

**Evelien M. Bunnik, Ph.D.**

Associate Professor  
 Department of Microbiology, Immunology and Molecular Genetics  
 University of Texas Health Science Center  
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**EDUCATION**

2004 – 2010 **Ph.D.**, University of Amsterdam, The Netherlands, *cum laude*  
 1998 – 2002 **M.S.**, University of Leiden, The Netherlands, *cum laude*

**PROFESSIONAL EXPERIENCE**

08/2023 – present **Associate Professor** (with Tenure) – Department of Microbiology, Immunology & Molecular Genetics, University of Texas Health Science Center, San Antonio, TX  
*Malaria immunology & parasite gene regulation*

08/2016 – 08/2023 **Assistant Professor** – Department of Microbiology, Immunology & Molecular Genetics, University of Texas Health Science Center, San Antonio, TX  
*Profiling naturally acquired protective immunity against malaria*

07/2011 – 08/2016 **Postdoctoral Fellow** – Department of Cell Biology and Neuroscience, University of California, Riverside, USA. Advisor: Dr. Karine Le Roch  
*A functional genomics approach to understand gene regulation in the human malaria parasite, Plasmodium falciparum*

11/2010 – 06/2011 **Scientist** – Crucell, Leiden, The Netherlands  
*Design of a preventative and therapeutic HPV vaccine*

01/2010 – 12/2010 **Postdoctoral Fellow** – Department of Experimental Immunology, Academic Medical Center, Amsterdam, The Netherlands. Advisor: Prof. Dr. Hanneke Schuitemaker  
*Evolution of HIV co-receptor usage during natural infection*

11/2004 – 12/2009 **Graduate Student** – Department of Experimental Immunology, University of Amsterdam, The Netherlands. Advisor: Prof. Dr. Hanneke Schuitemaker  
*HIV envelope evolution in response to neutralizing antibodies during natural infection*

10/2002 – 09/2003 **Research Technician** – OctoPlus Technologies, Leiden, The Netherlands  
*Development of a nanoparticle drug delivery system*

**FELLOWSHIPS, HONORS AND AWARDS**

2023 Academy of Educational Scholars Star Educator Award  
 2023 The Max and Minnie Tomerlin Voelcker Fund Young Investigator Award  
 2021 AAI Early Career Faculty Travel Award  
 2018 Pew Charitable Trusts Scholars Award, Institutional Nominee  
 2014 Best presentation award, Inaugural Riverside Postdoctoral Association Symposium, University of California, Riverside, CA, USA

- 2014 Best presentation award, Center for Plant Cell Biology Postdoc Symposium, University of California, Riverside, CA, USA
- 2013 Poster award, Molecular Parasitology Meeting, Woods Hole, MA, USA
- 2011 1<sup>st</sup> prize Academic Medical Center Amsterdam Ph.D. Thesis Award 2010
- 2010 HFSP long-term post-doctoral fellowship (3 year salary and travel support)
- 2010 EMBO long-term post-doctoral fellowship (2 year salary support)
- 2010 Ph.D. degree received *cum laude*
- 2010 Scholarship award for the Keystone meeting HIV Vaccines, Banff, AB, Canada
- 2008 Travel grant from the Dutch Society of Immunology (NVVI) for the AIDS Vaccine meeting, Cape Town, South Africa
- 2006 Registration award for the AIDS Vaccine meeting, Amsterdam, The Netherlands
- 2006 Scholarship award for the Keystone meeting HIV Pathogenesis, Keystone, CO, USA
- 2002 M.S. degree received *cum laude*
- 1999 Propaedeutic diploma (first year of University studies) received *summa cum laude*
- 1998 Finalist Dutch National Chemistry Olympiad (chemistry competition for high school students)

## PROFESSIONAL ORGANIZATIONS AND SERVICE

### Membership

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|----------------|---|
| 2016 – present | Member, American Association of Immunologists           |
| 2016 – present | Member, American Society of Tropical Medicine & Hygiene |
| 2016 – 2019    | Member, American Society of Parasitologists             |
| 2007 – 2011    | Member, Dutch Society of Immunology (NVVI)              |

### Reviewer

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| 2023           | External Grant Reviewer, German Research Foundation (DFG)  |
| 2023           | Ad Hoc Reviewer, NIH/NIAID – small business DCAI-12 B study section  |
| 2023           | Ad Hoc Reviewer, NIH/NIAID – small business DCAI-14 B study section  |
| 2022/2023      | Ad Hoc Reviewer, NIH/NIAID – VID study section   |
| 2022           | External Grant Reviewer, Wellcome Trust  |
| 2022           | External Grant Reviewer, Fondation pour la Recherche Médicinale  |
| 2021           | External Grant Reviewer, French National Research Agency (ANR)   |
| 2019           | Ad Hoc Grant Reviewer, American Heart Association  |
| 2019           | Ad Hoc Grant Reviewer, Dutch Arthritis Society   |
| 2018           | Ad Hoc Grant Reviewer, Wellcome Trust / DBT India Alliance   |
| 2014 – present | Ad Hoc Reviewer, <i>Immunity</i> , <i>Science Immunology</i> , <i>Science Advances</i> , <i>Nature Communications</i> , <i>Genome Research</i> , <i>Cell Reports</i> , <i>Cell Reports Medicine</i> , <i>Infection &amp; Immunity</i> , <i>Frontiers in Immunology</i> , <i>Frontiers in Cellular and Infection Microbiology</i> , <i>Journal of Infectious Diseases</i> , <i>International Journal for Parasitology</i> , <i>Microbiology Spectrum</i> , <i>Immunological Research</i> , <i>Advances in Wound Care</i> , <i>EBioMedicine</i> , <i>BMC Research Notes</i> , <i>Scientific Reports</i> , <i>Heliyon</i> |
| 2012 – 2013    | Ad Hoc Grant Reviewer, Dutch AIDS Foundation   |

### Reagent sharing

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| 2021 – present | Plasmid deposits to Addgene: SARS-CoV-2 RBD (bio-His) (requested 10 times), SARS-CoV-2 HexaPro spike (bio-His) (requested 16 times) |
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**DEPARTMENT AND UNIVERSITY SERVICE ACTIVITIES**

2023 – present	Member, Chair Dept. Cell. Integrative Physiology Search Committee
2022 – present	Member, Department of MIMG Leadership Committee
2022 – present	Member, Faculty Search Committee
2022 – present	Associate Director, I&I MS Program
2021 – present	Member, GSBS MIM Discipline Executive Committee
2020 – present	Member, Scientific Leadership Committee for the Vaccine Development Center of San Antonio
2019 – present	Member, I&I MS Admissions Committee
2018 – present	Co-organizer, annual Spring Retreat of the Dept. of Microbiology. Immunology & Molecular Genetics
2017 – present	Member, GSBS IBMS Admissions Committee
2017 – present	Director, MIMG Departmental Microscopy Facility
2017	Judge, Alamo Regional Science & Engineering Fair
2015	Co-chair, 5 <sup>th</sup> Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA

**TEACHING EXPERIENCE**

2021 –	<b>Course Director / Instructor</b> – INTD6062: Next-Generation Sequencing Data Analysis (Graduate School) <i>Preparation: 125 hours, Student contact: 32 hours</i>
2019 – 2022	<b>Team Teacher</b> – MICR6052: Advanced Immunology Module 2 (Graduate School) <i>Preparation: 3 hours, Student contact: 4 hours</i>
2018 –	<b>Lecturer</b> – CIRC5009: Attack and Defense (Medical School) <i>Preparation: 6 hours, Student contact: 2 hours</i>
2018 –	<b>Lecturer / Group Discussion Leader</b> – IBMS5000: Fundamentals of Biomedical Sciences (Graduate School) <i>Preparation and exam grading: 4 hours, Student contact: 6 hours</i>
2017 –	<b>Lecturer</b> – MICR5031 Pathogenic Microbiology (Graduate School) <i>Preparation and exam grading: 6 hours, Student contact: 4 hours</i>
2017 –	<b>Lecturer</b> – MICR5025 Eukaryotic Pathogens (Graduate School) <i>Preparation and exam grading: 8 hours, Student contact: 3 hours</i>
2017 –	<b>Team Teacher</b> – MICR5029 Building Scientific Thinking Skills (Graduate School) <i>Preparation and exam grading: 2 hours, Student contact: 1 hours</i>
2015	<b>Instructor</b> – Upper division undergraduate course “Immunology”, Dept. of Cell Biology and Neuroscience, University of California, Riverside <i>Two 1.5-hour lectures per week for 80 students during Fall quarter; writing and grading exams (as part of a team of two instructors)</i>
2010	<b>Instructor</b> – EUROPRISE PhD wet lab training course “B cell immunity”, San Raffaele Scientific Institute, Milan, Italy

**Mentorship responsibilities**Postdocs

2019 – 2020	Gayani Batugedara (current: Scientist I, 23andMe)
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PhD graduate students

2023 – present	Jake Moore
2021 – present	Rolando Garza

2018 – 2023	Raphael Reyes (current: post-doc, Ragon Institute, Boston)
2018 – 2022	Ashley Braddom Reers (current: Post-doc, Tulane, New Orleans)
2017 – 2021	Jake Gonzales (current: Field Application Scientist, BioLegend)

MS graduate students

2023 – present	Caroline Torres
2022 – 2023	Rodriel Bautista (current: Research Associate, Biorad Labs)
2021 – 2022	Elizabeth Martinez-Scholze
2020 – 2021	Katie Clarke (current: Associate Scientist, Regeneron)
2018 – 2019	Melissa Nunez (current: Research Associate, Leidos)
2018 – 2018	Mawjudah Abdulrashid
2017 – 2018	Bayan Fallatah (current: Ph.D. student, University of Liverpool)

Other

2023 – present	Sebastiaan Bol	Assistant Professor, Research
2023 – present	Anakaren Garcia	Undergraduate Student, STUROP
2023 – present	Bella Gonzalez	High School Student, VBRA
2023 – present	Avani Nagaregere	High School Student, VBRA
2023	Tobias Daney	High School Student
2022	Nirel Ayertey	High School Student
2022	Meagan Ybarra	Post-Bac, PREP program
2021 – 2022	Katie Clarke	Research Technician
2019	Cambrey Gallardo	Undergraduate Student
2017	Hannah Hall	Undergraduate Student
2016 – 2023	Sebastiaan Bol	Senior Research Scientist
2015 – 2016	Raphael Reyes	Undergraduate Student
2013 – 2016	Xueqing (Maggie) Lu	Graduate Student
2010 – 2011	Santusha Karia	Research Technician
2008 – 2009	Marilie Lobbrecht	Research Technician
2006 – 2007	Linaida Pisas	Research Technician
2007	Mischa Huson	Master's Student
2006	Sander Zeeman	Master's Student
2005 – 2006	Evelien Burks	Master's Student

**Student committees**Ph.D. Thesis Committee

2023 – present	Nathaniel Jackson
2023 – present	Guillermo Nunez
2023 – present	Jan Simper
2022 – present	Maria Fernandez
2021 – present	Kathrin Bailey
2021 – present	Stephanie Nordmeyer
2021 – present	Paulino Ramirez
2021 – 2023	Carlo Vanz
2020 – 2023	Jim McLellan (UTSA)
2020 – 2021	Cassidy Daw
2018 – 2020	Daniel Chupp
2018 – 2020	Justin Moroney

M.S. Proposal and Thesis committee

2023 – present	Elizabeth Buell
2023 – present	Santiago Aguilar
2022 – 2023	Kate Brinson
2022 – 2023	Brendan Determann II
2022 – 2023	Peter Osha
2022 – 2022	Josef Fowler
2020 – 2021	Nohelli Brockman
2019 – 2020	Arthur Flores
2019 – 2020	Gretchen Morrison
2019 – 2020	Samantha D'Spain
2018	Brittany McInnis
2018 – 2019	Grecia Morales
2018 – 2019	Vanessa Ortega
2017 – 2018	Aziz Almutairi

Ph.D. Qualifying Exam committee

2024	Emma Mask (Chair)
2023	Ramya Barre
2023	Nate Jackson
2023	Shili Li
2022	Jan Simper (Chair)
2022	Ashley Auerbach (Chair)
2022	Sarah Wedemeyer
2022	John Im
2022	Kizil Yusoof
2021	Alyssa Schami
2021	Stephanie Nortmeyer (Chair)
2021	Kathrin Bailey
2020	Yijiang Xu
2020	Raksha Parthasarathy
2020	Cassidy Daw
2019	Ivan Albino Flores
2018	Daniel Chupp
2017	Sergio Cepeda

**RESEARCH SUPPORT**

Departmental Start-Up Funds	(Bunnik)	08/01/16 –
R01 AI153425 (NIH/NIAID)	(Bunnik)	02/19/21 – 01/31/26
Defining conserved epitopes on polymorphic malaria antigens		
Major goal: to determine the epitopes of antibodies with cross-strain reactivity against polymorphic merozoite antigens MSP1, AMA1, and RhopH3.		
Role: PI		
R01 AI153425-02S1 (NIH/NIAID)	(Bunnik)	04/01/22 – 03/31/24
Defining conserved epitopes on polymorphic malaria antigens		
Major goal: to analyze B cell and antibody responses against the <i>P. falciparum</i> antigen PF3D7_1136200 and provide enhanced training and career development for M.D./Ph.D. graduate student Rolando Garza.		

Role: PI

R01 AI148641 (NIH/NIAID) (Wickes) 02/01/21 – 01/31/26  
 Development of a rapid, pan fungal diagnostic assay  
 Major goal: to develop a reference sequence database and nanopore sequencing strategy for a pan fungal assay that will take any specimen input and yield rapid, sensitive results with minimal user expertise.  
 Role: Co-I

R56 AI167359 (Kadosh) 08/01/23 – 07/31/24  
 Regulation of *Candida albicans* gene expression in response to host environmental stresses  
 Major goal: to gain a better understanding of translational mechanisms that control the response of *C. albicans* to a variety of host environmental stress conditions.  
 Role: Collaborator

Dept. MIMG Pilot award (Bunnik/Cheeseman) 12/01/22 – 11/30/23  
 Characterization of the transcriptional response of the malaria parasite to fever  
 Major Goals: to gain insight into the role of transcription factor AP2-L in the heat shock response of the malaria parasite *Plasmodium falciparum*  
 Role: MPI

Voelcker Young Investigator Award (Bunnik) 07/01/23 – 06/30/26  
 Atypical B cells as a therapeutic target in rheumatoid arthritis  
 Major Goals: to gain insight into the function and developmental pathways of atypical B cells in rheumatoid arthritis.  
 Role: PI

#### RESEARCH SUPPORT (COMPLETED)

Medical Research Award (Mulenga/Esteve-Gassent) 10/01/19 – 12/31/21  
 Robert J. Kleberg, Jr. and Helen C. Kleberg Foundation  
 Innovative technologies to minimize the risk for the re-emergence of bovine babesiosis in the US  
 Major goal: to develop a vaccine that will block Babesia transmission in cattle by targeting antigens in both bovine Babesia species and their tick vector.  
 Role: Collaborator

R21 AI128466 (Bunnik) 01/15/18 – 12/31/20  
 NIH/NIAID  
 Discovery of antibodies against the blood stage of the malaria parasite  
 Major goal: to develop an unbiased platform for the isolation of antibodies that interfere with parasite replication during the malaria blood stage.  
 Role: PI

R21 AI133274 (Bunnik) 02/01/18 – 01/31/21  
 NIH/NIAID  
 Structure and function of protective antibodies from memory B cells against malaria  
 Major goal: to elucidate which antibody features are important for protection against disease.  
 Role: PI

COVID-19 Institutional Pilot Award (Bunnik) 04/01/20 – 03/31/21  
 Long School of Medicine

Longitudinal analysis of SARS-CoV-2 memory B cell and neutralizing antibody responses after natural infection

Major goal: to characterize the phenotype and maintenance of neutralizing antibodies and B cells with specificity for the SARS-CoV-2 spike protein receptor binding domain

Role: PI

Formula Animal Health Fund  
Texas A&M University

(Mulenga/Esteve-Gassent)

03/01/18 – 08/31/19

Development of novel vaccine candidates to prevent the re-emergence of bovine babesiosis in the US

Major goal: to identify potential vaccine candidates in bovine *Babesia* species and their tick vector to block *Babesia* transmission in cattle.

Role: Collaborator

## RESEARCH PUBLICATIONS

45. Reyes RA, Batugedara G, Dutta P, Reers AB, Garza R, Ssewanyana I, Jagannathan P, Feeney ME, Greenhouse B, Bol S, Ay F, **Bunnik EM**. Atypical B cells consist of subsets with distinct functional profiles. **iScience** (2023), 26(12):108496.
44. McLellan JL, Sausman W, Reers AB, **Bunnik EM**, Hanson KK. Single-cell quantitative bioimaging of *P. berghei* liver stage translation. **mSphere** (2023), 8(6):e0054423.
43. Reers AB, Bautista R, Bol S, McLellan J, Morales B, Garza R, Hanson KK, **Bunnik EM**. Histone modification analysis reveals common regulators of gene expression in liver and blood stage merozoites of *Plasmodium* parasites. **Epigenetics & Chromatin** (2023), 16(1):25.
42. Bol S, Scaffidi A, **Bunnik EM**, Flematti GR. Behavioral differences among domestic cats in the response to cat-attracting plants and their volatile compounds reveal a potential distinct mechanism of action for actinidine. **BMC Biology** (2022), 20:192.
41. Gonzales SJ, Clarke K, Batugedara G, Garza R, Braddom AE, Reyes RA, Ssewanyana I, Garrison KC, Ippolito G, Greenhouse B, Bol S, **Bunnik EM**. A molecular analysis of memory B cell and antibody responses against *Plasmodium falciparum* merozoite surface protein 1 in children and adults from Uganda. **Frontiers in Immunology** (2022), 13:809264. \*\*published as part of the special topic 'Rising Stars in Parasite Immunology\*\*
40. Reyes RA, Clarke K, Gonzales SJ, Cantwell AM, Garza R, Catano G, Tragus R, Patterson T, Bol S, **Bunnik EM**. SARS-CoV-2 spike-specific memory B cells express higher levels of T-bet and FcRL5 after non-severe COVID-19 as compared to severe disease. **PLOS ONE** (2021), 16(22):e0261656
39. Gonzales SJ, Bol S, Braddom AE, Sullivan RT, Reyes RA, Ssewanyana I, Eggers E, Greenhouse B, **Bunnik EM**. Longitudinal analysis of FcRL5 expression and clonal relationships in classical and atypical memory B cells following malaria. **Malaria Journal** (2021) 20(1): 435
38. Braddom AE, Bol S, Gonzales SJ, Reyes RA, Musinguzi K, Nankya F, Ssewanyana I, Greenhouse B, **Bunnik EM**. B cell receptor repertoire analysis in malaria-naïve and malaria-experienced individuals reveals unique characteristics of atypical memory B cells. **mSphere** (2021) 6(5):e00726-21
37. Morrison GA, Fu J, Lee GC, Wiederhold NP, Cañete-Gibas CF, **Bunnik EM**, Wickes BL. Nanopore sequencing of the fungal Intergenic spacer (IGS) sequence as a potential rapid, diagnostic assay. **Journal of Clinical Microbiology** (2020), 58(12):e01972-20.
36. Batugedara G, Lu XM, Saraf A, Sardu ME, Cort A, Abel S, Prudhomme J, Washburn MP, Florens L, **Bunnik EM**, Le Roch KG. The chromatin bound proteome of the human malaria parasite. **Microbial Genomics** (2020), 6(2).

35. **Bunnik EM**, Venkat A, Shao J, McGovern KE, Batugedara G, Worth D, Prudhomme J, Lapp SA, Andolina C, Ross LS, Lawres L, Brady D, Sinnis P, Nosten F, Fidock DA, Wilson EH, Tewari R, Galinski MR, Ben Mamoun C, Ay F, Le Roch KG. Comparative 3D genome organization in apicomplexan parasites. **Proceedings of the National Academy of Sciences** (2019), 116(8):3183-3192.
34. **Bunnik EM**, Cook KB, Varoquaux N, Batugedara G, Prudhomme J, Cort A, Shi L, Andolina C, Ross LS, Brady D, Fidock DA, Nosten F, Tewari R, Sinnis P, Ay F, Vert JP, Noble WS, Le Roch KG. Changes in genome organization of parasite-specific gene families during the *Plasmodium* transmission stages. **Nature Communications** (2018), 9(1):1910.
33. Lu XM, Batugedara G, Lee M, Prudhomme J, **Bunnik EM**, Le Roch KG. Nascent RNA sequencing reveals mechanisms of gene regulation in the human malaria parasite *Plasmodium falciparum*. **Nucleic Acids Research** (2017), 45(13):7825-7840.
32. Bol S, Caspers J, Buckingham L, Anderson-Shelton GD, Ridgway C, Buffington CA, Schulz S, **Bunnik EM**. Responsiveness of cats (Felidae) to silver vine (*Actinidia polygama*), Tatarian honeysuckle (*Lonicera tatarica*), valerian (*Valeriana officinalis*) and catnip (*Nepeta cataria*). **BMC Veterinary Research** (2017), 13(1):70.
31. Khan S, Oosterhuis K, Wunderlich K, **Bunnik EM**, Bhaggoe M, Boedhoe S, Karia S, Steenbergen RDM, Bosch L, Serroyen J, Janssen S, Vellinga J, Scheper G, Zahn R, Custers J. Development of a replication-deficient adenoviral vector-based vaccine candidate for the interception of HPV16- and HPV18-induced infections and disease. **International Journal of Cancer** (2017), 141(2):393-404.
30. **Bunnik EM**, Batugedara G, Saraf A, Prudhomme J, Florens L, Le Roch KG. The mRNA-bound proteome of the human malaria parasite *Plasmodium falciparum*. **Genome Biology** (2016), 17(1):147.
29. Saraf A, Cervantes S, **Bunnik EM**, Ponts N, Sardiù ME, Chung DWD, Prudhomme J, Varberg JM, Wen Z, Washburn MP, Florens L, Le Roch KG. Dynamic and combinatorial landscape of histone modifications during the intra-erythrocytic developmental cycle of the malaria parasite. **Journal of Proteome Research** (2016), 15(8):2787-2801.
28. **Bunnik EM\***, Lu M\*, Pokhriyal N, Nasser S, Lonardi S, Le Roch KG. Analysis of nucleosome positioning landscapes enables gene discovery in the human malaria parasite *Plasmodium falciparum*. **BMC Genomics** (2015), 16(1):1005. (\*contributed equally)
27. Bol S, **Bunnik EM**. Lysine supplementation is not effective for the prevention or treatment of feline herpesvirus 1 infection in cats: a systematic review. **BMC Veterinary Research** (2015), 11:284. (systematic review)
26. **Bunnik EM\***, Ay F\*, Varoquaux N\*, Bol SM, Prudhomme J, Vert JP, Noble WS, Le Roch KG. Three-dimensional modelling of the *P. falciparum* genome during the erythrocytic cycle reveals a strong connection between genome architecture and gene expression. **Genome Research** (2014), 24:974-988. (\*contributed equally)
25. Polishko A, **Bunnik EM**, Le Roch K, Lonardi S. PuFFIN – a parameter-free method to build nucleosome maps from paired-end reads. **BMC Bioinformatics** (2014), 15(Suppl 9):S11.
24. **Bunnik EM**, Polishko A, Prudhomme J, Ponts N, Gill SS, Lonardi S, Le Roch KG. DNA-encoded nucleosome occupancy is associated with transcriptional levels in the human malaria parasite *Plasmodium falciparum*. **BMC Genomics** (2014), 15:347.
23. Cervantes S, **Bunnik EM**, Saraf A, Connor C, Escalante A, Sardiù M, Ponts N, Prudhomme J, Florens L, Le Roch K. The multifunctional autophagy pathway in the human malaria parasite, *Plasmodium falciparum*. **Autophagy** (2014), 10(1):80-92.
22. **Bunnik EM**, Chung DWD, Hamilton M, Ponts N, Saraf A, Prudhomme J, Florens L, Le Roch KG. Polysome profiling reveals translational control of gene expression in the human malaria parasite *Plasmodium falciparum*. **Genome Biology** (2013), 14(11):R128.
21. Ponts N, Fu L, Harris EY, Zhang J, Chung DWD, Cervantes MC, Prudhomme J, Atanasova-Penichon V, Zehraoui E, **Bunnik EM**, Rodrigues EM, Lonardi S, Hicks GR,



- Wang Y, Le Roch KG. Genome-wide mapping of DNA methylations in the human malaria parasite *Plasmodium falciparum*. **Cell Host & Microbe** (2013), 14(6): 696-706.
20. Poon AFY, Swenson LC, **Bunnik EM**, Edo-Matas D, Schuitemaker H, van 't Wout AB, Harrigan PR. Reconstructing the Dynamics of HIV Evolution within hosts from serial deep sequence data. **PLoS Computational Biology** (2012), 8(11): e1002753.
  19. Wang Y, Whittall T, Rahman D, **Bunnik EM**, Vaughan R, Schøller J, Bergmeier LA, Montefiori D, Singh M, Schuitemaker H, Lehner T. The role of innate APOBEC3G and adaptive AID immune responses in HLA-HIV/SIV immunized SHIV infected macaques. **PLoS One** (2012), 7(4):e34433.
  18. Yang GB, Wang Y, Babaahmady K, Schøller J, Rahman D, **Bunnik E**, Spallek R, Zong CM, Duan JZ, Qin C, Jiang H, Singh M, Vaughan R, Bergmeier L, Schuitemaker H, Shao Y, Lehner T. Immunization with recombinant macaque MHC class I and II, HIVgp140 and SIVp27 complex inhibits SHIV infection in macaques. **Journal of General Virology** (2012), 93(7):1506-1518.
  17. Bol SM, Booiman T, Van Manen D, **Bunnik EM**, Van Sighem AI, Sieberer M, Boeser-Nunnink B, De Wolf F, Schuitemaker H, Portegies P, Koostra NA and Van 't Wout AB. Single nucleotide polymorphism in gene encoding transcription factor Prep1 is associated with HIV-1-associated dementia. **PLoS ONE** (2012), 7(2):e30990.
  16. Bol SM, Booiman T\*, **Bunnik EM\***, Moerland PD, van Dort K, Strauss JF 3rd, Sieberer M, Schuitemaker H, Kootstra NA, van 't Wout AB. Polymorphism in HIV-1 dependency factor PDE8A affects mRNA level and HIV-1 replication in primary macrophages. **Virology** (2011), 420(1):32-42. (\*contributed equally)
  15. **Bunnik EM**, Swenson LC, Edo-Matas D, Huang W, Dong W, Frantzell A, Petropoulos CJ, Coakley E, Schuitemaker H, Harrigan PR, van 't Wout AB. Detection of inferred CCR5- and CXCR4-using HIV-1 variants and evolutionary intermediates using ultra-deep pyrosequencing. **PLoS Pathogens** (2011), 7(6):e1002106.
  14. van Gils MJ, **Bunnik EM**, Boeser-Nunnink BD, Burger JA, Terlouw-Klein M, Verwer N, Schuitemaker H. Longer V1V2 region with increased number of potential N-linked glycosylation sites in the HIV-1 envelope glycoprotein protects against HIV-specific neutralizing antibodies. **Journal of Virology** (2011), 85(14):6986-95.
  13. **Bunnik EM\***, Euler Z\*, Burger JA, Boeser-Nunnink BD, Grijzen ML, Prins JM, Schuitemaker H. Activity of broadly neutralizing antibodies, including PG9, PG16, and VRC01, against recently transmitted subtype B HIV-1 variants from early and late in the epidemic. **Journal of Virology** (2011), 85(14):7236-45. (\*contributed equally)
  12. Mörner A, Jansson M, **Bunnik EM**, Schøller J, Vaughan R, Wang Y, Montefiori DC, Otting N, Bontrop R, Bergmeier LA, Singh M, Wyatt RT, Schuitemaker H, Biberfeld G, Thorstensson R, Lehner T. Immunization with recombinant HLA classes I and II, HIV-1 gp140, and SIV p27 elicits protection against heterologous SHIV infection in rhesus macaques. **Journal of Virology** (2011), 85(13):6442-52.
  11. **Bunnik EM**, Euler Z, Welkers MRA, Boeser-Nunnink BDM, Grijzen ML, Prins JM, Schuitemaker H. Adaptation of HIV-1 envelope gp120 to humoral immunity at a population level. **Nature Medicine** (2010), 16(9):995-997.
  10. **Bunnik EM**, van Gils MJ, Lobbrecht MSD, Pisas L, Nanlohy NM, van Baarle D, van Nuenen AC, Hessel AJ, Schuitemaker H. Emergence of b12 neutralization resistant HIV-1 variants during natural infection in the absence of humoral or cellular immune pressure. **Journal of General Virology** (2010), 91(5): 1354-1364.
  9. Euler Z, **Bunnik EM\***, van Gils MJ\*, Phung P, Schweighardt B, Wrin T, Schuitemaker H. Cross-reactive neutralizing humoral immunity does not protect from HIV-1 disease progression. **Journal of Infectious Diseases** (2010), 201(7): 1045-1053. (\*contributed equally)

8. van Gils MJ, **Bunnik EM**, Burger JA, Jacob Y, Schweighardt B, Wrin T, Schuitemaker H. Rapid escape from preserved cross-reactive neutralizing humoral immunity without loss of viral fitness in HIV-1-infected progressors and long-term non-progressors. **Journal of Virology** (2010), 84(7): 3576-3585.
7. **Bunnik EM**, Lobbrecht MSD, van Nuenen AC, Schuitemaker H. Escape from autologous humoral immunity of HIV-1 is not associated with a decrease in replicative capacity. **Virology** (2010), 397(1):224-230.
6. **Bunnik EM**, van Gils MJ, Lobbrecht MSD, Pisas L, van Nuenen AC, Schuitemaker H. Changing sensitivity to broadly neutralizing antibodies b12, 2G12, 2F5, and 4E10 of primary subtype B HIV-1 variants in the natural course of infection. **Virology** (2009), 390(2):348-355.
5. **Bunnik EM**, Pisas L, van Nuenen AC, Schuitemaker H. Autologous neutralizing humoral immunity and evolution of the viral envelope in the course of subtype B human immunodeficiency virus type 1 infection. **Journal of Virology** (2008), 82(16):7932-7941.
4. Vermeulen JN, Prins JM, **Bunnik E**, Hack EC, Jurriaans S, Miedema F, Lange JMA, Schuitemaker H. Intravenous Immunoglobulin (IVIG) treatment of human immunodeficiency virus type 1 infected therapy-naïve individuals. **AIDS Research and Human Retroviruses** (2007), 23(11):1348-1353.
3. **Bunnik EM\***, Quakkelaar ED\*, van Alphen FPJ, Boeser-Nunnink BDM, van Nuenen AC, Schuitemaker H. Escape of human immunodeficiency virus type 1 from broadly neutralizing antibodies is not associated with a reduction of viral replicative capacity in vitro. **Virology** (2007), 363(2):447-453. (\*contributed equally)
2. **Bunnik EM**, Quakkelaar ED, van Nuenen AC, Boeser-Nunnink B, Schuitemaker H. Increased neutralization sensitivity of recently emerged CXCR4-using human immunodeficiency virus type 1 strains compared to coexisting CCR5-using variants from the same patient. **Journal of Virology** (2007), 81(2):525-531.
1. Vader LW, Stepniak DT, **Bunnik EM**, Kooy YM, de Haan W, Drijfhout JW, van Veelen PA, Koning F. Characterization of cereal toxicity for celiac disease patients based on protein homology in grains. **Gastroenterology** (2003), 125(4):1105-1113.

## REVIEWS, BOOK CHAPTERS, AND OTHER PUBLICATIONS

13. Garza R, Huson M, Garcia A, Gonzalez B, Musinguzi K, Nagaragere A, Nansubuga E, Zedi M, **Bunnik EM**, Bol S. Malaria—Why Do Mostly Children Get Sick? **Frontiers for Young Minds** (2024), 2024;12:1305938.
12. Bol S, Fuentes J, Garza R, **Bunnik EM**. How plants make cats happy. **Frontiers for Young Minds** (2023), 11:1057606.
11. Reyes RA, Garza R, **Bunnik EM**. X marks the shot against malaria. **Immunity** (2023), 56(2):234-236. (preview)
10. Gonzales SJ, Reyes RA, Braddom AE, Batugedara G, Bol S, **Bunnik EM**. Naturally acquired humoral immunity against *Plasmodium falciparum* malaria. **Frontiers in Immunology** (2020), 11:594653. (review)
9. Braddom AE, Batugedara G, Bol S, **Bunnik EM**. Potential functions of atypical memory B cells in *Plasmodium*-exposed individuals. **International Journal for Parasitology** (2020), 50(13):1033-1042. (review)
8. Batugedara G, Lu XM, **Bunnik EM**, Le Roch KG. The role of chromatin structure in gene regulation of the human malaria parasite. **Trends in Parasitology** (2017), 33(5):364-377. (review)

7. **Bunnik EM**, Le Roch KG. Epigenetics of malaria parasites. Epigenetics and infectious diseases. **(2016)** Springer, edited by J Casadesus, W Doerfler, P Boehm and M Noyer-Weidner. (*book chapter*)
6. **Bunnik EM**, Le Roch KG. Mechanisms regulating transcription in *Plasmodium falciparum* as targets for novel antimalarial drugs. Analysis of parasite biology – from metabolism to drug discovery. **(2016)** Wiley, edited by S Muller, R Cerdan, E Guca and O Radulescu. (*book chapter*)
5. **Bunnik EM**, Le Roch KG. PfAlba1: master regulator of translation in the malaria parasite. **Genome Biology (2015)**, 16(1):221. (*research highlight*)
4. **Bunnik EM\***, Ay F\*, Varoquaux N, Vert J-P, Noble WS, Le Roch KG. Multiple dimensions of gene regulation in the malaria parasite *Plasmodium falciparum*. **BioEssays (2015)**, 37(2):182-194. (*\*contributed equally; review*)
3. **Bunnik EM**, Le Roch KG. *Plasmodium* »Nucleosome«. Encyclopedia of Malaria. Springer, edited by M Hommel and PG Kremsner. ISBN 978-1-4614-8325-0 **(2020)**. (*book chapter*)
2. **Bunnik EM**, Le Roch KG. An introduction to functional genomics and systems biology. **Advances in Wound Care (2013)**, 2(9): 490-498. (*review*)
1. Polonis VR, Schuitemaker H, **Bunnik EM**, Brown BK, Scarlatti G. Impact of host cell variation on the neutralization of HIV-1 in vitro. **Current Opinions in HIV and AIDS (2009)**, 4:400-407. (*review*)

#### SELECTED ORAL PRESENTATIONS

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|---------|--|
| 05/2023 | 4 <sup>th</sup> Malaria Immunology and Elimination Symposium, online. <i>The different effector functions of malaria-associated atypical B cells</i> . (Invited Speaker)   |
| 05/2022 | BioMalPar XVIII: biology and pathology of the malaria parasite. Hybrid conference (online + Heidelberg, Germany). <i>The origin, fate, and function of malaria-associated atypical B cells</i> .   |
| 05/2022 | 3 <sup>rd</sup> Malaria Immunology and Elimination Symposium, online. <i>Isolation and characterization of broadly reactive antibodies against the PfEMP1 CIDR<math>\alpha</math>1 domains that are associated with severe malaria</i> . (Invited Speaker) |
| 05/2021 | Immunology 2021, Annual meeting of the American Association of Immunologists, online. <i>The origin and fate of malaria-associated atypical memory B cells</i> .   |
| 09/2019 | University of Texas San Antonio, South Texas Center for Emerging Infectious Diseases Seminar Series, San Antonio, TX, USA. <i>B cell immunity against malaria</i> .  |
| 02/2019 | Keystone Conference: Molecular Approaches to Vaccines and Immune Monitoring, Keystone, CO, USA. <i>Naturally acquired protective humoral immunity against malaria</i> .  |
| 06/2017 | University of Texas San Antonio, Vector-Borne Disease Symposium, San Antonio, TX, USA. <i>Genome organization during the life cycle of the malaria parasite Plasmodium falciparum</i> . (Invited Speaker)  |
| 03/2017 | Trinity University, Biology Department Seminar Series, San Antonio, TX, USA. <i>Genome organization during the life cycle of the malaria parasite Plasmodium falciparum</i> . (Invited Speaker)  |
| 02/2017 | University of Texas Health Science Center at San Antonio, Department of Pediatrics Seminar Series, San Antonio, TX, USA. <i>Genome organization during the life cycle of the malaria parasite Plasmodium falciparum</i> . (Invited Speaker)                |
| 10/2016 | University of Texas San Antonio College of Sciences Research Day, San Antonio, TX, USA. <i>Dynamic changes in genome organization during the life cycle of the malaria parasite, Plasmodium falciparum</i> . (Invited Speaker)                             |

- 09/2014 Molecular Parasitology Meeting, Woods Hole, MA, USA. *The association between chromatin structure and gene regulation in the human malaria parasite Plasmodium falciparum.*
- 09/2014 Inaugural Riverside Postdoctoral Association Symposium, Riverside, CA, USA. *Gene regulation in the human malaria parasite Plasmodium falciparum. (Best presentation award)*
- 06/2014 1<sup>st</sup> Annual UCR CEPCEB Postdoc Symposium, Riverside, CA, USA. *The role of chromatin structure in gene regulation in the human malaria parasite Plasmodium falciparum. (Best presentation award)*
- 10/2013 3<sup>rd</sup> Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA. *The three-dimensional architecture of the Plasmodium genome throughout the asexual cell cycle.*
- 09/2013 Molecular Parasitology Meeting, Woods Hole, MA, USA. *Polysome profiling reveals translational control of gene expression in the human malaria parasite Plasmodium falciparum.*
- 11/2012 2<sup>nd</sup> Annual Southern California Eukaryotic Pathogen Symposium, Riverside, CA, USA. *Polysome profiling in Plasmodium falciparum: evidence for regulation of gene expression at the translational level.*
- 04/2011 Dutch Society for Medical Microbiology, Papendal, The Netherlands. *Adaptation of HIV-1 envelope glycoprotein to humoral immunity at a population level*
- 11/2009 Dutch HIV conference, Amsterdam, The Netherlands. *Adaptation of HIV-1 envelope glycoprotein to humoral immunity at a population level.*
- 11/2007 EUROPRISE network meeting, Siena, Italy. *Antibody neutralization and Env evolution over the course of HIV-1 infection.*