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Research Summary

My research program is focused on various aspects of malaria from basic pathogenesis to translational development of vaccines. A major focus of our work is on the interactions between malaria parasites of different species and the host immune system, particularly during infection in pregnancy. From our field work with colleagues in Uganda, Colombia and Brazil, one of our major discoveries was that exposure to *Plasmodium vivax* can elicit antibodies against *P. falciparum* in pregnancy, which may lead to improved birth outcomes. My team is now studying the mechanism of cross-species immunity with a major goal to exploit these findings for vaccine development. We also study host-parasite interactions in the placenta microenvironment. We are specifically interested in the roles of different proteoglycans in mediating parasite sequestration in the placenta.

Current Position

Professor in Global Health 2019 – present
School of Public Health
Cross-appointed in the Dept. of Medical Microbiology and Immunology
University of Alberta
Edmonton, Canada

Education

PhD in Cell Biology 1998 – 2001
Imperial Cancer Research Fund
University College London
London, England

Bachelor of Science, First Class Honours 1992 – 1996
Department of Biology
McGill University
Montreal, Canada

Career History

Associate Professor 2015 – 2019
School of Public Health
University of Alberta

Assistant Professor (with 10% secondment to the university) 2008 – 2015
School of Public Health
University of Alberta

Program Leader 2007 – 2015
Research and Development

Alberta Provincial Laboratory for Public Health (ProvLab)

Postdoctoral scholar 2004 – 2006
Laboratory of Dr. Terry Spithill
Institute of Parasitology, McGill University, Montreal, Canada
Project: *"Targeting malaria genomic DNA with new A/T-specific alkylating agents"*

Postdoctoral scholar 2003 – 2004
Laboratory of Dr. John Rossi
Division of Molecular Biology, Beckman Research Institute, City of Hope, California
Project: *"Inhibition of gene expression by shRNA-mediated methylation of promoter DNA"*

Postdoctoral scholar 2001 – 2003
Laboratory of Dr. William Dunphy
Division of Biology, California Institute of Technology, Pasadena, California
Project: *"Identification of Xenopus Drf1, a protein involved in DNA replication and checkpoint control"*

PhD student 1997 – 2001
Laboratory of Sir Paul Nurse
Imperial Cancer Research Fund, London, England
Project: *"The roles of replication proteins Cdc18 and Cdt1 in cell cycle regulation in Schizosaccharomyces pombe"*

Summer research student & research assistant 1994 – 1996
Laboratory of Dr. Wayne Sossin
Montreal Neurological Institute, McGill University, Montreal, Canada
Project: *"Biochemical characterization of learning and memory in Aplysia"*

Honours and Awards

2019	Advisor of the Year, elected by the School of Public Health Students' Association
2014	Endeavour Executive Fellowship, Australia
2014 – 2016	Host, Visiting Scientist Award from Alberta Innovates – Health Solutions
2011	Rising Stars in Global Health Award, Grand Challenges Canada
2004 – 2007	CIHR postdoctoral fellowship
2004 – 2006	Richard H. Tomlinson postdoctoral fellowship, McGill University
2004 – 2007	Fonds de Recherche en Santé du Québec Postdoctoral Fellowship; declined
2001 – 2003	Caltech Divisional Fellowship
2000	Promega UK Young Life Scientist of the Year
1998 – 2000	Natural Sciences and Engineering Research Council of Canada post-graduate award
1998 – 1999	British Council Chevening/Athlone-Vanier Fellowship
1998 – 2001	Overseas Research Studentship award, University College London, UK

Current Lab Projects

Development of a cross-species vaccine against placental malaria

The goal of this project is to exploit natural cross-immunity between *P. vivax* and *P. falciparum* antigens that we observed in Colombia and Brazil to develop a vaccine against *P. falciparum* placental malaria. We are mapping the epitopes that induce cross-reactive antibodies and employing synthetic chemistry, structural biology, and computational modeling strategies to design vaccine candidates. We test different vaccine platforms (subunit vaccines and peptide-decorated liposomes) along with various adjuvant formulations to optimize vaccine responses. Collaborators: John Adams, University of South Florida; Eliana Arango and Amanda Maestre, U de Antioquia, Colombia; Michael Good, Griffith University, Australia.

Pathogenesis of placental malaria

We study the effects of parasite cytoadhesion on the physiology of the placenta. We are interested in the proteoglycan receptors that bind to infected red blood cells in the placenta and how they are regulated during infection. We also collaborate on studies of parasite extracellular vesicles in placental malaria. Collaborators: Denise Hemmings, Lara Mahal, and Lisa Willis, U of Alberta; Eliana Arango and Amanda Maestre, U de Antioquia, Colombia; Melisa Gualdrón-López, McGill University; Hernando del Portillo and Carmen Fernandez at ISGlobal, Barcelona; Bernard Kanoi, Mount Kenya University.

Research Funding

2024-2025	LKSIoV Research Support & Innovation Grants. 'Evaluation of a placenta-specific glycan as a plasma biomarker for placental malaria'. (**Co-PI**) $40,000.
2022-2027	Team grant from the Government of Alberta. 'COVID-19 Countermeasures from Alberta'. (**Team co-investigator**) Total funding: $54.95 million.
2023-2025	SPP-ARC Operating Grant (Striving for Pandemic Preparedness – The Alberta Research Consortium). 'Development of vaccine candidates against placental malaria using peptide-decorated antigenic liposomes'. (**PI**) $200,000.
2022-2024	Canadian Glycomics Network Collaborative Team Grant. 'Regulation of the proteoglycan syndecan-1 in the pathophysiology of placental malaria'. (**PI**) $150,000.
2022-2023	LKSIoV Research Support & Innovation Grants. 'Unravelling the role of extracellular vesicles in the pathogenesis of placenta malaria'. (**PI**) $40,000.
2020-2025	National Institutes of Health (NIH). 'Exploiting a cross-reactive epitope in Plasmodium vivax PvDBP to develop a vaccine against falciparum placental malaria'. (**PI**) $1,943,922 USD.
2020-2025	Canadian Institutes of Health Research. 'Exploiting a cross-reactive epitope in Plasmodium vivax PvDBP to develop a vaccine against falciparum placental malaria'. (**PI**) $812,196.

2019-2020 Li Ka Shing Institute of Virology Research Support & Innovation Grant. 'Advanced epitope mining for a vaccine to prevent placental malaria infections'. (**PI**) $40,000.

2019-2021 Innovation Grant from the Women and Children's Health Research Institute. 'Development of a physiologically oriented placental organoid culture model'. (**Co-PI**) $50,000.

2017-2019 Li Ka Shing Translational Research Grant. 'Cross-species epitopes as candidate vaccines against placental malaria'. (**PI**) $50,000.

2017-2022 NSERC Discovery Grant. 'DBL protein function in *P. chabaudi* invasion and cytoadhesion'. (**PI**) $156,000.

2017-2018 IC-Impacts. 'A point-of-care device for malaria diagnosis and drug resistance genotyping'. (**PI**) $382,630.

2015-2020 University of Alberta start-up funds. (**PI**) $170,000.

2015-2017 Li Ka Shing Translational Research Grant. 'A mouse model for pre-clinical evaluation of vaccines against human malaria'. (**Co-PI**) $100,000.

2015-2017 NSERC Discovery grant. 'Interactions between parasite surface antigens and host responses to *Plasmodium falciparum* and *P. vivax*'. (**PI**) $30,000.

2015-2017 CIHR Proof of Principle Phase I grant. 'Long-term preservation of a whole parasite malaria vaccine for storage and delivery in the tropics'. (**PI**) $160,000.

2015-2016 Innovation Grant from PATH Malaria Vaccine Initiative. 'A malaria transmission lab on a chip'. (**Co-PI**) $488,824 USD.

2014-2016 International Project Grant from Alberta Innovation and Advanced Education. 'Development of a portable system for the detection of infectious diseases'. (**PI**) $500,000. Industry partner: Aquila Diagnostics Systems, Inc.

2014-2016 Innovation Grant from the Women and Children's Health Research Institute. 'Development and validation of a humanized mouse model for the pre-clinical evaluation of vaccines against liver pathogens'. (**Co-PI**) $49,955.

2014 Philanthropic donation. $10,000

2014-2017 Proof-of-Principle Phase II grant from the Canadian Institutes of Health Research. 'A field-deployable malaria and fever diagnostic system'. (**PI**) $293,250. Industry partner: Aquila Diagnostics Systems, Inc.

2013-2017 Canadian Institutes of Health Research Operating Grant. 'Integrated molecular approaches to the diagnosis and epidemiology of pregnancy-associated malaria in Latin America'. (**PI**) $418,101.

2013 Alberta Health Research Grant. 'Adaptation of qPCR testing for toxin-producing cyanobacteria onto disposable chips for onsite testing of water samples in Alberta'. (**PI**) $60,000.

2011-2012 Canadian Institutes of Health Research Catalyst Grant: Maternal Health. 'Molecular diagnostics to enhance detection of malaria in pregnancy'. (**PI**) $67,786.

2011-2012 Grand Challenges Canada Rising Stars in Global Health. 'Revamping an old tool: point-of-care molecular diagnostics in blood capillary tubes'. (**PI**) $100,000.

2008 – 2013 Alberta Heritage Foundation for Medical Research Interdisciplinary Team Grant. 'Improving health care access and sustainability with microfluidic platforms'. (**Co-PI;** infectious diseases theme leader). Total grant: $5,000,000. Infectious diseases theme: $600,000.

2009 – 2013 University of Alberta, New Faculty Award. 'Malaria diagnostics and drug development'. (**PI**) $20,000.

2010 – 2012 Malaria Capacity Development Consortium grant. 'Genotyping *P. falciparum* resistant strains to sulphadoxine-pyrimethamine among pregnant women in Uganda'. (**Co-PI**) $150,000.

2009 – 2010 University Hospital Foundation Medical Research Competition, University of Alberta. 'The impact of molecular diagnostics for malaria on refugee health services in Alberta**'**. (**Co-PI**) $24,000.

Teaching and Educational Activities (select)

- Instructor, Introduction to Global Health, SPH 640. University of Alberta (2016-present)
- Instructor, Public Health Biology, SPH 506. University of Alberta (2020-present)
- Instructor, Topics in Public Health - Malaria, SPH 561. University of Alberta (2017-present)
- Guest lecturer, Principles of Parasitism, ZOOL 352. University of Alberta (2022-present)
- Panelist, Scientific and Human Aspects of Global Issues, University of Alberta (2019)
- Guest lecturer, Global Health elective for medical students (2017)
- Guest lecturer, EMBO Global Exchange Lecture Course on 'Malaria Genomics and Public Health', Madurai, India (2017)
- Guest panelist, Engaged Scholarship in Health, SPH 602. University of Alberta (2016-2019)
- Invited faculty, Global Health Diagnostics course. McGill Summer Institute in Infectious Diseases and Global Health. Montreal (2016)
- Guest lecturer, Molecular Genetic Approaches to the Study and Diagnosis of Disease, MLCSI 480. University of Alberta. (2015)
- Guest lecturer, Fundamentals of Public Health, PHS 505. University of Alberta (2012 – 2014)
- Guest lecturer, Intro to Integrative Practice of Medicine, MED 516. University of Alberta (2012)
- Guest lecturer for Students' International Health Association (2013, 2014)
- Organizer of the ProvLab Summer Student Program. (2008 – 2015)
- Laboratory capacity development and training, Uganda Virus Research Institute (2010)

Supervision and Mentoring (total)

Undergraduate students (>30)
PhD students (6)
MSc students (5)
Postdocs (4)
Research associates (4)
Research assistants/technicians (8)
Visiting research students from Latin America (8)
MPH students (>20)

Student Committees

MSc/PhD committees (last 5 years)

- MSc committee. Niklas Hayden, SPH, University of Alberta (2023-)
- MSc committee. Joel Swai, Dept. Medicine, University of Alberta (2023-)
- MSc committee. Diksha Sharma, Dept. Surgery, University of Alberta (2023-)
- MSc committee. Maia Finch, Dept. MMI, University of Alberta (2023-)
- PhD committee. Raj Patel, Dept. Surgery, University of Alberta (2022-)
- PhD committee. Aleksandra Stojic, Dept. MMI, University of Alberta (2022-)
- PhD committee. Murad Mufty, SPH, University of Alberta (2022)
- PhD committee. Jacob Hambrook, SPH, University of Alberta (2017-2022)
- PhD committee. Tania Nasreen, University of Alberta (2013-2019)
- PhD committee. Christen Klinger, University of Alberta (2013-2019)
- PhD committee. Catalina Larrotta, Universidad de Antioquia, Medellín, Colombia (2016-2019)

MSc/PhD external examiner (last 5 years)

- PhD thesis, Jhon Enterina, University of Alberta (2024)
- PhD thesis, Leyla Asadi, University of Alberta (2023)
- PhD thesis, Jessica Horton, University of Melbourne (2023)
- PhD candidacy exam, Claude Kasereka, University of Alberta (2023)
- MSc thesis, Taryn Stokowski, University of Alberta (2023)
- PhD candidacy exam, Daniel Yu, University of Alberta (2022)
- PhD candidacy exam, Leyla Asadi, University of Alberta (2022)
- PhD candidacy exam, Alexa Thompson, University of Alberta (2021)
- PhD thesis, Fadi Baakdah, McGill University (2020)
- PhD thesis, Anjaleena Anthony, University of Melbourne, Australia (2019)
- PhD candidacy exam, Farah Elawar, University of Alberta (2019)

University committees (last 5 years)

- Glycomics Institute of Alberta Training and Education Committee (2023-present)
- Faculty Evaluation Committee, School of Public Health, University of Alberta (2022-present)
- Steering Committee, SPP-ARC Government of Alberta team grant, University of Alberta (2022-present)
- Li Ka Shing Institute of Virology management committee, University of Alberta (2021-present)
- Search and Selection Committee for two Canada Research Chair positions in the School of Public Health (2021)
- Research Degrees Committee, School of Public Health (2018-2022)
- Awards Committee, School of Public Health (2015-2022)

Peer Review

- Reviewer for NIH, Vaccines Against Microbial Diseases Study Section (Oct 2020, June 2021, Oct 2021, June 2022, October 2024)
- Reviewer for CIHR, Microbiology and Infectious Diseases panel (2023, 2024)
- Reviewer for UKRI grant (February 2024)
- Reviewer for NIH ICMER grants (November 2023)
- Reviewer for NIH, Topics in Pathogenic Eukaryotes panel (July 2023)
- Reviewer for NIH, Fellowships in Infectious Diseases and Immunology B panel (March 2023)
- Reviewer for L'Agence Nationale de Recherche, France (2021)
- Reviewer for CIHR-CEPI grants (2021)
- Alberta Innovates SRS Adjudicator (Undergraduate summer student awards, 2020-2022)
- Reviewer for NIH, RFA on pre-erythrocytic malaria vaccines (June 2020)
- Reviewer, MITACS fellowship (2020)
- Reviewer, CIHR postdoctoral fellowships committee, (2019-2022)
- Reviewer, MRC grants (UK) (2018, 2019, 2021)
- Reviewer, WCHRI CRISP grants, University of Alberta (2018)
- Member, CIHR College of Reviewers (2017-present)
- Invited reviewer, CIHR Foundation Grants – Stage 2 (2015)
- Reviewer, M.J. Murdock Charitable Trust, USA (two grants in 2014)
- Reviewer, Canadian Foundation for Innovation (2014)
- Invited member, CIHR Microbiology & Infectious Diseases Peer Review Committee, May & December 2013
- Judge for the Young Investigator's competition, annual meeting of the American Society of Tropical Medicine and Hygiene (2012-2014)
- Reviewer, Blue Ribbon Panel Review of the Division of Parasitic Diseases' Reference Diagnostics Activities at the US Centers for Disease Control, Atlanta, March 15-16, 2012
- Ad hoc reviewer- *Nature Microbiology*, *Lancet Infectious Diseases; Lancet Global Health; Malaria Journal*; *PLoS One*; *Emerging Infectious Diseases*; *PLoS Neglected Tropical Diseases*; *Canadian Journal of Microbiology*; *Infection and Immunity*; *Genetics, Evolution and Infection and others.*

Leadership

- Project volunteer, Academics Without Borders (2023- present). Development of modules for the course 'Scholarly Essentials'. This course is offered in 2024 with LMIC partner institutions.
- Project co-lead (volunteer), Academics Without Borders (2021-2022). I co-developed a professional development program for faculty at MUST University in Uganda on promoting effective graduate student supervision.
- Member, Editorial Board, *Frontiers in Parasitology* (2022-)
- Subject matter expert, Royal Canadian Institute of Science (2021-present)
- Editor, Special Research Topic "Interactions between COVID-19 and Malaria", *Frontiers in Immunology* (2021-2023)
- Elected board member, Li Ka Shing Institute of Virology Management and Review Advisory Committee (2019-2023), and reviewer for student awards
- Associate Scientific Program Chair, American Society of Tropical Medicine and Hygiene (2015-2020)
- Nominated University of Alberta delegate to the SDGs Summit Africa 2020, Cape Town, South Africa (cancelled due to COVID-19)

- Workshop facilitator, CIHR Institute of Infection and Immunity, 2021-2025, Strategic Planning Prairie Provinces Virtual Engagement Workshop (Sept. 2020)
- Leader, Louis Miller Journal Club. Virtual seminar series with weekly presentations from international malaria experts (2020-2022)
- Nominated board member, IC-Impacts Research Management Committee (RMC) (2019-2022)
- Invited member of the Scientific Organizing Committee for the 2nd University of Alberta Infectious Diseases Conference (2019)
- Invited consultant, *Consultation on Future Priorities for Global Health Research in Canada*, hosted by the CIHR Institute of Infection and Immunity (March 2018; Declined due to scheduling conflict)
- Program Lead, Embedded Certificate in Communicable Diseases, School of Public Health (2017-present)
- Co-chair, Trainee Task Force, American Society of Tropical Medicine and Hygiene (2017-2018)
- Committee member: Digital Education Task Force, International Membership Committee, Inclusion and Respect Task Force, American Society of Tropical Medicine and Hygiene (2017-2022)
- Member, Task force on the creation of the Female Tropical Medicine Icon Medal, American Society of Tropical Medicine and Hygiene (2017)
- Board of Governors, Students Invested in Health Association, University of Alberta (2015-2017)
- Member of Scientific Advisory Board, Aquila Diagnostics (2012-2017)
- Co-organizer, Parasite Immunology Symposium, University of Calgary, March 5-6, 2015
- Member, Animal Care Committee, ProvLab (2012-2015)
- Chair, Program Management Committee, Alberta ProvLab (2008-2012)
- Co-chair, Molecular Strategic Planning Committee, Alberta ProvLab (2007-2012)
- Member, Scientific Management Committee for AHFMR Team Microfluidics (2008-2013)

Presentations and Workshops (recent)

- Invited speaker, Immunet Research Seminar, University of Alberta. December 12, 2024. 'Modulating epitope dominance through vaccine formulation'.
- Invited speaker, International Federation of Placenta Associations annual conference in Montreal. September 6, 2024. 'Characterization of the receptors for parasite cytoadherence in placental malaria'.
- Invited seminar speaker, Mount Kenya University. July 30, 2024. 'Designing a cross-species vaccine against placental malaria.
- Invited speaker, CME event for clinical staff in maternal-child heath at Webuye District Hospital, Kenya. August 1, 2024.
- Invited speaker, 5th International Virtual Conference on Malaria Immunology & Elimination (MIE-2024), Virtual. June 24, 2024. 'Enhancing the immunogenicity of a subdominant epitope in Plasmodium vivax Duffy binding protein'.
- Invited speaker, Institute for Glycomics, Griffith University, Southport, Australia. March 26, 2024. 'Designing a cross-species vaccine against placental malaria'.
- Invited speaker, Canadian Parasitology Network. Virtual. Feb. 20, 2024. 'Host-parasite interactions during placental malaria'.
- Invited speaker, Glycomics Institute of Alberta Research Symposium, Edmonton. Nov. 3, 2023. 'The roles of syndecan-1 and glypican-3 in placental malaria'.

- Invited speaker, 4th Malaria Immunology and Elimination conference. Virtual. May 10, 2023. 'Cross-reactive antibodies to VAR2CSA target an epitope within the CSA binding site of DBL3X'.
- Poster presentation, GlycoNet Annual Meeting, Edmonton, Alberta. May 8, 2023. 'Regulation of the proteoglycan syndecan-1 in the pathophysiology of placental malaria'.
- Symposium chair and speaker, 20th International Congress for Tropical Medicine and Malaria. Bangkok, Thailand. Oct 23-28, 2022. 'A mechanism of heterologous immunity between *P. vivax* PvDBP and *P. falciparum* VAR2CSA'.
- Invited speaker, DDN Webinars: Exploring Drug Discovery and Development (virtual). June 15, 2022. 'New hope for malaria vaccines'.
- Invited speaker, ImmuNet seminar series, University of Alberta. May 5, 2022. 'A heterologous vaccine strategy against malaria in pregnancy'.
- Invited speaker, Universidad de Antioquia, Medellín, Colombia. March 10, 2022. 'Developing a vaccine against placental malaria'.
- Research presentation to clinical and research staff at the hospital in Tierralta, Colombia. March 9, 2022. 'Desarrolar una vacuna contra la malaria en el embarazo'.
- Keynote speaker, Universidad de Córdoba workshop on malaria in pregnancy. Montería, Colombia. March 8, 2022. 'Desarrolar una vacuna contra la malaria placentaria'.
- Invited speaker, 2nd Global Summit on Vaccines Research & Development (GSVRD2022), Dubai, UAE. October 20-22, 2022. Declined due to scheduling conflict.
- Invited speaker, International Conference on Microbiology & Immunology, Paris, France (virtual). Nov. 16, 2021. 'A cross-species vaccine against placental malaria'.
- Invited speaker, University of Calgary. Sept 7, 2021.'The challenges of making a vaccine against malaria'.
- Invited speaker, Global Health Rounds, University of Alberta. Sept 21, 2021. 'The challenges of making a vaccine against malaria'.
- Invited speaker, 'Bench to Bedside' University of Alberta student organized seminar series, April 2021. 'Why we should still care about malaria'.
- Symposium chair and speaker, Annual Meeting of the American Society of Tropical Medicine and Hygiene. Nov 2020. 'A cross-species vaccine approach to elicit VAR2CSA antibodies'.
- Invited speaker, Malaria Immunology Symposium, USA (online), Aug 28, 2020 'A heterologous vaccine strategy to elicit antibodies against the placental antigen VAR2CSA'.
- Invited speaker, Alberta Association of Travel Health Professionals (AATHP) Annual Symposium, Banff, AB. June 2020 (postponed)
- Invited speaker and University of Alberta delegate to the SDGs Summit Africa 2020, Cape Town, South Africa (2020, postponed)
- Invited speaker, Infectious Diseases Rounds, University of Alberta Hospital. March 12, 2020. 'Exploring alternative strategies to develop a vaccine against pregnancy-associated malaria'.
- Invited speaker, Global Health Rounds, University of Alberta. March 9, 2020. 'An unconventional vaccine strategy against placental malaria'.
- Invited speaker, Infectious Diseases Conference, University of Alberta. Nov. 5, 2019. 'Developing diagnostics to detect outbreaks of dengue'.
- Poster presentation, International Conference on Plasmodium Vivax Research. Paris, France. June 26-28, 2019. 'Human antibodies to an epitope in PvDBP block adhesion of *P. falciparum* placental parasites'.
- Invited speaker, Infectious Diseases Rounds, University of Alberta Hospital. Dec, 6, 2018. 'Point-of-care diagnostics for tropical infections'.

- Invited speaker, Li Ka Shing Institute of Virology Research Symposium, Edmonton, Alberta. Nov. 28, 2018. 'Mapping a cross-species epitope as a vaccine candidate against placental malaria'.
- Keynote speaker, This is Public Health week, University of Alberta. Nov. 8, 2018. 'Worldwide killers: public health responds".
- Invited seminar speaker, Monash University 'Melbourne Malaria Seminar Series', Melbourne, Australia. June 29, 2018. 'Exploiting antibody cross-reactivity between *P. vivax* and *P. falciparum* to develop a vaccine against placental malaria'.
- Invited seminar speaker, University of Georgia, Athens, USA. April 30, 2018. 'The role of cross-recognition between *Plasmodium* virulence proteins and immunity to placental malaria'.

Media (last 5 years)

- Interview for Global News on malaria cases in the US (July 8, 2023)
- Opinion article for the Globe and Mail. 'Canada has a major role to play in advancing global COVID-19 vaccine equity'. Published April 26, 2022. Co-author.
- Radio interview for International Women's Day, Universidad de Córdoba, Colombia (March 8, 2022)
- Interview on malaria vaccines for the magazine *Québec Science* (for Dec 2021 issue)
- Canadian Press interview on mRNA vaccines (July 12, 2021)
- Global News Edmonton – TV interview about mRNA vaccines (June 8, 2021)
- Interview on COVID-19 for podcast Decomplicated (aired April 27, 2021)
- MESA (Malaria Eradication Scientific Alliance) media coverage on our symposium at the American Society of Tropical Medicine and Hygiene conference (2020)
- Interview with Reuters about two symposia from ASTMH (2020)
- Interview for Cabin News, NWT (2020)

Publications

1. Grewal, S., Hedge, N., and **Yanow, S.K.** (2024) Integrating machine learning to advance epitope mapping. *Frontiers in Immunology*. doi: 10.3389/fimmu.2024.1463931.
2. **Yanow, S.K.** and Vinals, D.F. (2024) Preconception immunization to prevent pregnancy-associated malaria. *Lancet Infectious Diseases*. doi: 10.1016/S1473-3099(24)00405-5.
3. Good, M.F. and **Yanow, S.K.** (2023) Hiding in plain sight: an epitope-based strategy for a subunit malaria vaccine. *Trends in Parasitology* 39(11):929-935.
4. Iyamu, U., Ferrer Vinals, D., Tornyigah, B., Arango, E., Bhat, R., Adra, T.R., Grewal, S., Martin, K., Maestre, A., Overdouin, M., Hazes, B., and **Yanow, S.K.** (2023) A conserved epitope in VAR2CSA is targeted by a cross-reactive antibody originating from *Plasmodium vivax* Duffy Binding Protein. *Frontiers in Cellular & Infection Microbiology* 13:1202276.
5. Van Eijk, A.M.,…**Yanow, S.K.** *et al*. (2023) Prevalence of and risk factors for microscopic and submicroscopic malaria infections in pregnancy: a systematic review and meta-analyses. *Lancet Global Health* 11(7):e1061-e1074.
6. **Yanow, S.K.**, and Whittaker, M.A. (2023) Editorial: Interactions between COVID-19 and malaria. *Frontiers in Immunology*. doi: 10.3389/fimmu.2023.1193377.
7. Rotich, A., Takashima, E., **Yanow, S.K.**, Gitaka, J., and Kanoi, B.N. (2022) Towards identification and development of alternative vaccines against pregnancy associated malaria based on naturally acquired immunity. *Frontiers in Tropical Diseases*. https://doi.org/10.3389/fitd.2022.988284

8. Alvarez-Larrotta, C., Agudelo-García, O.M., Gavina, K., **Yanow, S.K.**, Carmona-Fonseca, J., and Arango, E. (2022) Effect of Plasmodium infection during pregnancy on passive neonatal immunity against rotavirus and tetanus toxoid. *Am J Trop Med Hyg*. Doi: 10.4269/ajtmh.21-0335.
9. Nasreen, T., Hussain, N.A.S., Ho, J.Y., Aw, V.Z.J., Alam, M., **Yanow, S.K.**, and Boucher, Y.F. (2022) Assay for evaluating the abundance of *Vibrio cholerae* and its O1 serogroup subpopulation directly from water without DNA extraction. *Pathogens* 11(3)363. Doi: 10.3390/pathogens11030363.
10. Mitran, C.J., Higa, L., Good, M.F., and **Yanow, S.K.** (2020) Generation of a peptide vaccine candidate against falciparum placental malaria based on a discontinuous epitope. *Vaccines* 8(3):E392. Doi: 10.3390/vaccines8030392.
11. Wiebe, M.C., and **Yanow, S.K.** (2020) Do antibodies to malaria surface antigens play a role in protecting mothers from maternal anemia? *Front. Immunol*. Doi: 10.3389/fimmu.2020.609957.
12. Gnidehou, S., and **Yanow, S.K.** (2020) VAR2CSA antibodies in non-pregnant populations. *Trends in Parasitology*. Doi: 10.1016/j.pt.2020.09.012.
13. Gnidehou, S., and **Yanow, S.K.** (2020) Doesn't it all come down to function? How to correlate VAR2CSA antibodies with protection. *mSphere* 5(3):e00521-20. Doi: 10.1128/mSphere.00521-20.
14. Singh, S., **Yanow, S.K.**, and Agrawal, B. (2020) Heterologous immunity: implications and applications in vaccines and immunotherapies. *Front. Immunol.* 11:1408. Doi: 10.3389/fimmu.2020.01408.
15. **Yanow, S.K.** and Good, M. F. (2020) Nonessential research in the new normal: the impact of novel coronavirus disease (COVID-19). *Am J Trop Med Hyg.* doi: 10.4269/ajtmh.20-0325.
16. Mitran, C.J., and **Yanow, S.K.** (2020) The case for exploiting cross-species epitopes in malaria vaccine design. *Front. Immunol.* 11:335.
17. Nasreen, T., Hussain, N.A.S., Islam, M.T., Orata, F.D., Kirchberger, P.C., Case, R.J., Alam, M., **Yanow, S.K.**, and Boucher, Y.F. (2020) Simultaneous quantification of *Vibrio metoecus* and *Vibrio cholerae* with its O1 serogroup and toxigenic subpopulations in environmental reservoirs. *Pathogens* 9:1053. Doi:10.3390/pathogens9121053.
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