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Dr. Tricia Ruth Cottrell

Correspondence language: English Sex: Female Date of Birth: 12/10 Canadian Residency Status: Permanent Resident Country of Citizenship: United States of America

Contact Information

The primary information is denoted by (*)

Address

Primary Affiliation (*)

Queen's University Division of Cancer Biology & Genetics Botterell Hall 18 Stuart Street, Rm. 328 Kingston Ontario K7L 3N6 Canada

Telephone

Email

Work (*)	trc3@queensu.ca
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Website

Corporate	https://www.cottrelllab.org/



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Dr. Tricia Cottrell

Language Skills

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

Degrees

2004/8 - 2014/5 Post-doctorate, MD/PhD, Pathology, Johns Hopkins University Degree Status: Completed

2000/9 - 2004/5 Bachelor's, Bachelor of Arts, Chemistry (Biochemistry Concentration) & English Literature, Washington University in St. Louis Degree Status: Completed

Recognitions

2019/5	Award for Excellence in Translational Research Johns Hopkins University Prize / Award Award for Excellence in Translational Research
2017/10 - 2019/6	Physician Scientist Training Program (PSTP) Scholar Johns Hopkins Hospital Honor Physician Scientist Training Program (PSTP) Scholar
2015/2	Mabel Smith Resident Research and Education Award Johns Hopkins Hospital Distinction Mabel Smith Resident Research and Education Award
2010/11	ACR REF Medical/Graduate Student Achievement Award Johns Hopkins University Distinction ACR REF Medical/Graduate Student Achievement Award

Employment

2019/8 Assistant Professor Pathology and Molecular Medicine, Health Sciences/Queen's University/Kingston, Queen's University at Kingston Full-time Tenure Status: Tenure Track

2017/7 - 2019/6	Pathology Resident Pathology, School of Medicine/Johns Hopkins University/Baltimore, Johns Hopkins Hospital Full-time Tenure Status: Non Tenure Track Resident
2015/7 - 2017/6	Postdoctoral Fellow Dermatology, School of Medicine/Johns Hopkins University/Baltimore, Johns Hopkins University Full-time Tenure Status: Non Tenure Track
2014/7 - 2015/6	Pathology Resident Pathology, School of Medicine/Johns Hopkins University/Baltimore, Johns Hopkins Hospital Full-time Tenure Status: Non Tenure Track
2000/6 - 2004/7	Research Fellow Molecular Microbiology, School of Medicine/Washington University in St. Louis/St. Louis, Washington University in St. Louis Full-time Tenure Status: Non Tenure Track lab work

Affiliations

The primary affiliation is denoted by (*)

(*) 2019/8 Assistant Professor, Department of Pathology and Molecular Medicine, Queen's University at Kingston

Leaves of Absence and Impact on Research

2021/1 - 2021/12	Bereavement Palliative care for parent and subsequent bereavement period obviously affected research progress
2016/1 - 2017/1	Parental Slowed research career trajectory with birth of child and subsequent parental responsibilities.

Research Funding History

Awarded [n=4]

2019/3 - 2026/3 Characterization of immunological mechanisms underlying evasion of checkpoint blockade in non-small cell lung cancer, Grant

Funding Sources:

2020/11 - 2023/11 Government of Ontario (Ottawa, ON) Ontario Research Fund Total Funding - 200,000 Funding Competitive?: Yes

2021/4 - 2026/3Immunophenotyping malignant pleural mesothelioma: identifying predictive and prognosticPrincipal Applicantbiomarkers for combinatorial immunotherapy., Grant

Funding Sources:

	2021/4 - 2026/3	Canadian Institutes of Health Research (CIHR) Project Grant Program Total Funding - 872,865 Funding Competitive?: Yes		
2019/9 - 2024/8 Principal Investigator	OICR Clinician Scientist (I) Investigator Award, Grant			
	Funding Sources:			
	2019/9 - 2024/8	Ontario Institute for Cancer Research (OICR) Clinician Scientist (I) Investigator Award Total Funding - 725,000 Funding Competitive?: Yes		
2020/4 - 2020/4 Principal Applicant	John R. Evans Lead CAD), Grant	ers Fund (JELF), Canada Foundation for Innovation (2020, \$200,000		
	Funding Sources:			
	2020/3 - 2023/3	Canada Foundation for Innovation (CFI) John R. Evans Leaders Fund (JELF) Total Funding - 200,000 Funding Competitive?: Yes		

Courses Taught

2023/02/09	Lecturer, Queen's University at Kingston Course Title: MEDS120: Mechanisms of Disease Section: Neoplasia Guest Lecture?: Yes
2022/09/26	Lecturer, Queen's University at Kingston Course Title: MEDS230: CF: Circulation and Respiration Section: Pathology of Airway Diseases Guest Lecture?: Yes
2023/03/14 - 2023/03/14	Workshop Presenter, PeerView CME Course Title: Gaining Confidence in Predicting and Assessing Response to Cancer Immunotherapies Course Level: Post Graduate Section: Presentation - and recorded Podcast
2022/08/03 - 2023/03/14	Lecturer, Queen's University at Kingston Course Title: New Investigator Clinical Trials Course, Canadian Cancer Trials Group Section: Pre-Operative Surgical Trials in Drug Development
2023/01/16 - 2023/01/21	Co-leader, Society for the Immunotherapy of Cancer Course Title: Clinical Immuno-Oncology Network (SCION) Workshop for early career clinical researchers
2023/01/19 - 2023/01/19	Workshop Leader, Society for the Immunotherapy of Cancer Course Title: Cancer Immunotherapy Winter School (CIWS) Course Level: Post Graduate Section: Tumor Cell Analyses

2022/08/04 - 2022/08/04	Lecturer, Queen's University at Kingston Course Title: New Investigator Clinical Trials Course, Canadian Cancer Trials Group Course Level: Post Graduate Section: When is a Biomarker Ready for Use in a Clinical Trial
2022/02/01 - 2022/02/01	Lecturer, Queen's University at Kingston Course Title: Mechanisms of Disease Course Code: MEDS120 Course Level: Undergraduate Section: Tumour Immunology
2022/01/26 - 2022/01/26	, Society for the Immunotherapy of Cancer Course Title: Cancer Immunotherapy Winter School Section: Tumor Cell Analyses
2021/10/04 - 2021/10/04	Lecturer, Queen's University at Kingston Course Title: Circulation and Respiration Course Code: MEDS 230 Course Level: Undergraduate Section: The Pathology of Airway Disease
2020/09/15 - 2020/09/15	Lecturer, Queen's University at Kingston Course Title: Cancer Biology, Queen's University Course Code: Path 823 Section: Pathology of Cancer
2020/08/27 - 2020/08/27	Lecturer, Queen's University at Kingston Course Title: Quantitative Research Methods Course Code: CISC 817 Course Level: Graduate Section: Quantitative, Spatially-Resolved Characterization of the Tumor Microenvironment using Multiplex Immunofluorescence
2019/03/18 - 2019/03/18	Lecturer, USCAP Course Title: Tumor Immunology: Implications for TNM Staging and Therapeutics USCAP Annual Meeting, Washington DC Course Level: Post Graduate Section: Scoring Pathologic Responses to Checkpoint Blockade in the Neoadjuvant Setting

Student/Postdoctoral Supervision

Bachelor's [n=8]	
2023/5 Principal Supervisor	Alex Uriarte (In Progress), Queen's University
2023/5 Principal Supervisor	Katherine Brewer (In Progress), Queen's University
2022/9 - 2023/7 Principal Supervisor	Darah Vlaminck (Completed), Queen's University
2022/5 - 2024/5 Principal Supervisor	Rose Binley-Ewing (In Progress), Queen's University
2022/5 - 2023/4 Principal Supervisor	Angel Wong (Completed), Queen's University

2022/5 - 2024/8 Principal Supervisor	Kyran Sachdeva (Completed), Queen's University
2022/5 Principal Supervisor	Phoebe Ji (In Progress), Queen's University
2022/5 - 2024/5 Principal Supervisor	Mide Olanrewaju (Completed), Queen's University

Bachelor's Honours [n=5]

2021/9 - 2022/5 Principal Supervisor	Michelle Mataj (Completed), Queen's University Thesis/Project Title: Investigating the presence of subclonal EMT in epithelioid malignant pleural mesothelioma. Present Position: Student
2021/9 - 2022/5 Principal Supervisor	Pablo Morse (Completed), Queen's University Thesis/Project Title: Proportionally Sampling the Immune Infiltration of Tumours in Squamous Cell Carcinoma Present Position: Student
2021/9 - 2022/5 Principal Supervisor	Angela (Seungah) Choi (Completed), Queen's University Thesis/Project Title: Investigating biomarkers to improve prediction of outcome to anti-PD1 therapy in Non-Small Cell Lung Carcinoma. Present Position: Student
2020/9 - 2021/5 Principal Supervisor	Emily Cohen (Completed), Queen's University Thesis/Project Title: Identifying Predictive Biomarkers for Neoadjuvant Anti-PD-1 Therapy in Non-Small Cell Lung Carcinoma Present Position: Student
2020/9 - 2021/5 Principal Supervisor	Michael Fotheringham (Completed), Queen's University Thesis/Project Title: TMA vs Whole-Slide Analysis of Tumour Microenvironment in Non- Small Cell Lung Carcinoma Present Position: Student

Master's Thesis [n=5]

2022/5 - 2023/4 Principal Supervisor	Angela (Seungah) Choi (Completed), Queen's University Thesis/Project Title: Evaluation of TANs on T&E to predict response to immune checkpoint blockade in Non-Small Cell lung cancer. Present Position: Student
2021/9 - 2023/8 Principal Supervisor	Michael Fotheringham (Completed), Queen's University Thesis/Project Title: TMA vs Whole-slide analysis of tumour microenvironment in Non- Small Cell Lung Carcinoma. Present Position: Student
2021/9 - 2023/8 Principal Supervisor	Eman Radwan (Completed), Queen's University Thesis/Project Title: Investigating the tumor immune microenvironment and immune checkpoint inhibitors in different histological subtypes of Malignant Pleural Mesothelioma. Present Position: Student
2021/9 - 2023/8 Principal Supervisor	Emily Cohen (Completed), Queen's University Thesis/Project Title: Characterizing Response to Neoadjuvant Anti-PD1 Therapy in Non- Small Cell Lung Carcinoma Present Position: Student

2021/5 - 2023/5 Principal Supervisor	Nicole Espinosa (Completed), Queen's University Thesis/Project Title: Evaluation of TANs on H&E to predict response to immune checkpoint blockade in non-small cell lung cancer. Present Position: Student
Doctorate [n=2]	
2023/9 Principal Supervisor	Michael Fotheringham (In Progress), Queen's University Student Degree Start Date: 2023/9 Student Degree Expected Date: 2027/8
2023/5 Principal Supervisor	Eman Radwan (In Progress)

Staff Supervision

Number of Scientific and Technical Staff: 2 Number of Highly Qualified Personnel in Research Training: 2 Number of Employees: 2 Number of Volunteers: 5

Most Significant Contributions

Identified the features of immune-mediated tumor regression following neoadjuvant anti-PD-1 therapy in non-small cell lung carcinoma (NSCLC).

I have identified the features of immune-mediated tumor regression following neoadjuvant anti-PD-1 therapy in non-small cell lung carcinoma (NSCLC). This first published phase II clinical trial of neoadjuvant anti-PD-1 therapy showed a promising response rate, with 9/20 (45%) of patients achieving major pathologic response (<10% residual viable tumor) at definitive surgical resection following neoadjuvant anti-PD-1. My work demonstrates immune-mediated tumor regression in this setting is characterized by features of immune activation, massive tumor cell death, and tissue repair. I have proposed immune-related pathologic response criteria (irPRC) for the standardized and reproducible assessment of pathologic response following neoadjuvant immunotherapy. The work has been extended across many solid tumour types and a pan-tumour irPRC-based approach for pathologic response quantification is being validated in a multi-stakeholder effort I am co-leading through the Society for Immunotherap

2018/1 Identified the adaptive pattern of PD-L1 expression in multiple novel tumor types I have identified the adaptive pattern of PD-L1 expression in multiple novel tumor types. I have quantified expression of PD-L1 and tumour immune infiltrates using immunohistochemistry and digital image analysis in numerous solid tumours. The association of PD-L1 expression with infiltrating cytotoxic T cells supports the presence of the adaptive pattern of PD-L1 expression, which is associated with response to PD-(L)1 blockade. With collaborators at Johns Hopkins, we have developed the AstroPath Platform for whole-slide multiplex immunofluorescence (mIF) to simultaneously assess immune cell subsets and expression of multiple checkpoint molecules in a single tumour section.

Presentations

- (2022). CD8+FoxP3+ cells represent early, effector T-cells and predict outcomes in patients with resectable non-small cell lung carcinoma (NSCLC) receiving neoadjuvant anti-PD-1-based therapy. Society for Immunotherapy of Cancer (SITC) Annual Meeting, Boston, United States of America Main Audience: Researcher
- (2022). Pan-Tumor Application of Immune-Related Pathologic Response Criteria (irPRC). Immunotherapy Bridge Congress, Naples, Italy Main Audience: Researcher Invited?: Yes Description / Contribution Value: Invited platform presentation
- (2022). The Devil in the Details: Pathologic Endpoints of Neoadjuvant Trials. American Society of Clinical Oncology (ASCO) Annual Meeting, Chicago, United States of America Main Audience: Researcher Description / Contribution Value: Invited platform presentation
- 4. (2021). Using Multiplex Immunofluorescence to Predict and Characterize Response to Immune Checkpoint Blockade. Speaker series: Queen's Department of Pathology and Molecular Medicine,
- (2021). Using Multiplex Immunofluorescence to Predict and Characterize Response to Immune Checkpoint Blockade. University of Calgary Department of Pathology and Lab Medicine, Invited?: Yes Description / Contribution Value: Invited Grand Rounds speaker
- 6. (2021). Using Multiplex Immunofluorescence to Predict and Characterize Response to Immune Checkpoint Blockade. Canadian Cancer Trials Group Spring Meeting Correlative Science and Tumour Biology (CSTB) Committee,
- (2021). Neoadjuvant PD-1 Blockade in NSCLC and Beyond. Machine Learning in Medical Imaging Consortium, Main Audience: Researcher
 - Description / Contribution Value: Monthly Virtual ForumSeries
- (2021). AstroPath When Astronomy Meets Pathology. Biomedical Research Core Facilities Annual Conference, Palm springs, CA, United States of America Invited?: Yes, Keynote?: Yes Description / Contribution Value: Opening Keynote Speaker
- (2021). Mapping the Tumour Microenvironment in Malignant Pleural Mesothelioma using Multiplex Immunofluorescence (IND227). Canadian Cancer Trials Group Spring Meeting Investigational New Drug (IND) Committee,
- 10. (2021). AstroPath Program. Johns Hopkins Bloomberg~Kimmel Institute for Cancer Immunotherapy External advisory board meeting, Baltimore, United States of America
- 11. (2021). CCTG Neoadjuvant Trial Platform. Canadian Cancer Trials Group Spring Meeting Correlative Science and Tumour Biology (CSTB) Committee, Kingston, Canada Main Audience: Knowledge User
- (2021). Neoadjuvant PD-1 Blockade in NSCLC and Beyond. Canadian Surgical Forum (virtual), Invited?: Yes Description / Contribution Value: Invited platform presentation in the Surgical Oncology Trials session

 (2020). Quantifying response to neoadjuvant anti-PD1 in non-small cell lung carcinoma Immuno-Oncology Summit Europe, London, England. Immuno-Oncology Summit Europe, London, England, London, United Kingdom Invited?: Yes

Description / Contribution Value: Invited platform presentation

- (2020). Quantifying response and characterizing resistance to neoadjuvant anti-PD1 in non-small cell lung carcinoma (NSCLC).Immuno-Oncology Summit Europe, United Kingdom Main Audience: Researcher Invited?: Yes, Keynote?: No
- (2020). Quantifying response to neoadjuvant anti-PD1 in non-small cell lung carcinoma. Ontario Institute for Cancer Research (OICR) Town Hall, Invited?: Yes Description / Contribution Value: Town Hall
- 16. (2019). Quantifying response and characterizing resistance to neoadjuvant anti-PD1 in non-small cell lung carcinoma (NSCLC). Queen's University, Department of Pathology and Molecular Medicine,
- 17. (2019). Quantifying response and characterizing resistance to neoadjuvant anti-PD-1 in non-small cell lung carcinoma (NSCLC). McMaster University, Immunology and Infection Program, Hamilton, Canada Main Audience: Researcher
- (2018). Histopathologic features of response and resistance to neoadjuvant anti-PD-1 in non-small cell lung carcinoma (NSCLC). Pathology Department Special Seminar, University of Pittsburgh Medical Center, Philadelphia, PA, United States of America Main Audience: Researcher Invited?: Yes, Keynote?: No
- (2018). Histopathologic features of response and resistance to neoadjuvant anti-PD-1 in non-small cell lung carcinoma (NSCLC). Special Seminar, Queen's University, Kingston, ON, Canada Main Audience: Researcher Invited?: Yes, Keynote?: No
- (2018). Histopathologic features of response and resistance to neoadjuvant anti-PD-1 in non-small cell lung carcinoma (NSCLC). Basic and Translational Research Seminar Series, University of Pittsburgh Medical Center, Pittsburgh, PA, United States of America Main Audience: Researcher Invited?: Yes, Keynote?: No
- Cottrell, T., Ovtcharov, V., Hellebust, A., Taube, J. (2017). Biomarkers of Antitumor Immune Activity Associate with Survival in Melanoma. Quantitative Pathology and User Group Meeting; San Francisco, CA., United States of America Main Audience: Researcher Invited?: Yes, Keynote?: No
- 22. Cottrell T, Taube J. (2017). Illuminating the Tumor Microenvironment using IHC. Institute for Cancer Immunotherapy Scientific Retreat, Baltimore, MD, United States of America Main Audience: Researcher Invited?: Yes, Keynote?: No
- Cottrell, T., Ovtcharov, V. Taube, J. (2016). Case Study using HALO and STRATA: Biomarkers of Antitumor Immune Activity Associate with Survival in Melanoma. Webinar hosted by Indica Labs, United States of America Main Audience: Researcher Invited?: Yes, Keynote?: No

- Cottrell, T., Casciola-Rosen, L., Rosen, A. (2009). Scleroderma Autoantibodies: New Insight.Johns Hopkins Scleroderma Advisory Board; Baltimore, MD., United States of America Main Audience: Researcher Invited?: Yes, Keynote?: No
- Cottrell, T., Liu, H., Bose, I., Pierini, L., Goldman, W., Doering, T. (2002). Use of dsRNA interference to suppress gene expression in Cryptococcus neoformans.WUSM Infectious Disease/Basic Microbiological Mechanisms Research Conference; St. Louis, MO., United States of America Main Audience: Researcher Invited?: Yes, Keynote?: No
- Cottrell, T., Liu, H., Pierini, L., Goldman, W., Doering, T. (2001). Use of dsRNA interference to suppress gene expression in Cryptococcus neoformans.WUSM Medical Mycology Research Club; St. Louis, MO., United States of America Main Audience: Researcher Invited?: Yes, Keynote?: No
- Cottrell, T., Liu, H., Pierini, L., Goldman, W., Doering, T. (2001). New Methods for Modulation and Quantitation of Gene Expression in Cryptococcus neoformans.HHMI Summer Research Program Conference; St. Louis, MO., United States of America Main Audience: Researcher Invited?: Yes, Keynote?: No
- Cottrell, T., Liu, H., Doering, T. (2000). RNA Interference in Cryptococcus neoformans.HHMI Prefreshman Biology and Biomedical Research Conference; St. Louis, MO., United States of America Main Audience: Researcher Invited?: Yes, Keynote?: No

Broadcast Interviews

2023/03/14	Gaining Confidence in Predicting and Assessing Response to Cancer Immunotherapies, PeerView CME, USCAP https://PeerView.com/GNU821
	Description / Contribution Value: This PeerView educational activity, based on a recent live symposium, focuses on current and emerging immunotherapy biomarkers, the rationale for and practicalities of biomarker testing as a guide for immunotherapy selection for different solid tumors, and the nuances of pathologic response assessment after neoadjuvant immunotherapy. Additionally, practical guidance is provided to help multidisciplinary coordination of care based on biomarker testing and pathologic response assessment so that more patients receive personalized immunotherapy and experience improved outcomes.
2022/02/04 - 2022/02/04	Revolutionizing cancer therapy by using the immune system: an interview with Dr. Tricia Cottrell for World Cancer Day 2022, Southeastern Ontario Academic Medical Organization (SEAMO), SEAMO https://www.seamo.ca/news/stories/revolutionizing-cancer-therapy-using-immune-system- interview-dr-tr

Publications

Journal Articles

- 1. Julie Stein Deutsch, Ashley Cimino-Mathews, Elizabeth Thompson, Mariano Provencio, Patrick M Forde, Jonathan Spicer, Nicolas Girard, Daphne Wang, Robert A Anders, Edward Gabrielson, Peter Illei, Jaroslaw Jedrych, Ludmila Danilova, Joel Sunshine, Keith M Kerr, Mia Tran, Judy Bushong, Junliang Cai, Vipul Devas, Jaclyn Neely, David Balli, Tricia R Cottrell, Alex S Baras, Janis Taube. 222-N Analysis of pathologic features and efficacy outcomes with neoadjuvant nivolumab plus platinum-doublet chemotherapy for resectable non-small cell lung cancer in CheckMate 816. Journal for ImmunoTherapy of Cancer. 11(2),
- Michael T Lotze, Tricia Cottrell, Carlo Bifulco, Laura Chow, Leslie Cope, Sacha Gnjatic, Holden T Maecker, Joe Yeong Poh Shen. (2024). SITC Clinical Immuno-Oncology Network (SCION) commentary on measurement and interpretation of essential biomarkers in early clinical trials. Journal for immunotherapy of cancer. 12(3),
- 3. (2024). Association between pathologic response and survival after neoadjuvant therapy in lung cancer. Nature medicine. 30(1): 218-228.
- 4. Julie S. Deutsch, Tricia R. Cottrell, Krista Y. Chen, Carlos E. De Andrea, Ezra Baraban, Pierre Fiset, Jaroslaw Jedrych, Christine Orr, Roberto Salgado, Christian M. Schürch, Richard A Scolyer, Raja Seethala, Lynette M. Sholl, Sabina Signoretti, Michael Tetzlaff, Annikka Weissferdt, Xiaowei Xu, James Ziai, Ashley Cimino-Mathews, and Janis M. Taube. (2024). Pan-tumor harmonization of pathologic response assessment for standardized data collection in neoadjuvant IO trials (PATHdata): Final analysis of a multi-institutional reproducibility study.Journal of Clinical Oncology. 42(16),
- Cohen E, Wang D, Engle E, et al. (2022). 57 CD8+FoxP3+ cells represent early, effector T-cells and predict outcomes in patients with resectable non-small cell lung carcinoma (NSCLC) receiving neoadjuvant anti-PD-1-based therapy. Journal for ImmunoTherapy of Cancer. 10,

Book Chapters

 Cottrell TR, Rosen A. (2013). Mechanisms of autoimmunity. Rich R, Fleisher T, William S, Schroeder H, Frew A, Weyand C.Clinical Immunology: Principles and Practice. 4th: 587-594. Published, Elsevier Saunders, United States of America

Supervised Student Publications

- Angela Choi and Nicole Espinosa Tumour associated neutrophils (TAN): An H&E-based biomarker predicting poor outcome to anti-PD-1 monotherapy in lung adenocarcinomas with high PD-L1 expression (in progress). (2023). , Student Contribution (%): 60
- Michael Fotheringham Tissue Microarray vs Whole-Slide Analysis of CD8 in Non-Small Cell Lung Carcinoma (In progress). (2023).
- 3. Emily Cohen

Early, effector CD8+FoxP3+ cells and their topology associate with outcomes in patients with non-small cell lung carcinoma (NSCLC) receiving neoadjuvant anti-PD-1-based therapy (in progress). (2023)., Student Contribution (%): 70





Date Submitted: 2025-02-07 19:34:05 Confirmation Number: 1907630 Template: CIHR Academic

Dr. Chantelle Jae Capicciotti

Correspondence language: English Sex: Female Date of Birth: 5/16 Canadian Residency Status: Canadian Citizen Country of Citizenship: Canada

Contact Information

The primary information is denoted by (*)

Address

Primary Affiliation (*)

Department of Chemistry Queen's University Chernoff Hall, Room 405 90 Bader Lane Kingston Ontario K7L 3N6 Canada Primary Affiliation

Department of Biomedical and Molecular Sciences Queen's University Botterell Hall, Room 625 18 Stuart St. Kingston Ontario K7L 3N6 Canada

Telephone

Work (*) 1-613-5332627

Email

Work (*) c.capicciotti@queensu.ca





Protected when completed

Dr. Chantelle Capicciotti

Language Skills

Language	Read	Write	Speak	Understand
English	Yes	Yes	Yes	Yes

User Profile

Disciplines Trained In: Chemistry, Biochemistry

Research Disciplines: Chemistry, Biochemistry, Cell Biology

Areas of Research: Organic Molecules and Biomolecules, Biological and Biochemical Mechanisms, Chemical Synthesis and Catalysis

Fields of Application: Biomedical Aspects of Human Health, Foundations and Knowledge Acquisition

Research Specialization Keywords: Carbohydrates, Glycans, Chemical Biology, Organic Chemistry, Glycobiology, Carbohydrate Chemistry, Chemical Synthesis, Enzymes, Glycosyltransferases

Degrees

2014/2 - 2018/6	Post-doctorate, Post-Doctoral Research Fellow in Glycobiology, Carbohydrate Chemistry and Chemical Glycobiology, Complex Carbohydrate Research Center, University of Georgia Degree Status: Completed
	Supervisors: Boons, Geert-Jan
2009/5 - 2014/3	Doctorate, Doctor of Philosophy in Chemistry, Chemistry, University of Ottawa Degree Status: Completed Transferred to PhD without completing Masters?: Yes
	Supervisors: Robert N. Ben
2005/9 - 2009/6	Bachelor's Honours, Bachelor of Science in Biopharmaceutical Sciences, Medicinal Chemistry, Biopharmaceutical Sciences, Medicinal Chemistry, University of Ottawa Degree Status: Completed
	Supervisors: Robert N. Ben

Recognitions

2024/4 - 2029/3 Canada Research Chair - 600,000 Natural Sciences and Engineering Research Council of Canada (NSERC) Prize / Award

2023/3	ChemBioChem Lecturer ChemBioChem Journal - American Chemical Society Distinction
2022/5	Prize for Excellence in Research- Outstanding Emerging Researcher - 5,000 Queen's University at Kingston Prize / Award
2021/3	4th Year Chemistry Teaching Award Queen's University at Kingston Distinction
2021/1	Thieme Chemistry Journals Early Career Researcher Award Thieme Chemistry Journals Distinction
2019/11	2019 Ferrier Lecturer Ferrier Institute - Victoria University of Wellington, New Zealand Prize / Award
2018/7 - 2023/6	Queen's National Scholar in Precision Molecular Medicine Queen's University at Kingston Prize / Award

Employment

2024/7	Associate Professor, Tier 2 CRC Department of Chemistry and Department of Biomedical and Molecular Sciences, Faculty of Arts and Science and Faculty of Health Sciences, Queen's University at Kingston
2018/7 - 2024/6	Assistant Professor, Queen's National Scholar Department of Chemistry and Department of Biomedical and Molecular Sciences, Faculty of Arts and Science and Faculty of Health Sciences, Queen's University at Kingston
2014/2 - 2018/6	Post-Doctoral Research Associate Complex Carbohydrate Research Center, Franklin College of Arts and Sciences, University of Georgia

Affiliations

The primary affiliation is denoted by (*)(*) 2018/7Assistant Professor and Queen's National Scholar, Queen's University at Kingston

Research Funding History

Awarded [n=9]			
2024/4 - 2029/3 Principal Investigator	Canada Research Chair, Tier 2 - Chemical Biology		
	Funding Sources:		
	2024/4 - 2029/3	Canada Research Chairs (CRC) Total Funding - 600,000 (Canadian dollar) Funding Competitive?: Yes	
2021/9 - 2027/8 Co-investigator	Protection of Metalli	c Surfaces from Bulk to Nano Through Molecular-level Innovation	
	Co-applicant : Alasta Zheng; Kevin Stamp	air McLean; Brian Wilson; Christopher Baddeley; Hannu Hakkinen; Jie blecoskie; Marianne Koritzinsky; Tatsuya Tsukuda;	

	Co-investigator : Gar	ng Zheng; Janine Mauzeroll; Paul Ragogna; Yolanda Hedberg;	
	Principal Investigator	r : Cathleen Crudden	
	Funding Sources:		
	2021/9 - 2027/8	Social Sciences and Humanities Research Council of Canada (SSHRC) New Frontiers in Research Fund - Transformation Total Funding - 24,000,000 (Canadian dollar) Funding Competitive?: Yes	
2022/9 - 2027/8	Programmed Glycos	ylation Changes in Controlling the Germinal Center	
Co-applicant	Co-applicant : Olivier Julien;		
	Principal Investigator : Matthew Macauley		
	Funding Sources:		
	2022/9 - 2027/8	Canadian Institutes of Health Research (CIHR) Project Grant	
		Funding Competitive?: Yes	
2020/4 - 2026/3	Chemical Biology Tools for Probing and Discovering Glycan-Protein Interactions		
Principal Investigator	Funding Sources:		
	2020/4 - 2025/3	Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant Total Funding - 157,000 (Canadian dollar)	
		Funding Competitive?: Yes	
2020/9 - 2025/12 Co-investigator	Improving Antibody-Drug Conjugates (ADCs) through Glyco-Engineering for New Targeted Cancer Therapeutics		
	Co-applicant : Andrew Craig; P. Andrew Evans;		
	Principal Investigator	r : John Allingham	
	Funding Sources:		
	2020/9 - 2022/8	Queen's University Wicked Ideas Fund Total Funding - 150,000 (Canadian dollar) Funding Competitive?: Yes	
2023/9 - 2025/8 Principal Investigator	Improving Antibody-Drug Conjugates (ADCs) through Glyco-Engineering for New Targeted Cancer Therapeutics		
	Co-applicant : Andrew Craig; P. Andrew Evans;		
	Principal Investigator : John Allingham		
	Funding Sources:		
	2023/6 - 2025/5	Queen's University Wicked Ideas - Phase 2 Total Funding - 150,000 (Canadian dollar) Funding Competitive?: Yes	
2023/4 - 2025/3	Illuminating the dark glyco-immunointeractome through cellular glycoengineering		
Co-investigator	Co-applicant : Stacy Malaker;		
	Co-investigator : Landon Edgar		

Funding Sources:

2023/4 - 2025/3	Social Sciences and Humanities Research Council of Canada (SSHRC)
	New Frontiers in Research Fund - Exploration
	Total Funding - 250,000 (Canadian dollar)
	Funding Competitive?: Yes

2018/7 - 2024/12 Research Initiation Grant - Startup funding from Queen's University

Principal Investigator Funding Sources:

2018/7 - 2022/6 Queen's University Research Initiation Grant Total Funding - 145,000 (Canadian dollar) Funding Competitive?: No

2021/9 - 2024/12Fixing the Need for Nitrogen: A New Molecular Language for Plant-Rhizobium SymbiosesCo-applicantCo-applicant : David Zechel; Jacqueline Monaghan;

Co-investigator : Diana Cordoba; Graeme Howe;

Principal Investigator : George DiCenzo

Funding Sources:

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Completed [n=10]

2023/4 - 2024/4 Principal Investigator	A Benchtop SPR Instrument for HighThroughput Interrogation of Protein Ligand Interactions		
	Co-applicant : Che Colpitts; Christopher Lohans; Faith Brennan; Graeme Howe;		
	Co-investigator : Katrina Gee		
	Funding Sources:		
	2023/4 - 2024/4	Natural Sciences and Engineering Research Council of Canada (NSERC) NSERC-RTI Total Funding - 150,000 (Canadian dollar) Funding Competitive?: Yes	
2022/9 - 2024/3 Principal Investigator	Identifying Siglec Ligands by Glycan Remodeling with Photo-Crosslinking Probes		
	Co-investigator : Matthew Macauley		
	Funding Sources:		
	2022/10 - 2024/10	GlycoNet - Canadian Glycomics Network Collaborative Team Grant Total Funding - 150,000 (Canadian dollar) Funding Competitive?: Yes	
2022/1 - 2024/1 Co-investigator	Targeting glycans to	prevent coronavirus infection: A sweet antiviral prophylactic strategy	
	Principal Investigato	r : Che Colpitts	

	Funding Sources:		
	2022/1 - 2023/1	J.P. Bickell Foundation Medical Research Grant Total Funding - 72,000 (Canadian dollar) Funding Competitive?: Yes	
2019/6 - 2023/5 Principal Investigator	Uncovering the Fund Partners at the Cellu	ction of Glycans: Examining Interactions with their Biological Binding	
	Funding Sources: 2019/6 - 2022/5	Canada Foundation for Innovation (CFI) JOHN R. EVANS LEADERS FUND Total Funding - 192,439 (Canadian dollar) Funding Competitive?: Yes	
2019/6 - 2023/5 Principal Investigator	Uncovering the Function of Glycans: Examining Interactions with their Biological Binding Partners at the Cellular Level		
	Funding Sources: 2019/6 - 2022/5	Ministry of Research, Science and Technology (MRST) JOHN R. EVANS LEADERS FUND Total Funding - 192,439 (Canadian dollar) Funding Competitive?: Yes	
2020/9 - 2022/8 Principal Applicant	Targeting Cancer GI Surfaces	ycans with Imaging Probes: New Frontiers to Chemically Map Tissue	
	Funding Sources: 2020/9 - 2022/8	Queen's University Catalyst Grant Total Funding - 25,000 (Canadian dollar) Funding Competitive?: Yes	
2020/4 - 2022/3 Co-applicant	Mitigation of Necrotic Molecules and Stres	c Enteritis by Improving the Integrity of Intestinal Mucin through Small s Management	
	Co-applicant : Alisda Wade Abbott;	ir Boraston; G. Douglas Inglis; Richard R.E. Uwiera; Steven Smith;	
	Principal Applicant :	Wesley Zandberg	
	Funding Sources:		
	2020/4 - 2022/3	GlycoNet - Canadian Glycomics Network Collaborative Team Grant Total Funding - 384,000 (Canadian dollar) Funding Competitive?: Yes	
2019/4 - 2022/3 Principal Investigator	Developing a High-T Immunotherapies	hroughput Platform to Identify Glycan Targets for Novel Cancer	
	Co-applicant : Ormiston, Mark		
	Funding Sources: 2019/4 - 2022/3	Social Sciences and Humanities Research Council of Canada (SSHRC) NEW FRONTIERS IN RESEARCH FUND – EXPLORATION Total Funding - 250,000 (Canadian dollar) Funding Competitive?: Yes	

2020/7 - 2021/12 Principal Investigator	Harnessing Cell-Surface Glyco-Engineering to Enhance Stem-Cell Therapies	
	Funding Sources: 2020/7 - 2021/12	Banting Foundation Discovery Award Total Funding - 25,000 (Canadian dollar) Funding Competitive?: Yes
2020/7 - 2020/12	Developing Sweet P	rophylactics: Targeting Glycans to Prevent COVID-19 Spread
Principal Investigator	Co-investigator : Che Colpitts	
	Funding Sources:	
	2020/7 - 2020/12	Queen's University Queen's COVID-19 Rapid Response Research Opportunity Total Funding - 35,000 (Canadian dollar) Funding Competitive?: Yes
Under Review [n=2]		
2025/9 - 2030/8	Developing Chemical Biology Tools for Studying Glycans and Glycan-Protein Interactions	
Principal investigator	Funding Sources:	
	2025/10 - 2030/9	Ontario Ministry of Colleges and Universities
		Early Researcher Award Total Funding - 150.000 (Canadian dollar)
		Funding Competitive?: Yes
2022/9 - 2023/8	Developing Chemica	I Biology Tools to Probe and Identify Glycans and Glycoproteins
Principal Investigator	Collaborator : Lance	Wells; Peng Zhao
	Funding Sources:	
	2022/9 - 2023/8	Natural Sciences and Engineering Research Council of Canada (NSERC) Alliance Internation Catalyst Grant Total Funding - 25,000 (Canadian dollar) Funding Competitive?: Yes

Student/Postdoctoral Supervision

Bachelor's Honours [n=22]

Principal Supervisor	Ella Millenaar (In Progress), Queen's University Student Degree Start Date: 2021/9 Student Degree Expected Date: 2025/4 Present Position: Undergraduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Celina Bradley (In Progress), Queen's University Student Degree Start Date: 2021/9 Student Degree Expected Date: 2025/4 Present Position: Honour's 4th Year Student, Queen's University

Principal Supervisor	Krista Brunt (In Progress), Queen's University Student Degree Start Date: 2021/9 Student Degree Expected Date: 2025/4 Present Position: Undergraduate Student Capicciotti Lab, Queen's University, Kingston, ON
Co-Supervisor	Katherine Brewer (In Progress), Queen's University Student Degree Start Date: 2021/9 Student Degree Expected Date: 2026/4 Present Position: Undergraduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Olivia Roland (In Progress), Queen's University Student Degree Start Date: 2021/9 Student Degree Expected Date: 2025/4 Present Position: Undergraduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Tate Erickson (Completed), Queen's University Student Degree Start Date: 2021/9 Student Degree Received Date: 2024/5 Present Position: MD/PhD Student, Queen's University
Principal Supervisor	Brianne Flint (Completed), Queen's University Student Degree Start Date: 2020/9 Student Degree Received Date: 2024/5 Present Position: Teachers College
Principal Supervisor	Cole Garnier (Completed), Queen's University Student Degree Start Date: 2020/9 Student Degree Received Date: 2024/5 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Madeleine Cook (Completed), Queen's University Student Degree Start Date: 2020/9 Student Degree Received Date: 2024/5 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Isabelle Da Barp (Completed), Queen's University Student Degree Start Date: 2020/9 Student Degree Received Date: 2024/4 Present Position: Graduate Student, University of Toronto
Principal Supervisor	Martha Prindl (Completed) , Queen's University Student Degree Start Date: 2019/9 Present Position: Graduate Student, St. Andrew's University, Scottland
Principal Supervisor	Sara Fraser (Completed), Queen's University Student Degree Start Date: 2018/9 Student Degree Received Date: 2022/5 Present Position: Teachers College
Principal Supervisor	Sophie Emberley-Korkmaz (Completed), Queen's University Student Degree Start Date: 2017/9 Student Degree Received Date: 2021/5 Present Position: Graduate Student, McGill University, Montreal, QC

Principal Supervisor	Michael Trolio (Completed), Queen's University Student Degree Start Date: 2016/9 Student Degree Received Date: 2021/5 Present Position: Graduate Student, Queen's University, Kingston, ON
Principal Supervisor	Raquel Simoes (Completed), Queen's University Student Degree Start Date: 2016/9 Student Degree Received Date: 2021/5 Present Position: ATS Health and Beauty Care Corporation - Jr. Chemist/Jr. Quality Control
Principal Supervisor	Jonathan Babulic (Completed), Queen's University Student Degree Start Date: 2016/9 Student Degree Received Date: 2020/5 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Joshua Kofsky (Completed), Queen's University Student Degree Start Date: 2016/9 Student Degree Received Date: 2020/5 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Simran Gauba (Completed), Queen's University Student Degree Start Date: 2016/9 Student Degree Received Date: 2019/9 Present Position: Clinical Research Coordinator, SKiN Health, Cobourg, ON
Principal Supervisor	Fabiola De Leon Gonzalez (Completed), Queen's University Student Degree Start Date: 2015/9 Student Degree Received Date: 2020/9 Present Position: Graduate Student, Queen's University, Kingston, ON
Principal Supervisor	Yu Chen (Completed) , Queen's University Student Degree Start Date: 2015/9 Present Position: Undergraduate Student, Queen's University, Kingston, ON
Principal Supervisor	Kristina Faurschou (Completed) , Queen's University Student Degree Start Date: 2015/9 Present Position: Graduate Student, University of Toronto, Toronto, ON
Principal Supervisor	Rebecca Tian (Completed), Queen's University Student Degree Start Date: 2015/5 Student Degree Received Date: 2020/5 Present Position: Research Technician, Ottawa Hospital and Research Institute, Ottawa, ON

Master's Thesis [n=14]

Principal Supervisor	Nicole Boileau (In Progress), Queen's University Student Degree Start Date: 2024/9 Student Degree Expected Date: 2026/8 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Thanh Nguyen (In Progress), Queen's University Student Degree Start Date: 2024/9 Student Degree Expected Date: 2026/8 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON

Principal Supervisor	Maryam Momeni Moqadam (In Progress), Queen's University Student Degree Start Date: 2024/5 Student Degree Expected Date: 2026/4 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Cole Garnier (In Progress), Queen's University Student Degree Start Date: 2024/5 Student Degree Expected Date: 2026/4 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Madeleine Cook (In Progress), Queen's University Student Degree Start Date: 2024/5 Student Degree Expected Date: 2026/4 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Yasmine Saini (In Progress) , Queen's University Student Degree Start Date: 2023/5 Present Position: Graduate Student Capicciotti Group, Queen's University, Kingston, ON
Co-Supervisor	Florian Handel (Completed), Queen's University Student Degree Start Date: 2023/5 Student Degree Received Date: 2024/10 Present Position: Graduate Student, EPFL, Switzerland
Principal Supervisor	Joshua Hutton (In Progress) , Queen's University Student Degree Start Date: 2022/9 Present Position: Graduate Student, Queen's University, Kingston, ON
Principal Supervisor	Alexandra Golds (In Progress), Queen's University Student Degree Start Date: 2022/5
Principal Supervisor	Sukhmani Nijjar (In Progress) , Queen's University Student Degree Start Date: 2022/5 Present Position: Graduate Student, Queen's University, Kingston, ON
Principal Supervisor	Pascal Vogt (Completed) , Queen's University Student Degree Start Date: 2020/9 Present Position: Research & Development Scientist, Paul Bauder GmbH & Co
Principal Supervisor	Daniel Whalen (Completed) , Queen's University Student Degree Start Date: 2020/9 Present Position: Optician's Consultant, Glasgow, Scottland
Co-Supervisor	Jacob Melamed (Completed), Queen's University Student Degree Start Date: 2019/9 Student Degree Received Date: 2021/12 Present Position: Graduate Student, Co-supervised with Inka Brockhausen, Queen's University, Kingston, ON
Principal Supervisor	Alexandra Golds (Completed) , Queen's University Student Degree Start Date: 2018/9 Present Position: Research Scientist
Doctorate [n=6]	

Principal Supervisor Daisy Nebel (In Progress), Queen's University Student Degree Start Date: 2023/9 Present Position: Graduate Student Capicciotti Group, Queen's University, Kingston, ON

Principal Supervisor	Fabiola De Leon Gonzalez (In Progress), Queen's University Student Degree Start Date: 2020/9 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON
Principal Supervisor	Joshua Kofsky (In Progress) , Queen's University Student Degree Start Date: 2020/5 Present Position: Graduate Student, Queen's University, Kingston, ON
Principal Supervisor	Jonathan Babulic (In Progress) , Queen's University Student Degree Start Date: 2020/5 Present Position: Graduate Student, Queen's University, Kingston, ON
Principal Supervisor	Youjin Kim (In Progress) , Queen's University Student Degree Start Date: 2020/1 Present Position: Graduate Student, Queen's University, Kingston, ON
Principal Supervisor	Marie Boddington (In Progress), Queen's University Student Degree Start Date: 2019/9 Student Degree Expected Date: 2025/8 Present Position: Graduate Student, Queen's University, Kingston, ON

Research Associate [n=1]

Principal Supervisor	Xiaojing Guo (In Progress) , Queen's University
	Student Degree Start Date: 2023/10
	Present Position: Research Associate, Capicciotti Lab, Queen's University

Technician [n=1]

Principal Supervisor Youjin Kim (Completed) , St. Lawrence College / Queen's University Student Degree Start Date: 2017/9 Student Degree Received Date: 2019/5 Present Position: Graduate Student Capicciotti Lab, Queen's University, Kingston, ON

Presentations

- CJ Capicciotti (Presenter), Cathleen Crudden, Gang Zheng, Kevin Stamplecoskie. (2024). Precision Nano-Medicine Development and Applications for Photo-Dynamic Therapies. Carbon to Metal Coating Institute (C2MCI) - Annual General Meeting, Kingston, Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti (Presenter), Jonathan L. Babulic, Fabiola De Leon Gonzalez, Marie E. Boddington, Youjin Kim, Joshua M. Kofsky. (2023). Expanding the Selective Cell-Surface Glyco-Engineering Toolbox to Interrogate Glycan-Mediated Interactions. Society for Glycobiology: 2023 Annual Meeting, Kona, United States of America Main Audience: Researcher Invited?: No
- CJ Capicciotti. (2023). Expanding the selective cell-surface glyco-engineering toolbox. ACS Spring 2023, Indianapolis, United States of America Main Audience: Researcher Invited?: Yes

- 4. CJ Capicciotti (Presenter), Jonathan L. Babulic, Fabiola De Leon Gonzalez, Marie E. Boddington, Youjin Kim, Joshua M. Kofsky. (2023). Expanding the chemical biology toolbox for selective cell-surface glyco-engineering. Canadian Chemistry Conference and Exhibition (CSC 2023), Vancouver, Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti. (2023). The Sweet Side of Health and Disease: Harnessing Chemistry to Understand the Biology of Carbohydrates. Biological Chemistry Symposium - University of Toronto, Toronto, Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti. (2023). Expanding the Selective Cell-Surface Glyco-Engineering Toolbox. Glycomics Institute of Alberta Annual Symposium, Edmonton, Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti (Presenter), Matthew Macauley. (2023). Identifying Siglec Ligands by Glycan Remodeling with Photo-Crosslinking Probes. GlycoNet Annual General Meeting, Edmonton, Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti. (2022). Expanding the Chemical Toolbox for Selective Cell-Surface Glyco-Engineering. Society for Glycobiology Annual Meeting, United States of America Main Audience: Researcher Invited?: No
- CJ Capicciotti. (2022). Expanding the Glyco-Engineering Toolbox: From Probing Glycan-Protein Interactions to Therapeutic Development. Canadian Chemistry Conference and Exhibition (CSC 2022), Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti (Presenter), Cathleen Crudden, Gang Zheng, Kevin Stamplecoskie. (2022). Precision Nano-Medicine Development Updates. Carbon to Metal Coating Institute (C2MCI) - Annual General Meeting, Kingston, Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti. (2021). Chemical Biology Tools to Probe Glycan Interactions and Functions. American Chemical Society (ACS) Spring 2021 National Meeting and Exposition, United States of America Main Audience: Researcher Invited?: Yes
- CJ Capicciotti. (2021). Glycan Remodelling with Chemical Tools to Probe Glycan-Protein Interactions. GlycoNet and ACS Webinar Series, Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti. (2021). Expanding the Enzymatic Glyco-Engineering Toolbox with Sialic Acid Probes. Chemical Biology Seminar Series – University of Alberta, Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti. (2021). The Sweet Side of Health and Disease: Chemical Biology Tools to Probe the Function of Carbohydrates and Glyco-Engineer Therapeutics. Immunology Research Centre Seminar Series – McMaster University, Canada Main Audience: Researcher Invited?: Yes

- 15. CJ Capicciotti. (2020). The Sweet Side of Health and Disease: Harnessing Chemistry to Understand the Biology of Carbohydrates. Department of Biomedical and Molecular Sciences Seminar Series, Kingston, Canada Main Audience: Researcher Invited?: Yes
- 16. CJ Capicciotti. (2020). The Sweet Side of Health and Disease: Harnessing Chemistry to Understand the Biology of Carbohydrates. Department of Biology Seminar Series, Kingston, Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti. (2020). Chemical Tools for Probing and Discovering Glycan-Protein Interactions. Chemical and Synthetic Biology Symposium, Canada Main Audience: Researcher Invited?: Yes
- CJ Capicciotti. (2020). The Sweet Side of Health and Disease: Harnessing Chemistry to Understand the Biology of Carbohydrates. Department of Chemistry Seminar Series, Kingston, Canada Main Audience: Researcher Invited?: Yes

Broadcast Interviews

2020/08/27 -COVID-19 Research at Queen's University: Glycan-Based COVID-19 Antiviral2020/08/27Prophylactics, Global News Kingston Morning Show, Global Kingston

Publications

Journal Articles

- Babulic, J. L., De León González, F.V., Capicciotti, C. J. (2024). Recent advances in photoaffinity labeling strategies to capture Glycan–Protein interactions.Current Opinion in Chemical Biology. 80: 102456. Published Refereed?: Yes
- Siwak, K.C., LeBlanc, E.V., Scott, H.M, Kim, Y., Pellizzari-Delano, I., Ball, A.M, Temperton, N.J., Capicciotti, C. J., Colpitts, C. C. (2024). Cellular sialoglycans support endosomal entry of SARS-CoV-2. PLoS Pathogens. Revision Requested Refereed?: Yes
- Alkas, A., Kofsky, J.M., Sulivan, E.C., Nebel, D., Robertson, K.N., Capicciotti, C. J., Jakeman, D.L., Johnson, E.R., Thompson, A. (2024). BODIPYs α-Appended with Distyryl-linked Aryl Bisboronic Acids: Single-Step Cell Staining and Turn-On Fluorescence Binding with D-Glucose. Organic and Biomolecular Chemistry. 22: 7448-7459. Published Refereed?: Yes
- De León González, F.V., Boddington, M. E., Kofsky, J.M., Prindl, M.L., Capicciotti, C. J. (2024). Glyco-Engineering Cell Surfaces by Exo-Enzymatic Installation of GlcNAz and LacNAz Motifs. ACS Chemical Biology. 19: 629-624. Published Refereed?: Yes

- Kumawat, D., Gray, T.E., Garnier, C.R., Bui, D. T., Li, Z., Jame-Chenarboo, Z., Jerasi, J., Wong, W.O., Klassen, J.S., Capicciotti, C.J., Macauley, M.S. (2024). A Kinetic Trapping Approach for Facile Access to 3FaxNeu5Ac and a Photo-Crosslinkable Sialyltransferase Probe. Journal of the American Chemical Society. In Press Refereed?: Yes
- Babulic, J. L., Kofsky, J.M., Boddington, M. E., Kim Y., Leblanc, E.V., Cook, M.G., Garnier, C.R., Emberley-Korkmaz, S., Colpitts, C. C., Capicciotti, C. J. (2023). One-Step Selective Labeling of Native Cell-Surface Sialoglycans by Exogenous α2,8-Sialylation. ACS Chemical Biology. 18: 2418-2429. Published Refereed?: Yes
- Kofsky, J.M., Babulic, J. L., Boddington, M.E., De León González, F.V, Capicciotti, C.J. (2023). Glycosyltransferases as versatile tools to study the biology of glycans. Glycobiology. 33: 888-910. Published Refereed?: Yes
- Babulic, J. L., Capicciotti, C. J. (2022). Enzymatic Cell-Surface Glycan Labeling for Capturing Glycan-Protein Interactions through Photo-Crosslinking.Bioconjugate Chemistry. 33(5): 773-780. Published Refereed?: Yes
- 9. Bui, D. T., Jung, J., Kitova, E. N., Li, Z., Willows, S. D., Boddington, M. E., Kitov, P. I., Mason, A. L., Capicciotti, C. J., Mahal, L. K., Macauley, M. S., Klassen, J. S.. (2022). Mass Spectrometry-Based Shotgun Glycomics Using Labeled Glycan Libraries. Analytical Chemistry. 94: 4997-5005. Published Refereed?: Yes
- Kofsky, J. M., Daskhan, G. C., Macauley, M. S., Capicciotti, C. J. (2022). Efficient Synthesis of AzidoSugars using Fluorosulfuryl Azide Diazotransfer Reagent.European Journal of Organic Chemistry.2022: e202200108. Published Refereed?: Yes
- 11. Sheikh, M.O.¹, Capicciotti, C.J¹, Liu, L., Praissman, J., Mead, D.G, Brindley, M.A, Willer, T., Campbell, K.P, Moremen, K.W, Wells, L., Boons, G.J. [¹Equal Contributing Authors]. (2022). Cell Surface Glycan Engineering Reveals that Matriglycan Alone can Recapitulate Dystroglycan Binding and Function. Nature Communications. 13: 3617. First Listed Author Revision Requested Refereed?: Yes
- 12. LeBlanc, EV; Kim, Y; Capicciotti, CJ; Colpitts, CC. (2021). Hepatitis C Virus Glycan-Dependent Interactions and the Potential for Novel Preventative Strategies. Pathogens. 10(6): 685-704. Published Refereed?: Yes

Intellectual Property

Patents

 Water-Soluble N-Heterocyclic Carbene Nanoclusters. United States of America. PCT/CA2024/050729. 2024/05/30. Patent Status: Pending