

Education

PhD Student	Biomedical Imaging
2017 +	<i>University of Oxford (ONBI-CDT), United Kingdom</i>
BMSc	Medical Biophysics, Honors Specialization with Distinction
2013 – 2017	<i>University of Western Ontario, Canada</i> Erasmus: King's College London, United Kingdom

Awards & Distinctions

2017	Clarendon Scholarship, University of Oxford
2017	Medical Sciences Graduate Scholarship, University of Oxford
2017	Mackenzie King Graduate Open Scholarship – (Declined), Canada
2016	Rhodes Scholarship Finalist, Ontario, Canada
2016	Medical Biophysics Research Studentship, University of Toronto
2013 – 2017	Dean's Honors List, University of Western Ontario (UWO)
2013 – 2017	Continuing Entrance Scholarship for Academic Excellence, UWO
2015	International Learning Award, UWO
2015	Global Opportunities Award, UWO
2015	The Freemen of the City of London of North America Scholarship
2013	Waterloo Region Top Students Award, Waterloo Region Record
2013	Lisa Anne Filiatrault Scholarship, Bluevale Collegiate Institute
2013	Valedictorian, Graduating Class of 2013, Bluevale Collegiate Institute

Research Appointments

2017	Research Assistant – Culham Lab, Brain and Mind Institute
<i>Topic:</i>	<i>Functional Magnetic Resonance Imaging</i>
2016 – 2017	Medical Biophysics Honours Thesis – Brain and Mind Institute
<i>Thesis Title:</i>	<i>Reducing Mass Distribution Artefacts in Functional MRI</i>
2016 – 2017	3D Printing Internship – Dr. Julielynn Wong, 3D4MD
<i>Topic:</i>	<i>3D Printable Medical Prosthesis Design</i>

- 2016 **Research Studentship** – Medical Biophysics, University of Toronto
 Topic: *Mass Spectrometry Imaging for Cancer Identification and Detection*
- 2015 **Research Assistant** – Zarrine-Afsar Lab, Techna Institute
 Topic: *Mass Spectrometry Imaging for Cancer Identification and Detection*
- 2014 – 2015 **Medical Biophysics Research Project** – Robarts Research Institute
 Project Title: *Nitrogen Washout and Hyperpolarized ³He MRI Measurements of Ventilation Heterogeneity: Elderly Never Smokers, non-CF Bronchiectasis and COPD*
- 2014 **Research Trainee** – Parraga Lab, Robarts Research Institute
 Topic: *Hyperpolarized ³He MRI, image segmentation*

Refereed Journal Articles

1. M Woolman, A Gribble, **E Bluemke**, J Zou, M Ventura, N Bernards, M Wu, H Ginsberg, S Das, A Vitkin, A Zarrine-Afsar. Optimized Mass Spectrometry Analysis Workflow with Polarimetric Guidance for ex vivo and in situ Sampling of Biological Tissues. *Nature Scientific Reports* 2017.
2. M Woolman, A Tata, **E Bluemke**, D Dara, H Ginsberg, A Zarrine-Afsar; An Assessment of the Utility of Tissue Smears in Rapid Cancer Profiling with Desorption Electrospray Ionization Mass Spectrometry (DESI-MS). *J Am Soc Mass Spectr* 2017.
3. M Woolman, A Tata, D Dara, J Meens, E D'Arcangelo, C Perez, S Prova, **E Bluemke**, H Ginsberg, D Ifa, A McGuigan, L Ailles, A Zarrine-Afsar. Rapid Determination of Tumor Stroma Ratio in Squamous Cell Carcinomas with Desorption ElectroSpray Ionization Mass Spectrometry (DESI-MS): A Proof-Of-Concept Demonstration. *Analyst* 2017.
4. J Bilkey, A Tata, T McKee, A Porcari, **E Bluemke**, M Ventura, M Eberlin, A Zarrine-Afsar; Variations in the Abundance of Lipid Biomarker Ions in Mass Spectrometry Images are Correlated to Tissue Density. *Analytical Chemistry* 2016.
5. A Tata, A Gribble, M Ventura, M Ganguly, **E Bluemke**, H Ginsberg, D Jaffray, D Ifa, A Vitkin, A Zarrine-Afsar; Wide-Field Tissue Polarimetry Allows Efficient Localized Mass Spectrometry Imaging of Biological Tissues. *Chemical Science* 2016.
6. A Tata, M Woolman, M Ventura, N Bernards, M Ganguly, A Gribble, B Shrestha, **E Bluemke**, H Ginsberg, A Vitkin, J Zheng, A Zarrine-Afsar. Rapid Detection of Necrosis in Breast Cancer with Desorption ElectroSpray Ionization Mass Spectrometry. *Nature Scientific Reports* 2016.

Conference Proceedings

1. TJ Lindenmaier, **E Bluemke**, M Mura, C Licskai, L Mielniczuk, IA Cunningham, G Parraga; Three-Dimensional Segmentation of Pulmonary Artery Volume from Thoracic Computed Tomography Imaging. *SPIE* 2015.
2. F Guo, S Svenningsen, **E Bluemke**, M Rajchl, J Yuan, A Fenster, G Parraga; Automated Pulmonary Lobar Ventilation Measurements Using Volume-matched Thoracic CT and MRI. *SPIE* 2015.

Poster & Oral Presentations

PRESENTED

1. **Dept. Medical Biophysics, University of Toronto 2016:** Optimizing Mass Spectrometry Analysis: Polarimetric Guidance for Efficient *ex vivo* and *in situ* Sampling of Biological Tissues.
2. **Radiation Physics Seminar 2016:** Optimized Mass Spectrometry Analysis with Polarimetric Guidance for Efficient *ex vivo* and *in situ* Sampling of Biological Tissues. Princess Margaret Cancer Centre.
3. **Dept. Medical Biophysics, University of Toronto 2015:** Accelerating Margin Assessment: Wide-Field Tissue Polarimetry Allows Targeted Mass Spectrometry Profiling.
4. **Radiation Physics Seminar 2015:** Accelerating Margin Assessment: Wide-Field Tissue Polarimetry Allows Targeted Mass Spectrometry Profiling. Princess Margaret Cancer Centre. *Video-conferenced to Credit Valley Hospital, Lakeridge Health, Royal Victoria Hospital, Southlake Regional Health Centre.*
5. **London Health Research Day 2015:** Relationship of Ventilation Heterogeneity in the Conducting and Acinar Airway Zones with ^3He MRI in Elderly Never-Smokers.

CO-AUTHORED (*Did not attend*)

6. **American Association for Cancer Research Annual Meeting 2017:** A Zarrine-Afsar, B Shrestha, A Tata, M Woolman, M Ventura, N Bernards, M Ganguly, H Ginsberg, J Zheng, **E Bluemke**; Rapid detection of necrosis in breast cancer with *ex vivo* and *in situ* mass spectrometry analysis methods.
7. **American Thoracic Society 2015:** **E Bluemke**, S Svenningsen, K Sheikh, G Paulin, DG McCormack, G Parraga; Relationship of Ventilation Heterogeneity in the Conducting and Acinar Airway Zones with ^3He MRI in Elderly Never-Smokers.
8. **American Thoracic Society 2015:** S Svenningsen, D Capaldi, **E Bluemke**, G Paulin, C Davis, K Sheikh, DG McCormack, G Parraga; Lung Clearance Index and Hyperpolarized ^3He MRI Ventilation Heterogeneity Measurements in non-CF Bronchiectasis and COPD.