

# Stephanie Yanow, PhD

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## Research Summary

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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 protective 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. In other recent work, we are developing *ex-vivo* models of placental malaria to study host-parasite interactions in this microenvironment. We are specifically interested in the role of exosomes in mediating these interactions and the downstream physiological effects of parasite sequestration on the placenta.

## Current Position

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### 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

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### 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

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### 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

<b>Program Leader</b> Research and Development Alberta Provincial Laboratory for Public Health (ProvLab)	2007 – 2015
Postdoctoral scholar Laboratory of <b>Dr. Terry Spithill</b> Institute of Parasitology, McGill University, Montreal, Canada Project: " <i>Targeting malaria genomic DNA with new A/T-specific alkylating agents</i> "	2004 – 2006
Postdoctoral scholar Laboratory of <b>Dr. John Rossi</b> Division of Molecular Biology, Beckman Research Institute, City of Hope, California Project: " <i>Inhibition of gene expression by shRNA-mediated methylation of promoter DNA</i> "	2003 – 2004
Postdoctoral scholar Laboratory of <b>Dr. William Dunphy</b> Division of Biology, California Institute of Technology, Pasadena, California Project: " <i>Identification of Xenopus Drf1, a protein involved in DNA replication and checkpoint control</i> "	2001 – 2003
PhD student Laboratory of <b>Sir Paul Nurse</b> Imperial Cancer Research Fund, London, England Project: " <i>The roles of replication proteins Cdc18 and Cdt1 in cell cycle regulation in Schizosaccharomyces pombe</i> "	1997 – 2001
Summer research student & research assistant Laboratory of <b>Dr. Wayne Sossin</b> Montreal Neurological Institute, McGill University, Montreal, Canada Project: " <i>Biochemical characterization of learning and memory in Aplysia</i> "	1994 – 1996

## Honours and Awards

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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

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### Development of a cross-species vaccine against placental malaria (Project lead)

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. Collaborators: Dr. John Adams, University of South Florida; Dr. Eliana Arango and Dr. Amanda Maestre, U de Antioquia, Colombia; Dr. Michael Good, Griffith University, Australia.

### Integrated molecular approaches to the diagnosis and epidemiology of pregnancy-associated malaria in Colombia (Project lead)

We apply molecular diagnostics to investigate the prevalence and parasite dynamics of *P. falciparum* and *P. vivax* during pregnancy within a low transmission setting in Colombia. We recently completed a longitudinal study of pregnant women in Colombia and are studying the effects of infections in pregnancy on host immunity and clinical outcomes at delivery. We are particularly interested in how submicroscopic infections are controlled by maternal immunity. Collaborators: Dr. Eliana Arango and Dr. Amanda Maestre, U de Antioquia, Colombia.

### Pathogenesis of placental malaria (Project co-lead)

We are developing an *ex-vivo* model of placental malaria using placental villi and cultured *P. falciparum* parasites. With this model, we are studying the effects of parasite cytoadhesion on the physiology of the placenta, the role of host and parasite exosomes on cytoadhesion and immune cell recruitment, and the regulation of the syndecan-1 receptor. We are also using this model for pre-clinical testing of antibodies raised against our vaccine candidates. Collaborators: Dr. Denise Hemmings, U of Alberta; Dr. Hernando del Portillo and Dr. Carmen Fernandez at ISGlobal, Barcelona.

## Research Support

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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 <i>P. chabaudi</i> 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 <i>Plasmodium falciparum</i> and <i>P. vivax</i> '. (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

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- 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)
- 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 lecturer, Scientific Communication in Public Health, PHS 603. University of Alberta. (2010-2019)
- 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)
- Technologist training seminars on: real-time PCR, syphilis and malaria diagnostics. ProvLab, (2009 – 2010)
- Co-organizer of the ProvLab 'Partners in Health' seminar series. (2008 – 2009)
- Co-instructor for Cell Biology 201. Institute of Parasitology, McGill University. (2006)
- Teaching assistant for final year undergraduate course on the cell cycle. Department of Biology, University College London. (1999)

## Supervision and Mentoring

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### **Current trainees:**

PhD students (3)  
Visiting graduate student from Colombia (1)  
Postdoc (2)  
Research associate (1)  
Undergraduate students (2)  
Research technician (1)  
MPH students (4)

### **Past trainees:**

Research associates (2)  
Postdoc (1)  
PhD students (3)  
MSc students (4)  
Visiting graduate students from Colombia (6)  
Undergraduate students (23)  
Research assistants/technologists (5)  
MPH students (>15)

**Other:** I have mentored six trainees from developing countries in scientific writing through the AuthorAID program ([www.authoraid.info](http://www.authoraid.info))

## Student Committees

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### **MSc/PhD committees**

- Member, MSc thesis committee. Jacob Hambrook, SPH, University of Alberta (2017-present)
- Member, MSc thesis committee. Raj Patel, Dept of Surgery, University of Alberta (2021-present)
- Member, PhD thesis committee. Tania Nasreen, University of Alberta (2013-2019)
- Member, PhD thesis committee. Christen Klinger, University of Alberta (2013-2019)
- Member, PhD thesis committee. Catalina Larrotta, Universidad de Antioquia, Medellín, Colombia (2016-2019)
- Member, PhD thesis committee. Hannah Jones, SPH, University of Alberta (2016-2017)
- Member, MSc thesis committee. Alethe Kabore, SPH, University of Alberta (2015-2016)
- Member, MSc thesis committee. Kellar Klein, University of Alberta (2013-2016)
- Member, PhD thesis committee, Olga Maria Agudelo, Universidad de Antioquia, Medellín, Colombia (2011-2018)
- Member, MSc thesis committee. Ravi Chavali, University of Alberta (2011-2012)

### **MSc/PhD examination committees**

- External examiner, PhD thesis, Fadi Baakdah, McGill University (2020)
- External examiner, PhD thesis, Anjaleena Anthony, Univ. of Melbourne, Australia (2019)
- External examiner, PhD candidacy exam, Farah Elawar, University of Alberta (2019)
- External examiner, PhD candidacy exam, Sydney Rudko, University of Alberta (2018)
- External examiner, PhD candidacy exam, Cindy Im, University of Alberta (2017)
- External examiner, Final PhD exam: Nour Rashwan, McGill University (2016)

- External examiner, PhD candidacy exam: Maram Hulbah, University of Alberta (2016)
- External examiner, PhD candidacy exam: Michelle Gordy, University of Alberta (2015)
- External examiner, PhD candidacy exam: Safeenaz Alladin-Mustan, University of Alberta (2015)
- External examiner, PhD candidacy exam: Emmanuel Pila, University of Alberta (2015)
- External examiner, PhD candidacy exam: Areej Allhazmi, University of Alberta (2014)
- External examiner, Final PhD exam: Anya Smith, University of Calgary (Dec. 2014)
- External examiner, Final PhD exam: Noha Sharafeldin, University of Alberta (July 2014)
- External examiner, PhD candidacy exam: Noha Sharaf El-Din, University of Alberta (2011)
- External examiner, MSc final defense: Hashim Mohammad, University of Alberta (2011)

### **University committees**

- 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-present)
- MPH Common Core Course Development Working Group, School of Public Health (2017)
- Curriculum Design Committee, School of Public Health (2016-2017)
- Peer Review of Teaching Committee (2016-2017)
- Awards Committee, School of Public Health (2015-present)
- Admissions review for MPH in Global Health program, School of Public Health, University of Alberta (2011-present)
- Search and Selection Committee, Assistant Professor position in parasitology, Dept of Biological Sciences, University of Alberta (2016-2017)
- Davis Projects for Peace Selection Committee, University of Alberta (2017)

### **Peer Review**

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- Reviewer for NIH, Vaccines Against Microbial Diseases Study Section (Oct 2020, June 2021, Oct 2021)
- Reviewer for L'Agence Nationale de Recherche, France (2021)
- Reviewer for CIHR-CEPI grants (2021)
- Alberta Innovates SRS Adjudicator (Undergraduate summer student awards, 2020-present)
- Reviewer for NIH, RFA on pre-erythrocytic malaria vaccines (June 2020)
- Reviewer, MITACS fellowship (2020)
- Reviewer, CIHR postdoctoral fellowships committee, (2019-present)
- 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

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- Project co-lead, Academics Without Borders. I am developing a professional development program for faculty at MUST University in Uganda on promoting effective graduate student supervision (2021-present)
- Subject matter expert, Royal Canadian Institute of Science (present)
- 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 (postponed 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-present)
- Editor, Special Research Topic "Interactions between COVID-19 and Malaria", *Frontiers in Immunology* (2021-present)
- Associate Editor, Board of Vaccines and Molecular Therapeutics (specialty section of *Frontiers in Immunology* and *Frontiers in Public Health*) (2020-present)
- Guest Editor, *Frontiers in Immunology* (2019-2020)
- Nominated board member, IC-Impacts Research Management Committee (RMC) (2019-2021)
- Elected board member, Li Ka Shing Institute of Virology Management and Review Advisory Committee (2019-2023), and reviewer for student awards
- Invited member, organizing committee, Infectious Diseases Conference and network, University of Alberta (2019-present)
- 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)
- Invited member of the Scientific Organizing Committee for the 2<sup>nd</sup> University of Alberta Infectious Diseases Conference, 2019
- 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-present)
- 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)



## Invited Presentations and Workshops (2012-present)

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- Invited speaker, 2<sup>nd</sup> 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'.
- Invited panellist, World IP Day event dedicated to women innovators. TEC Edmonton. April 26, 2018. Radio interview on the Ryan Jespersen Show, April 26, 2018.
- Oral presentation (selected). Annual meeting of the American Society of Tropical Medicine and Hygiene, Baltimore, Nov. 2-6, 2017. 'Antibodies to *Plasmodium vivax* PvDBP reveal a mechanism for cross-species immunity to *P. falciparum* placental malaria'.

- Invited speaker, School of Public Health Research Seminar series, Edmonton. Oct. 11, 2017. 'Probing the function of virulence proteins from different species of malaria'.
- Invited speaker, Host-Parasite Interactions: From Molecules to Ecosystems. Banff, Canada. Sept. 'Molecular tools for malaria surveillance and elimination'. Sept. 21-24, 2017.
- Oral presentation (selected). 6th International Conference on Plasmodium vivax Research, Manaus, Brazil, June 11-14, 2017. 'Antibodies to *Plasmodium vivax* PvDBP recognize VAR2CSA and block adhesion of *P. falciparum*-infected red cells to chondroitin sulphate A'.
- Invited speaker, ImmuNet seminar series, University of Alberta, March 8, 2017. 'A novel mechanism of cross-species immunity to malaria'.
- Invited speaker, EMBO course on Malaria Genomics and Public Health. Madurai, India. February 2-3, 2017. Two seminars. 'Malaria diagnosis' and 'The pathogenesis of *P. falciparum* and *P. vivax* in pregnancy'.
- Invited speaker, Malaria Symposium, Monteria, Colombia. October 2016. Declined due to schedule conflict.
- Invited speaker, Global Health Diagnostics course. McGill Summer Institute in Infectious Diseases and Global Health. June 13-17, 2016. 'Malaria diagnostics'. Co-presented with Dr. David Bell.
- Invited speaker, Infectious Diseases Conference, University of Alberta, May 3, 2016. 'DNA and RNA-based diagnostics for malaria parasites directly from blood'.
- Invited speaker, University of Copenhagen, April 26, 2016. 'Can cross-species immunity protect against malaria in pregnancy?'
- Invited speaker, Global Health Fair, University of Alberta, January 25, 2016. 'Cross-species immunity to malaria in pregnancy'.
- Invited speaker, McGill University, November 25, 2015. 'Molecular detection of malaria in the field: applications for acute diagnosis, clinical trials and surveillance'.
- Invited speaker, NSERC Create Host-Parasite Interactions Training Program Bootcamp, hosted by the University of Calgary. Kananaskis, March 20-21, 2015.
- Invited speaker, Rotary Club, Medicine Hat. December 1, 2014. 'Diagnosis of malaria in pregnant women in Colombia'.
- Invited speaker, Critical and Point-of-Care Testing 25<sup>th</sup> International Symposium, San Diego, California, September 18, 2014. 'Point-of-care applications for malaria detection'.
- Invited speaker and faculty mentor, Campus Alberta Student Conference on Health. Banff, September 5-6, 2014. 'Slugs, toads and parasites: my winding road to public health'.
- Invited speaker, School of Population Health, University of Queensland, Australia, May 13, 2014. 'Lab-on-Chip technology for public health diagnostics and surveillance'.
- Field demonstration of the Accutax diagnostic system for malaria. Solomon Islands, May 7-9, 2014.
- Invited speaker, annual meeting of the American Society of Tropical Medicine and Hygiene, Washington, DC. November 13-17, 2013. 'The Accutax platform for portable qPCR'.
- Invited speaker, CIHR Institute of Infection and Immunity, University of Alberta visit. October 16, 2013. 'Molecular and immunological characterization of malaria in pregnant women from Colombia'.
- Invited speaker, Molecular and Cellular Basis of Infectious Disease Research Symposium, University of Calgary. September 13, 2013. 'A Lab-on-Chip for malaria diagnosis: high tech solutions for the developing world'.
- Invited speaker, University of Calgary, Infectious Diseases Rounds, Calgary, Alberta. June 3, 2013. 'Molecular approaches to malaria diagnosis and control'.

- Invited speaker, Department of Medical Microbiology and Immunology, University of Alberta. May 29, 2013. 'Molecular approaches to malaria diagnosis and control'.
- Oral presentation, Canadian Association for Clinical Microbiology and Infectious Diseases, annual conference, Quebec City, Quebec. April 4-6, 2013. 'Genetic analysis of primaquine tolerance in a patient with relapsing vivax malaria'.
- Invited speaker, Australian Army Research Institute, Brisbane, Australia. February 12, 2013. 'Lab on a Chip for malaria diagnosis and surveillance'.
- Invited presenter, Grand Challenges Canada annual meeting, Ottawa, Ontario. Dec 10-13, 2012. 'The Domino capillary chip: a field deployment tool for malaria and fever diagnosis'.
- Invited speaker, Global Health Rounds, University of Alberta. November 26, 2012. 'New malaria diagnostics for the field'.
- Invited speaker, XVIII International Congress for Tropical Medicine and Malaria, Rio de Janeiro, Brazil. September 23-27, 2012. 'Molecular diagnostics for the point-of-care'.
- Invited speaker, Global Health Biomedical Research Symposium, University of Alberta. Edmonton, AB. August 30, 2012. 'Molecular approaches to malaria diagnosis and control'.
- Invited speaker, Disease Diagnostic and Instrument Development Workshop, University of Alberta. Edmonton, AB. August 28-29, 2012. 'Field diagnostics for malaria'.
- Invited speaker, McGill University. August 20, 2012. 'Molecular approaches to malaria diagnosis and control'.
- Invited speaker, XIth European Multicolloquium of Parasitology (EMOP XI), Cluj-Napoca, Romania. July 24-29, 2012. 'Post-arrival screening for malaria in asymptomatic refugees using real-time PCR'.
- Invited speaker, Foundation for Innovative New Diagnostics, Geneva, Switzerland. July 20, 2012. 'A capillary platform for molecular diagnosis of malaria'.
- Invited speaker, Komfo Anokye Teaching Hospital, Ghana. May 14, 2012. 'New technologies for malaria diagnosis'.

## Patent

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United States Provisional Patent Appln No. 63/203,292

Title: CROSS-REACTIVE MALARIA PEPTIDES, ANTIBODIES THERETO AND METHODS OF USE

Inventor(s): YANOW, Stephanie Kim; MITRAN, Catherine Jennifer; GOOD, Michael, Francis

## Media (recent engagements)

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- 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

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1. 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.

2. 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.
3. Gnidehou, S., and **Yanow, S.K.** (2020) VAR2CSA antibodies in non-pregnant populations. *Trends in Parasitology.* Doi: 10.1016/j.pt.2020.09.012.
4. 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.
5. 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.
6. **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.
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