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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	LKSloV 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	LKSloV Research Support & Innovation Grants. 'Unravelling the role of extracellular vesicles in the pathogenesis of placental 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 <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 (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 UKRI grant (February 2024)
- Reviewer for NIH ICMER grants (November 2023)
- Reviewer for CIHR, Microbiology and Infectious Diseases panel (2023, 2024)
- 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 NIH, Vaccines Against Microbial Diseases Study Section (Oct 2020, June 2021, Oct 2021, June 2022, October 2024)
- 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, 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 health 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. 'Desarrollar una vacuna contra la malaria en el embarazo'.
- Keynote speaker, Universidad de Córdoba workshop on malaria in pregnancy. Montería, Colombia. March 8, 2022. 'Desarrollar 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)
- 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.

Publications

1. Grewal, S., Hedge, N., and **Yanow, S.K.** (Accepted) Integrating machine learning to advance epitope mapping. *Frontiers in Immunology*.
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., Torniyigah, B., Arango, E., Bhat, R., Adra, T.R., Grewal, S., Martin, K., Maestre, A., Overdoun, 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.
 18. Mitran, C.J., Mena, A., Gnidehou, S., Banman, S., Arango, E., Lima, B.A.S., Lugo, H., Ganesan, A., Salanti, A., Mbonye, A.K., Ntumngia, F., Barakat, K., Adams, J.H., Kano, F.S., Carvalho, L.H., Maestre, A., Good, M.F., and **Yanow, S.K.** (2019) Antibodies to cryptic epitopes in distant homologues underpin a mechanism of heterologous immunity between *Plasmodium vivax* PvDBP and *Plasmodium falciparum* VAR2CSA. *mBio* Oct 8;10(5). pii: e02343-19. doi: 10.1128/mBio.02343-19.
 19. Mehta, N., Perrais, B, Martin, K., Kumar, A., Hobman, T., Cabalfin-Chua, M.N., Donald, M., Siose Painaga, M.S., Gaite, J.Y., Tran, V., Kain, K.C., Hawkes, M.T., **Yanow, S.K.** (2019) A Direct from Blood/Plasma Reverse Transcriptase Polymerase Chain Reaction for DENV Detection in Point-of-Care Settings. *Am J Trop Med Hyg.* 100(6):1534-1540.
 20. Gnidehou, S., Mitran, C.J., Arango, E., Banman, S., Mena, A., Medawar, E., Lima, B.A.S., Doritchamou, J., Rajwani, J., Jin, A., Gavina, K., Ntumngia, F., Duffy, P., Narum, D., Ndam, N.T., Nielsen, M.A., Salanti, A., Kano, F.S., Carvalho, L.H., Adams, J.H., Maestre, A., Good, M.F., and **Yanow, S.K.** (2019) Cross-species immune recognition between *Plasmodium vivax* PvDBP antibodies and *P. falciparum* VAR2CSA. *Journal of Infectious Diseases* 219(1):110-120.
 21. Alvarez-Larrotta, C., Agudelo, O.M., Duque, Y., Gavina, K., **Yanow, S.K.**, Maestre, A., Carmona-Fonseca, J., and Arango, E. (2018) Submicroscopic *Plasmodium* infection during

- pregnancy is associated with reduced antibody levels to tetanus toxoid. *Clin Exp Immunology* doi: 10.1111/cei.13213
22. Mitran, C.J., Mbonye, A., Hawkes, M.T., and **Yanow, S.K.** (2018) Using reference qPCR to assess the clinical performance of the Paracheck-Pf® rapid diagnostic test in a field setting in Uganda. *Am. J. Trop. Med. Hyg.* 99(2):357-9.
 23. Reiman, J.M., Kumar, S., Rodriguez, I.B., Gnidehou, S., Ito, K., Stanisic, D.I., Lee, M., McPhun, V., Majam, V., Willemssen, N.M., Batzloff, M.R., Raja, A.I., Dooley, B., Hoffman, S.L., **Yanow, S.K.**, and Good, M.F. (2018) Induction of immunity following vaccination with a chemically attenuated malaria vaccine correlates with persistent antigenic stimulation. *Clinical and Translational Immunology* 7:e1015
 24. Kiakos, K., Englinger, B., **Yanow, S.K.**, Wernitzning, D., Jakupec, M.A., Berger, W., Keppler, B.K., Hartley, J.A., Lee, M., and Patil, P.C. (2018) Design, synthesis, nuclear localization, and biological activity of a fluorescent duocarmycin analog, HxTfA. *Bioorganic and Medicinal Chemistry Letters* 28:1342-1347.
 25. Gavina, K., Gnidehou, S., Arango, E., Hamel-Martineau, C., Mitran, C., Agudelo, O., Lopez, C., Karidio, A., Banman, S., Carmona-Fonseca, J., Salanti, A., Ndam, N.T., Hawkes, M., Maestre, A., and **Yanow, S.K.** (2018) Clinical outcomes of submicroscopic infections and correlates of protection of VAR2CSA antibodies in a longitudinal study of pregnant women in Colombia. *Infection and Immunity* 86:4.
 26. Good, M.F. and **Yanow, S.K.** (2017) A whole parasite transmission blocking vaccine for malaria - an ignored strategy. *Emerging Topics in Life Sciences* 1(6):547-552.
 27. 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
 28. 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
 29. 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* 2:70-76.
 30. 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
 31. Good, M.F., **Yanow, S.K.** (2016) Cryptic epitopes should not be forgotten in vaccine design. *Expert Review of Vaccines*. Mar 21:1-2.
 32. 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.
 33. **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.
 34. **Yanow, S.K.** Molecular diagnosis of malaria in low-resource settings. (2016). *Point of Care* 15:41-42.
 35. 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.

36. 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
37. 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.
38. 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.
39. 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.
40. 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.
41. Good, M.F., Rodriguez, B.I., Ito, K., Reiman, J., **Yanow, S.K.**, Batzloff, M.R., Stanistic, 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.
42. 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.
43. 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.
44. 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.
45. 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.
46. 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.
47. Bright, A.T., Alenazi, T., Shokoples, S., Tarning, J., Paganotti, G.M., White, N.J., Houston, S., Winzeler, E., and **Yanow, S.K.** (2013) Genetic analysis of primaquine tolerance in a patient with relapsing vivax malaria. *Emerging Infectious Diseases* 19:802-805.
48. Naidu, P., **Yanow, S.K.**, and Kowaleska-Grochowska. (2013) Eosinophilia: a poor predictor of *Strongyloides* infection in refugees. *Canadian Journal of Infectious Diseases and Medical Microbiology* 24:1-4.

49. Manage, D.P., Lauzon, J., Atrazhev, A., Chavali, R., Samuel, R.A., Chan, B., Morrissey, Y.C., Gordy, W., Edwards, A.L., Larison, K., **Yanow, S.K.**, Acker, J.P., Zahariadis, G., and Pilarski, L.P. (2013) An enclosed in-gel PCR amplification cassette with multi-target, multi-sample detection for platform molecular diagnostics. *Lab Chip* Epub March 7, 2013.
50. **Yanow, S.K.**, Gregson, D., and Chawla, R. Case Report: Discordant diagnosis of malaria in a family of child refugees from Sierra Leone. (2013) *Canadian Journal of Infectious Diseases and Medical Microbiology* 24:e22-e23.
51. Bubela, T., **Yanow, S.** (2012) Molecular typing technology: a legal perspective. *Public Health Ethics* 5:317-320.
52. Boadu, N.Y., Ansong, D., Higginbottom, G., Einsiedel, E., **Yanow, S.K.**, and Menon, D. (2012) Rapid malaria diagnosis in Ghana: implementing policies, and navigating technology at the point of care. *International Journal of Qualitative Methods* 11:765
53. Arango, E.M., Samuel, R., Agudelo, O.M., Carmona-Fonseca, J., Maestre, A., and **Yanow, S.K.** (2012) Genotype comparison of *Plasmodium vivax* and *Plasmodium falciparum* clones from pregnant and non-pregnant populations in North-west Colombia. *Malaria Journal* 11:392.
54. Manage, D.P., Lauzon, J., Atrazhev, A., Morrissey, Y.C., Edwards, A.L., Stickel, A.J., Crabtree, H.J., Pabbaraju, K., Zahariadis, G., **Yanow, S.K.**, and Pilarski, L.M. (2012) A miniaturized and integrated gel post platform for multiparameter PCR detection of herpes simplex viruses from raw genital swabs. *Lab Chip* 12:1664-71.
55. Taylor, B.J., Martin, K.A., Arango, E., Agudelo, O.M., Maestre, A., and **Yanow, S.K.** (2011) Real-time PCR detection of *Plasmodium* directly from whole blood and filter paper samples. *Malaria Journal* 10:244.
56. Desta, D., Sjöholm, R., Lee, L., Lee, M., Dittenhafer, K., Canche, S., Babu, B., Chavda, S., Dewar, C., **Yanow, S.**, Best, A.A., Lee, M. (2011) Synthesis and antiprotozoal activity of 1,2,3,4-tetrahydro-w-thioxopyrimidine analogs of combretastatin A-4. *Medicinal Chemistry Research* 20:364-369.
57. Matisz, C.E., Naidu, P., Shokoples, S.E., Grice, D., Krinke, V., Brown, S.Z., Kowalewska-Grochowska, K., Houston, S., and **Yanow, S.K.** (2011) Post-arrival screening for malaria in asymptomatic refugees using real-time PCR. *American Journal of Tropical Medicine and Hygiene* 84: 161-165.
58. Divis, P.C.S., Shokoples, S.E., Singh, B., **Yanow, S.K.** (2010) A TaqMan real-time PCR assay for the detection and quantitation of *Plasmodium knowlesi*. *Malaria Journal* 9: 344-351.
59. Cruz, R., Shokoples, S.E., Manage, D.P., and **Yanow, S.K.** (2010) High throughput genotyping of single nucleotide polymorphisms in the *P. falciparum dhfr* gene using melt-curve analysis. *Journal of Clinical Microbiology* 48: 3081-7.
60. Martin, I.E., Tsang, R.S., Sutherland, K., Anderson, B., Read, R., Roy, C., **Yanow, S.**, Fonseca, K., White, W., Kandola, K., Kouadjo, E., Singh, A.E. (2010) Molecular typing of *Treponema pallidum* strains in Western Canada: predominance of 14d subtypes. *Sexually Transmitted Diseases* 37: 544-8.
61. Zahariadis, G., Joffe, A.R., Talbot, J., deVilliers, A., Campbell, P., Pabbaraju, K., Wong, S., Bastien, N., Li, Y., Mitchell, R.L., Pang, X.L., **Yanow, S.**, Chui, L., Predy, G., Willans, D., Lee, B.E., Preiksaitis, J.K., Clement, B., Jacobs, A., Jaipaul, J., Fonseca, K. (2010) Identification and epidemiology of severe respiratory disease due to novel swine-origin influenza A (H1N1) virus infection in Alberta. *Canadian Journal of Infectious Diseases & Medical Microbiology* 21: E151-E157.

62. Chavda, S., Babu, B., **Yanow, S.K.**, Jardim, A., Spithill, T.W., Kiakos, K., Kluza, J., Hartley, J.A., and Lee, M. (2010) A novel achiral seco-cyclopropylpyrido[e]indolone (CPyl) analog of CC-1065 and the duocarmycins: synthesis, DNA interactions, in vivo anticancer and anti-parasitic evaluation. *Bioorganic and Medicinal Chemistry* 18: 5016-24.
63. Purcell, L.A., Leitao, R., Ono, T., **Yanow, S.K.**, Pradel, G., Spithill, T.W., Rodriguez, A. (2010) A putative kinase-related protein (PKRP) from *Plasmodium berghei* mediates infection in the midgut and salivary glands of the mosquito. *International Journal of Parasitology* 40: 979-88.
64. Pabbaraju, K., Wong, S., Wong, A., Appleyard, G., Chui, L., Pang, X., **Yanow, S.**, Fonseca, K., Lee, B., Fox, J.D., and Preiksaitis, J. (2009) Design and validation of real-time reverse transcription-PCR assays for detection of pandemic (H1N1) 2009 virus. *Journal of Clinical Microbiology* 47: 3454-60.
65. Shokoples, S.E., Ndao, M., Kowaleska-Grochowska, K., and **Yanow, S.K.** (2009) Multiplexed real-time PCR assay for discrimination of *Plasmodium* species with improved sensitivity for mixed infections. *Journal of Clinical Microbiology* 47: 975-980.
66. Purcell, L.A., Wong, K.A., **Yanow, S.K.**, Lee, M., Spithill, T.W., and Rodriguez, A. (2008) Chemically attenuated *Plasmodium* sporozoites induce specific immune responses, sterile immunity, and cross-protection against heterologous challenge. *Vaccine* 26: 4880-4884.
67. Purcell, L.A., **Yanow, S.K.**, Lee, M., Spithill, T.W., and Rodriguez, A. (2008) Chemical attenuation of *Plasmodium berghei* sporozoites induces sterile immunity in mice. *Infection and Immunity* 76: 1193-1199.
68. **Yanow, S.K.**, Purcell, L.A., Pradel, G., Sato, A., Rodriguez, A., Lee, M., and Spithill, T.W. (2008) Potent antimalarial and transmission-blocking activities of a novel DNA binding agent. *The Journal of Infectious Diseases* 197: 527-534.
69. **Yanow, S.K.**, Purcell, L.A., Lee, M. and Spithill, T.W. (2007) Genomics-based drug design targets the AT-rich malaria parasite: implications for anti-parasite chemotherapy. (Review) *Pharmacogenomics* 8: 1267-1272.
70. **Yanow, S.K.**, Purcell, L.A., and Spithill, T.W. (2006) The A/T-specific DNA alkylating agent adozelesin inhibits *Plasmodium falciparum* growth *in vitro* and protects mice against *Plasmodium chabaudi adami* infection. *Molecular and Biochemical Parasitology* 148: 52-59.
71. Castanotto, D., Tommasi, S., Li, M., **Yanow, S.**, Pfeifer, G.P., and Rossi, J.J. (2005) Short hairpin RNA-directed cytosine (CpG) methylation of the RASSF1A gene promoter in HeLa cells. *Molecular Therapy* 12: 179-83.
72. **Yanow, S.K.**, Gold D.A., Yoo, H.Y., and Dunphy, W.G. (2003) Xenopus Drf1, a regulator of Cdc7, displays checkpoint-dependent accumulation on chromatin during an S-phase arrest. *Journal of Biological Chemistry* 278: 41083-92.
73. *Murakami, H., ***Yanow, S. K.**, Griffiths, D., Nakanishi, M. and Nurse, P. (2002) Maintenance of replication forks and the S-phase checkpoint by Cdc18p and Orp1p. *Nature Cell Biology*, 4: 384-8. ***Joint-first authors**
74. **Yanow, S.K.**, Lygerou, Z. and Nurse, P. (2001) Expression of Cdc18/Cdc6 and Cdt1 in G2 phase induces initiation of DNA replication. *EMBO Journal* 20: 1-9.
75. Baum, B., Nishitani, H., **Yanow, S.** and Nurse, P. (1998) Cdc18 transcription and proteolysis couple S phase to passage through mitosis. *EMBO Journal* 17: 5689-98.
76. **Yanow, S.K.**, Manseau, F., Hislop, J., Castellucci, V.F., and Sossin, W.S. (1998) Biochemical pathways by which serotonin regulates translation in the nervous system of *Aplysia*. *Journal of Neurochemistry* 70: 572-583.

77. Dyer, J.R., Pepio, A.M., **Yanow, S.K.**, and Sossin, W.S. (1998) Phosphorylation of eIF₄E at a conserved serine in *Aplysia*. *Journal of Biological Chemistry* 273: 29469-74.