

Stephanie Yanow, PhD

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Research Summary

My research program is focused on different aspects of malaria from basic pathogenesis to translational development of diagnostics and vaccines. My lab is engaged in a multidisciplinary collaboration to transfer molecular diagnostic tests for malaria to a platform to be used at the point-of-care in limited-resource areas. We have partnered with international colleagues to pilot this technology in malaria-endemic settings (Uganda, India). Another major focus of our work is on the interactions between malaria parasites of different species and the host immune response, particularly during infection in pregnancy. From our work with colleagues in Colombia and Brazil, we discovered that exposure to *Plasmodium vivax* may induce protective antibodies against *P. falciparum* in pregnancy, leading to improved birth outcomes. My team is now trying to understand this mechanism of cross-species immunity and exploit these findings for vaccine development.

Current Positions

Associate Professor in Global Health

2015 – present

School of Public Health,
Cross-appointed in 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, Quebec, Canada

Career History

Program Leader Research and Development Alberta Provincial Laboratory for Public Health (ProvLab), Edmonton, Canada	2007 – 2015
Postdoctoral scholar Laboratory of Dr. Terry Spithill 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 Dr. John Rossi 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 Dr. William Dunphy 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 Dr. Paul Nurse 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 Dr. Wayne Sossin Montreal Neurological Institute, McGill University, Montreal, Canada Project: <i>“Biochemical characterization of learning and memory in Aplysia.”</i>	1994 – 1996

Honours and Awards

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

Current Lab Projects

Development of a 'Lab-on-a-Chip' for malaria diagnosis

Our interdisciplinary team aims to transfer molecular diagnostic tests for malaria and other infectious diseases to platforms that can be used at the point-of-care in low resource settings. The technology is being commercialized in partnership with Aquila Diagnostic Systems Inc, Edmonton. Field trials of the technology are planned in the Solomon Islands (in collaboration with Prof. Maxine Whittaker, Univ. of Queensland) and in Uganda (in collaboration with the Foundation for Innovative New Diagnostics, Switzerland, and Dr. Anthony Mbonye, Ministry of Health, Uganda).

Integrated molecular approaches to the diagnosis and epidemiology of pregnancy-associated malaria in Latin America

We are applying 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 are also studying the effects of these infections on host immunity and clinical outcomes. (In collaboration with Dr. Amanda Maestre, Universidad de Antioquia, Colombia and Michael Good, Griffith University).

Development of a chemically-attenuated malaria blood stage vaccine

We are employing chemical attenuation strategies to produce a whole parasite malaria vaccine. The vaccine is being evaluated in animal models and human trials carried out in Australia. We are studying the effects of attenuation on parasite viability. We are also examining approaches to desiccate the vaccine to facilitate storage and delivery in malaria-endemic countries. (In collaboration with Prof. Michael Good, Griffith University, Australia and Dr. Jason Acker, Canadian Blood Services).

A humanized mouse model for testing malaria vaccines

We are generating mice with a humanized liver and human immune system which can be infected with human species of malaria. These mice will serve as a preclinical model to evaluate the efficacy of experimental malaria vaccines. (In collaboration with Dr. Michael Hawkes and Dr. Lorne Tyrrell from the University of Alberta, and Prof. Michael Good, Australia).

Research Support

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| 2017-2018 | Li Ka Shing Translational Research Grant. 'Cross-species epitopes as candidate vaccines against placental malaria'. (PI) \$50,000. |
| 2017-2023 | NSERC Discovery Grant. 'DBL protein function in <i>P. chabaudi</i> invasion and cytoadhesion'. (PI) \$130,000. |
| 2017-2018 | IC-Impacts. 'A point-of-care device for malaria diagnosis and drug resistance genotyping'. (PI) \$382,630. |
| 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. Co-investigators: M. Good (Griffith University, Australia) and J. Acker (Canadian Blood Services).
- 2015-2016 Innovation Grant from PATH Malaria Vaccine Initiative. 'A malaria transmission lab on a chip'. (co-investigator) \$488,824 USD. PI: T. Bousema (RUMC, Netherlands).
- 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: David Alton (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. Co-investigators: M. Hawkes (PI), L. Tyrrell (U Alberta), M. Good (Griffith U).
- 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: David Alton (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. Co-investigators: K. Kain (U Toronto), S. Gnidehou (U Alberta).
- 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. Co-investigator: X. Pang (U Alberta)
- 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. Co-investigators: L. Pilarski, C. Backhouse, J. Preiksaitis, E.

Einsiedel, J. Acker, T. Reiman, A. Belch, J. Mackey, N. Bahlis, G. Denomme, M. Mehta, L. Sheremeta (U of Alberta and U of Calgary faculty)

- 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. Co-investigators: A. Mbonye (Uganda), P. Magnussen (U Copenhagen)
- 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. Co-investigators: S. Houston and K. Kowalewska-Grochowska (U of Alberta)

Teaching and Educational Activities

- Instructor, Introduction to Global Health, SPH 640. University of Alberta 2016-
- Instructor, Topics in Public Health - Malaria, SPH 561. University of Alberta 2017-
- Guest lecture, Global Health elective for medical students (2017)
- Guest lecturer, Scientific Communication in Public Health, PHS 603. University of Alberta. 2010, 2011, 2012, 2014, 2015, 2016
- Guest panelist, Engaged Scholarship in Health, SPH 602. University of Alberta 2016, 2017
- Invited faculty, Global Health Diagnostics course. McGill Summer Institute in Infectious Diseases and Global Health. Montreal, June 13-17, 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, July 2010
- Technologist training seminars on: real-time PCR, syphilis and malaria diagnostics. 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. Winter, 2006
- Teaching assistant for final year undergraduate course on the cell cycle. Department of Biology, University College London. Spring term, 1999

Supervision and Mentoring

Current trainees:

Research supervisor

Ken Gavina (PhD student, 2013-)

Catherine Mitran (PhD student, 2016-)

Angie Mena (MSc student, 2016-)

Nawell Fayad (Honours student, 2016-)
Shanna Banman (lab technician, 2015-)
Quinten Starko (Undergraduate, 2017-)

MPH advisor

Jared Yeung (2017-)
Delaney Wiebe (2015-2017)
Diana Gresku (2015-2017)

Past trainees:

Research Associate

Dr. Sédami Gnidehou (research associate, 2010-2015)

Graduate students

Nana Yaa Boadu (PhD student, graduated Dec. 2013; currently a postdoc at IDRC)
Rochelle Cruz (MSc student, graduated Aug. 2011)
Catalina Larrotta (visiting Colombian graduate student, 2016)
Maria Isabel Arroyo (visiting Colombian MSc student, 2013)
Alexander Gallego (visiting Colombian PhD student, 2012)
Olga Agudelo (visiting Colombian PhD student, 2012)
Eliana Arango (visiting Colombian PhD student, 2011)

Undergraduate students

Chloe Hamel-Martineau (summer student, 2016, 2017)
Chit Singh (summer student, 2014 and 2016)
Jahanara Rajwani (undergraduate research student, 2012, 2014-2015)
Aisha Karidio (undergraduate research student, 2015-2016)
Diana Gonzalez (visiting medical student, 2016)
Angela Heninger (undergraduate Medical Lab Science student, 2014/2015; co-supervisor)
Evelyn Medawar (University of Alberta Research Experience intern student; Feb-April, 2015)
Albert Jin (undergraduate honours and summer student, 2013-2014)
Prachur Shrivastava (University of Alberta Research Experience intern/summer student, 2013-2014)
Samantha Lam (undergraduate honours and summer student, 2012-2013)
Roshini Samuel (undergraduate honours and summer student, 2008-2012)
Jessica Wyrostok (undergraduate honours student, 2012-2013)
Robert Sjöholm (summer research student, 2011)
Karly Burr (undergraduate honours student, 2009-2010)
Jason Lee (undergraduate honours student, 2008-2009)
Christie Dewar (summer research student, 2008)

Research assistants/technologists

Jessica Powell (lab technician, 2015-2016)
Sandy Shokoples (research technologist, 2007-2015)
Kim Sharplin (research technologist, 2009-2013)

Markos Sleshi (visiting technologist from Ethiopia, 2013)
Chelsea Matisz (2010)

MPH students

Georgia Venner (2015-2016)
Avryll Fuller (2011-2013)
Jason Carney (2010-2011)
Hannah Brooks (2015-2016)

Other: I mentor 4 trainees from Ghana, Nigeria and Cameroon in scientific writing through the AuthorAID WHO program

Student Committees

MSc/PhD committees

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

MSc/PhD examination committees

- Chair, MSc final exam: Rhianna Charchuck, University of Alberta (2017)
- External examiner, PhD candidacy exam, Cindy Im, University of Alberta (2017)
- Chair, PhD final exam: Shuai Zhi, University of Alberta (2016)
- 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

- 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-)
- Admissions review for MPH in Global Health program, School of Public Health, University of Alberta (2011-)
- 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)
- Internal reviewer, CIHR Foundation Grant LOI (for P. Hanington, E. Foley) (2015)

Peer Review

- Invited reviewer, CIHR Foundation Grants – Stage 2 (2015)
- External grant reviewer, M.J. Murdock Charitable Trust, USA (two grants in 2014)
- External grant 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 for 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- *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*

Academic and Scientific Committees

- Assistant Scientific Program Chair, American Society of Tropical Medicine and Hygiene (2015-present)
- Co-chair, Trainee 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-present)
- Board of Governors, Students' International Health Association, University of Alberta (2015-2017)
- Member of Scientific Advisory Board, Aquila Diagnostics (2012-present)
- Member, ImmuNet Council, University of Alberta (2014-present)
- 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)
- Member, American Society for Microbiology and the American Society for Tropical Medicine and Hygiene

Invited Presentations and Workshops (2010-present)

- 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.

- Invited speaker, Malaria Symposium, Monteria, Colombia. October 2016. Declined due to schedule conflict.
- 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.
- Co-Organizer, Parasite Immunology Symposium, University of Calgary, March 5-6, 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 25th 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'.
- Invited symposium speaker at the 60th Annual Meeting of the American Society of Tropical Medicine and Hygiene, December 4-8, 2011. 'Point of care testing methodology for the detection of parasites'.
- Invited symposium speaker at the 51st Interscience Conference on Antimicrobial Agents and Chemotherapy in Chicago, September 17-20, 2011. 'Lab-on-a-Chip: malaria molecular diagnostics'. Expenses paid in full by the American Society of Microbiology.
- Invited seminar speaker at the Institute for Glycomics, Griffith University. August 15, 2011. 'Bridging the technology gap in malaria diagnosis'. Expenses paid in full by host institution.
- Invited seminar speaker at Canadian Blood Services, Ottawa. January 12, 2011. 'Molecular diagnostics for malaria: from the bench to the field'. Expenses paid in full by host institution.
- Invited speaker, Infectious Diseases Rounds, University of Alberta Hospital, May 12, 2011. 'Post-arrival screening for malaria in asymptomatic refugees using real-time PCR'.
- Invited speaker, Alberta Health and Wellness (Ministry of Health). April 14, 2011. 'Point of care technology for molecular diagnostics'.
- Invited speaker, Universidad de Antioquia, Medellin, Colombia. February 16-18, 2011. 'Molecular approaches to malaria diagnosis', 'Real-time PCR applications in parasitology', 'Real-time PCR workshop'. Expenses paid in full by host institution.
- Invited speaker and workshop facilitator. Uganda Virus Research Institute, Entebbe, Uganda. July 11-22, 2010. 'High throughput genotyping for drug-resistant malaria'.

Publications

1. Good, M.F. and **Yanow, S.K.** (2017) A whole parasite transmission blocking vaccine for malaria - an ignored strategy. *Emerging Topics in Life Sciences*. *In press*.
2. Rajwani J., Klinger C.M., Arango E., Arroyo M.I., Sabbagh A., Maestre A., Dacks J.B., Gnidehou S., **Yanow S.K.** (2017) Genetic analysis of ID1-DBL2X predicts its validity as a vaccine candidate in Colombia and supports at least two independently introduced Plasmodium falciparum populations in the region. *Infect. Genet. Evol.* 55:175-185
3. Taylor, B.J., Lanke, K., Banman, S.L., Morlais, I., Morin, M.J., Bousema, T., Rijpma, S.R., **Yanow, S.K.** (2017) A Direct from Blood Reverse Transcriptase Polymerase Chain Reaction Assay for Monitoring Falciparum Malaria Parasite Transmission in Elimination Settings. *Am. J. Trop. Med. Hyg.* 97(2):533-543

4. Gavina, K., Arango, E., Larrotta, C.A., Maestre, A., **Yanow, S.K.** (2017) A sensitive species-specific reverse transcription real-time PCR method for detection of *Plasmodium falciparum* and *Plasmodium vivax*. *Parasite Epidemiology and Control*. In press.
5. Arroyo-Arroyo, M., Arango, E., Carmona-Fonseca, J., Aristizabal, B., **Yanow, S.K.**, Maestre, A. (2017) Efficacy of different primaquine regimens to control *Plasmodium falciparum* gametocytemia in Colombia. *Am. J. Trop. Med. Hyg.* 97(3):712-718
6. Good, M.F., **Yanow, S.K.** (2016) Cryptic epitopes should not be forgotten in vaccine design. *Expert Review of Vaccines*. Mar 21:1-2.
7. Boadu, N.Y., Amuasi, J., Ansong, D., Einsiedel, E., Menon, D., **Yanow, S.K.** (2016) Challenges with implementing malaria rapid diagnostic tests at primary care facilities in a Ghanaian district: a qualitative study. *Malaria Journal* 15:126.
8. **Yanow, S.K.**, Gavina, K., Gnidehou, S., and Maestre, A. (2016) Impact of malaria in pregnancy as Latin America approaches elimination. *Trends in Parasitology* 32:416-27.
9. **Yanow, S.K.** Molecular diagnosis of malaria in low-resource settings. (2016). *Point of Care* 15:41-42.
10. Good, M.F., Hawkes, M.T., and **Yanow, S.K.** (2015) Humanized Mouse Models to Study Cell-Mediated Immune Responses to Liver-Stage Malaria Vaccines. *Trends in Parasitology* 31:583-594.
11. Mbonye A.K., Birungi J., **Yanow S.K.**, Shokoples S., Malamba S., Alifrangis M., Magnussen P. (2015) The prevalence of *P. falciparum* resistance markers to sulphadoxine-pyrimethamine among pregnant women receiving intermittent preventive treatment of malaria in Uganda. *Antimicrobial Agents and Chemotherapy* 59: 5475-5482
12. Taylor, B.J., Howell, A., Martin, K.A., Manage, D.P., Gordy, W., Campbell, S.D., Lam, S., Jin, A., Polley, S.D., Samuel, R.A., Atrazhev, A., Stickel, A.J., Birungi, J., Mbonye, A.K., Pilarski, L.M., Acker, J.P., and **Yanow, S.K.** (2014) A Lab-on-Chip for malaria diagnosis and surveillance. *Malaria Journal* 13:179.
13. Gnidehou, S., Doritchamou, J., Arango, E.M., Cabrera, A., Arroyo, M.I., Kain, K.C., Ndam, N., Maestre, A., and **Yanow, S.K.** (2014) Functional antibodies against VAR2CSA in non-pregnant populations from Colombia exposed to *Plasmodium falciparum* and *Plasmodium vivax*. *Infection and Immunity* 82:2565-73.
14. Bright, A.T., Manary, M.J., Tewhey, R., Arango, E.M., Wang, T., Schork, N.J., **Yanow, S.K.**, and Winzeler, E.A. (2014) A high resolution case study of a patient with recurrent *Plasmodium vivax* infections shows that relapses were caused by meiotic siblings. *PLoS Neglected Tropical Diseases* 8:e2882.
15. Agudelo Garcia, O.M., Aristizabal, B., **Yanow, S.K.**, Arango, E., Carmona-Fonseca, J., and Maestre, A. (2014) Submicroscopic infection of placenta by *Plasmodium* produces Th1/Th2 cytokine imbalance, inflammation and hypoxia in women from north-west Colombia. *Malaria Journal* 13:122.
16. Good, M.F., Rodriguez, B.I., Ito, K., Reiman, J., **Yanow, S.K.**, Batzloff, M.R., Staniscic, D.I., Spithill, T., Hoffman, S.L., Lee, M., and McPhun, V. (2013) Cross-species malaria immunity induced by chemically attenuated parasites. *Journal of Clinical Investigation* pii:66634 July 1, 2013.
17. Arango, E.M., Samuel, R., Agudelo, O.M., Carmona-Fonseca, J., Maestre, A., and **Yanow, S.K.** (2013) Molecular detection of malaria at delivery reveals a high frequency of submicroscopic infections and associated placental damage in pregnant women from Northwest Colombia. *The American Journal of Tropical Medicine and Hygiene* 89:178-83.

18. Mbonye, A.K., **Yanow, S.**, Birungi, J., and Magnussen, P. (2013) A new strategy and its effect on adherence to intermittent preventive treatment of malaria in pregnancy in Uganda. *BMC Pregnancy Childbirth* 13:178.
19. Mbonye, A.K., Birungi, J., **Yanow, S.**, and Magnussen, P. (2013) Prescription patterns and drug use among pregnant women with febrile illnesses in Uganda: a survey in out-patient clinics. *BMC Infectious Diseases* 13:237.
20. Yasnot, M.F., Perkins, J., Corredor, M., **Yanow, S.**, Carmona-Fonseca, J., and Maestre, A. (2013) The effects of *Plasmodium vivax* gestational malaria on the clinical and immune status of pregnant women in Northwestern Colombia. *Colombia Medica* 44:172-7.
21. Shokoples, S., Scott, A., Mukhi, S., and **Yanow, S.K.** (2013) Impact of routine real-time PCR on the diagnosis of imported malaria over four years of implementation in a clinical laboratory. *Journal of Clinical Microbiology* 51:1850-4.
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