scholarships

1. **2014** - CSMS ASMS student travel award.
   Description: A student travel award to attend and present research at the American Society of Mass Spectrometry Conference (2014). One graduate student is selected annually by the Canadian Society of Mass Spectrometry. Candidates are selected based on research potential and leadership ability. **Value:** $2 000.
2. **2014** - CNPN student travel award.
   Description: A student travel award to attend and present their current research at Canadian National Proteomics Network 6th Annual CNPN Symposium. This award is sponsored by the CNPN. **Value** $500.
3. **2013** - Nova Scotia Health Research Foundation Scotia Scholar Award.
   Description: An award from the Nova Scotia Health Research Foundation (NSHRF) to provide financial support to students enrolled in a M.Sc. degree. This award is designed to support highly qualified health researchers and leaders in the Nova Scotia health research enterprise. **Value:** $10 000 over a one year period.
4. **2013** - Douglas E. Ryan Excellence Prize for Graduate Studies in Chemistry.
   Description: Prizes given to reward students who have excelled in several aspects of their Graduate Programs in Chemistry at Dalhousie University. **Value:** $1 000.
5. **2012** - NSERC Alexander Graham Bell Canada Graduate Scholarships (CGS M.).
   Description: An award from the Natural Sciences and Engineering Research Council of Canada (NSERC) to provide financial support to students enrolled in a M.Sc. degree in the natural sciences. Candiates are selected based on grades, research potential, and leadership ability. **Value:** $17 500 over a one year period.
6. **2012** - 95th Canadian Chembistry Conference and Exhibition Undergraduate Poster Prize (2nd Place) Analytical Chemistry Division.
   Description: The award granted for the 2nd place poster presentation at the undergraduate level in the 95th Canadian Chemistry Conference and Exhibition in Calgary, Alberta. **Value:** $50.
7. **2012** - Natural Sciences and Engineering Research Council Undergraduate Student Research Awards (USRA).
   Description: A 16 week award from the Natural Sciences and Engineering Research Council of Canada to provide undergraduate students a chance to gain experience in a research laboratory. Focus of work: Spectroscopic activity assay for monitoring trypsin activity in organic-aqueous solvent. **Value:** $4 500.

8. **2011** - Dalhousie E. Walter Todd Scholarship.
   Description: A memorial scholarship for the late E. Walter Todd, a previous member of the Department of Chemistry, Dalhousie University. The award includes a bound book inscribed in memory of E. Walter Todd. **Value:** $1 000.
9. **2011** - American Chemistry Society (ACS) Award in Analytical Chemistry.
   Description: A Dalhousie Institutional award, to recognize students who have shown an aptitude for a career in analytical chemistry. This award is sponsored by the Division of Analytical Chemistry of the American Chemical Society, offering a gift subscription to Analytical Chemistry.
10. **2011** - Natural Sciences and Engineering Research Council Undergraduate Student Research Awards (USRA).
    Description: A 16 week award from the Natural Sciences and Engineering Research Council of Canada to provide undergraduate students a chance to gain experience in a research laboratory. Focus of work: The effect of SDS on solvent precipitation of proteins. **Value:** $4 500.
11. **2010 -** Natural Sciences and Engineering Research Council Undergraduate Student Research Awards (USRA).
    Description: A 16 week award from the Natural Sciences and Engineering Research Council of Canada to provide undergraduate students a chance to gain experience in a research laboratory. Focus of work: APFO - An MS-friendly alternative to SDS for proteome analysis. **Value:** $4 500.

Work Experience

1. **May 2015 to Present –** Research Technician
   Location: Cape Breton University, Sydney NS.
   Description and responsibilities: Analysis samples using tandem mass spectrometry. Focus on method development, and experimental design. Provide input on sample preparation and purification. Provide analytical consultation on third party work.
2. **Jan. 2015 to Feb. 2015** – Research Associate - Tandem Mass Spectrometry.
   Location: Dalhousie University.
   Description and responsibilities: Analysis samples using tandem mass spectrometry in order to identify gas phase fragmentation pathways of small molecules. Responsibilities include sample preparation, instrument optimizaqtion, sample analysis, and instrument maintenance.
3. **Sept. 2013 to Dec. 2014** - Assistant marker for 2nd year analytical chemistry.
   Location: Dalhousie University.
   Description and responsibilities: Assist professor in marking both midterms and final exams for the university course. Responsibilities include assisting in preparing a marking scheme for exams, independently marking sections of the exams, and independent decision making.
4. **Sept 2012 to Dec 2013** - Laboratory Teaching Assistant
   Location: Dalhousie University.
   Description and responsibilities: Supervise undergraduate laboratory courses. Responsibilities include designing experiments for the course, supervise students to ensure safety, teach students important concepts, and mark lab reports.

5. **Summer 2011 and 2012 –** Chemistry Discover Days Organizer/Volunteer
   Location: Dalhousie University.
   Description and responsibilities: Supervise Jr. High Students visiting the Chemistry Department to do demo experiments designed to demonstrate basic chemistry principals. Responsibilities included designing and preparing the experiments students preformed. Also to explain and supervise the experiments to ensure students both learn and remain safe.
6. **May 2010 to Aug 2011** - Research Assistant
   Location: Dalhousie University.
   Description and responsibilities: Part time research assistant during undergraduate degree and full time student researcher during summer terms. Responsibilities include assisting graduate students with experiments. Funded partially by NSERC USRA.