

# Benny Borremans – CV

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3 May 2022

bennyborremans@bbresearch.org

## Personal Details

Last name      Borremans  
First name     Benny  
Date of birth   8 Feb 1982  
Place of birth  Antwerp, Belgium  
Nationality    Belgian  
Address        4730 Niagara Ave, San Diego, CA 92107, USA.  
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Online         www.bbresearch.org

Current employment      • Independent Contractor (self-employed) – Research Scientist.  
                                     • Assistant Project Scientist, University of California, Los Angeles.  
                                     • Research Scientist, The Marine Mammal Center.

## Education

- PhD Biology (*Transmission ecology of Morogoro arenavirus in the multimammate mouse Mastomys natalensis in Tanzania*; advised by Prof. Herwig Leirs and dr. Jonas Reijnders; external committee members Prof. Richard Ostfeld and Prof. Michael Begon). University of Antwerp, Belgium. 2009-2015
- MSc Biology (incl. 6-month exchange program at Stellenbosch University, South Africa), graduation *magna cum laude*. University of Antwerp, Belgium. 2007-2009
- BSc Biology, graduation *cum laude*. University of Antwerp, Belgium. 2004-2007

## Contract/Employment history

- Montana State University. 2022-...  
Contract (Jan 2022 – Oct 2022) – Prof. Raina Plowright.  
Quantitative Ecologist performing analyses of data on bat-borne viruses (incl. henipah viruses and coronaviruses), as part of the PREEMPT project “Bat OneHealth”.
- The Marine Mammal Center, Sausalito. 2021-...  
Research Scientist (part time, varying hours; Nov 2021- Nov 2023).  
Co-Principal Investigator of a research project on California sea lion entanglement mitigation.
- University of California Los Angeles (UCLA). 2021-...  
Assistant Project (part time; Oct 2021 - current) – Prof. James Lloyd-Smith.
- University of California Los Angeles (UCLA). 2020-2021  
Postdoctoral researcher (Oct 2020 - Sep 2021) – Prof. James Lloyd-Smith.
- University of California Los Angeles (UCLA) and Hasselt University. 2017-2020  
Postdoctoral researcher (Oct 2017 – Sep 2020), supported by a Marie Skłodowska-Curie Individual Fellowship – European Commission.
- University of California Los Angeles (UCLA). 2016-2017

- Postdoctoral researcher (Oct 2016 - Sep 2017) – Prof. James Lloyd-Smith.
- University of Antwerp. 2016  
Postdoctoral researcher, (Jan-Feb) – Prof. Herwig Leirs.  
Affiliated researcher – Prof. Herwig Leirs. 2015-...
- World Health Organisation. 2014  
Consultant (Sep – Oct 2014) - Team leader of an expedition for Ebola virus diagnostics in Guéckédou (Guinea) for European Mobile Laboratories (EMLAB - EU-GOARN – WHO – Prof. Stephan Günther).
- Professional musician. 2001-2008

## Awards, Fellowships, Grants

- UCLA Animal Research Committee (ARC) 3R Grant for the improvement of animal welfare in research. PI Prof. James Lloyd-Smith [Contribution: co-writer]. \$10,000
- Marie Skłodowska-Curie Postdoctoral Global Fellowship (EU-Horizon2020) in collaboration with Prof. James Lloyd-Smith (UCLA – USA) and Prof. Niel Hens (UHasselt – Belgium) (2017-2020). €240,530
- Henri Schouteden Award 2017 for PhD thesis. Award for ‘important original work on faunistics (preferably in Africa), taxonomy, ecology, ethology and anatomy of animals’. Royal Flemish Academy of Belgium for Science and Arts (KVAB). €1,250
- Belgian American Education Foundation (BAEF) - Honorary postdoctoral fellowship (2016-2017).
- Faculty of 1000 (F1000) recommendation of first-authored article Borremans et al. (2016) PLoS Comp Biol.
- Shortlisted (3rd place): Oral Presentation Award at the 12th African Small Mammal Symposium (Mantsoa, Madagascar, 2015).
- Best Speaker Award at the 5th International Conference on Rodent Biology and Management (Zhengzhou, China, 2014).
- Research Foundation Flanders (FWO) 2x Conference travel grant (2014, 2015). €8.000
- Research Foundation Flanders (FWO) PhD Fellowship extension (2013-2015). €65.000
- Research Foundation Flanders (FWO) PhD Fellowship (highly competitive) (2011-2013). €65.000
- Research Foundation Flanders (FWO) 2x Field work travel grant (2012, 2013). €12.000
- Shortlisted: “EOS-prijz 2009” (EOS Magazine), a Flemish contest for the popularised version of MSc theses in exact sciences.

## Publications

Metrics ORCID ID: [orcid.org/0000-0002-7779-4107](https://orcid.org/0000-0002-7779-4107)  
 Google Scholar Profile: [scholar.google.be/citations?user=zVLjRqEAAAAJ&hl=en](https://scholar.google.be/citations?user=zVLjRqEAAAAJ&hl=en).  
 ResearcherID Profile: [www.researcherid.com/rid/D-2241-2009](https://www.researcherid.com/rid/D-2241-2009).  
 ResearchGate Profile: [www.researchgate.net/profile/Benny\\_Borremans](https://www.researchgate.net/profile/Benny_Borremans).  
 First-author articles: 11 (incl. 1 shared).

Peer-reviewed articles 39. Nelis JLD, Rosas de Silva G, Ortuño J, Tsagkaris AS, **Borremans B**, Haslova J, Colgrave ML, Elliott CT (2022). The General Growth Tendency: a tool to improve publication trend reporting by removing record inflation bias and enabling quantitative trend analysis. **PLoS ONE** in press. [Contribution: conceptual thinking, method development, R coding].

38. Snedden CE, Makanani SK, Schwartz ST, Gamble A, Blakey RV, [Borremans B](#), Helman SK, Espericueta L, Valencia A, Endo A, Alfaro ME, Lloyd-Smith JO (2021). SARS-CoV-2: Cross-scale insights from ecology and evolution. **Trends in Microbiology** 29(7):593-605. [Contribution: conceptual thinking, literature review, co-writing]. PDF
37. Whitmer ER, [Borremans B](#), Duignan PJ, Johnson SP, Lloyd-Smith JO, McClain AM, Field CL, Prager KC (2020). Classification and regression tree (CART) analysis for predicting prognosis in wildlife rehabilitation: a case study of leptospirosis in California sea lions (*Zalophus californianus*). **Journal of Zoo and Wildlife Medicine** 52(1):38-48. [Contribution: model development, statistics, co-writing]. PDF
36. Reijnders J, Tersago K, [Borremans B](#), Hartemink N, Voutilainen L, Henttonen H, Leirs H (2020). Why Hantavirus prevalence does not always increase with host density: modelling the role of host spatial behaviour and maternal antibodies. **Frontiers in Cellular and Infection Microbiology** 10:536660. [Contribution: concept development, co-writing]. PDF
35. [Borremans B](#), Gamble A, Prager KC, Helman SK, McClain AM, Cox C, Savage V, Lloyd-Smith JO (2020). Quantifying antibody kinetics and RNA shedding during early-phase SARS-CoV-2 infection. **eLife** 9:e60122. PDF
34. Mariën J, [Borremans B](#), Verhaeren C, Kirkpatrick L, Gryseels S, Goüy de Bellocq J, Günther S, Sabuni CA, Massawe AW, Reijnders J, Leirs H (2020). Density-dependence and persistence of Morogoro arenavirus transmission in a fluctuating population of its reservoir host. **Journal of Animal Ecology** 89:506-518. [Contribution: concept development, experimental design, field work organization, supervision of PhD student Mariën J]. PDF
33. [Borremans B](#), Faust C, Manlove KR, Sokolow SS, Lloyd-Smith JO (2019). Cross-species pathogen spillover across ecosystem boundaries: mechanisms and theory. **Philosophical Transactions of the Royal Society B** 374:20180344. PDF
32. Manlove KR, Sampson LM, [Borremans B](#), Cassirer FE, Miller RS, Pepin KM, Besser TE, Cross PC (2019). Epidemic growth rates and host movement patterns shape management performance for pathogen spillover at the wildlife-livestock interface. **Philosophical Transactions of the Royal Society B** 374:20180343 [Contribution: co-writing, concepts/ideas]. PDF
31. Mariën J, [Borremans B](#), Kourouma F, Jatta B, Rieger T, Günther S, Magassouba N, Leirs H, Fichet-Calvet E (2019). Evaluation of rodent control to fight Lassa fever based on field data and mathematical modelling. **Emerging Microbes & Infections** 8(1):640-649 [Contribution: co-writing, methodology, supervision of PhD student Mariën J]. PDF
30. Nimo-Paintsil SC, Fichet-Calvet E, [Borremans B](#), Letizia AG, Mohareb E, Bonney JHK, Obiri-Danso K, Ampofo WK, Schoepp RJ, Kronmann KC (2019). Rodent-borne infections in rural Ghanaian farming communities. **PLoS ONE** 14(4):e0215224 [Contribution: statistics, co-writing]. PDF
29. Costantini D, [Borremans B](#) (2019). The linear no-threshold model is less realistic than threshold or hormesis-based models: An evolutionary perspective. **Chemico-Biological Interactions** 301:26-33 [Contribution: conceptual thinking, mathematical model development, co-writing]. PDF
28. Iserbyt A, Griffioen M, [Borremans B](#), Eens M, Müller W (2018). How to quantify animal activity from radio-frequency identification (RFID) recordings. **Ecology and Evolution** 1-10, 10.1002/ece3.4491 [Contribution: R coding, development of functions and user-friendly examples; co-writing]. PDF
27. Mariën J, Sluydts V, [Borremans B](#), Gryseels S, Vanden Broecke B, Sabuni C, Katakweba, A, Mulungu, L, Günther S, Goüy de Bellocq J, Massawe A, Leirs H (2018). Arenavirus infection correlates with lower survival of its natural rodent host. **Parasites & Vectors** 11:90 [Contribution: co-writing, methodology, supervision of PhD student Mariën J]. PDF
26. [Borremans B](#), Reijnders J, Hens N, Leirs H (2017). The shape of the contact-density function matters when modelling disease transmission in fluctuating populations. **Royal Society Open Science** 4(11):171308. PDF
25. Vanden Broecke B, [Borremans B](#), Mariën J, Makundi R, Massawe A, Leirs A, Hughes N (2017). Does exploratory behavior or activity in a wild mouse explain susceptibility to virus infection?

- Current Zoology** 10.1093/cz/zox053. [Contribution: conceptual thinking, co-writing, methodology, supervision of MSc projects of Vanden Broecke B and Mariën J]. PDF
24. Mariën J, Borremans B, Gryseels S, Vanden Broecke B, Becker-Ziaja B, Makundi R, Massawe A, Reijnders J, Leirs H (2017). Comparative study of arenavirus infection patterns in experimentally and naturally infected rodent hosts. **EcoHealth** 10.1007/s10393-017-1256-7. [Contribution: conceptual thinking, experimental design, co-writing, data collection, supervision of PhD student Mariën J]. PDF
23. Cuypers L, Cuypers W, Abraham L, Aertbeliën S, Blomme A, Massawe A, Borremans B, Gryseels S, Leirs H (2017). No evidence for avoidance of black rat scent by the presumably less competitive Natal multimammate mouse in a choice experiment. **African Zoology** 52:119-123. [Contribution: conceptual thinking, co-writing, supervision of BSc student Cuypers L]. PDF
22. Mariën J, Borremans B, Gryseels S, Soropogui B, De Bruyn L, Njala Nongo G, Becker-Ziaja B, Goüy de Bellocq J, Günther S, Magassouba N, Leirs H, Fichet-Calvet E (2017). No measurable adverse effects of Lassa, Morogoro and Gairo arenaviruses on their rodent reservoir host in natural conditions. **Parasites & Vectors** 10:210. [Contribution: data collection, conceptual thinking, co-writing, supervision of PhD student Mariën J]. PDF
21. Gryseels S, Baird S, Makundi R, Borremans B, Bryjová A, Leirs H, Goüy de Bellocq J (2017). When viruses don't go viral: the importance of intraspecific phylogeography in the spatial spread of arenaviruses. **PLoS Pathogens** 13(1): e1006073. [Contribution: data collection, conceptual thinking, co-writing]. PDF
20. Borremans B, Reijnders J, Hughes N, Gryseels S, Makundi R, Leirs H (2016). Nonlinear scaling of foraging contacts with rodent population density. **Oikos** 126:792-800. PDF
19. Kerber R, Krumkamp R, ..., Borremans B, ..., Günther S, Di Caro A (85 authors) (2016). Analysis of diagnostic findings from the European Mobile Laboratory in Guéckédou, Guinea, March 2014 to February 2015. **Journal of Infectious Diseases** 214(S3):S250-257. [Contribution: sample analysis during 2014-2015 EMLab expedition]. PDF
18. Borremans B, Hens N, Beutels P, Leirs H, Reijnders J (2016). Estimating time of infection using prior serological and individual information can greatly improve incidence estimation of human and wildlife infections. **PLoS Computational Biology** 12:e1004882. [**Recommended by F1000** (F1000prime) as an article of special significance 6 June 2016, f1000.com/prime/726354304; Article **featured on the cover page** of the journal website]. PDF
17. Caluwaerts S, Fautsch T, Lagrou D, Camara M, Moreau M, Van Herp M, Borremans B, Richter M, Logue C, Günther S, Burkhardt G, Erland E, Lledo P, Lionetto F, de la Rosa O, Hassna M (2016). Dilemmas in managing pregnant women with Ebola: 2 case reports. **Clinical Infectious Diseases** 62:903-905. [Contribution: sample collection during 2014-2015 EMLab expedition]. PDF
16. Mulungu LS, Borremans B, Ngowo V, Mdangi ME, Katakweba AS, Tesha P, Mrosso FP, Mchomvu M, Kilonzo BS (2015). Comparative study of movement patterns of *Mastomys natalensis* in irrigated rice and fallow fields in eastern Tanzania. **African Journal of Ecology** 53:473-479. PDF
15. Carroll MW, Matthews DA, ..., Borremans B, ..., Formenty P, Günther S (133 authors) (2015). Temporal and spatial analysis of the 2014-2015 Ebola virus outbreak in West Africa. **Nature** 524:97-101. [Contribution: sample collection during 2014-2015 EMLab expedition]. PDF
14. Borremans B, Vossen R, Becker-Ziaja B, Gryseels S, Hughes N, Van Houtte N, Günther S, Leirs H (2015). Shedding dynamics of Morogoro virus, an Old World Arenavirus closely related to Lassa virus, in its natural reservoir host *Mastomys natalensis*. **Scientific Reports** 5:10445. PDF
13. Makundi RH, Massawe AW, Borremans B, Laudisoit A, Katakweba A (2015). We are connected: flea-host association networks in the plague outbreak focus in the Rift Valley, northern Tanzania. **Wildlife Research** 42:196-206. [Contribution: data analysis, application of network analysis to flea-host association data, co-writing]. PDF
12. Borremans B, Sluydts V, Makundi R, Leirs H (2015). Evaluation of short-, mid and long-term effects of toe clipping on a wild rodent. **Wildlife Research** 42:143-148. PDF
11. Katakweba AAS, Mhamphi GG, Mwalimu DC, Mchau G, Mbise TJ, Lugendo RM, Borremans B, Kilonzo BS (2015). Laboratory and field tests of Carbaryl 5% against fleas in Lushoto district, Tanzania. **Tanzanian Journal of Health Research** 17:10.4314/thrb.v17i2XX. [Contribution: data analysis]. PDF

10. Gryseels S, Rieger T, Oestereich L, Cuypers B, [Borremans B](#), Makundi R, Leirs H, Gunther S, Gouy de Bellocq J (2015). Gairo virus, a novel arenavirus of the widespread *Mastomys natalensis*: Genetically divergent, but ecologically similar to Lassa and Morogoro viruses. **Virology** 476:249-256. [Contribution: data collection]. PDF
9. Moreau M, Spencer, C, Gozalbes JG, Colebunders R, Lefevre A, Gryseels S, [Borremans B](#), Gunther S, Becker D, Bore JA, Koundouno FR, Di Caro A, Wolfel R, Van Herp M, Peetermans L, Camara AM (2015). Lactating mothers infected with Ebola virus: EBOV RT-PCR of blood only may be insufficient. **Eurosurveillance** 20:pil=21017. [Contribution: sample collection during 2014-2015 EMLab expedition]. PDF
8. Veyrunes F, Perez J, [Borremans B](#), Gryseels S, Richards LR, Duran A, Chevret P, Robinson TJ, Britton-Davidian J (2014). A new cytotype of the African pygmy mouse *Mus minutoides* in Eastern Africa. Implications for the evolution of sex-autosome translocations. **Chromosome Research** 22:533-543. [Contribution: data collection]. PDF
7. [Borremans B](#) (2014). Ammonium improves elution of fixed dried blood spots without affecting immunofluorescence assay quality. **Tropical Medicine and International Health** 19:413-416. PDF
6. [Borremans B](#), Hughes N, Reijniers J, Sluydts V, Katakweba AAS, Mulungu L, Sabuni C, Makundi R, Leirs H (2014). Happily together forever: temporal variation in spatial patterns and complete lack of territoriality in a promiscuous rodent. **Population Ecology** 56: 109-118. PDF
5. Goyens J, Reijniers J, [Borremans B](#), Leirs H (2013). Density thresholds for Mopeia virus invasion and persistence in its host *Mastomys natalensis*. **Journal of Theoretical Biology** 317:55-61. [Contribution: conceptual thinking, co-writing]. PDF
4. Katakweba A, Mulungu L, Eiseb S, Mahlaba T, Makundi R, Massawe A, [Borremans B](#), Belmain S (2012). Prevalence of haemoparasites, leptospires and coccobacilli with potential for human infection in the blood of rodents and shrews from selected localities in Tanzania, Namibia and Swaziland. **African Zoology** 47(1): 119-127. [Contribution: data analysis]. PDF
3. [Borremans B](#), Leirs H, Günther S, Gryseels S, Makundi R, Gouy de Bellocq J (2011). Presence of Mopeia Virus, an African Arenavirus, related to individual host characteristics and biotope; implications for transmission. **Vector-Borne and Zoonotic Diseases** 11(8):1125-1131. PDF
2. Gouy de Bellocq J, [Borremans B](#), Katakweba A, Makundi R, Baird S, Becker-Ziaja B, Günther S, Leirs H (2010). Sympatric occurrence of three arenaviruses in Morogoro, Tanzania. **Emerging Infectious Diseases** 16:692-695. [Contribution: data collection]. PDF
1. \*Geelhand de Merxem D, \*[Borremans B](#), de Jäger ML, Johnson T, Jooste M, Ros P, Zenni RD, Ellis AG, Anderson B (2009). The importance of pollinators not predicted by floral syndromes. **South African Journal of Botany** 75:660-667. \*author position decided by coin toss. PDF

## Academic Service

Review service

- Peer review for journals: eLife, Trends in Ecology & Evolution, PLoS Computational Biology, Ecology Letters, Ecology, Emerging Infections Diseases, Proceedings of the Royal Society B, PLoS Neglected Tropical Diseases, Nature (co-review with James Lloyd-Smith), Biology Letters, Pest Management Science, BioScience, Epidemics, Functional Ecology, EcoHealth, Mammalia, Scientific Reports, Oecologia, Vector-Borne and Zoonotic Diseases, Annales Zoologici Fennici.  
Publons reviewer profile: [publons.com/a/1223658](https://publons.com/a/1223658)
- Review for grant agencies: Marie Curie Postdoctoral fellowships (2021, European Commission), ERC Starting Grant (2018, European Commission; €1,500,000), NERC Highlight Topics (2021, UK Natural Environment Research Council; £2,000,000), Graduate Women in Science fellowship (2021).
- Invited recommender (~handling editor) for "Peer Community In Ecology", a non-profit initiative that aims to formally review pre-prints, independent of journals. 2018-...  
[Website link]

Organisation	Co-organisation of a 3-day UAntwerp workshop “Ecology and Evolution of Parasites and Infections” (2x).	2014-2015
	Co-organisation and supervision of a bi-annual Tropical Field Course (official UAntwerp BSc course), a 3-week field course in several natural reserves in Tanzania with ~60 BSc Biology (UAntwerp, Belgium) students and ~60 BSc Wildlife Management (Sokoine University of Agriculture, Tanzania) students (3x).	2010-2014

## Presentations

Talks	<ul style="list-style-type: none"> <li>• <u>Invited talk</u>, “Inferring disease transmission and immune parameters from sparse serological data”, research seminar at the UCLA Institute for Quantitative and Computational Biosciences, Los Angeles, USA.</li> <li>• <u>Invited talk</u>, “Disease ecology: integrating field, lab and mathematical work”, seminar at the Mediterranean Center for the Environment and Biodiversity, Montpellier, France.</li> <li>• <u>Invited talk</u>, “Model systems in disease ecology: from contacts and population density to climate”, I-Biostat seminar series, Hasselt University, Belgium.</li> <li>• <u>Invited talk</u>, "Predicting spillover and emergence in an inherently stochastic world", INSPIRE session on Frontiers and Limits in Disease Macroecology at the Ecological Society of America (ESA) annual meeting, New Orleans, USA.</li> <li>• Contributed talk, Ecological Society of America (ESA) Annual Meeting, New Orleans, USA.</li> <li>• <u>Invited participation</u>, international workshop on Immunology Across Scales organized by Dr. Clay Cressler; IDEAS (Infectious Disease Evolution Across Scales) workshop; Glasgow, UK.</li> <li>• <u>Invited talk and participation</u>, international workshop on Serology organized by Dr. Niel Hens; ERC (European Commission - Horizon2020) workshop; Antwerp, Belgium.</li> <li>• <u>Invited talk</u> and participation, international workshop on Pathogen Spillover organized by Dr. Raina Plowright, with the goal of generating new ideas; will be complemented by a special issue of Phil Trans B; Yellowstone, USA.</li> <li>• <u>Invited talk</u>, seminar at the National Wildlife Research Center, APHIS USDA, Fort Collins, USA.</li> <li>• Contributed talk, Ecological Society of America (ESA) Annual Meeting, Portland, USA.</li> <li>• Contributed talk, Ecology and Evolution of Infectious Diseases (EEID), University of California Santa Barbara, USA.</li> <li>• <u>Invited talk</u>, public information session about applying for Marie-Curie Individual Fellowships organised by Research Foundation Flanders (FWO), Brussels, Belgium.</li> <li>• Contributed talk, Pathogen Host Shift Meeting, Cambridge, UK.</li> <li>• Contributed talk, 12th African Small Mammal Symposium, Mantasoa, Madagascar.</li> <li>• <u>Invited talk</u>, “Ebola round table: how different disciplines are working together to contain Ebola”, University of Antwerp &amp; University of Hasselt, Belgium.</li> <li>• Contributed talk, 5th International Conference on Rodent Biology &amp; Management, Zhengzhou, China.</li> <li>• <u>Invited talk</u>, Simulation models of infectious diseases (SIMID), international workshop, Hasselt, Belgium.</li> <li>• Contributed talk, Epidemics 4, Amsterdam, Netherlands.</li> <li>• Contributed talk, International Conference on Emerging Vector-borne Diseases in a Changing European Environment (EDEN), Montpellier, France.</li> <li>• Contributed talk, 4th International Conference on Rodent Biology and Management, Bloemfontein, South Africa.</li> </ul>	<p>2020</p> <p>2020</p> <p>2019</p> <p>2018</p> <p>2018</p> <p>2018</p> <p>2018</p> <p>2018</p> <p>2017</p> <p>2017</p> <p>2017</p> <p>2017</p> <p>2016</p> <p>2016</p> <p>2015</p> <p>2014</p> <p>2014</p> <p>2014</p> <p>2013</p> <p>2010</p> <p>2010</p>
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Posters	• Ecology and Evolution of Infectious Diseases (EEID) conference, Princeton, USA.	2019
	• 3 <sup>rd</sup> Annual QCBio Retreat, UCLA, USA.	2017
	• 5th International Conference on Rodent Biology & Management, Zhengzhou, China.	2014
	• 11th African Small Mammal Symposium, Kwaluseni, Swaziland.	2011
	• International Conference on Emerging Vector-borne Diseases in a Changing European Environment (EDEN), Montpellier, France.	2010
	• VIII International Conference on HFRS, HPS & Hantaviruses, Athens, Greece.	2010

## Mentoring and Teaching

Postdoctoral researchers	• Amandine Gamble, PhD (UCLA)	2020
Doctoral students	• Sarah Helman (UCLA)	2022
	• Ana Gomez (UCLA)	2022
	• Joachim Mariën (UAntwerp - co-supervision) – Principal writer of Mariën’s highly competitively awarded VLADOC PhD fellowship (Flemish Interuniversity Council – VLIR), <i>Transmission dynamics of Old World arenaviruses in natural populations of their reservoir host.</i>	2015
Master students	• Mats Van Gestel (UAntwerp), <i>Cross infection of different strains of Mastomys natalensis with the arenaviruses Gairo virus and Morogoro virus in their respective hosts</i> [co-supervised with dr. Sophie Gryseels].	2015
	• Joachim Mariën (UAntwerp), <i>Measuring and modelling Morogoro virus transmission in natural Mastomys natalensis populations.</i>	2014
	• Bram Vanden Broecke (UAntwerp), <i>Personality traits of Mastomys natalensis relevant for infection risk</i> [co-supervised with dr. Nelika Hughes].	2014
	• Glenn Borgmans (UAntwerp), <i>Individual variation in Mastomys natalensis scent marking behaviour</i> [co-supervised with dr. Nelika Hughes].	2013
	• Nele Tomsin (UAntwerp), <i>The effect of biodiversity on social contacts between different host species.</i>	2013
	• Fanny Gascuel (Ecole Normale Supérieure and University Pierre et Marie Curie, France), <i>Density-dependent scaling of contacts between Mastomys natalensis.</i>	2012
	• Jarl Bastiaenen (UAntwerp), <i>Survival of Puumala hantavirus in the environment.</i>	2011
	• Thomas Minne (UAntwerp), <i>Transmission patterns of Mopeia arenavirus in natural populations of the host Mastomys natalensis.</i>	2010
Teaching	• Assistance in practical courses on Biology, Tropical Field Class, Animal Anatomy, and Statistics, totalling >100 teaching hours.	2009-2013

## Skills, Courses

Analytical	• Statistics: linear and non-linear regression, ANOVA, machine learning, Bayesian statistics, multivariate regression, cluster analysis, non-parametric statistics, mixture models, bootstrapping, permutation, joint-likelihood models, MCMC, mark-recapture models, social network analysis, image analysis, spatial statistics.	
	• Mathematical modelling: compartmental models, individual-based models, coupled differential equations, mechanistic models.	
	• Computer: R programming and statistics, JAGS, WinBUGS, Stan, MS Office.	
	• Course: Mathematical modelling of infections - Wellcome Trust Advanced Course, 4-15 Feb 2013, Cambridge, UK.	2013
Field work	• Wild California sea lion catching and disentanglement on San Miguel Island. Project lead of a team consisting of NOAA and The Marine Mammal Center employees.	2022

- Wild California sea lion catching and sampling expeditions on San Miguel Island and Año Nuevo Island, in the context of research on *Leptospira* transmission.
  - Organisation and execution of frequent independent fieldwork (during MSc and PhD) expeditions in Belgium and Tanzania, trapping and sampling small mammals.
  - Supervision of several MSc thesis projects in Tanzania.
  - Participation in several fieldwork/study trips in the Cape region of South Africa.

2016-2019

2008-2013

2010-2015

2008
- Wet lab: Immuno-fluorescence antibody assay, PCR, RT-PCR, RNA/DNA extraction, small mammal dissection.
  - Biosafety level 4 virus sample analysis in field conditions (WHO – European Mobile Laboratories 5-week expedition team leader in Guinea during the 2014 Ebola virus outbreak)
  - Biosafety level 2-3 small mammal handling and sampling.
  - Animal care: Organisation, setup and maintenance of a wild type *Mastomys natalensis* breeding colony at University of Antwerp, in an open cage system and in individually ventilated cages.
  - Course: Biohazard laboratory procedures for pathogens up to and including biosafety level 4 in field conditions (EU - European Mobile Laboratory Project training course in simulated field conditions, 18-22 Aug 2014, Bundeswehr Institute of Microbiology, München).
  - Course: Laboratory Animal Science, University of Antwerp – “Experiment Leader Level C” certificate.

2009-2015

2014

2011
- Dutch (mother tongue), English (fluent), French (good), Swahili (intermediate), Spanish (intermediate), Afrikaans (basic), German (basic).