This is a draft version only. Do not submit to any funding organization. Only the final version from the History page can be submitted.

Protected when completed

Mr. Michael Nguyen

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	
Vietnamese	Yes	Yes	Yes	Yes	

Degrees

2017/9 (2019/8) — Doctorate, PhD in Biochemistry, Biochemistry, University of Windsor
Degree Status: In Progress

Supervisors: Marquardt,Drew

2011/9 - 2015/6 — Bachelor's Honours, Bachelor of Science, Biochemistry, University of Windsor
Degree Status: Completed

Credentials

2017/9 - 2021/9 — Radiological Worker Training for HFIR and SNS Users, Oak Ridge National Laboratories

Research Disciplines: Biochemistry

2017/7 - 2021/7 — Radiation Safety Training, NIST Center for Neutron Research

Research Disciplines: Biochemistry

2017/9 - 2019/9 — Radiation Safety Training, Canadian Nuclear Laboratories - National Research Universal

Research Disciplines: Biochemistry

Recognitions

2020/5 - 2023/5 — Natural Sciences and Engineering Research Council of Canada (NSERC) - Alexander Graham Bell Canada Graduate Scholarship-Doctoral (CGS D) - 105,000 (Canadian dollar)
Natural Sciences and Engineering Research Council of Canada (NSERC)
Prize / Award

2020/2 - 2020/6 — MITACS Globalink Research Award - 6,000 (Canadian dollar)
National Institute of Standards and Technology
Prize / Award
The Mitacs Globalink Research Award provides $6,000 for senior undergraduate and graduate students, and postdoctoral fellows in Canada to conduct 12–24-week research projects at universities overseas. This project is being conducted at the National Institute of Standards and Technology (MD,USA).

2019/5 - 2020/4	Ontario Graduate Scholarships - 15,000 (Canadian dollar) University of Windsor Prize / Award OGS is awarded by the provincial government for one academic year to students having an A- grade average or better in the most recent two years of study.
2019/4 - 2019/4	Biointerphases award for Best Student Presentation at the Biomembrane Symposium at the 257th ACS National Meeting & Exposition - 225 (United States dollar) AVS JOURNAL BIOINTERPHASES Prize / Award
2019/1 - 2023/1	Doctoral Entrance Scholarship - 30,000 (Canadian dollar) University of Windsor Prize / Award
2018/5 - 2018/5	American Crystallographic Association Travel Grant - 599 (United States dollar) American Crystallographic Association Prize / Award
2018/5 - 2019/4	Ontario Graduate Scholarships - 15,000 (Canadian dollar) University of Windsor Prize / Award OGS is awarded by the provincial government for one academic year to students having an A- grade average or better in the most recent two years of study.
2018/3	William A. Redmond Memorial Bursary - Awarded annually on the basis of academic achievement to a student beginning a graduate program in Chemistry or Biochemistry at the University of Windsor. - 1,000 (Canadian dollar) University of Windsor Prize / Award
2017/9 - 2018/9	Master's Entrance Scholarship (Canadian-Thesis) - 6,999 (Canadian dollar) University of Windsor Prize / Award
2011/9 - 2015/4	Dean's List - 0 (Canadian dollar) University of Windsor Honor
2011/9 - 2013/4	President's Honour Roll - 0 (Canadian dollar) University of Windsor Honor
2011/9 - 2015/4	Queen Elizabeth II Aiming for the Top Scholarship - 14,000 (Canadian dollar) Ministry of Training, Colleges and Universities Prize / Award
2011/9 - 2015/4	Renewable Entrance Scholarship - 6,400 (Canadian dollar) University of Windsor Prize / Award

User Profile

Fields of Application: Foundations and Knowledge Acquisition

Areas of Research: Membranes, Lipid/Lipoprotein analysis, Biomaterials

Research Specialization Keywords: antimicrobial peptides, biophysics, flip-flop, membranes, neutron scattering, phospholipid asymmetry, phospholipids, pores, protein channels, X-ray scattering

Research Disciplines: Biochemistry, Chemistry, Biology and Related Sciences

Employment

2018/1	Graduate Teaching Assistant Chemistry and Biochemistry, Science Faculty, University of Windsor Thus far, I have been a graduate assistant for the following courses: 2 biotechnology courses (one undergraduate and the other graduate level) and 2 second year biomolecules classes. My duties include leading groups of undergraduate students (~20/ group) with their laboratory experiments, providing lab report feedback, and assisting the students with their academic troubles.
2017/9	Research Assistant Chemistry & Biochemistry, Essex Hall, University of Windsor As a research assistant, my tasks pertain to conducting wet lab work with a variety of biophysical and general assays and instruments, reduction and analysis of data, maintenance of lab space and supplies, planning and execution of research projects, and training of new members to the lab group.
2019/9 - 2019/12	Mitacs Accelerate Fellowship Catalent Pharma Solutions Full-time Development and characterization of pharmaceutical vitamin formulations for Catalent, Inc. in partnership with MITACS and the University of Windsor.
2016/4 - 2018/11	SAP Operations Clerk The Real Canadian Superstore Part-time As an SAP operations clerk, my tasks include coordinating with the various departments to ensure new products and arrangements are done correctly. Furthermore, I am responsible for numerous logistical procedures (e.g. daily inventory control checks) required for normal store function.
2016/4 - 2018/11	Family Respite Service Provider Family Respite Services Part-time As a provider, when I am with them, I assist a mentally challenged child with their everyday tasks, ranging from teaching them how to do basic chores and homework to having fun with them by taking them out to eat or enjoy whatever activity they like to partake in. This service is provided to help the child acclimate themselves with people outside of their family, as well as allow their family members time to focus on other tasks and activities, as caring for a mentally challenged individual can be time-consuming, however rewarding it may be.
2015/5 - 2015/8	Maintenance Facilities General Labourer CenterLine Ltd. (Windsor)

Affiliations

The primary affiliation is denoted by (*)

(*) 2017/9	Research Assistant/Graduate Assistant/Graduate Student, Chemistry & Biochemistry, University of Windsor

Research Funding History

Awarded [n=1]

2017/9 - 2017/9 Co-applicant	Canadian Institute for Neutron Scattering (CINS) Travel Grant

Funding Sources:

2017/9 - 2017/9 Canadian Institute for Neutron Scattering
CINS Travel Grant
Total Funding - 400 (Canadian dollar)
Funding Competitive?: No

Co-applicant : Mitchell DiPasquale;

Principal Investigator : Drew Marquardt

Courses Taught

2018/03/07 - 2018/03/07 Guest Lecturer, Chemistry & Biochemistry, University of Windsor
Course Title: Organic Chemistry of Biomolecules
Course Topic: Biochemistry
Course Level: Undergraduate
Number of Students: 270
Guest Lecture?: Yes

Mentoring Activities

2015/9 - 2018/9 Tutor, Self-Employed
Number of Mentorees: 6
As a tutor, I teach students from grade 9-12 in the math and sciences, but when my students require help in other areas I will assist them. For example, I try to impart life skills such as time management so they can have a balanced life style while getting the most out of their education.

2015/5 - 2015/6 English Teacher, Caritas Kontum in Vietnam
Number of Mentorees: 60
With the help of Father Dong in Pleiku City, Kontum in Vietnam, I was able to teach English to roughly 60 disadvantaged students. Many of my pupils came from discriminated minority groups and come from under-served, impoverished areas (i.e. mountainous villages). For the time I was there, I taught 3 classes during the weekdays and on the weekends I would go on relief missions with the Caritas Kontum - a Catholic organization with the purpose of providing relief and development services - to those in need.

2015/3 - 2015/4 High School Badminton Coach, Catholic Central High School
Number of Mentorees: 30
During my time at Catholic Central high school, I coached and supervised high school badminton players, consisting of both junior and senior students. I also formulated practices and attended tournaments with players.

Event Participation

Event Personnel, Canadian Institute for Neutron Scattering Meeting 2018, Association, 2018/10 - 2018/10
Managed registration and event set-up for this national event of Canadian neutron scatterers.

Member, Canadian Institute for Neutron Scattering Meeting 2020, Association, 2020/11 - 2020/11
Annual meeting for Canadian neutron scatterers and associates to discuss the current state of neutron scattering in Canada and abroad.

Volunteer, Heart Breaker Challenge - Hosted by Hotel Dieu Grace Hospital, Association, 2016/5 - 2016/5
The Heart Breaker Challenge is a fundraiser run by the local hospital, Hotel Dieu Grace, to raise research money and awareness for cardiopulmonary disease. As a volunteer, my duties included: overseeing a part of the obstacle course to ensure participants did not get injured or, in the cases of injury, receive the necessary care.

Member, Canadian Institute for Neutron Scattering Meeting 2019, Association, 2019/10 - 2019/10
Annual meeting for Canadian neutron scatterers and associates to discuss the current state of neutron scattering in Canada and abroad.

Community and Volunteer Activities

2015/1 - 2019/1 — Easter Seals Volunteer, Easter Seals
I am a fundraiser volunteer for multiple events, raising money to help children with physical disabilities. My duties include providing organisation information to participants, directing people, and as a station hand.

2016/1 - 2017/9 — Financial Committee Member, Roman Catholic Church of Philipphe Minh & Ane Thanh
After Sunday mass, my task includes: counting the donation money that was collected during the week, disbursing funds, and writing reports (e.g. expenses) and cheques.

2012/8 - 2017/9 — Concierge and Fundraiser Volunteer, Transition to Betterness
As a concierge volunteer, I provide comfort to cancer patients and their family members during their stay at the hospital. I do this by conversing with them, accommodating their needs (e.g. food and parking passes), and providing empathy when possible. I have helped volunteer in numerous fundraising events where my tasks have included: providing organisational information, manning activity stations, and providing event support.

2014/9 - 2014/12 — Vietnamese Language School Volunteer, Truong Viet Ngu Van Lang - Vietnamese Language School
I assisted students that were lagging behind the class by personally explaining lessons as it went along. Also, my other tasks included supervising the children during recess, proctoring examinations, and conducting attendance.

2011/1 - 2014/1 — Volunteer, Hotal Dieu Grace Hospital
I was able to contribute my time and energy into three roles: discharge escort, emergency response department and intensive care unit volunteer. For the most part, I was focused on providing aid and comfort to patients and their family members. I also helped the hospital staff during down-times, such as running samples to the lab, restocking medical supply, and other miscellaneous tasks.

International Collaboration Activities

2017/11 — Instrument Development, United States
I, along with the Marquardt group of the University of Windsor (Dr. Drew Marquardt, Mitchell DiPasquale, and Brett Rickeard), am working with Dr. Matthias Frontzek, an instrument scientist at Oak Ridge National Laboratories (ORNL), to optimize the WAND2 (Wide Angle Neutron Diffractometer2) instrument located at the High Flux Isotope Reactor (HFIR) in ORNL. This will be done by the Marquardt group synthesizing model lipid samples and sending the samples to Dr. Frontzek for analysis using WAND2.

2020/2 - 2020/3 — Instrument User and Researcher at NIST, United States
This collaborative endeavour involved measuring a variety of samples using the VSANS instrument, located at the NCNR of the National Institute of Standards and Technology in Gaithersburg, Maryland, USA. Our collaborators include Dr. Kelley (NIST), Dr. Murphy (NIST) and Dr. Nagao (NIST).

2019/11 - 2019/11 — Instrument User and Researcher at ANSTO, Australia

2019/10 - 2019/10 — Instrument User and Researcher at NIST, United States
This collaborative endeavour involved looking at a variety of samples using the VSANS and 30m SANS instruments, located at the NCNR of the National Institute of Standards and Technology in Gaithersburg, Maryland, USA. Our collaborators include Dr. Kelley (NIST) and Dr. Nagao (NIST).

2019/7 - 2019/7 — Instrument User and Researcher at ORNL, United States
This collaborative endeavour involved measuring a variety of samples using the EQSANS instrument, located at the Oak Ridge National Laboratory in Oak Ridge, Tennessee, USA. Our collaborators include Dr. Stanley (ORNL), Dr. Kelley (NIST) and Dr. Nagao (NIST).

2019/6 - 2019/6 — Instrument User and Researcher at NIST, United States
This collaborative endeavour involved looking at a variety of samples using the VSANS instrument, located at the NCNR of the National Institute of Standards and Technology in Gaithersburg, Maryland, USA. Our collaborators include Dr. Kelley (NIST) and Dr. Nagao (NIST).

2018/9 - 2018/9 — Instrument User and Researcher at ORNL, United States
This collaborative endeavour involved looking at a variety of samples using the EQ-SANS instrument on beamline 6, located at the Spallation Neutron Source (SNS) in Oak Ridge National Laboratory (ORNL) in Oak Ridge, Tennessee, USA. Our collaborators include Dr. Graham Taylor (University of Tennessee Knoxville), Dr. Frederick Heberle (ORNL), Dr. Milka Doktorova (Weill Cornell Medical College), and Dr. Chris Stanley (ORNL).

2018/8 - 2018/8 — Instrument User and Researcher at NIST, United States
I, along with fellow researchers from the University of Windsor (Dr. Drew Marquardt, Mitchell DiPasquale and Brett W. Rickeard) conducted a series of experiments analyzing asymmetric model membranes. This was conducted at the laboratories of National Institute of Standards and Technology (NIST), more specifically at the Neutron Spin Echo (NSE) instrument of the NIST Center for Neutron Research (NCNR). Our collaborators include Dr. Elizabeth Kelley and Dr. Michihiro Nagao, instrument scientists from the NCNR.

2018/1 - 2018/1 — Instrument User and Researcher at ORNL, United States
Fellow lab member, Mitchell DiPasquale, and I travelled to Oak Ridge National Laboratories (ORNL) in Oak Ridge, Tennessee, USA to conduct an experiment on Vitamin E, in collaboration with Dr. Frederick Heberle (at the time, a post-doctoral fellow at the Shull Wollan Center of ORNL). The experiment was conducted on the BIO-SANS instrument located at HFIR (high flux isotope reactor)

2017/11 - 2017/11 Instrument User and Researcher at ORNL, United States
I, with the help of fellow researchers from the University of Windsor (Dr. Drew Marquardt, Brett Rickeard, and Mitchell DiPasquale), University of Tennessee Knoxville (Dr. Graham Taylor, Dr. Francisco N. Barrera, and Hayden L. Scott), Oak Ridge National Laboratories (Dr. Frederick Heberle), and Weill Cornell Medical College (Milka Doktorova) conducted a series of experiments on the effects different types of pore-forming proteins has on the flip-flop rates of phospholipids in model membrane systems. Specifically, EQ-SANS (Extended Q-range Small Angle Neutron Scattering) in the SNS (Spallation Neutron Source) facility located in ORNL was used to measure phospholipid flip-flop rates.

2017/11 - 2017/11 Instrument User and Researcher at ORNL, United States
I along with fellow researchers from the University of Windsor (Dr. Drew Marquardt, Brett Rickeard, and Mitchell DiPasquale) and Oak Ridge National Laboratories (Dr. Frederick Heberle) conducted a series of experiments on determining the physical presence of vitamin E (alpha-tocopherol) in model domain-forming membrane systems. Specifically, this was done using the Bio-SANS (Bio-Small Angle Neutron Scattering) instrument in the HFIR (High Flux Isotope Reactor) facility located in ORNL.

2017/10 - 2017/10 Instrument User and Researcher at CNL, Canada
In collaboration with the Zelisko research group at Brock University (Dr. Mark Frampton) and instrument scientist, Dr. Matthias Frontzek of Oak Ridge National Laboratories (ORNL), samples of synthetic lipid A mimic was analyzed using the N5 neutron diffraction instrument located in the National Research Universal of the Canadian Nuclear Laboratories. Future collaborations with Dr. Matthias in early 2018 involve samples of the lipid A mimic to be used to test the new WAND2 (Wide-Angle Neutron Diffractometer2) instrument, which is newly installed at the High Flux Isotope Reactor facility (HFIR) of Oak Ridge National Laboratories.

2017/9 - 2017/9 Instrument User and Researcher at NIST, United States
I, along with fellow researchers from the University of Windsor (Dr. Drew Marquardt and Mitchell DiPasquale), University of Tennessee Knoxville (Dr. Graham Taylor), and Oak Ridge National Laboratories (Dr. Frederick Heberle), conducted a series of experiments on the effects alamethicin, a pore-forming protein, has on the flip-flop rates of phospholipids in model membrane systems. This was conducted at the laboratories of National Institute of Standards and Technology (NIST), more specifically at the NGB30-SANS instrument of the NIST Center for Neutron Research (NCNR).

2017/9 - 2017/9 Instrument User and Researcher at ORNL, United States
This was a joint collaboration including myself and fellow University of Windsor Marquardt Group lab members (Dr. Drew Marquardt and Mitchell DiPasquale) with those from the Zelisko research group at Brock University (Dr. Mark Frampton). The experiment involved the synthesis of siloxane phospholipids by the Brock University group and its characterisation by the Marquardt group using the Wide-Angle Neutron Diffraction (WAND) instrument at the Oak Ridge National Laboratories in Oak Ridge, Tennessee.

Other Memberships

2018/8 Member, Canadian Institute for Neutron Scattering
As a proud member of the CINS organization, I partake in educating the public about the use and importance of neutron scattering to science, as well as advocating for its role in the future of Canadian research.

2017/9 Graduate Chemistry Club Member, University of Windsor
As a member of the graduate chemistry club at the University of Windsor, I am responsible for helping with the planning, organization and set-up of graduate level events.

2018/6 - 2019/6 Member, American Crystallographic Association

2018/1 - 2019/1 Member, American Chemical Society

Presentations

1. (2020). SANS to measure lateral organization in liposomes (TALK). Friends of Soft Matter Meeting - National Institute of Standards of Technology (NIST) Center for Neutron Research, Gaithersburg, MD, United States
Main Audience: Researcher
Invited?: No, Keynote?: No, Competitive?: No

2. (2020). Probing Transverse Lipid Diffusion in Peptidolipid Systems Using a Novel SANS Approach (POSTER - Accepted, Cancelled COVID19). 27th Annual NIST Chapter of Sigma XI PPP, Gaithersburg, MD, United States
Main Audience: Researcher
Invited?: No, Keynote?: No, Competitive?: Yes
Description / Contribution Value: Accepted abstract but cancelled due to COVID19.

3. (2019). SANS to Probe Lipid Flip-Flop in Asymmetric Liposomes (TALK). 2019 Canadian Institute for Neutron Scattering Student Symposium, Hamilton, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No, Competitive?: Yes

4. (2019). Probing Lipid Dynamics in Asymmetric and Symmetric Peptidoliposomes Using Small Angle Neutron Scattering (TALK). 102nd Canadian Chemistry Conference and Exhibition (Biophysics: Partnering Experiment and Simulation), Windsor, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No, Competitive?: Yes

5. (2019). Measuring the transverse lipid diffusion of peptidolipidic systems using a novel SANS approach (TALK). ACS Spring 2019 National Meeting & Exposition (DIVISION: Division of Colloid and Surface Chemistry SESSION: Biomembrane Synthesis, Structure, Mechanics & Dynamics), Orlando, United States
Main Audience: Researcher
Invited?: No, Keynote?: No, Competitive?: Yes

6. Mark Frampton, Drew Marquardt, Michael H.L. Nguyen, Mitchell DiPasquale, Paul Zelisko. (2018). Siloxane Phosphocholine Self-Assembled Bilayers (POSTER). Conference: 49th Silicon Symposium and 101st Canadian Society for Chemistry Conference, Edmonton, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No, Competitive?: No
Description / Contribution Value: I was the co-author on this conference poster presentation.

7. Mitchell DiPasquale, Brett W. Rickeard, and Drew Marquardt. (2018). Revealing the Hidden Relationship Between Pore-Forming Proteins and Biomembranes. (TALK). American Crystallographic Association - 3.2.4 Scattering Strategies in Biomembrane Research, Toronto, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No, Competitive?: No
Description / Contribution Value: I presented my biomembranes research to fellow researchers.

   Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC)

8. DiPasqule M, Nguyen M, Katsaras J, Marquardt D. (2017). Determining the Physical Presence of Vitamin E in Lipid Membranes (POSTER).Oak Ridge National Laboratory Workshop on Inhomogeneous Membranes, Oak Ridge, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: No, Competitive?: No

9. DiPasqule M., Nguyen M.H.L., Rickeard B.W., Katsaras J., Marquardt D. (2017). Determining the Physical Presence of Vitamin E in Lipid Membranes (POSTER).Canadian Institute for Health Research New Principal Investigators Meeting, Montreal, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No, Competitive?: No

Publications

Journal Articles

1. Brett W Rickeard, Michael HL Nguyen, Mitchell DiPasquale, Caesar G Yip, Hamilton Baker, Frederick A Heberle, Xiaobing Zuo, Elizabeth G Kelley, Michihiro Nagao, Drew Marquardt. (2020). Transverse lipid organization dictates bending fluctuations in model plasma membranes. Nanoscale. 12: 1438-1447.
http://dx.doi.org/10.1039/C9NR07977G
First Listed Author
Published, Royal Society of Chemistry, United Kingdom
Refereed?: Yes, Open Access?: Yes, Synthesis?: No
Number of Contributors: 8

   Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) - 2018-04841

2. Mitchell DiPasquale, Omotayo Gbadamosi, Michael H. L. Nguyen, Stuart R. Castillo, Brett W. Rickeard, Elizabeth G. Kelley, Michihiro Nagao, and Drew Marquardt. (2020). A Mechanical Mechanism for Vitamin E Acetate in E#cigarette/Vaping-Associated Lung Injury. Chemical Research in Toxicology. 33(9): 2432-2440.
http://dx.doi.org/doi.org/10.1021/acs.chemrestox.0c00212
Co-Author
Published, American Chemical Society, United States
Refereed?: Yes, Open Access?: No
Number of Contributors: 8

   Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) - RGPIN-2018-04841

3. Mitchell DiPasquale, Michael HL Nguyen, Brett W Rickeard, Nicole Cesca, Christopher Tannous, Stuart R Castillo, John Katsaras, Elizabeth G Kelley, Frederick A Heberle, Drew Marquardt. (2020). The antioxidant vitamin E as a membrane raft modulator: Tocopherols do not abolish lipid domains. Biochimica et Biophysica Acta (BBA)-Biomembranes. 1862(8): 183189.
http://dx.doi.org/https://doi.org/10.1016/j.bbamem.2020.183189
Co-Author
Published, Elsevier, Netherlands
Refereed?: Yes, Open Access?: Yes, Synthesis?: No
Number of Contributors: 10

4. Adam Langlois, Gage T Mason, Michael HL Nguyen, Mehdi Rezapour, Paul-Ludovic Karsenti, Drew Marquardt, Simon Rondeau-Gagné. (2019). Photophysical and Optical Properties of Semiconducting Polymer Nanoparticles Prepared from Hyaluronic Acid and Polysorbate 80. ACS omega. 4(27): 22591-22600.
http://dx.doi.org/https://doi.org/10.1021/acsomega.9b03402
Co-Author
Published, American Chemical Society, United States
Refereed?: Yes, Open Access?: Yes, Synthesis?: No
Number of Contributors: 7

5. Michael H.L. Nguyen, Mitchell DiPasquale, Brett W. Rickeard, Christopher B. Stanley, Elizabeth G. Kelley, and Drew Marquardt. (2019). Methanol Accelerates DMPC Flip-Flop and Transfer: A SANS Study on Lipid Dynamics. Biophysical Journal. 116(5): 755-759.
http://dx.doi.org/https://doi.org/10.1016/j.bpj.2019.01.021
First Listed Author
Published, Cell Press (Elsevier), United States
Refereed?: Yes, Open Access?: No, Synthesis?: No
Number of Contributors: 6
Description of Contribution Role: My role in this paper began with conception of the project idea. I made the samples and also performed the experiments on the small angle neutron and X-ray scattering instruments and dynamic light scattering. The data was analyzed by myself using a variety of analytical tools and programs to model and plot the data. Lastly, the manuscript was written by myself.
Description / Contribution Value: This paper outlines methanol's role in influencing membrane properties, namely lipid bilayer dynamics. Methanol is a common solubilizing agent of lipids and proteins, but its effects on the system of study is ill studied. The bilayer of living organisms possess a precise arrangement of lipids, crucial to cellular survival and protein function. Here, it was found that methanol vastly disrupts this lipid homeostasis via accelerating a number of lipid dynamics, such as lipid flip-flop and lipid exchange between particles. The implications of such findings highlights an often overlooked aspect of protein studies in membrane systems.

   Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) - 2018-04841

6. Michael HL Nguyen, Mitchell DiPasquale, Brett W Rickeard, Milka Doktorova, Frederick A Heberle, Haden L Scott, Francisco N Barrera, Graham Taylor, Charles P Collier, Christopher B Stanley, John Katsaras, Drew Marquardt. (2019). Peptide-induced lipid flip-flop in asymmetric liposomes measured by small angle neutron scattering. Langmuir. 35(36): 11735-11744.
http://dx.doi.org/https://doi.org/10.1021/acs.langmuir.9b01625
First Listed Author
Published, American Chemical Society, United States
Refereed?: Yes, Open Access?: Yes, Synthesis?: No
Number of Contributors: 12

   Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) - RGPIN-2018-04841

7. M. B. Frampton, Michael Nguyen, Mitchell DiPasquale, Robert Dick, Drew Marquardt, and Paul Zelisko. (2018). Characterization of self-assembled hybrid siloxane-phosphocholine bilayers. Chemistry and Physics of Lipids. 216(-): 1-8.
http://dx.doi.org/doi.org/10.1016/j.chemphyslip.2018.07.007
Co-Author
Published, Elsevier, United States
Refereed?: Yes, Open Access?: No, Synthesis?: No
Number of Contributors: 6
Description of Contribution Role: With regards to this research paper, my duties included conducting many of the biophysical characterization assays used in this study (e.g. small angle X-ray scattering, differential scanning calorimetry, and volume measurements) and subsequently analyzing the results.

   Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC)

Book Chapters

1. Michael H.L. Nguyen, Brett W. Rickeard, Mitchell DiPasquale, and Drew Marquardt. (2019). Asymmetric Model Membranes: Frontiers and Challenges. Springer Nature. Biomimetic Lipid Membranes: Fundamentals, Applications, and Commercialization. -(-): 47-71.
   First Listed Author
   Published, Springer Cham., Switzerland
   Refereed?: No
   Number of Contributors: 4

   Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC)

2. Mitchell DiPasquale, Michael H.L. Nguyen, Thad A. Harroun, and Drew Marquardt. (2019). Monitoring oxygen sensitive membranes and Vitamin E as an antioxidant. -. The Characterization of Biological and Biomimetic Membranes: Structure and Dynamics. -(-): 391-412.
   Co-Author
   Published, Walter de Gruyter GmbH & Co KG, Berlin, Germany
   Refereed?: Yes
   Number of Contributors: 4

Newsletter Articles

1. Darko Milenkovic. (2019). UWindsor researcher first to publish from state-of-the-art neutron diffraction instrument. DailyNews (University of Windsor). , Canada
   Contribution Percentage: 41-50
   Description of Contribution Role: Contributed to the synthesis and editing of this article.
   Description / Contribution Value: This article provides details on how I, along with my colleagues, were the first researchers to publish a research article using data obtained from a brand-new state of the art neutron instrument. We were given access prior to beam-time being available to the public in the hopes of improving the instrument's capabilities.

2. Sara Elliott. (2018). Neutron research centre to open doors for UWindsor chemistry grad students. DailyNews (University of Windsor). -(-): -. , Canada
   Contribution Percentage: 21-30
   Description of Contribution Role: The author of this article, Sara Elliott, interviewed our group for insights into our August 2018 trip to the National Institute of Standards and Technology laboratory in Gaithersburg, Maryland, USA.
   Description / Contribution Value: The newsletter article aimed to demonstrate the excellence of the students and research from the University of Windsor, with a focus on Neutron research.