

Karine Gaëlle Le Roch, PhD

Professor of Molecular, Cell and Systems Biology | Director, Center for Infectious Disease and Vector Research
University of California, Riverside, USA • karine.leroch@ucr.edu • 858-699-1757

PROFESSIONAL PROFILE

Internationally recognized molecular parasitologist and academic leader with more than 25 years of experience in eukaryotic pathogens, functional genomics, systems biology, and translational drug discovery. Leads an interdisciplinary center spanning parasitology, vector biology, immunology, genomics, microbiology, computational biology, and population-relevant vector-borne disease research. Brings extensive experience in scientific governance, program evaluation, multi-institution collaboration, mentorship, community building, and international peer review. Author of 140+ peer-reviewed papers and proceedings, and three patents; Google Scholar h-index 56 with more than 26,000 citations (July 2026). Member of ASTMh, the RNA Society, and AAAS.

EDUCATION

1998-2001	Ph.D., University Paris-Sorbonne, France, Parasitology: Host-Parasite Interactions.
1996-1997	M. S., Oxford University, UK/ Lille II University, France, Host-Parasite Interactions.
1991-1995	B.S., University Paris-Sorbonne, France, Biochemistry/Chemistry - Microbiology.

PROFESSIONAL APPOINTMENTS AND RESEARCH EXPERIENCES

2016-Present	Director Center for Infectious Disease and Vector Research, UCR, USA.
2015- Present	Professor with Tenure, Step VIII, Department of Molecular, Cell and Systems Biology, UCR, USA.
2011-2015	Associate Professor, Department of Cell Biology, UCR, USA.
2006-2011	Assistant Professor, Department of Cell Biology, UCR, USA.
2004-2006	Institute Fellow – Drug discovery program against malaria - Genomics Institute of the Novartis Research Foundation (GNF), La Jolla, California, USA.
2001-2003	Postdoctoral Fellow with <i>Prof. E. Winzeler</i> - Functional genomics in <i>Plasmodium falciparum</i> - The Scripps Research Institute (TSRI), La Jolla, California, USA.
1998-2001	Ph.D. student with <i>Prof. C. Doerig</i> – Molecular Biology and Cell cycle in <i>Plasmodium falciparum</i> , University Paris VI Sorbonne, France.
1997-1998	IBM_ PMU, Software tester, Paris, France.
1996-1997	Master Student with <i>Prof. A. Wakefield</i> – Molecular Biology <i>Pneumocystis carinii</i> . Oxford University, UK
1995-1996	Assistant Researcher with <i>Pr. M. Doenhoff</i> - Vaccine Discovery <i>Schistosoma mansoni</i> . North Wales University, UK.
1994	Assistant Researcher, Laboratory of Cytogenetics and Molecular Biology, MERIEUX, Lyon, France.

AWARDS AND NOMINATIONS

2026	Chancellor's Award for Excellence in Undergraduate Research and Creative Achievement.
2021	The 2021 CEPCEB Natasha V. Raikhel Award for Research, Innovation & Leadership
2018-2019	UC Women's Initiative for Professional Development and Leadership
2017-2018	Provost Faculty Leadership Program, University of California, Riverside
2008	Academic Senate Regent Award for outstanding Research. University of California
2002	Scholarship award. Drugs against Tropical Protozoan Parasites. Keystone Symposia
1998-2001	Pre-doctoral fellowship. French Delegation General pour l'Armement (DGA) Defense ministry
1996-1997	Graduate student fellowship. Education ministry, Paris, France
1995-1996	ERASMUS fellowship. European community. Scientific Exchange

RESENT, PENDING and PAST RESEARCH SUPPORT**ONGOING SUPPORT**

1 – NIH R01AI188634-01 **PI: Le Roch** 12/01/2024 – 11/30/2029
Title: Deciphering the Role of Non-Coding RNAs in Gene Regulation: This proposal seeks to develop state-of-the-art complementary approaches to identify RNAs that regulate epigenetic, genome architecture and gene expression in the human malaria parasite, *Plasmodium falciparum*, throughout its life cycle. The proposed study will offer groundbreaking insights into parasite biology and identify novel strategies to kill the parasite.

2 – NIH 1R21AI191405 **PI: Le Roch** 03/01/2025 - 02/28/2027
Title: RNA-Binding Proteins and RNA-Dependent Proteins - An Emerging Role for RNAs in Plasmodium Biology. This application aims to decipher not only the role of RNA-binding proteins (RBPs) and RNA- dependent protein (RDPs) in the biology of the human malaria parasite *Plasmodium falciparum* but also validate their potential as novel targets for antiparasitic strategies.

3 - CDC 1U01CK000516-01 **PIs: Barker (UCD)/Atkinson (UCR)** 7/01/2022 – 06/30/2027
Title: Pacific Southwest Regional Center of Excellence for Vector-Borne Disease Research at the University of California (UCR and UCD).

4 -NIH 1R01AI192615 **PIs: Le Roch, Ben Mamoun and Vanderwal** 04/01/2026 - 06/30/2031
Total Federal fund requested: \$3,981,069.00
Title: Optimization of the Pyrroloiminoquinone Scaffold for Malaria and Babesiosis Treatment: The proposed collaborative research project focuses on the chemical synthesis and biological activity of a novel class of compounds, named pyrroloiminoquinones or PIQs, with potent activity against the human malaria- and babesiosis-causing parasites of the genera *Plasmodium* and *Babesia*. The proposed work will deliver samples of potent natural product analogues that are only available by chemical synthesis to fuel critical studies of their in vitro and in vivo efficacy, safety profile, structure-activity relationships, and mode of action, all of which are required to identify best candidates for further preclinical development.

5- NIH 1R01AI198692 **PIs: Le Roch, Ben Mamoun and Vanderwal** 07/01/2026 - 06/30/2031
Total Fund requested: \$4,069,941.
Title: Therapeutic potential and mechanism of action of leelamine-derived isonitriles for malaria and babesiosis.
 This collaborative research project centers on the chemical synthesis and biological evaluation of isonitrile containing compounds derived from inexpensive leelamine, which exhibit potent activity against the human malaria- and babesiosis-causing parasites of the genera *Plasmodium* and *Babesia*. The study is highly relevant to global health because of the devastating effects of malaria on millions of individuals worldwide, and the increasing prevalence of tick-borne diseases such as human babesiosis around the world including the US. The proposed studies will generate and deliver lead compounds for in-depth assessment of in vitro and in vivo efficacy, safety, structure-activity relationships, and drug mechanism of action, all of which are required to identify best candidates for further preclinical development.

PENDING SUPPORT

1 – NIH 1R01AI193327 **PIs: Le Roch, Ben Mamoun and Vanderwal** 04/01/2027 - 03/30/2032
Total Federal fund requested: \$5,863,186.00
Title: Preclinical Development of MED6-189 for Malaria Therapy: Malaria remains a significant global health challenge due to widespread drug resistance. We have demonstrated that MED6-189, a new kalihinol analogue, shown promise in preclinical studies by targeting novel pathways in *Plasmodium falciparum*. This project aims to further develop MED6-189 through comprehensive in vitro, pharmacological, and in vivo studies to support its progression to clinical trials.

2 - NIH R01AI142743 **PIs: Le Roch and Djuranovic** 04/01/2027 - 03/30/2032
Total Fund requested: \$ 2, 993,780
Title: Mechanism of translational control in Apicomplexa's organelles
 This proposal seeks to uncover how a newly identified family of RNA-binding proteins, called RAPs, controls translation within Apicomplexa's organelles, the mitochondrion and the apicoplast. Apicomplexan parasites cause diseases that impose a substantial global health and economic burden, including in the United States where toxoplasmosis remains a major infection in immunosuppressed patients and pregnant women, and malaria continues to threaten travelers and military personnel. Understanding RAP-mediated control of organellar translation will

reveal vulnerabilities that can be exploited to develop novel therapies against these major human pathogens.

Pending Scientific Review – Competitive

PAST SUPPORT:

1-KAUST	PI: Pain/Co-PI Le Roch	04/01/2023- 03/31/2026
Title: Characterization of PfAP2-MRP (Master Regulator of Pathogenesis)- associated epigenetic regulators in intra-erythrocytic developmental cycle (IDC) and transmission stages of the human malaria parasite <i>P. falciparum</i>		
2 - NIAID - R01 AI158417	PIs: Wilson and White	01/01/2021-12/31/2025
Title: Defining the cell and molecular basis of Toxoplasma recrudescence.		
3 -NIH/R01 AI142743	PI: Le Roch	09/19/2018-08/31/2025
Title: RAPs-mediated post-transcriptional control in Apicomplexan parasites		
4- NIH/NIAID 1 R01 AI136511	PI: Le Roch	05/01/2018-04/30/2025
Title: Chromatin Structure and Control of Gene Expression in the human Malaria Parasite.		
5-NIH/R01AI138139	PIs: Le Roch, Vanderwal, Ben Mamoun	09/21/2018-06/30/2024
Title: Hit-to-Lead Development of the Kalihinol Scaffold for Malaria Treatment		
6- NIH/SBRI	PI: ChromoLogic, LLC - Jim Axtelle	06/01/202-06/30/2024
Title: Mobile Health Point-of-Care Diagnostics for Malaria, QuickMag		
7- NIH/ R21 A1154386	PI: Jon P. Boyle	07/01/2020-06/30/2023
Title: Completing multiple EupathDB genomes using integrated sequencing and annotation pipeline		
8- CDC 1U01CK000516-01	PIs: Barker (UCD)/Walton (UCR)	09/01/2017-06/30/2022
Title: Pacific Southwest Regional Center of Excellence for Vector-Borne Disease Research (UCR and UCD).		
9- NIH/ R21 AI142506-01	PI: Le Roch	12/01/2018-11/30/2021
Title: Evolution of the 3D chromatin structure in apicomplexan parasites		
10- CIDVR seed Grant	PIs: Barton and Le Roch	07/01/2018-06/30/2020
Title: Evolution of host-pathogen innate immunity in mosquito's arbovirus infection and transmission		
11 - NIH/ 1 R01 AI106775	PIs: Dr. Noble/Le Roch	07/01/2013-06/30/2018
Title: The spatial organization of the Plasmodium genome throughout its infectious cycle.		
12- NSF/ 1302134	PI: Dr. Lonardi	07/01/2013-06/30/2016
Title: Algorithms and Software Tools for Epigenetics Research.		
13- NIH / 1 R01 A1085077	PI: Dr. Le Roch	09/15/2010-08/31/2015
Title: Understanding the role of nucleosome turnover in the malaria parasite infectious cycle.		
14 - NIH / U01TW007401	PI: Dr. Hay	09/01/2009-08/31/2014
Title: Exploration, conservation & development of marine biodiversity in Fiji.		

SERVICES

Member of the RNA society

Member of the American Society of Tropical Medicine and Hygiene (ASTMH)

Member of the American Association for the Advancement of Science (AAAS)

Editorial Board Member:

Since 2015 Scientific Report.

Since 2019 Frontiers in Cellular and Infections Microbiology – Parasite and Host

Editorial Guest Editor:

2014- 2019 PLoS Computational Biology, PLoS Pathogen.

2024 to present Guest Editor of the Article Collection Host-microbe interactions 2025/2026: parasites for Current Opinion in Microbiology published by ELSEVIER LIMITED.

Ad hoc reviewer:

Since 2005 Over 300 manuscripts reviewed for Science, Nature, Nature Method, Nature Biotech, Nature Communication, Cell Host & Microbe, eLIFE, Genome Biology, Genome Research, Autophagy, Proc. Natl. Acad. Sci., Traffic, Journal of Biochemical Chemistry, PLoS Biology, PLoS Pathogen, Genome Medicine, PLoS One, PLoS Medicine, PLoS Computational Biology, Scientific Report, Cell Report, Bioorganic and Medicinal chemistry Bioinformatics, FEBBS letter, Molecular Microbiology, Journal of Antimicrobial Chemotherapy, Parasitology International, Malaria Journal, Future Medicinal Chemistry, BMC Genomics, Molecular Systems Biology, Trend in Parasitology, Genetica, Bioorganic & Medicinal Chemistry, Journal of Biochemistry, Cellular and Molecular Life Science, Methods in Molecular Biology.

Reviewer - Funding Agency Study Sections

2009	External reviewer for NIH Challenge Grants. 2009-2021
2009	External reviewer for the Wellcome Trust, UK.
2009	External reviewer for the French Embassy, Chateaubriand fellowships, France.
2009	External reviewer the Canadian Foundation Innovation, Canada.
2009-2016	External reviewer the Medical Research Council, UK.
2010-2013	External reviewer for the Swiss National Science Foundation.
2009-2015	External reviewer for the National Medical Research Council (NMRC), Singapore.
2010- 2011	External reviewer for the Netherlands Organization for Scientific Research.
2011	External reviewer for the Bill and Melinda Gates Foundation.
2012-2016	Member of the Scientific Advisory Group for the NIH Malaria Center of Excellence in Southeast Asia _ meeting twice a year
2013-2015	External reviewer for French National Research Agency, France.
2013-2016	NIAID study section - F13 Infectious Diseases and Microbiology Fellowship Panel.
2013	NIAID Pathogenic Eukaryotes Study Section (PTHE) Review Panel.
2014 -2024	External reviewer for the Institut National de la Santé et de la Recherche Medical (INSERM- France) and the French National Cancer Institute - Epigenome and Cancer Review Panel.
2016	NIAID/MIDB study section, Clinical Scientist Research Career Development Review panel, Ad Hoc member.
2016	External reviewer for the European Research Council Grant panel.
2017	External reviewer for the King Abdullah University of Science and Technology, Saudi Arabia
2018	CDC/UCD/UCR PacVec CoE Training Grants review committee.
2018-2022	External Grant reviewer - Israel Science Foundation.
2018	External Grant reviewer - United States-Israel Binational Science Foundation
2018	External Grant reviewer - The Wellcome Trust/DBT India Alliance Fellowship
2019	External Grant reviewer - NSF
2019-2026	External Grant reviewer - Deutsche Forschungsgemeinschaft (DFG), Germany
2019	External Grant reviewer - Netherlands Organisation for Health Research and Development
2019-2024	External Grant reviewer- CNRS/INSERM/ATIP Avenir Program Young group leader – France.
2019	NIH study section Special emphasis panel in the Genes, Genomes and genetics review Panel.
2019-2026	External Grant reviewer - Medical Research Council (MRC) – UK research and Innovation, UK.
2024	External Grant reviewer for the Crick Africa Network Career Acceleration Fellowship
2020 - 2024	Permanent Member of the NIH/NIAID Pathogenic Eukaryotes Study Section (PTHE) Review Panel.
2024 - present	Member of the Scientific Advisory Group for the NIH Malaria Centers of Excellence, meeting twice a year
2025 - 2026	NIH study section Special Emphasis Panel – drug discovery for infectious diseases
2025	External Grant reviewer for the Swiss National Science Foundation
2025	External Grant reviewer for the Singapore Ministry of Education (MOE)
2025	External review member for the Nebraska Center for Virology at the University of Nebraska- Lincoln (UNL).

University Services

2016-present	Director Center for Infectious Disease and Vector Research
2019	UCR/RED reviewer for the selection of the Pew limited submission applications
2018	Chair of the CNAS Executive Committee fellowship award
2018-present	Member of the Executive Committee for the GGB graduate program
2015-2018	Member of the UCR CNAS Executive Committee
2006- 2025	College and Department Search Faculty Committee Members (16 different Faculty searches)
2008- 2015	Chair of the Center for Disease Vector Research Seminar series
2007	Chair of the GGB Seminar Series
2008-2009	Session Chair / CMDB / 9th Annual Research Symposium
2008	Faculty Chair / American Society for Microbiology Student
2008 – 2015	Graduate Writing Qualifying Exam Committee – CMDB
2012 – 2016	Member of the Executive Committee for the CMDB graduate program
2010-2011	Member of the Graduate GGB admission committee
2011-2012	Chair CMDB seminar series

2011-2014	Graduate Advisor for PhD Students-Microbiology
2012	Member of the CNAS Redesign Subcommittee on Excellence in Community Engagement & Service.
2013-2016	Member of the department award committee.
2016-2024	Member of the department Grant review committee
2006- 2016	Master Defenses (2); PhD defenses (5), Oral-qualifying exams (19)
2015-2016	Reviewer for UCR SEED Grants (4-5 per year)
2016-2017	Member of the CNAS Scholarship Committee – Close to 100 grants to review each year.
2017-2018	Chair of the CNAS Scholarship Application Review Committee
2017-2018	Member of the Graduate Program in Microbiology admission committee
2018-Present	Member of the Executive Committee for the GGB graduate program
2020-2023	Member of the Senate Committee on Charges.
2023-2026	Member of the Senate - Committee on Faculty Welfare.
2022-2023	Chair of a Faculty Search for the department of MCSB.
2023-2024	Faculty Search committee for the department of MCSB
2024-2025	Search committee for the Dean of the College of Natural & Agricultural Sciences (CNAS)
2024-present	Chair of the department Grant review committee
2021-present	Mentoring 6 Assistant Professors at UCR

Conference Organizing

2010	Co-organizer of the Center for Disease Vector Research and the Institute for Integrative Genome Biology symposium - Facing the Challenges of Vector-Borne Diseases in the 21 st Century - March 2010.
2011 - Present	Initiated and Co-organize the Annual Southern Californian Eukaryotic Pathogens Symposium (SCEP) at UCR since the fall of 2011. Over 140 participants each year from UCLA, UCSD, UCI, Loma Linda, University of Arizona and several Cal states.
2017 - Present	Initiated and Co-organizer of the Center for Infectious Disease Vector Research symposium - May 2017, May 2019, May 2021, May 2024 and May 2025.

Public Services

2008	The French Embassy and UCI seminar - The Ubiquitin proteasome system as a new therapeutic approach for the treatment of the human malaria parasite
2008	Women in Science at International High School. Los Angeles, CA Malaria: In search of new strategies to combat the disease
2012	Interview for a documentary “Man vs Malaria”.
2013	Riverside TV interview “Face to Face”.
2014	Malaria Day in High Tech Middle school students in San Diego CA
2018-2019	Science Seminar Series at the Lycée Français de San Diego.
2019	Sick: A YouTube show from Seeker, a digital publisher devoted to science that described how the disease can spread on the human body. I help in the design and creation of the Sick’s crash course in malaria (https://www.youtube.com/watch?v=nFcvDVf1XRI).
2024	Epigenetic Podcast for Active Motif – Interviewed by Stefan Dillinger: https://www.activemotif.com/podcasts - https://www.activemotif.com/podcasts-karine-le-roch
2024	Interview by Ana Hernando for the scientific news agency Agencia SINC , based in Madrid (Spain).
2024	Interview By Alex Viveros For Chemical and Engineering News: https://cen.acs.org/pharmaceuticals/drug-discovery/Sponge-derived-natural-products-lead/102/web/2024/10
2024	Interview by Sophia Abene for Contagion Live, a platform dedicated to providing critical insights into infectious diseases. IDWeek, 2024 https://www.contagionlive.com/view/kalihinol-analog-targets-apicoplast-function-in-malaria-treatment
2024	People behind the Science Podcast: https://www.peoplebehindthescience.com/podcasts/ (789).
2024	The Biomedical & Life Sciences Collection at Henry Stewart Talks (HSTalks)
2024	Interview with Tina Ayodele , Infectious Disease Education Manager for the physician community. Created a Video available on VuMedi. https://www.vumedi.com/video/idweek-2024-insights-the-next-generation-of-malaria-treatment/Imldk2Vlay0yMDI0LWluc2lnaHRzLXR0ZS1uZXh0LWdlbmVvYXRpb24tb2YtbWFsYXJpYS10cmVhdG1lbnQI:1tOPcM:dbKJPXm9TI3vsYPUastYtm29zGGs663tTuyZqoDs8c0/
2025	Session Chair – Women in Malaria Meeting March 2025

- 2025 Interview by Randy Dotinga for a Nature Microbiology paper - Study Reveals Malaria Parasite's Secrets (<https://www.medscape.com/viewarticle/study-reveals-how-malaria-parasites-hide-body-years-2025a1000fdv>)
- 2025 HSTalks: Interview by Eyal Kalie on Kalihinol Analog MED6-189
- 2025 **Women and girls in science** - bridging the gap: inspiring more women to lead in science & technology – May 8th, 2025 - French Consulate, Los Angeles, Ca – Panel Member to discuss how to cultivate inclusion in science and empowering diverse women voices

PUBLICATIONS

- 140 Papers
- 6 Peer Reviewed Proceedings
- 16 Book Chapters
- 3 Patents

Google Scholar: h-index: 56; i10-index: 122; citations over 26,000.

See: <https://scholar.google.com/citations?user=wcZCugQAAAAJ&hl=en>

<https://www.ncbi.nlm.nih.gov/myncbi/karine.le%20roch.1/bibliography/public/>

PATENTS

- 1 - C-7 Functionalized Artemisinin Derivatives for the Treatment of Malaria. Carvalho, Paulo, **Le Roch, Karine**, Avery, Mitchell Williamson, John Chittiboyina, Amar Valdez, Matthew Chahine, Zeinab Baldwin, Melinda. **United States Patent Application 20240423958**
- 2- Disclosure of Record of Invention: UC case NO. 2008-427. Patent application 61/018609. Use of Salinosporamide A triazoles as antimalarial and antiparasitic agents. **K. Le Roch** (UCR) and M. Pirrung (UCR). 2008
- 3 - Patent US-2011-0190338-A1: Compounds and compositions Useful in the Treatment of Malaria. J. Kubanek, M. Hay, A. Lane and **K. Le Roch**. U.S. Application Serial No. 13/021,171; Filed February 4, 2011. Published in August 2011.

PEER REVIEWED PUBLICATIONS (Most recent listed first)

- 140 – Li Z., Lonardi S. and **Le Roch K.G.** Integrating Epigenetic and Chromatin Features to Improve Genomic Annotation in the Human Malaria Parasite, *Plasmodium falciparum*. **Manuscript submitted, 2026.**
- 139 - Seifert-Gorzycki J., Muñoz D., Ciampossin L., Lizarraga A., Bhanvadia S., Iriarte L., Coceres V., Johnson P.J., **Le Roch K.G.**, Strobl-Mazzulla P.H. and de Miguel N. Epigenetic reprogramming restores metronidazole sensitivity in drug-resistant *Trichomonas vaginalis* parasites. **Manuscript submitted, 2026.**
- 138 – Lenz T., Zhang X., Chakraborty A., Ardakany AR., Prudhomme J., Ay F., Deitsch K. and **Le Roch G.** Chromatin structure and *var2csa* – a tango in regulation of *var* gene expression in the human malaria parasite, *Plasmodium falciparum*? **Manuscript submitted 2026. Available on the biorxiv preprint server.**
- 137 – Choi J.Y., Vydyam P., Barnes G.L., Li Z.³, **Le Roch K.G.**, Vanderwal C.D. and Ben Mamoun C.. GB-79, Leelamine Isonitrile, defines a new antifungal scaffold with potent and broad-spectrum activity against drug-resistant *Candida* species. **Manuscript under revision, 2026.**
- 136- Ciampossin L., Ulu A., Lenz T., Li Z., Abel S., Srivastava S., White M., Wilson E. and **Le Roch K.G.** Host-Cell Dependent Epigenetic Profiles Associated with Survival Outcomes in *T. gondii* infection. **Epigenetics & Chromatin**. 2026 May 5. PMID: **42087241** doi: 10.1186/s13072-026-00678-x
- 135 – Singh P., Estrada K., Gonzalez L.M., Grande R., Sánchez-Prieto S, Cornillot E., Harb O., Sanchez-Flores A., Montero E., **Le Roch KG.**, Lonardi S. and Ben Mamoun C. *Babesia hegottelforum* sp. nov., a zoonotic *Babesia* species previously referred to as *Babesia* sp. *MO1*. **Emerg Microbes Infect.** 2026 Dec;15(1):2637280. doi: 10.1080/22221751.2026.2637280. Epub 2026 Mar 6. PMID: 41790956, 2026.
- 134 – Milic M., Obi P., Vanderwal C. *, Ben Mamoun C.* and **Le Roch KG..*** Polypharmacology in Malaria Treatment:

- Single Drugs, Multiple Mechanisms, Greater Impact. **Trends Parasitol.** **2026 Apr**;42(4):222-236. doi: 10.1016/j.pt.2026.02.004. Epub 2026 Mar 16. PMID: 41846229
- 133 - Yanase R, Hair M, Zeeshan M, Ferguson DJP, Brady D, Pasquarello C, Bottrill A, Bhanvadia S, Neal A, Tromer EC, **Le Roch KG**, Hainard A, Holder AA, Vaughan S, Guttery DS, Tewari R. A divergent Plasmodium NEK4 acts as a key regulator driving the early events of meiosis. **Nature Commun.** **2026 May 12.** doi: 10.1038/s41467-026-73169-y. PMID: 42120403
- 132 - Paco K, Mendivil MP, Zhang Z, Zebardast S, Davila C, Mooney RM, Olatoyinbo P, Yang T, Bassi S, Gonzalez V, Chen E, Ashraf FB, Roman IC, Felix JR, Alam RM, Lay JA, Johal MS, **Le Roch K**, Tolstorukov I, Hernandez JB, da Silva FLB, Lonardi S, Sazinsky MH, Ray A. ASPred: identification of antigen apecific B-cell receptors from single V(D)J sequences using large language models 4171 **The Journal of Immunology**, Volume 214, Issue Supplement 1, November **2025.** <https://doi.org/10.1093/jimmun/vkaf283.1885>.
- 131 – Nagar N., Yanase R., Zeeshan M., Ferguson MJ, Abel S., Pashley SL., Mishra A, Eze A., Rea E., Brady D., Bottrill AR., Vaughan S., **Le Roch KG**, Guttery DG, Holder AA., Tromer EC, Sharma P. and Rita Tewari R. *Plasmodium* ARK1 regulates spindle formation during atypical mitosis and forms a divergent chromosomal passenger complex. **Nature Commun.** **2026 Feb 26**;17(1):1598. doi: 10.1038/s41467-026-69460-7. PMID: 41748607.
- 130 - Zeeshan M., Blatov I, Yanase R., Ferguson D.J.P., Pashley S.L., Chahine Z., Botté Y.Y, Mishra A., Marché B., Bhanvadia S., Hair H, Batra S., Markus R., Brady D., Bottrill A., Vaughan S., Botté C.Y., **Le Roch KG**, Holder A.A., Tromer E.C., Tewari R. A novel SUN1-ALLAN complex coordinates 1 segregation of the bipartite MTOC across the nuclear envelope during rapid closed mitosis in Plasmodium. **elife.** May 20, **2025.** PMID: 40392232, DOI: [10.7554/eLife.106537](https://doi.org/10.7554/eLife.106537)
- 129 – Hollin T., Chahine Z., Abel S., Banks C., Pasaje CFA., Lenz T., Prudhomme J., Ybanez CM., Abbaszadeh AS., Niles JC., Florens L. and **Le Roch KG**. RAP proteins regulate apicoplast noncoding RNA processing in *Plasmodium falciparum*. **Cell Reports**, **2025 Jun 25**;44(7):115928. doi: 10.1016/j.celrep.2025.115928. PMID: 40577132.
- 128 – Margarida T. Grilo Ruivo, Ji-hun Shin, Todd Lenz, Stephanie Y. Matsuno, Katherine Olivia Yanes, Arnault Graindorge, Maguy Hamie, Laurence Berry-Sterkers, Mathieu Gissot, Hiba El Hajj, **Karine G. Le Roch**, Melissa B. Lodoen, Maryse Lebrun and Diana Marcela Penarete-Vargas. The *Toxoplasma* rhostry protein ROP55 is a major virulence factor that prevents lytic host cell death. **Nat Commun.** **2025 Jan 15**;16(1):709. doi: 10.1038/s41467-025-56128-x. PMID: 39814722.
- 127 - Barnes, G. L.; Magann, N.; Perrotta, D.; Hörmann, F.; Fernandez, S.; Vydyam, P.; Prudhomme, J.; **Le Roch, K.G.**; Ben Mamoun, C.; Vanderwal, C. D.* “A Divergent Synthesis of Numerous Pyrroloiminoquinone Alkaloids Identifies Promising Antiprotozoal Agents” **J. Am. Chem. Soc.** **2024**, doi: 10.1021/jacs.4c11897.
- 126 - Chahine Z, Abel S, Hollin T, Barnes GL, Chung JH, Daub ME, Renard I, Choi JY, Vydyam P, Pal A, Alba-Argomaniz M, Banks CAS, Kirkwood J, Saraf A, Camino I, Castaneda P, Cuevas MC, De Mercado-Arnanz J, Fernandez-Alvaro E, Garcia-Perez A, Ibarz N, Viera-Morilla S, Prudhomme J, Joyner CJ, Bei AK, Florens L, Ben Mamoun C, Vanderwal CD, and **Le Roch K.G.** A kalihinol analog disrupts apicoplast function and vesicular trafficking in *P. falciparum* malaria. **Science.** **2024 Sep 27**;385(6716):eadm7966. doi: 10.1126/science.adm7966.
- 125 – Baptista CG, Hosking S., Gas-Pascual E., Ciampossine L., Abel S. Hakimi MA, Jeffers V., **Le Roch KG.**, West C.M., and Blader IJ. *Toxoplasma gondii* F-Box Protein L2 Silences Feline-Restricted Genes Necessary for Sexual Commitment. **PLoS Pathog.** **2024 May 30**;20(5):e1012269. doi: 10.1371/journal.ppat.1012269. eCollection 2024 May.
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PEER REVIEWED PROCEEDINGS

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- 5 – Abel S., Williams D., Ireri S., Brown M., Su S., Hung K, Henke J. and **Le Roch KG.** A deep investigation into the virome of Culex mosquitoes in California using small RNA sequencing. **Proceedings and Papers of the Mosquito and Vector Control Association of California, 2020**, Vol 88, Iss 1, 1.
- 4 – Polishko A., Hasan MA., Pan W., Bunnik EM., **Le Roch KG.** and Lonardi S.. ThIEF: Finding Genome-wide Trajectories of Epigenetics Marks. **Proceedings of 17th International Workshop on Algorithms in Bioinformatics (WABI) 2017, Boston, MA, USA.**
- 3 - Polishko A., Bunnik EM., **Le Roch K.**, Lonardi S. PuFFIN - A Parameter-free Method to Build Nucleosome Maps from Paired-end Reads. **Proceedings of RECOMB-SEQ'14.**
- 2 - Pokhriyal N., Ponts N, Harris E. Y., **Le Roch K.G.** and Lonardi S. Novel Gene Discovery in the Human Malaria Parasite

using Nucleosome Positioning Data. **Proceedings of LSS Computational Systems Bioinformatics, Aug 2010.**

- 1 - Winzeler E., **Le Roch K.**, Zhou Y., Blair P., Grainer M., Moch KJ., Haynes D., De la Vega P., Holder A., Batalov S., Carucci DJ. System Biology and malaria. Proceedings of the Eighth Annual **International Conference on Computational Molecular Biology, 2004**, San Diego, California, USA, March 27-31, 2004; 01/2004.

BOOK CHAPTERS

- 16 - Ciamposin L., Hollin T., **Le Roch KG.** Deep Sequencing for Histone Modifications using ChIP-seq Analysis. **In Press Epigenetics Methods, 2e Elsevier in 2025**
- 15 - Gupta M., Lenz T. and **Le Roch KG.** Chromosomes Conformation Capture Coupled with Next generation Sequencing (Hi-C) in *Plasmodium falciparum*. PARASITE GENOMICS, series **Methods in Molecular Biology, published by Springer Nature. 2021**, Methods Mol Biol. 2021;2369:15-25. doi: 10.1007/978-1-0716-1681-9_2. PMID: 34313981
- 14 - Hollin T., Abel, S. and **Le Roch KG.** Genome-Wide Analysis of RNA-Protein Interactions in *Plasmodium falciparum* using eCLIP-seq. Parasite Genomics, series Methods in Molecular Biology, published by Springer Nature. **2021**, **Methods** Mol Biol. 2021;2369:139-164. doi: 10.1007/978-1-0716-1681-9_9. PMID: 34313988
- 13 - Davis S. and. **Le Roch K** Genome-wide analysis of Gene Expression. The Encyclopedia of Biological Chemistry 3rd edition, Elsevier. **In press, 2021.**
- 12- Lu M. and **Le Roch KG..** Strand-Specific RNA-Seq Applied to Malaria Samples. Springer. Methods Molecular Biology, volume 2170, ISBN: 978-1-0716-0742-8. Methods Mol Biol. **2021**;2170:19-33. doi: 10.1007/978-1-0716-0743-5_2. PMID: 32797448
- 11 – William D. and **Le Roch K..** Genomics and Precision Medicine for Malaria – A Dream Come True? 3rd edition of Genomic and Personalized Medicine. Edited by Hunt Willard and Geoffrey S Ginsburg. **2017**. ISBN- 13: 978-0128006818
- 10 - Bunnik, EM. and **Le Roch, K.** Epigenetics of malaria parasite. Epigenetics and Infectious Diseases edited by Walter Doerfler, Petra Boehm, Mario Noyer-Weidner, and Josep Casadesus. **Springer 2016.**
- 9 - Bunnik, EM. and **Le Roch, K.** Mechanisms regulating transcription in *Plasmodium falciparum* as targets for novel antimalarial drugs. Comprehensive Analysis of Parasite Biology. Edited by Sylke Müller (University of Glasgow, UK), Rachel Cerdan, Ewelina Guca and Ovidiu Radulescu (University of Montpellier, France). Paul M. Selzer (Series Editor). **WILEY 2016.**
- 8 – Bunnik, EM., **Le Roch, K.** *Plasmodium* »Nucleosome«. Encyclopedia of Malaria. Springer. Edited by Marcel Hommel and Peter G. Kremsner. 2014, ISBN: 978-1-4614-8757-9 (Online). Hard copy in 2016.
- 7 - Carlton, J., Sullivan, S., **Le Roch, K..** *Plasmodium* genomics and the art of sequencing malaria parasite genomes. Comparative Genomics of Plasmodium Parasites. Editors: Jane Carlton. Horizon Scientific Press. 2013
- 6- Nadia Ponts, Duk-Won D. Chung, and Karine G. Le Roch. Strand-Specific RNA-Seq Applied to Malaria Samples. Methods in molecular Biology. Springer Science. 2012
- 5 - Chung DW, Ponts N, and **Le Roch K.G..** Genome-wide analysis of Gene Expression. Encyclopedia of Biological Chemistry 2nd edition, Elsevier. 2012.
- 4 – Ponts N. and **Le Roch K..** Malaria and personal genomic: Idealist or realist? 2nd edition of Genomic and Personalized Medicine. Edited by Hunt Willard and Geoffrey S Ginsburg. October 2012
- 3 - **Le Roch KG.** and Winzeler E.A.. Understanding the transcriptome of the malaria parasite, *Plasmodium falciparum*. Molecular Approach to Malaria, Edited By Irwin Sherman, 2005.
- 2 - **Le Roch KG.** and Winzeler E.A.. Biochip in Malaria for Anti-Parasitic Discovery. Biochips as Pathways to Discovery. Taylor & Frances. 2005

- 1 - **Le Roch KG.** and Winzeler E.A.. Genome-wide analysis of Gene Expression. Encyclopedia of Biological Chemistry, Elsevier Inc. 2004.

MEETING PRESENTATIONS

ORAL PRESENTATIONS

- 108 - Invited Speaker - Beyond Transcription: Coordinated Remodeling of Host and Parasite Chromatin Architecture During *Toxoplasma gondii* Infection. Seminar Serie, UC Merced, September 2026, CA, USA.
- 107 - Invited Speaker - Chromatin Architecture, RNA and Virulence in Apicomplexan parasites: Mechanistic insights and therapeutic opportunities. Brown University, Providence, Rhode Island, March 2026, USA.
- 106 – Invited Speaker: Proteomic Dissection of Gene Regulation in human malaria parasites: From Chromatin Dynamics to RNA–Protein Networks. US HUPO 2026, St Louis, Missouri, US, February 2026.
- 105 – Public Lecture: Chromatin Architecture, RNA, and Virulence in Apicomplexan Parasites: Mechanistic Insights and Therapeutic Opportunities. The university of Geneva, School of Medicine, November 2025. Switzerland.
- 104 – Speaker: A kalihinol analogue disrupts apicoplast function and vesicular trafficking in malaria parasite. Annual Meeting of the American Society of Tropical Medicine and Hygiene, November 2025, Metro Toronto, Ontario, Canada
- 103 - Invited speaker: A Systems Biology Approach to Antimalarial Drug Discovery. The university of Geneva, School of Medicine, Seminar series, Geneva, Switzerland, June 2025.
- 102 – Invited Speaker - Metagenomics of mosquitoes and ticks identify a wide diversity of pathogens in field and laboratory settings - Application of metagenomic analysis to monitor molecular changes following vaccination of rodents for *Borrelia* control programs. PacVec annual meeting UC-Davis, April 2025.
- 101 – Invited Speaker: A kalihinol analogue disrupts apicoplast function and vesicular trafficking in malaria parasite. 60th Anniversary Ceremony and 25th EID Conference of the Japan-U.S. Medical Cooperation Program. Tokyo, Japan, March 2025.
- 100 – Invited Speaker: Microbiology Graduate Program Seminar. A Systems Biology Approach to Antimalarial Drug Discovery. March 2025.
- 99 - Invited speaker: *Taking a Closer Look at Human parasites: From Basic Science to Drug Discovery*. Society of Women Engineers UCR, Riverside, California. February 2025
- 98 - Invited speaker: Deciphering the non-coding code of pathogenicity and sexual differentiation in the human malaria parasite. Keystone symposium on lncRNA, Keystone Colorado, USA, January 2025
- 97 – Invited speaker: A Systems Biology Approach to Antimalarial Drug Discovery. Virtual Apicomplexan Parasites Research meeting, International, January 2025.
- 96 - Invited speaker: A Systems Biology Approach to Antimalarial Drug Discovery. UC Davis Seminar Serie. Department of Microbiology and Molecular Genetics. January 2025.
- 95 - Keynote speaker: A Systems Biology approach to understand drug mechanism of action. UCR faculty retreat, Riverside, December 2024.
- 94 - Invited speaker: The next generation of malaria treatment: A kalihinol analog that disrupts apicoplast function and vesicular trafficking in *P. falciparum*. Infectious Disease (ID)Week 2024. Los Angeles, October 2024 – **Gave 3 interviews/podcasts in person and online to different journalists after this talk.**
- 93 - Invited speaker: A Systems Biology Approach to Understand Gene Regulation in Plasmodium – from Chromatin Structure to RNA Binding Proteins. Seminar series, The Crick Institute, London, UK, June 2024.

- 92 - Invited Keynote speaker: A Systems Biology Approach to Understand Gene Regulation in Plasmodium – from Chromatin Structure to RNA Binding Proteins. Congress of the French Societies of Parasitology (SFP) and Medical Mycology (SFMM)) Angers, France from 3-5 June 2024.
- 91 - Invited speaker: A Systems Biology Approach to Understand Gene Regulation in Plasmodium – from Chromatin Structure to RNA Binding Proteins. ISBAM conference, Brest, France, May 2024.
- 90 - Plenary talk: A Kalihinol Analogue Disrupts Apicoplast Function and Vesicular Trafficking in *P. falciparum* Malaria. Seminar Series, University of Angers and University of West Britany, France May 2024.
- 89 – Invited Keynote speaker: A Systems Biology Approach to Understand Gene Regulation in Plasmodium – from Chromatin Structure to RNA Binding Proteins. World Malaria Day, April 25th, 2024. Johns Hopkins University, Baltimore. USA
- 88 - Invited Speaker: MED6-189: An effective Antimalarial Kalihinol Analog Targets Plasmodium falciparum Apicoplast and Membrane Biogenesis. Center for Molecular and Translational Medicine (MolMed) Symposium, February 2023.
- 87 – Invited Speaker: In Search of New Therapeutic Strategies to Combat malaria. Seminar Serie Cal State Polytechnic Univ. Pomona. CA, USA. February 2023.
- 86 – Invited Speaker: Emerging Role of lncRNA in *P. falciparum* gene regulation. Malaria Research Program Symposium, Division of Intramural Research, NIAID, NIH, October 2022, Washington DC, USA
- 85 – Invited Speaker: Gene regulation in malaria parasites: from chromatin structure to RNA binding proteins. seminar series, The University of Glasgow, UK September 2022.
- 84 – Speaker: A Systems Biology Approach to Understand Gene Regulation in apicomplexan parasites. The CMDB graduate symposium. UCR, September 2022
- 83 - Invited Moderator and Panelist: Incorporating Systems Biology to Vector-borne Pathogen Research: Current Landscape, Challenges and Opportunities. NIH/NIAID/DMID/PIPB workshop, May 2022.
- 82 – Invited Speaker: Gene regulation in malaria parasites: from chromatin structure to RNA binding proteins. Seminar Serie, College of Medicine, Drexel University, Philadelphia, PA USA, March 2022.
- 81 – Invited speaker: A Systems Biology Approach to Understand Gene Regulation in Infectious Diseases. City of Hope, CA, USA December 2021.
- 80 - Invited Speaker: A Systems Biology Approach to Understand Gene Regulation and pathogenicity in Malaria parasites. University of Virginia Seminar Series, Virginia, USA, September 2021.
- 79 - Invited Speaker: A Systems Biology Approach to Understand Gene Regulation and pathogenicity in Malaria parasites The Infectious Disease and Microbiome Seminar Series – Broad Institute, Harvard and MIT. April 2021.
- 78 – Invited speaker: The Role of lncRNAs in Malaria Parasites: Deciphering the Non-Coding Code of Pathogenicity and Sexual Differentiation. Women in Malaria (WiM) first conference. Spain March 2021
- 77 – Speaker: Genomics and Integrated Systems Biology in Apicomplexan parasites: A path to Control and Eradicate Parasitic Disease. MRB monthly meeting. UCR. March 2021.
- 76 – Speaker: Small RNA genomics of field mosquitoes to identify patterns of viral abundance and specific mosquito immune response. Pacific Southwest Center of Excellence in Vector- Borne Diseases. 4th Annual Meeting, University of California, Davis (Virtual Meeting). February 2021.
- 75 - Invited Speaker: A Systems Biology Approach to Understand Gene Regulation and pathogenicity in Malaria

- parasites. University of Pennsylvania, School of Veterinary Medicine seminar series. February 2021.
- 74 – Speaker: Small RNA genomics of field mosquitoes to identify patterns of viral abundance and specific mosquito immune response. CIDVR symposium January 2020, University of California, Riverside.
- 73 – Invited Speaker: A Systems Biology Approach to Understand Gene Regulation and pathogenicity in Malaria parasites. Western University seminar series, CA, USA. January 2021.
- 72 – Invited Speaker: A Systems Biology Approach to Understand Gene Regulation and pathogenicity in Malaria parasites. Department of Infectious Diseases and Cellular Biology seminar series, Stanford University of Georgia, GA, USA. January 2021.
- 71 - Invited Speaker: Comparative 3D Genome Organization in Apicomplexan Parasites. ABACBS2020, the annual conference of the Australian Society of Bioinformatics and Computational Biology (<https://www.abacbs.org/>). Virtual meeting, Australia, November 2020.
- 70 - Invited Speaker: A Systems Biology Approach to Understand Gene Regulation and pathogenicity in Malaria parasites. Department of Microbiology and Immunology seminar series, Stanford University School of Medicine, CA, USA. October 2020.
- 69 - Invited Speaker A Systems Biology Approach to Understand Gene Regulation and pathogenicity in Malaria parasites. Indiana University School of Medicine seminar series, Indiana, USA. September 2020.
- 68 - Speaker- The Role of LncRNAs in Malaria Parasites: Deciphering the Non-Coding Code of Pathogenicity and Sexual Differentiation. MAM 2020, Lorne, Australia, February 2020.
- 67 - Invited Speaker - Chair: Comparative 3D Genome Organization in Apicomplexan Parasites. Cold Spring Harbor Meeting, New York, USA – Genome Informatics November 2019.
- 66 - Invited Speaker: A Systems Biology Approach to Understand Gene Regulation and pathogenicity in Apicomplexan parasites, New York University, New York, USA –November 2019
- 65 - Invited Speaker: Comparative 3D Genome Organization in Apicomplexan Parasites The 18th Awaji International Forum on Infection and Immunity, Osaka, JAPAN, September 2019
- 64 – Invited Speaker: A Systems Biology Approach to Understand Gene Regulation and pathogenicity in Human Malaria parasites. Seminar series Department of Environmental Parasitology, Tokyo Medical and Dental University (TMDU), Tokyo 113-8510 Japan. September 2019.
- 63 - Speaker: A Systems Biology Approach to Understand Gene Regulation and pathogenicity in Human Malaria parasites. University of Notre Dame, Indiana, Department Seminar series. April 2019.
- 62 – Speaker: A Systems Biology Approach to Understand Gene Regulation in Human Malaria Parasites" PacVac Seminar series, February 2019, UCR.
- 61 – Speaker: Insight into Vector-Borne Diseases – A Systems Biology Approach. Pacific Southwest Center of Excellence in Vector Borne Diseases. 2nd Annual Progress Meeting. University of California Davis, January 2019.
- 60 – Speaker: Comparative 3D Genome Organization in Apicomplexan Parasites link genome organization and gene expression in more virulent pathogens. Late Breaker Abstract. American Society of Tropical Medicine and Hygiene. 67th Annual Meeting. New Orleans October 2018.
- 59 - Invited Speaker: Chromatin Structure and Gene Regulation in Malaria and Apicomplexan parasites. Departmental seminar series, La Sierra University, Riverside, CA. USA. September 2018.
- 58 – Invited Speaker: Changes in Genome Organization of Parasites. International Conference on Systems Biology of Human Diseases, June 2018, Los Angeles, CA, USA.

- 57 – Invited Speaker: Multiple dimensions of gene regulation in the malaria parasites, Microbiology Department, Karolinska Institutet, Sweden, June 2017.
- 56 - Speaker: Let's talk about sex - and sex chromosomes - in human malaria parasites. CIDVR Vector Symposium, UCR, applying advance synthetic biology to engineer the fate of species. May 2017.
- 55 – Invited Speaker: Taking a Closer Look at Human parasites: From Basic Science to Drug Discovery! Novartis Institutes for BioMedical Research, February 2017.
- 54 – Invited Speaker: Multiple dimensions of epigenetic gene regulation in malaria parasites - Transcriptional regulation via histone modifications, nucleosome positioning and nuclear architecture. Center for big Data, UCR, December 2016.
- 53 – Speaker: New approaches to examining antigenic variation in multiple *Plasmodium* species and in the course of infections in humans, non-human primates and mosquitoes. American Society of Tropical Medicine and Hygiene 65th Annual Meeting, Atlanta, Georgia USA, Nov 2016.
- 52 - Speaker: The three-dimensional structure of *Plasmodium* genomes acts as a master gene regulator controlling pathogenicity, sexual differentiation, and transmission. Molecular approaches to Malaria, Lorne, Victoria, Australia. 2016.
- 51 – Invited Speaker: A system Biology approach to understand the biology of the human malaria parasite *P. Falciparum*. City of Hope, Department of Molecular Immunology - Jan 2016.
- 50 – Speaker: Association between chromatin structure, gene regulation and pathogenicity in the human malaria parasite; *Plasmodium falciparum*. Gordon Conference (malaria), Spain, July 2015.
- 49 - Speaker: Association between chromatin structure, gene regulation and pathogenicity in the human malaria parasite; *Plasmodium falciparum*. Keystone meeting (Epigenomics), Keystone, Colorado April 2015.
- 48 – Speaker: Three-dimensional modeling of the *P. falciparum* genome during the erythrocytic cycle: A major organizational role of virulence genes in the genome architecture. Gordon conference (GRC) Biology of Host-Parasite Interactions" Salve Regina University in New Port RI, USA, June 2014.
- 47 – Speaker: The three-dimensional architecture of the *Plasmodium* genome throughout the asexual cell cycle. World Malaria Day Symposium. April 25, 2014. UC Berkley/ Zagaya.
- 46 – Speaker: The three-dimensional architecture of the *Plasmodium* genome throughout the asexual cell cycle. 4th Annual Southern California Systems Biology Conference (SoCalSysBio), Irvine, CA, USA, January 2014.
- 45- Invited Speaker: A system Biology approach to understand the biology of the human malaria parasite *P. Falciparum*. Boston College, January 2014.
- 44 – Speaker: The Spatial Organization of the *P. falciparum* genome. Gordon Conference, Italy August 2013.
- 43 – Invited Speaker: Seq Technologies to Understand the Human Malaria Parasite Infectious Cycle X- GENCongress, San Diego March 2013.
- 42 – Invited Speaker: Epigenomics and Virulence in the human malaria parasites: a system biology approach to understand the parasite infection cycle, Paul-Ehrlich-Institut Langen, Germany, November 2012.
- 41 – Invited speaker: Epigenmics and Virulence in the human malaria parasite. A system Biology approach to understand the parasite Infectious cycle. International symposium on Proteomics Beyond IDs. Pune India, November 2012.
- 40 - Invited Speaker: Using Next-Generation Sequencing technology To Understand the Parasite Infection Cycle.

Illumina User meeting. Los Angeles, October 2011.

- 39 - Invited Speaker: Epigenomics and Virulence in the human malaria parasites: a system biology approach to understand the parasite infection cycle. UCLA, Sept 2011.
- 38 - Invited Speaker: Epigenomics and Virulence in the human malaria parasites: a system biology approach to understand the parasite infection cycle. USC, August 2011.
- 37 - Speaker: Epigenomics and Virulence in the human malaria parasites: a system biology approach to understand the parasite infection cycle. Gordon Conference, Italy August 2011.
- 36 - Invited speaker. Epigenomics and Virulence in the human malaria parasites: a system biology approach to understand the parasite infection cycle. California State University, Long Beach. March 2011.
- 35 - Invited speaker. Epigenomics and Virulence in the human malaria parasites: a system biology approach to understand the parasite infection cycle. Southern California System Biology Conference. University of California Irvine, January 2011.
- 34 - Invited Speaker. Genome-wide nucleosome positioning and DNA methylation in the human malaria parasite: Insights into differentiation and virulence. University of Florida November 2010.
- 33 - Speaker. Genome-wide nucleosome positioning and DNA methylation in the human malaria parasite: Insights into differentiation and virulence. International Conference on Intelligent System for Molecular Biology. Official Meeting of the international Society of Computational Biology. Boston, MA, USA, July 2010.
- 32 - Invited Speaker. Genome-wide nucleosome positioning and DNA methylation in the human malaria parasite: Insights into differentiation and virulence. Biology of Host parasite interaction, Gordon Conference, Salve Regina University, USA, RI, June 2010.
- 31 - Speaker. Malaria In search of new strategies to combat the disease: A genomics approach. International 2010 CDVR Symposium. Facing the Challenge of Vector-borne Disease in the 21st Century. California, USA, March 2010.
- 30 - Invited Keynote Speaker. Unravelling Gene Regulation Mechanisms in the Human Malaria Parasite: Insights Into Chromatin Remodeling. International Society for Computational Biology (ISCB) and Africa ASBCB Conference on Bioinformatics of Infectious Diseases. Bamako, Mali November 2009.
- 29 - Invited speaker. Mapping chromatin structure and nucleosome fluctuation by massive parallel sequencing: A Genomic-based approach to understand the Malaria parasite infectious cycle. Illumina Symposium, University of California, Riverside, USA November 2009.
- 28 - Invited speaker. Mapping Chromatin Structure and Nucleosome Fluctuation by Massive Parallel Sequencing: A Genomic Approach to Understand the Human Malaria parasite Infectious cycle. Seminar Series, Institute for Genomics and Bioinformatics, University of California Irvine, California, USA, November 2009.
- 27 - Invited Speaker. Malaria: In search of new strategies to combat the disease. Model United Nations, University of San Diego, USA Presented on 10/17/2009.
- 26 - Invited speaker. The ubiquitin proteasome system as a new therapeutic approach against the human malaria parasite. The Ubiquitin Drug Discovery and Diagnostics 2009 conference, Philadelphia, USA presented on 10/13/2009.
- 25 - Invited Speaker. Mapping Chromatin Structure and Nucleosome Fluctuation by Massive Parallel Sequencing: A Genomic Approach to Understand the Human Malaria Parasite. 5th Annual ChemGen IGERT Retreat, Lake Arrowhead, USA Presented on 10/03/2009.
- 24 - Invited speaker. Mapping chromatin structure and nucleosome fluctuation by massive parallel sequencing: A Genomic-based approach to understand the Malaria parasite infectious cycle. Illumina Latin America Genomics Symposium 2009 Cuernavaca Presented on 08/26/2009; Mexico City (UNAM) Presented on 08/27/2009 and

Mexico City (Inmegen).

- 23 - Invited speaker. Malaria, in search of New Strategies to combat the disease. University of South California, USA Presented on 08/03/2009.
- 22 - Invited speaker. Binary Alterations of Chromatin Structure Control a Rigid transcriptional device in the Human Malaria Parasite. FABS 2009, French American Biotechnology Symposium. Lyon France 2009. Presented on 03/31/2009.
- 21 - Invited keynote speaker. Mapping chromatin structure controlling the human malaria parasite infection cycle. Bioinformatics of Plasmodium falciparum 2009. Paris France 2009, presented on 01/21/2009.
- 20 - Speaker. Mapping chromatin structure and nucleosome fluctuation by massive parallel sequencing: A genomic-based approach to understand the malaria parasite infection cycle UCSD Next-Gen Sequencing 2008 Meeting, San Diego, USA presented on 11/2008.
- 19 - Invited speaker. Mapping chromatin structure and nucleosome fluctuation by massive parallel sequencing: A genomic-based approach to understand the malaria parasite infection cycle. IBC's Discovery to Diagnostics 2008, San Diego, USA presented on 09/2008.
- 18 - Invited speaker The ubiquitin proteasome system as a new therapeutic approach for the treatment of the human malaria parasite. Seminar series in Infectious Diseases. University of Bordeaux II, France. Bordeaux. Presented on 07/2008.
- 17 - Invited speaker, Salinosporamides as broad-spectrum antimalarial agents. Medicines for Malaria Venture. MMV/WHO. Philadelphia. Presented on 07/2008.
- 16 - Invited speaker. Malaria and drug discovery; An integrated approach. 33rd Annual La Jolla Immunology Conference. The Salk Institute, La Jolla, USA. Presented on 10/2007.
- 15 - Invited speaker. The malaria UPS: A new therapeutic approach. Proteases Workshop. Palm Canyon Resort, Borrego Springs. Presented on 04/2007.
- 14 - Invited speaker Natural products as new Potential Antimalarials. UCSD. La Jolla. Presented on 04/2007.
- 13 - Invited speaker. Malaria and drug discovery; an integrated approach. Emerging challenges in microbiology & immunology. University of California, Davis. Presented on 01/2007.
- 12 - Invited speaker. Variation in response to drugs/perturbogens/immunity. Malaria think-tank. MIT. Broad Institute, MIT, Cambridge, MA. Presented on 09/2006.
- 11 - Invited speaker: Functional Genomics of the malaria parasite. Montreal Microarray Symposium, 4th edition, Biotechnology Research Institute, Montreal, Canada , March 2005.
- 10 - Invited speaker. Functional Genomics of the malaria parasite. The seven China-Novartis symposium on infectious Diseases. Chengdu, China (November 2004).
- 9 - Functional genomics of the antimalarial choline analogue T4 on *Plasmodium falciparum* reveal potential therapeutic targets. Molecular Parasitology meeting Woods Hole, Ma, USA (September 2004).
- 8 - Invited speaker. Functional genomics of Malaria. 7th International Meeting of the Microarray Gene Expression Data Society. Toronto, Canada. (September 2004).
- 7 - Invited speaker. Functional genomics of *Plasmodium falciparum*: A new approach for identifying therapeutic targets against malaria. 42^{ème} Réunion du Groupement des Protistologues de Langue Française Montpellier, France. (May 2004).

- 6 - Invited speaker. Functional genomics of *Plasmodium falciparum*: A powerful approach to find new therapeutic targets against Malaria. Department Genetics Cell Biology and Anatomy, Nebraska Medical Center Omaha, USA, (April 2004).
- 5 - Invited speaker. Functional genomics of *Plasmodium falciparum*: A powerful approach to find new therapeutic targets against Malaria. 2nd International Symposium on Social Responsibility and Tropical Diseases., Sao Paulo, Brazil (February 2004).
- 4 - Highly-parallel discovery of gene function by expression profiling of the malaria parasite life cycle. XIV Molecular Parasitology meeting Woods Hole, Ma, USA (September 2003).
- 3 - A genome-wide study using high-density oligonucleotide arrays. XIII Molecular Parasitology meeting Woods Hole, Ma, USA (September 2002).
- 2 - Development of an *in vitro* inhibition essay for the CDKs of *Plasmodium falciparum* using chemical inhibitors of cyclin-dependant kinases. Second Symposium of the INCO-DC network on *Plasmodium falciparum* differentiation. Johannesburg, South Africa, (March 1999).
- 1 - Highly divergent types of *Pneumocystis carinii* infected ferret lungs. Fifth International Workshop on opportunistic protists, Lille, France (September 1997).

POSTERS

- 80 - Li Z., Lonardi S., Le Roch KG. Integrating Epigenetic and Chromatin Features to Improve Genomic Annotation in the Human Malaria Parasite, *Plasmodium falciparum*. Molecular Parasitology Meeting, Woods Hole, MA, USA, Sept 2026.
- 79 - Tseng G., Li Z., Nguyen L., Swanson S.K., Falla A., Flerida A. Pasaje C., Esherrick L. Prudhomme J., Niles J.C, Florens L., Absalon S., Hollin T. and Le Roch K.G. A Mitochondrial RAP Protein Network Regulates RNA Metabolism and Parasite Development in *Plasmodium falciparum*. Molecular Parasitology Meeting, Woods Hole, MA, USA, Sept 2026.
- 78 - Ciampossin L., Xu S., Li Z., Nguyen L., Noble W. and Le Roch K.G. Mapping lncRNA–chromatin interactions in *Plasmodium falciparum* reveals regulatory RNA contacts associated with gene expression, antigenic variation, and sexual differentiation. Molecular Parasitology Meeting, Woods Hole, MA, USA, Sept 2026.
- 77 - Tseng G., Li Z., Nguyen L., Falla A., Flerida A. Pasaje C, Niles JC., Florens L., Hollin T., and Le Roch KG. Unraveling Mitochondrial Regulation by RAP Proteins in the human Malaria Parasite, *Plasmodium falciparum*. Annual Southern California Eukaryotic Pathogen Symposium, UC Riverside, CA, USA. November 2025.
- 76 - Neal A., Tseng G., Li Z., Nguyen L., Banks C., Florens L. Le Roch K.G.. Defining the role of the nuclear lamina-like protein PfCRWN in chromatin organization of *Plasmodium falciparum*. Annual Southern California Eukaryotic Pathogen Symposium, UC Riverside, CA, USA. November 2025.
- 75 - Li, Z. , Lonardi S., and Le Roch KG. Joint Supervised/Unsupervised Epigenomics for Genome Annotation and lncRNA Discovery in *P. falciparum*. Annual Southern California Eukaryotic Pathogen Symposium, UC Riverside, CA, USA. November 2025.
- 74 - Zehao Li, Lonardi S. and Le Roch KG. Gene prediction using machine learning and epigenetic features in *Plasmodium falciparum*. Annual Southern California Eukaryotic Pathogen Symposium, UC Riverside, CA, USA. November 2024.
- 73 - Loic Ciampossin, Arzu Ulu, Todd Lenz, Steven Abel, Sandeep Srivastava, Emma Wilson, Michael White, and Karine Le Roch. Host-cell dependent epigenetic profiles associated with differential expression and survival outcomes for unadapted *T. gondii* parasites. Annual Southern California Eukaryotic Pathogen Symposium, UC Riverside, CA, USA. November 2024.

- 72 - Loic Ciampossin, Arzu Ulu, Todd Lenz, Steven Abel, Sandeep Srivastava, Emma Wilson, Michael White, and Karine Le Roch. Host-cell dependent epigenetic profiles associated with differential expression and survival outcomes for unadapted *T. gondii* parasites. Molecular Parasitology Meeting, Woods Hole, USA, Sept 2024.
- 71 - Chahine Z, Gupta M, Lenz T, Hollin T, Abel S, Banks C, Saraf A, Prudhomme J, Florens L, Le Roch KG. PfMORC protein regulates chromatin accessibility and transcriptional repression in the human malaria parasite, *P. falciparum*. Gordon Research Conference. 2024 Biology of Host-Parasite Interactions. Rhode Island, USA, June 2024.
- 70 - Abel SM, Hong Z, Williams D, Ireri S, Brown MQ, Su T, Hung KY, Henke JA, Barton JP, Le Roch KG. Small RNA sequencing of field *Culex* mosquitoes identifies patterns of viral infection and the mosquito immune response. Gordon Research Conference. 2024 Genetic Biocontrol. Barcelona, Spain, May 2024.
- 69 - Amit Kumar Subudhi AK, Green JL, Satyam R, Lenz T, Salunke RP, Shuaib M, Isaiglou I, Abel S, Gupta M, Esau L, Ferguson DJP, Gupta I, Le Roch KG, Holder AA, Pain A. A *Plasmodium*-specific AP2-P regulates multiple pathogenicity factors with dual expression peaks during the IDC. Molecular Parasitology Meeting, Woods Hole, USA, Sept 2023.
- 68 - Srivastava S, Vizcarra EA, Goerner AL, Ulu A, Hong DD, Bergersen KV, Brooks K, Le Roch KG, Wilson EH, White MW. New methods for the study of bradyzoite recrudescence. Molecular Parasitology Meeting, Woods Hole, USA, Sept 2023.
- 67 - Chahine Z, Prudhomme J, Abel S, Renard I, Chung J.H, Barnes G.L, Daub M.E, Choi J., Pratap V, Pal A, Kirkwood J, Saraf A, Banks C.A.S, Camino I, Castaneda P, Cuevas MC, De Mercado-Arnanz J, Fernandez- Alvaro E, Garcia-Perez A, Ibarz N, Viera-Morilla S, Bei AK, Florens L, Ben Mamoun C, Vanderwal C.D. and Le Roch K.G.. MED6-189: An effective Antimalarial Kalihinol Analog Targets *Plasmodium falciparum* Apicoplast and Membrane Biogenesis. Molecular Parasitology Meeting, Woods Hole, USA Sept 2023.
- 66 - Batugedara G, Lu XM, Abel S, Chahine Z, Hristov B, Williams D, Hollin T, Wang T, Cort A, Lenz T, Thompson T, Prudhomme J, Tripathi AK, Xu G, Cudini J, Dogga D, Lawniczka M.⁴, Noble WS, Sinnis P. and Le Roch KG. Deciphering the non-coding code of pathogenicity and sexual differentiation in the human malaria parasite. Keystone meeting, Victoria, Canada, March 2023.
- 65 - Hollin T, Abel S, Hales K, Banks C, Florens L, Noble W.S. and Le Roch KG. Identification of RNA-Dependent Proteins by Density Gradient Ultracentrifugation to discover RNA-Protein Complexes in the human malaria parasite, *Plasmodium falciparum*. Molecular Parasitology Meeting, Woods Hole, USA Sept 2022.
- 64 - Gupta M, Abel SM, Lenz T, Chahine Z, Saraf S, Florens L, Prudhomme J. and Le Roch KG. Unraveling the genome wide distribution of *Plasmodium falciparum* MORC protein. Molecular Parasitology Meeting, Woods Hole, USA Sept 2022.
- 63 - Hollin T, Abel S, Hales K, Banks C, Florens L, Noble W.S. and Le Roch KG. Identification of RNA-Dependent Proteins by Density Gradient Ultracentrifugation to discover RNA-Protein Complexes in the human malaria parasite, *Plasmodium falciparum*. RNA meeting, June 2022.
- 62 - Gupta M, Abel SM, Chahine Z, Prudhomme J, Le Roch KG. Unraveling the genome wide distribution of *Plasmodium falciparum* MORC protein. 11th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA. October 2021. **Best Poster Award**.
- 61 - Chahine Z, Prudhomme J, Daub ME, Ben Mamoun C, Vanderwal CD and Le Roch KG. A Multi-omics Approach to Understand the Mode of Action of a Kalihinol Analogue, a Potent New Antimalarial against *Plasmodium falciparum*. Molecular Parasitology Meeting, Woods Hole, USA Sept 2021.
- 60 - Abel SM, Hong Z, Williams D, Ireri S, Brown MQ, Su T, Hung KY, Henke JA, Barton JP, and Le Roch KG. Small RNA sequencing of field *Culex* mosquitoes identifies patterns of viral abundances and the mosquito immune response. 10th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA. October 2020.

- 59 - Hollin T., Abel S., Falla A., Pasaje F., Kirkwood KG., Saraf A., Prudhomme J., Florens L., Niles J., and Le Roch KG. Functional characterization of two RAP proteins essential for the mitochondrial biogenesis of *P. falciparum* asexual stages. Molecular Parasitology Meeting, Virtual meeting, USA, Sept 2020.
- 58 - Chahine Z, Prudhomme J, Daub ME, Ben Mamoun C, Vanderwal CD and Le Roch KG. A Multi-omics Approach to Understand the Mode of Action of a Kalihinol Analogue, a Potent New Antimalarial against *Plasmodium falciparum*. Molecular Parasitology Meeting, Virtual meeting, USA Sept 2020.
- 57- Abel S., Williams D., Ileri S., Brown M., Su S., Hung K, Henke J. and Le Roch KG.. A deep investigation into the virome of Culex mosquitoes in California using small RNA sequencing. The Mosquito and Vector Control Association of California (MVCAC) - 88th Annual Conference San Diego, January 26-28, 2020.
- 56- Chahine, Z., Prudhomme, J., Daub, ME., Ben Mamoun, C., Vanderwal, CD. and Le Roch KG. Targeting the Human Malaria Parasite *P. falciparum* with Kalihinol Analogues. 9th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA. November 2019.
- 55 - Xia, J., Bainbridge, R., Venkat, A., Ay, F., Le Roch KG. and Boyle JP.. Revising the karyotype of *Toxoplasma gondii* and synteny with *Neospora caninum* using single molecule sequencing. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2019.
- 54 - Pasaje, CFA., Hollin, T., Abel, S., Lukens, AK., Summers, RL., Vanaerschot, M., Murithi, J., Ruth, MR., Otilie, S., Le Roch, KG., Wirth, DF., Fidock, DA., Winzeler, EA., Niles, JC.. Characterization of a *Plasmodium falciparum* acetyl-CoA synthetase and targeted discovery of inhibitors using functional genomics. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2019.
- 53 - Hollin, T., Prudhomme, J., Pasaje, CF., Falla, A., Saraf, A., Florens, L., Niles, JC. and Le Roch, KG. The role of RNA-binding proteins abundant in Apicomplexans (RAPs) in mitochondrial biogenesis of the human malaria parasite, *P. falciparum*. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2019.
- 52- Chahine, Z., Prudhomme, J., Daub, ME., Ben Mamoun, C., Vanderwal, CD. and Le Roch KG. Targeting the Human Malaria Parasite *P. falciparum* with Kalihinol Analogues. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2019.
- 51- Bunnik E.M., Venkat A., Shao J., McGovern K.E., Batugedara G., Worth D., Prudhomme J., Lapp S.A., Andolina C., Ross L.S., Lawres L., Brady D., Sinnis P., Nosten F., Fidock D.A., Wilson A.E, Tewari R., Galinski M.R., Ben Mamoun C., Ay F., and Le Roch K.G. Comparative 3D Genome Organization in Apicomplexan Parasites. 7th International Conference on *Plasmodium vivax* Research (ICPvR)" Institute Pasteur, Paris, June 2019.
- 50 - Pandey, R., Abel, A., Boucher, M., Wall, RJ., Zeeshan, M., ERea, E., Freville, A., Lu, XM., Brady, D., Daniel, E., Stanway, RR., Wheatley, S., Batugedara, G., Hollin, T., Bottrill, AR., Gupta, D., Holder, AA., Le Roch KG. and Tewari R.. *Plasmodium* condensin core subunits (SMC2/SMC4) mediate atypical mitosis and are essential for parasite proliferation and transmission. BioMalpar. Germany 2019.
- 49 - Mohammad Zeeshan, David J. P. Ferguson, Tobias Mourier, Steven Abel, Edward Rea, Declan Brady, Emily Daniel, Michael Delves, Sue Vaughan, Arnab Pain, Anthony A. Holder, Karine Le Roch, Carolyn A. Moores and Rita Tewari. *Plasmodium* Kinesin-8B is a male gametocyte-specific kinesin that is essential for axoneme formation during male gametogenesis. BioMalpar. Heidelberg, Germany May 2019.
- 48 - Bunnik E.M., Venkat A., Shao J., McGovern K.E., Batugedara G., Worth D., Prudhomme J., Lapp S.A., Andolina C., Ross L.S., Lawres L., Brady D., Sinnis P., Nosten F., Fidock D.A., Wilson A.E, Tewari R., Galinski M.R., Ben Mamoun C., Ay F., and Le Roch K.G. Comparative 3D Genome Organization in Apicomplexan Parasites. Keystone Symposia Conference. 3D Genome: Gene Regulation and Disease. Fairmont Banff Springs, Banff, Alberta, Canada. March 2019
- 47 - Batugedara, XM. Lu, S. Abel, T. Lenz, D. Williams, A. Cort, T. Wang, J. Prudhomme and KG. Le Roch. The Role of LncRNAs in Malaria Parasites: Deciphering the Non-Coding Code of Pathogenicity and Sexual Differentiation.

Keystone meeting on Long Non-Coding RNAs: From Molecular Mechanism to Functional Genetics. Whistler British Columbia, Canada February 2019.

- 46 - Bunnik E.M., Venkat A., Shao J., McGovern K.E., Batugedara G., Worth D., Prudhomme J., Lapp S.A., Andolina C., Ross L.S., Lawres L., Brady D., Sinnis P., Nosten F., Fidock D.A., Wilson A.E, Tewari R., Galinski M.R., Ben Mamoun C., Ay F., and Le Roch K.G. Comparative 3D Genome Organization in Apicomplexan Parasites. 4DN- ASCB Satellite Meeting. San Diego California. December 2018.
- 45 - Mohammad Zeeshan, Edward Rea, Declan Brady, Emilie Daniel, Steven Abel, Anthony Holder, Carolyn Moores, Karine Le Roch and Rita Tewari. *Plasmodium* Kinesin 8, is localized on mitotic spindles and is required for parasite proliferation and transmission during mosquito stages. EMBO workshop on Molecular advances and parasite strategies in host infection. Les Embiez Island, France. Sept 2018
- 44- Campelo R, Tong X, Xie W, Batugedara G, Cook KB, Orchard LM, Llinas M, Noble WS, Le Roch KG, Patel DJ, Kafsack BK. Homeo Domain-like Protein 1 regulates chromatin structure and gene expression during the early stages of *P. falciparum* sexual development. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2018.
- 43- Gayani Batugedara, Desiree Williams, Xueqing M. Lu, Anita Saraf, Anthony Cort, Steven Abel, Jacques Prudhomme, Laurence Florens, Evelien M. Bunnik and Karine G. Le Roch. The chromatin-bound proteome of the human malaria parasite, and functional characterization of a novel plant-like protein analogous to the animal nuclear lamina. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2018.
- 42 – Bunnik E.M., Cook K.B., Varoquaux N., Batugedara G., Prudhomme G., Shi L., Andolina C., Ross L.S., Brady D., Fidock A.D., Nosten F., Tewari R., Sinnis P., Ay F., Vert JP., Noble WS., Le Roch K.G.. Genome organization as regulator of transcription during the transmission stages of *Plasmodium* parasites. Malaria Gordon Conference, Switzerland, July 2017.
- 41- Batugedara G., Saraf A., Lu XM., Prudhomme J., Florens L., Bunnik EM, and Le Roch KG.. Discovery of protein complexes that control the chromatin structure of the human malaria parasite. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2016.
- 40 - Xueqing Lu, Gayani Batugedara, Evelien Bunnik, Jacques Prudhomme, and Karine G. Le Roch. Nascent RNA sequencing reveals transcriptional regulation mechanisms in the human malaria parasite life cycle. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2016.
- 39 – Bunnik EM, Cook K, Varoquaux N., Prudhomme J., Ross LS., Shi L., Andolina C., Voss T., Nosten F., Fidock D., Sinnis P., Ay F., Vert JP, Noble WS and Le Roch KG. The three-dimensional structure of *Plasmodium* genomes acts as a master gene regulator controlling pathogenicity, sexual differentiation, and transmission CSHL Meeting: Nuclear Organization & Function. NY, (May 2016).
- 38 – Bunnik EM, Batugedara G., Saraf A., Prudhomme J., Florens L., and Le Roch KG . *A catalog of RNA-binding proteins in Plasmodium falciparum*. Molecular Approaches to Malaria, Lorne, VIC, Australia. (February 2016).
- 37 - Bunnik E., Farhat Ay, Varoquaux N, Bol S., Prudhomme J., Vert JP., Noble WS. and Le Roch K. The three- dimensional architecture of the *Plasmodium* genome throughout the asexual cell cycle. Gordon Conference. Biology of Host parasite interactions. Salve Regina University, Newport, RI, USA (June 2014).
- 36 - Bunnik E., Farhat Ay, Varoquaux N, Bol S., Prudhomme J., Vert JP., Noble WS. and Le Roch K. Three- dimensional modelling of the *P. falciparum* genome during the erythrocytic cycle reveals a strong connection between genome architecture and gene expression. Systems Biology Cold Spring Harbor, NY, USA (March 2014).
- 35 - Bunnik E., Polishko A., Prudhomme J., Ponts N., Gill SS., Lonardi S., Le Roch K. DNA-encoded nucleosome occupancy regulates transcription levels in the human malaria parasite *Plasmodium falciparum*. Systems Biology: Cold Spring Harbor, NY, USA (March 2014).
- 34 - Bunnik E., Farhat Ay, Varoquaux N, Bol S., Prudhomme J., Vert JP., Noble WS. and Le Roch K. The dynamic 3D model of the *P. falciparum* genome reveals the role of genome architecture in regulating gene expression. Keystone

conference Transcriptional Regulation and Cancer Epigenetics, Santa Fe, NM, USA (February 2014).

- 33 - Bunnik E., Farhat Ay, Varoquaux N, Bol S., Prudhomme J., Vert JP., Noble WS. and Le Roch K. The three- dimensional architecture of the *Plasmodium falciparum* genome throughout the asexual cell cycle. Molecular parasitology meeting, Woods Hole, MA, Sept 2013. (Best poster award).
- 32 - Bunnik E., Polishko A., Prudhomme J., Ponts N., Gill SS., Lonardi S., Le Roch K. DNA-encoded nucleosome occupancy regulates transcription levels in the human malaria parasite *Plasmodium falciparum*. Molecular parasitology meeting, Woods Hole, MA, Sept 2013.
- 31 - Bunnik E., Polishko A., Prudhomme J., Ponts N., Gill SS., Lonardi S., Le Roch K. Analysis of nucleosome positioning in *P. falciparum* using a MAINE, FAIRE and ChIP-Seq approach in combination with a novel accurate nucleosome positioning method: PuFFiN. Malaria Keystone meeting New Orleans, January 2013.
- 30 - Noble W., Kundaje A. and Le Roch K. Meta-analysis of chromatin architecture and epigenetic assays in *Plasmodium*. Infectious Disease Genomics and Global health meeting, Cambridge, UK 2012.
- 29 - Cervantes S., Prudhomme J., Ponts N. and Le Roch K. The role of autophagy in the human malaria parasite life cycle. Gordon Conference Autophagy, April 2012.
- 28 - Cervantes S., Prudhomme J., Ponts N. and Le Roch K. The role of autophagy in the human malaria parasite life cycle Molecular parasitology meeting, Woods Hole, MA, Sept 2012
- 27 - Ponts N., Harris E.Y., Chung DW., Prudhomme J., Saraf S., Florens L., Lonardi S and Le Roch K.G. An Integrated View of the Human Malaria Parasite's Epigenome. Molecular parasitology meeting. Woods Hole, MA, USA, September 2011.
- 26 - Saraf S., Cervantes S., Washburn S., Le Roch K. and Laurence Florens Mapping the chromatin structure controlling life cycle progression of *Plasmodium falciparum*. 58th ASMS Conference on Mass Spectrometry, Salt Lake City, Utah, USA. Presented on 05/27/2010.
- 25 - Cervantes M., Cervantes S., Burton M., Prudhomme J., and Karine Le Roch. High content live cell imaging of *Plasmodium falciparum* using RNA probes for high-throughput antimalarial drug discovery. 2010 UCR Annual Symposium for Undergraduate Research, Presented on 05/07/2010.
- 24 - Ponts N., Harris RY., Elisandra Rodrigues Prudhomme J., Hicks G., Lonardi S. and Le Roch KG. DNA methylation in the human malaria parasite. San Diego Consortium for Systems Biology 2010. Presented on 05/21/ 2010.
- 23 - Ponts N., Harris RY., Elisandra Rodrigues Prudhomme J., Hicks G., Lonardi S. and Le Roch KG. DNA methylation in the human malaria parasite. Illumina user meeting, Nappa Valley, California. Presented on 04/04/ 2010.
- 22 - Chung D., Prudhomme J. and Le Roch K. Elucidating the ubiquitination machinery within the human malaria parasite, *Plasmodium falciparum*. International 2010 CDVR Symposium. Facing the Challenge of Vector- borne Disease in the 21st Century. California, USA, March 2010.
- 21 - Bruton M., Cervantes S., Prudhomme J., Carter D., Gopi KG., Li Q., Chang YT. and Le Roch KG: High-content live cell imaging with RNA probes: advancements in high-throughput antimalarial drug discovery. International 2010 CDVR Symposium. Facing the Challenge of Vector-borne Disease in the 21st Century. California, USA, March 2010.
- 20 - Cervantes M., Cervantes S., Prudhomme J. and Le Roch K: High content live cell imaging of *Plasmodium falciparum* using RNA probes for high-throughput antimalarial drug discovery. CAMP Symposium, Irvine, USA. Presented on 02/2010.
- 19 - Cervantes S., Prudhomme J., Carter D., Gopi KG., Li Q., Chang YT. and Le Roch KG: High-content live cell imaging with RNA probes: advancements in high-throughput antimalarial drug discovery. Molecular Parasitology meeting Woods Hole, MA, USA. Presented on 09/15/2009.
- 18 - Chung D., Prudhomme J. and Le Roch K. Elucidating the ubiquitination machinery within the human malaria

- parasite, *Plasmodium falciparum*. Molecular Parasitology meeting Woods Hole, USA presented on 09/14/2009.
- 17 - Ponts N., Harris E., Prudhomme J., Hicks G., Hardiman G., Lonardi S. and Le Roch K. Mapping chromatin structure and nucleosome fluctuation by massive parallel sequencing: A Genomic-based approach to understand the Malaria parasite infectious cycle. Gordon Conference, Oxford September 2009.
 - 16 - Cervantes M., Cervantes S., Burton M., Prudhomme J., and Karine Le Roch. High content live cell imaging of *Plasmodium falciparum* using RNA probes for high-throughput antimalarial drug discovery. MARCU Symposium, 2009 UCR. Presented on 08/28/2009.
 - 15 - Saraf A., Cervantes S., Florens L., and Le Roch K. Mapping the chromatin structure controlling life cycle progression of the human malaria parasite. Ninth International Symposium on Mass Spectrometry in the Health & Life Sciences: Molecular & Cellular Proteomics. San Francisco, USA presented on 08/2009.
 - 14 - Ponts N., Harris EY, Prudhomme J, Wick I, Eckhardt C, Hicks G, Hardiman G., Lonardi S. and Le Roch K. Mapping chromatin structure and nucleosome fluctuation by massive parallel sequencing: A genomic-based approach to understand the malaria parasite infection cycle. UCSD Illumina meeting, April 2009.
 - 13 - Chung D., Prudhomme J and Le Roch K. Elucidating the ubiquitination machinery within the *Plasmodium falciparum* apicoplast for antimalarial drug targeting. Molecular Parasitology meeting Woods Hole, USA presented on 09/24/2008.
 - 12 - Ponts N., Yang J., Chung DW., Prudhomme J., Girke T. and Le Roch K. Deciphering the ubiquitin-mediated pathway in malaria: a potential strategy to interfere with parasite virulence. FABS. French Marican Biotechnology Symposium. The Salk Institute, La Jolla, USA. Presented on 04/2008.
 - 11 - Ponts N., Yang J., Chung DW., Prudhomme J., Girke T. and Le Roch K The ubiquitin proteasome system as a new therapeutic approach for the treatment of the human malaria parasite. Molecular Approach to Malaria. Lorne, Australia. Presented on 02/2008.
 - 10 - Ponts N., Yang J., Chung DW., Prudhomme J., Girke T. and Le Roch K. The ubiquitin-proteasome system and the erythrocytic cell cycle progression of the human malaria parasite, *Plasmodium falciparum*. Molecular Parasitology Meeting. Woods Hole (MA). Presented on 09/2007.
 - 9 - Prudhomme J., McDaniel E., Ponts N., Bertani S., Fenical W. Jensen P, and Le Roch K. Novel Anti-Malarial Discovery and the Fruits of Our Bountiful Seas. Molecular Parasitology Meeting. Woods Hole (MA). Presented on 09/2007.
 - 8 - Yang J., Prudhomme J. and Le Roch K. Ubiquitin/Proteasome system: A new class of targets for the development of novel drugs against malaria and Apicomplexan parasites. Keystone. Big Sky, Montana. Presented on 02/2007.
 - 7 - Le Roch K. Comparative genome analysis of the ubiquitin /proteasome system in Apicomplexan parasites. Molecular Parasitology meeting. Woods Hole (MA). Presented on 09/2006.
 - 6 - Le Roch K., Johnson J.R., Ahiboh H., Plouffe D. Henson K., Zhou Y., Ben Mamoun C., Yates J.R, Vial H., and E. Winzeler. Genomic profiling of the malaria Parasite response to choline analog reveals drug mechanism of action. Keystone Symposia, Taos New Mexico, USA, (February-March 2006).
 - 5 - Le Roch K, Ghislain Breton, Felix Marr, David Plouffe, Claire Kidgell, Carsten Anderson, Nathanael Gray, Jeff Harper, Peter G. Schultz, Elizabeth Winzeler. Development of the drug discovery program of the malaria parasite, Gordon Research Conferences. Queen's College, Oxford, UK, (August 2005).
 - 4 - Le Roch K. Winssinger N, Shipway A, Winzeler E. and Harris J. Functional profiling of malarial proteases. Molecular Approaches to Malaria, Lorne, Victoria, Australia (January 2004).
 - 3 - Le Roch K., Dorin D., Gray N., Knockaert M., Harmse L., Meijer L., Winzeler E. and Doerig C. *Plasmodium falciparum* casein kinase 1 as probable drug target. Drug against Tropical Protozoan Parasites. Keystone Symposia meeting Co, USA (February 2002).

2 - Le Roch K., Dorin D., Gray N., Knockaert M., Harmse L., Meijer L., and Doerig C., Identification of *Plasmodium falciparum* casein kinase 1 as probable target of a purine derivative inhibiting parasite growth ex vivo. European Cooperation in the field of Scientific and Technical Research, COST-B9 Antiprotozoal Chemotherapy, Bruges, Belgium (March 2000).

1 - Le Roch K., Sestier C., Dorin D., Waters N., Kappes B., Meijer L. and Doerig C. Activation of a cyclin-dependant kinase of *plasmodium falciparum*. British Society of Parasitology, London, UK (September 1999).

ORAL PRESENTATIONS from Students and Post-Doctoral Fellows

37- Lenz T., Yang L., Ciampossin L., Srivastava S., Vizcarra E., Boyle J., Wilson E.H. and Le Roch K.G. Beyond Transcription: Coordinated Remodeling of Host and Parasite Chromatin Architecture During *Toxoplasma gondii* Infection. Molecular Parasitology Meeting, Woods Hole, MA, USA, Sept 2026

36- Ciampossin L., Lenz T., Srivastava S., Vizcarra E., Boyle J., Wilson E.H. and Le Roch K.G.. Parasite-Driven Epigenetic Reprogramming: How Patogen Reshapes Host Chromatin. MCSB-CMDB Seminar Day, UCR, December 2025. 2nd Best Talk Presentation.

35 – Ciampossin L., Lenz T., Srivastava S., Vizcarra E., Boyle J., Wilson E.H. and Le Roch K.G.. Parasite-Driven Epigenetic Reprogramming: How *Toxoplasma gondii* Reshapes Host Chromatin. Annual Southern California Eukaryotic Pathogen Symposium, UC Riverside, CA, USA. November 2025.

34 – Neal A., Chahine Z., Prudhomme J., and Le Roch KG. Determining the role of PfCRWN-L protein in regulating chromatin structure in the human malaria parasite, *P. falciparum*. Eukaryotic Pathogen Symposium, Riverside, CA, USA. Novembre 2024.

33 –Lenz T, Srivastava S., Vizcarra E., Wilson E. and Le RochKG. Epigenetic Regulation and Immune Control in Fibroblasts During *Toxoplasma gondii* Infection. GGB annual symposium, UC Riverside, CA, USA. October 2024.

32 - Zehao Li, Lonardi S. and Le Roch KG. Gene prediction using machine learning and epigenetic features in *Plasmodium falciparum*. GGB annual symposium, UC Riverside, CA, USA. October 2024.

31 - Hollin T., Abel S., Hales K., Banks C., Florens L., Noble W.S. and Le Roch KG. Identification of RNA-Dependent Proteins by Density Gradient Ultracentrifugation to discover RNA-Protein Complexes in the human malaria parasite, *Plasmodium falciparum*. Eukaryotic Pathogen Symposium, Riverside, CA, USA. October 2023.

30- Hollin T., Abel S., Hales K., Banks C., Florens L., Noble W.S. and Le Roch KG. Identification of RNA-Dependent Proteins by Density Gradient Ultracentrifugation to discover RNA-Protein Complexes in the human malaria parasite, *Plasmodium falciparum*. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2023

29 – Thomas Hollin. Genome-Wide Analysis of RNA-Protein Interactions in *Plasmodium falciparum* Using eCLIP-Seg. Eclipsebio, The RNA Genomics company & Le Roch Lab Seminar. UCR June 2023.

28 – Batugedara G., Lu XM., Abel S., Chahine Z., Hristov B., Williams D., Hollin T., Wang T., Cort A., Lenz T., Thompson T., Prudhomme J., Tripathi AK., Xu G., Cudini J., Dogga S., Lawniczak M., Noble WS, Sinnis S. and Le Roch KG. Deciphering the non-coding code of pathogenicity and sexual differentiation in the human malaria parasite. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2022

27 - Gupta M., Abel SM., Lenz T. Chahine Z., Saraf S., Florens L., Prudhomme J. and Le Roch KG. Unraveling the genome wide distribution of *Plasmodium falciparum* MORC protein. Molecular Parasitology Meeting, Woods Hole, USA Sept 2022.

26 - Lenz T., Zhang X., Deitsch K., Le Roch K.. Chromatin structure and var2csa – a tango in regulation of var gene expression in the human malaria parasite *Plasmodium falciparum*? 11th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA. October 2021.

25 – Lenz T., Zhang X., Deitsch K., Le Roch K.. Loss of var2csa disrupts chromatin structure surrounding *Plasmodium*

falciparum var genes. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2021

- 24 – Hollin T., Abel S., Falla A., Florida C., Kirkwood JA., Saraf A. Prudhomme J., Florens L., Niles JC., and **Le Roch KG.** Functional Characterization of RAP Proteins Essential for Mitochondrial Biogenesis in the Human Malaria Parasite, *Plasmodium falciparum*. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2021
- 23 - Abel S., Hong Z Williams D., Ireri S., Brown MQ., Su T., Hung KY., Henke JA., Barton JP, and Le Roch KG. Small RNA sequencing of field Culex mosquitoes identifies patterns of viral abundances and the mosquito immune response. CIDVR symposium, UCR May 2021.
- 22 - Hollin, T., Prudhomme, J., Pasaje, CF., Falla, A., Saraf, A., Florens, L., Niles, JC. and Le Roch, KG. Functional genomics approaches to understand the role of RAP proteins that are essential for the mitochondrial biogenesis of *P. falciparum* asexual stages. 10th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA. October 2020.
- 21 - Chahine Z, Prudhomme J, Daub ME, Ben Mamoun C, Vanderwal CD and Le Roch KG. A Multi-omics Approach to Understand the Mode of Action of a Kalihinol Analogue, a Potent New Antimalarial against *Plasmodium falciparum*. 10th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA. October 2020.
- 20 – Hollin, T., Prudhomme, J., Pasaje, CF., Falla, A., Saraf, A., Florens, L., Niles, JC. and Le Roch, KG. The role of RNA-binding proteins abundant in Apicomplexans (RAPs) in mitochondrial biogenesis of the human malaria parasite, *P. falciparum*. 9th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA. November 2019.
- 19 – Batugedara G., Lu X.M., Abel S., Lenz T., Williams D., Cort A., Wang T., Prudhomme J. and Le Roch K.G. The Role of LncRNAs in Malaria Parasites: Deciphering the Non-Coding Code of Pathogenicity and Sexual Differentiation. 8th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA. November 2018.
- 18 – Steven Abel, William Fondrie, Alex Zelter, Tonya Skuse, Jacques Prudhomme, John Yates, Bill Noble and Karine Le Roch. Defining the molecular architecture of malaria parasite chromatin complexes by cross- linking based mass spectrometry and structural modeling. Genetics, Genomics, and Bioinformatics annual symposium, UCR, September 2018
- 17 - Gayani Batugedara, Xueqing Lu, Anita Saraf, Anthony Cort, Laurence Florens, Jacques Prudhomme, Evelien Bunnik and Karine G. Le Roch. The chromatin-bound proteome of the human malaria parasite, *Plasmodium falciparum*. 7th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA (November 2017).
- 16 - Xueqing Lu, Gayani Batugedara, Evelien Bunnik, Jacques Prudhomme, and Karine G. Le Roch. Nascent RNA sequencing reveals transcriptional regulation mechanisms in the human malaria parasite life cycle. 6th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA (November 2016).
- 15 - Xueqing Lu, Gayani Batugedara, Evelien Bunnik, Jacques Prudhomme, and Karine G. Le Roch. Nascent RNA sequencing reveals transcriptional regulation mechanisms in the human malaria parasite life cycle. Molecular Parasitology Meeting, Woods Hole, MA, Sept 2016.
- 14 - Xueqing Lu, Gayani Batugedara, Evelien Bunnik, Jacques Prudhomme, and Karine G. Le Roch. Nascent RNA sequencing reveals transcriptional regulation mechanisms in the human malaria parasite life cycle. 5th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA (November 2015).
- 13 - Bunnik EM, Ay F., Varoquaux N., Bol SM., Shi L., Polishko A., Prudhomme J., Ponts N., Sinnis P., Lonardi S., Vert JP., Noble W, Le Roch KG.. The role of chromatin structure in gene regulation in the human malaria parasite *Plasmodium falciparum*. 4th Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA (November 2015).
- 12 - Bunnik E., Farhat Ay, Varoquaux N, Bol S., Polishko, A., Ponts, N., Prudhomme J., Vert JP., Lonardi, S., Noble WS and

Le Roch. Regulation of gene expression in the human malaria parasite *Plasmodium falciparum*. UCR Post-doctoral Symposium, Riverside, CA, USA (September 2014). Best talk award.

- 11 - Bunnik E., Farhat Ay, Varoquaux N, Bol S., Polishko, A., Ponts, N., Prudhomme J., Vert JP., Lonardi, S., Noble WS and Le Roch. The association between chromatin structure and gene regulation in the human malaria parasite *Plasmodium falciparum*. Woods Hole, MA, USA. September 2014.
- 10 - Bunnik E., Farhat Ay, Varoquaux N, Bol S., Prudhomme J., Polishko, A., Vert JP., Lonardi, S., Noble WS. and Le Roch. The three-dimensional architecture of the Plasmodium genome throughout the asexual cell cycle. 1st Annual UCR post-doc Symposium, Riverside, CA, USA (June 2014). Best talk award.
- 9 - Bunnik E., Farhat Ay, Varoquaux N, Bol S., Prudhomme J., Vert JP., Noble WS. and Le Roch. The three- dimensional architecture of the Plasmodium genome throughout the asexual cell cycle. 3rd Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA (October 2013).
- 8 - Bunnik E., Prudhomme J., and Le Roch K. Polysome profiling in *Plasmodium falciparum*. Molecular parasitology meeting. Woods Hole, MA, USA. September 2013.
- 7 - Cervantes S., Prudhomme J., Ponts N. and Le Roch K. The role of autophagy in the human malaria parasite life cycle. Gordon Conference Authophagy, Ventura, CA April 2012.
- 6 - Chung DW., Ponts N., Prudhomme J., Tran J., Ferdig M. and Le Roch K.G. Elucidating the ERAD and ERAD-like Systems within the Plasmodium falciparum. Molecular parasitology meeting. Woods Hole, MA, USA. September 2011.
- 5 - Chung DW., Ponts N., Harris E.Y., Zhang J., Prudhomme J., Rodrigues E., Hicks GR, Wang Y., Lonardi S and Le Roch K.G. Genome-wide DNA methylation occurs in the malaria parasite and regulates differentiation and virulence. Molecular Parasitology Meeting. Woods Hole (MA). Presented on 09/2010.
- 4 - Bruton M., Prudhomme P., Stout EP., Aalbersberg W., Hay ME., Kubanek J. and Le Roch KG. Marine Natural Compounds as New Drug against Malaria. Symposium for Undergraduate Research, UCR, CA, USA. May 2010.
- 3 - Ponts N., Harris E.Y., Prudhomme J., Hicks GR, Lonardi S and Le Roch K.G. Genome-wide DNA methylation in the human malaria parasite. Illumina symposium, UCR, CA, USA, April 2010.
- 2 - Ponts N., Harris RY., Prudhomme J., Wick I., Eckhardt C., Hicks G., Hardiman G., Lonardi S. and Le Roch KG. Nucleosome Landscape and Control of Transcription in the Human Malaria Parasite. Workshop for French Young Scientists. French Consulate and the University of Southern California, Los Angeles, CA, USA. November 2009.
- 1 - McDaniel E., Prudhomme J., Ponts N., Bertani S., Fenical W. Jensen P and Le Roch K. Novel Anti-Malarial Discovery and the Fruits of Our Bountiful Seas. Symposium for Undergraduate Research. UCR 2008.

TEACHING

Instructor of Record at the Undergraduate Level:

- 1- Medical Molecular Parasitology - Biol 158 - 4 credits, 20 students 2008, 2010, 2013, 2014 and 2017.
- 2- Fundamental of Cell biology - CBNS 101 - 4 credits, 180 students, 2007, 2008, 2009 2010 and 2011.
- 3- Advanced Molecular Biology – Biol 107B - 4 credits, 40 students, 2013, 2014, 2015, 2016, 2017, 2018, 2020, 2021, 2022, 2023, 2024, 2025.
- 4- Molecular Biology- Biol 107A – 4 credits, 120 students, 2014.
- 5- Freshman Seminars - 2 credits, 25 students, 2010, 2015 and 2020.
- 6- CBNS 197 -Introduction to Research for undergraduates - Every year since 2006 – 1 to 4 undergraduate students working in my lab every quarter.

Instructor of Record at the Graduate Level

- 1- Molecular Biology - CMDB 201 - 4 credits, 20 students 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2019, 2020, 2021, 2022, 2023, 2024 and 2025.
- 2- Molecular Cell Biology - CMDB 200 - 4 credits, 20 students 2008, 2009, 2010, 2011, 2017, 2018 and 2022.
- 3- Functional Genomics - MCBL 240 - 4 credits, 20 students, 2008.
- 4- Microbial genetics – MCBL 210 - 4 credits, 20 students, 2008 and 2010.

- 5- Microbial Pathogenesis and Physiology - MCBL 202 - 4 credits, 20 students 2012, 2014, 2015 and 2016.

Guest Lecturer:

- 1- Microarray Technologies. University of California, San Diego, extension (2003, 2004, 2006)

STUDENT AND POST-DOC MENTORING

Post-doctoral fellows:

- 1- Nadia Ponts - 02/2007 to 12/2011 - Now Professor at INRA/University of Bordeaux – France.
- 2- Elisandra Rodrigues - 01/2009 to 12/2010 - Now Research Scientist – Brazil.
- 3- Doug Chung – 06/2011 to 03/2012 - Now Staff Scientist at UCLA
- 4- Sebastiaan Bol - 01/2012 to 01/04/2013 – Now Staff Scientist at University of Texas at San Antonio
- 5- Evelien Bunnik - 07/20/2011 to 08/31/2016 - Now Associate Professor at the University of Texas, San Antonio.
- 6- Eniyou C. Oriero – 06/2017 – 06/2020 - DELGEME Postdoc Fellow - MRC Unit – Now Assistant Professor at the Medical Research Council Unit the Gambia and the London School of Hygiene & Tropical Medicine.
- 7- Thomas Hollin – 09/2018 – 12/2024. Now an Associate Professor at the University of Montpellier / CNRS France
- 8- Mohit Kumar Gupta – 05/2019 – 11/2022 - Now staff scientist
- 9- Sage Davis – 08/2019 – 02/2021. Staff scientist at UCLA.
- 10- Trevor Thompson – 06/2021 to 10/01/2023. Now post-doc in the UK
- 11- Todd Lenz – 02/2025 to 07/2025 – Now Bioinformatics Scientist in Pharma.

UCR PhD students:

- 1- Doug Chung - Cellular Molecular and Developmental Biology, UCR 09/2007 – 06/2011. Now staff Scientist at UCLA
- 2- Serena Cervantes - Cellular Molecular and Developmental Biology, UCR, 11/2007 - 8/2013. Specialist at Thermo Fisher Scientific. Software Engineer/Head of Technology at Blockchain 48TM.
- 3- Xueqing Lu – Genetics, Genomics, Bioinformatics – 04/2013 to 12/2017 – Now Senior Bioinformatics Scientist in Pharma.
- 4- Gayani Batugedara - Cellular Molecular and Developmental Biology, UCR – 03/2014 to 12/2018 – Now staff scientist in a Biotech company.
- 5- Steven Abel - Genetics, Genomics, Bioinformatics, UCR – 08/2018 to 03/2024 – Now data scientist
- 6- Desiree Williams - Cellular Molecular and Developmental Biology, UCR 05/2017 to 10/2019
- 7- Zeinab Chahine – Microbiology graduate program, UCR 09/2018- 08/2024. Now staff scientist in a Biotech company.
- 8- Todd Lenz – Genetics, Genomics, Bioinformatics, UCR 04/2019 – 12/2024. Now Bioinformatics Scientist in a Biotech company.
- 9- Arrmund Neal - Cellular Molecular and Developmental Biology, UCR - 01/2023 to Present
- 10- Zehao Li - Genetics, Genomics, Bioinformatics, UCR - 02/2023 to Present
- 11- Loic Ciampossin – Cellular Molecular and Developmental Biology, UCR - 07/2023 to Present
- 12- George Tseng - Microbiology graduate program, UCR - 09/2024 to Present
- 13- Luniung Yang – Genetics, Genomics, Bioinformatics, UCR 09/2025 to present

Foreign PhD students:

- 1- Zoraima Neto - 08/2011 to 12/2011 – Portugal
- 2- Marcela de Melo Burger - 06/2013 to 10/2013 – Brazil

Master Students:

- 1- Jianfeng Yang - Computational Science, UCR, 2006-2007. Working at Google as computational Scientist.
- 2- Neeti Pokhriyal - Computational Science, UCR, 2008-2009. PhD student – Now Computer Scientist
- 3- Loic Ciampossin – Biomedical Science, UCR, 2021- 2023 - Now PhD student.
- 4- Joseph Alas - California State Polytechnic University, Pomona, CA – UCR, 2022-2024 . Now a science teacher
- 5- Jean-Baptiste Marché. International Student - 6 months- Polytech Lyon GBM program in Lyon, France. Now an engineer in a biotech company

Rotating graduate students:

- 1- George Hsu - GGB – 2006

- 2- Stephanie Turner - CMDB-2006
- 3- Robin Clark - Biomed 2007
- 4- Sourav Roy - GGB-2007
- 5- En Hui Hsien (Gracie) - Biomed-2007
- 6- Tatiana Cirico – GGB -2007 and 2008
- 7- Kevin Keller - CMDB-2010
- 8- Arit Ghosh - CMDB 2011
- 9- Melania Ebrahimi (Microbiology 2011
- 10- Jessica Jang - MCBL – 2012
- 11- Cheryl Stork - CMDB 2013
- 12- Michael Hamilton – CMBD 2012 to 2014
- 13- Sahah Radi -BMBG -2015
- 14- Desiree Williams – CMDB - 05/2018 to 10/2019
- 15- Arafat Rahman – GGB 2017
- 16- Sally Ileri – CMDB 2018
- 17- Shyleen Frost – Biomed 2018
- 18- Cheng-hung Tsai – GGB – 10/2020 to 12/2020
- 19- Vinit Adani - Biomed – 10/2022 to 12/2022
- 20- Arrmund Neal – 01/2023 to 03/2023
- 21- Zehao Li - GGB – 02/2023 to 04/2023
- 22- Sarah Schroder -01/2024 to 02/2024
- 23- George Tseng - 08/2024 to 09/2024
- 24- Luniung Yang – 09/2025 to present

Undergraduate students:

- 1- Eric McDaniel - 04/2006 to 06/2007 – Medical School – now Anesthesiologist at UCLA medical Center
- 2- Lynelle Garnica Guerrero – Summer 2007. Now Senior Environmental Health Specialist
- 3- Joseph Yacoub – 2007.
- 4- Matthiew Bruton - 07/2007 to 06/2010 – Now research Assistant
- 5- Allen Austin - 07/2008 to 06/2009 - MARC U* student
- 6- Michael Cervantes - 09/2008 to 06/2012 – MARC U* - Dental School
- 7- Hans Meimban - 09/2009 to 03/2010 Executive Assistant at Thomas Edison Charter Academy (TECA)
- 8- Matthiew Braley - 07/2010 to 06/2011 - Now Research Assistant
- 9- Anup Sarakki - 09/2010 to 06/2011 – Graduate school – Now Associate Scientist at Insitro
- 10- Christopher Margano - 09/2011 to 01/2012 - Medical School - UCSF – Now Biotech Investor at Deep Track Capital
- 11- Manny Torres - 07/2011 to 09/2012 - MARC U* student
- 12- Sean Whitton - 03/2012 to 06/2013 – Now Research Assistant
- 13- Aster Escalante - 06/2012 to 06/2014 – MARC U* student - PhD student – Now Field Applications Specialist - Hamilton
- 14- David Ghim – 06/2013 to 06/2014 – Now an Osteopathic medical student
- 15- Michael Lee – 4/2013 to 06/2015 - PhD student at City of hope – Now CEO of a start-up company
- 16- Christopher Conner - 06/2012 to 06/2015 - MARC U* student. Graduate student at UCSB – Now scientist and product manager in a Biotechnology company (Invivoscribe)
- 17- Nichole Escamilla – 06/2014 to 06/2015 - MARC U* student - Biology High School teacher and GMP Quality Professional
- 18- Aaron Watson – 06/2014 – 12/2015 MARC U* student
- 19- Sophia Vizcarra – 07/2015 to 09/2016. Now Doctor of Physical Therapy
- 20- Raphael Reyes – 09/2015 to 06/2017 – Now a post-doctoral Fellow at Harvard University
- 21- Steve Lu – 04/2016 to 06/2017 – Now Lead Scribe at Arrowhead Regional Medical Center
- 22- Rossela (Stephanie) Guevara – HHMI summer student 2016 - UCLA graduate Student
- 23- Basava Jonnala 03/2016 to 09/2016 – Now Clinical Operations @ Athelas
- 24- Rahul Jalota – 08/2016 to 03/2017
- 25- Xavier Faraj - 04/2017 to 06/2017 – USC medical school – Now Preclinical Drug Product Development at Amgen
- 26- Anjelika Grate - 04/2017 to 12/2017 _ Master at UCLA Health care administration and management.
- 27- Anthony Cort - 04/2017 – to 06/2020 - MARC U* student (Barry M. Goldwater National Research Scholarship)

- award, Phi Beta Kappa National Honors Society, Dean's Honor List and Academic Distinction Award, Honors Convocation). Now medical student at Stanford
- 28- Tina Wang –09/2016 – 06/2021 - Now medical student - Now medical student - urology residency in Texas Tech (Lubbock, TX).
 - 29- Tran Thai – 01/2018 – 06/2020 – Now PhD student on Biomedical informatics at UCLA
 - 30- Sonali Nair - HHMI summer student 2018
 - 31- Vincent Nguyen – 06/2019 – 06/2021 – Now Lab Technician
 - 32- Joseline Sanchez – Summer 2019 – Master of Public health (UCSD)
 - 33- Lianne Quek – 06/2019 – 06/2020 - M.S. in Nursing at USF
 - 34- Nicholas Alegre – 09/2019 - 06/2021 Now Medical student at Albert Einstein College of Medicine
 - 35- Marco Duenas – 05/2020 – 06/2021 (UCR Honors projects and 2021 Academic Excellence Award). Now PhD student
 - 36- Pari Gumasekaran – 09/2021 to 06/2023. Now a medical student at Burnett School of Medicine at TCU
 - 37- Alan Pan – 11/2021 to April 2023.
 - 38- Ian Pitman – 04/2022 to April 2023 Now a Teacher at CodeREV Kids
 - 39- Alberto Flores – 06/2022 to 06/2024 – Now a lab tech applying for medical school in 2026
 - 40- Caitlyn Marie Ybanez – 09/2022 to 06/2024 – Now a PhD student at Student at Keck Graduate Institute
 - 41- Emma Williams – 06/2023 to 09/2023 – Now a Teacher in LA.
 - 42- Anahita Abbaszadeh – 07/2023 to 06/2024 – Now in Dental School
 - 43- Suhani Bhanvadia – 02/2024 to 01/2026
 - 44- Iheanyichukwu Kalu-Okere – 04/2025 to 08/2026 Now a Master student in computational Biology at NYU
 - 45- Tanvi Koganti – 10/2025 to present
 - 46- Tri Bui – 01/2026 to present
 - 47- Prashil Shah - 02/2026 to present
 - 48- Lilian Ying – 04/2026 to present
 - 49- Klara Aziz – 06/2026 to present
 - 50- Emily Galoustian - 06/2026 to present