

EDUCATION

Doctor of Philosophy (PhD)

Leiden, THE NETHERLANDS

Leiden University (2020)

- Thesis: HIV and *Schistosoma* spp. interactions: epidemiology and consequences for detection and prevention in the lake region of Tanzania

Doctorate of Veterinary Medicine (DVM)

Lyon, FRANCE

National Veterinary School of Lyon (2016)

- Experience abroad: 1 year at University College of Dublin, Ireland 2011-2012
- Thesis: Cross-sectional study of brucellosis and Q-fever among livestock at the Thai-Cambodian border.

Master of Public Health (MPH)

New Haven, CT, USA

Yale School of Public Health (2016)

- Epidemiology of Microbial Diseases and Global Health track

EXPERIENCE

Institute of Tropical Medicine, Antwerp Belgium (*Outbreak epidemiologist*)

09/2020-Present

- Epidemiologist within the multidisciplinary Outbreak Research Team
- Develop research protocols and conduct epidemiological field studies
- Responsible for the management and analysis of epidemiological data.

Public Health Agency, Sweden (*EPIET fellow*)

09/2018-09/2020

- European Training in Intervention Epidemiology
- Supported epidemiological activities within the COVID-19 crisis team
- Automated the daily monitoring processes and investigate zoonotic and food-borne outbreaks
- Evaluated the Swedish surveillance system for detection of acute rubella
- Estimated incidence, prevalence, burden of disease and cost-of-illness of various diseases, including food and water-borne diseases.
- Taught on outbreak investigations and on the use of R
- Collaborated with WHO HQ on rodent-borne diseases and on the creation of a roadmap

Weill Cornell Medicine, Tanzania (*Global Health Fellow*)

06/2016-09/2018

- Led data collection in rural communities and health care centers
- Conducted analyses related to the epidemiology of schistosomiasis and HIV co-infections
- Tutored colleagues and fellows in the use of STATA and R
- Taught zoonoses within the microbiology department at the local medical school (~300 students)

IHM/HEP World Health Organization, Switzerland (*Intern*)

05/2017-06/2017

- Developed One-Health outbreak control guidelines for leptospirosis, CCHF, and Q fever
- Wrote a concept note on rodents and public health
- Coordinated the Global Leptospirosis Environmental Action Network activities
- Conducted a systematic literature review on geographic distribution of leptospirosis in Europe

- Provided recommendations after analysis of outbreak case studies for MersCoV, Meningitis and H5N1

Global Health Leadership Institute, USA (*Consultant*) **01/2016-06/2016**

- Participated in a USAID program evaluation report for African francophone countries
- Created post-program surveys in Qualtrics
- Conducted and translated qualitative interviews

Yale School of Public Health, USA (*Case study co-author*) **05/2015-04/2016**

- Led the writing of a case study for communication classes based on the 2014 Ebola outbreak example
- Performed a literature review of Ebola biology and evidence-based public health policy
- Interviewed key actors for the case and wrote the case

Ministry of Public Health, Thailand (*Graduate Student Researcher*) **05/2015-08/2015**

- Designed a seroprevalence survey with risk factors' analysis of Q fever and brucellosis among livestock
- Created the research protocol and the field questionnaire in Epi Info 7
- Led a field team composed of public health officers and veterinarians to collect the data
- Collected, organized and tested blood samples
- Conducted the analysis in R and mapped the results in ArcGIS
- Presented the study design to Thai public health officers

Yale Leptospirosis Laboratory, USA (*Graduate Student Researcher*) **01/2015-05/2015**

- Researched leptospirosis determinants for translocation through MDCK cell membranes
- Grew and maintained MDCK cell cultures
- Performed leptospirosis translocation experiments

Cary Institute of Ecosystem Studies, NY, USA (*Intern*) **06/2013-09/2013**

- Performed camera-trapping, tick-dragging, mosquitoes and small mammals-trapping
- Participated in mosquito identification, *Borrelia burgdorferi* immunofluorescence testing and creation of stable isotopes
- Restarted and reorganized a former landscape project in ArcGIS

SKILLS

Computer: MS Office, R, STATA, SAS, ArcGIS, QGIS, EpiInfo 7, SaTScan, ATLAS software, Qualtrics

Quantitative: Time Series Analyses, CUSUM Analysis, Markov and Queuing Modeling, Categorical data analysis

Laboratory: ELISA, cell culture, blood cell enumeration, PCR, fecal flotation methods, Kato-Katz analysis

Languages: French (native), English (fluent), Spanish (Upper Intermediate), Swedish (Upper Intermediate), Swahili (Elementary)

1. **Colombe S**, Jernberg C, Löf E, Angervall AL, Mellström-Dahlgren H, Dotevall L, Bengnér M, Hall I, Sundqvist L, Kühlmann-Berenzon S, Galanis I, Lindblad M, Hansen A, Rehn M. Outbreak of unusual H₂S-negative monophasic *Salmonella* Typhimurium strain likely associated with small tomatoes, Sweden, August to October 2019. Euro Surveill. 2019 Nov;24(47). www.doi.org/10.2807/1560-7917.ES.2019.24.47.1900643
2. Mishra P, **Colombe S**, Paul N, Mlingi J, Tosiri I, Aristide C, Gao J, Kashangaki P, Nagai H, Kalluvya SE, de Dood CJ, Corstjens P, Mngara J, van Dam GJ, Downs JA. Insufficiency of annual praziquantel treatment to control *Schistosoma mansoni* infections in adult women: a longitudinal cohort study in rural Tanzania. PLoS Negl Trop Dis. 2019 Nov 21;13(11):e0007844. www.doi.org/10.1371/journal.pntd.0007844
3. **Colombe S**, Machemba R, Mtenga B, Lutonja P, Safari W, Beard J, Downs JA, Urassa M, Todd J, Changalucha J. Cascade of care for HIV-seroconverters in rural Tanzania: a longitudinal study. AIDS Care. 2019 Jul 10:1-6. www.doi.org/10.1080/09540121.2019.1640842
4. Espenhain L, Riess M, Müller L, **Colombe S**, Ethelberg S, Litrup E, Jernberg C, Kühlmann-Berenzon S, Lindblad M, Hove NK, Torpdahl M, Mörk MJ. Cross-border outbreak of *Yersinia enterocolitica* O3 associated with imported fresh spinach, Sweden and Denmark, March 2019. Euro Surveill. 2019 Jun;24(24). www.doi.org/10.2807/1560-7917.ES.2019.24.24.1900368
5. **Colombe S**, Beard J, Mtenga B, Lutonja P, Mngara J, de Dood CJ, van Dam GJ, Corstjens PLAM, Kalluvya S, Urassa M, Todd J, Downs JA. HIV-seroconversion among HIV-1 serodiscordant married couples in Tanzania: a cohort study. BMC Infect Dis. 2019 Jun 13;19(1):518. www.doi.org/10.1186/s12879-019-4151-8
6. Hinjoy S, Kongyu S, Doung-Ngern P, Doungchawee G, **Colombe S**, Tsukayama R, Suwancharoen D. Environmental and Behavioral Risk Factors for Severe Leptospirosis in Thailand. Trop Med Infect Dis. 2019 May 16;4(2). pii: E79. www.doi.org/10.3390/tropicalmed4020079
7. Dupnik KM, Lee MH, Mishra P, Reust MJ, **Colombe S**, Haider SR, Yao B, Vick K, Zhang T, Xiang J, Miyaye D, Magawa R, Lyimo E, Mukerebe C, Mngara J, Kalluvya SE, de Dood CJ, van Dam GJ, Corstjens PLAM, Downs JA. Altered Cervical Mucosal Gene Expression and Lower Interleukin 15 Levels in Women With *Schistosoma haematobium* Infection but Not in Women With *Schistosoma mansoni* Infection. J Infect Dis. 2019 May 5;219(11):1777-1785. www.doi.org/10.1093/infdis/jiy742
8. Masikini P, **Colombe S**, Marti A, Desderius B, de Dood CJ, Corstjens PLAM, van Dam GJ, Seugendo M, Kalluvya S, Downs JA. Schistosomiasis and HIV-1 viral load in HIVinfected outpatients with immunological failure in Tanzania: a case-control study. BMC Infect Dis. 2019 Mar 12;19(1):249. www.doi.org/10.1186/s12879-019-3876-8
9. **Colombe S**, Watanapalachaigool E, Ekgatat M, Ko AI, Hinjoy S. Cross-sectional study of brucellosis and Q fever in Thailand among livestock in two districts at the Thai- Cambodian border, Sa Kaeo province. One Health. 2018 Oct 11;6:37-40. www.doi.org/10.1016/j.onehlt.2018.10.001

10. **Colombe S**, Corstjens PLAM, de Dood CJ, Miyaye D, Magawa RG, Mngara J, Kalluvya SE, van Lieshout L, van Dam GJ, Downs JA. HIV-1 Viral Loads Are Not Elevated in Individuals Co-infected With *Schistosoma* spp. After Adjustment for Duration of HIV-1 Infection. *Front Immunol*. 2018 Sep 6;9:2005. www.doi.org/10.3389/fimmu.2018.02005
11. Aziz R, **Colombe S**, Mwakisambwe G, Ndezi S, Todd J, Kalluvya S, Mangat HS, Magleby R, Koebler A, Kenemo B, Peck RN, Downs JA. Pre-post effects of a tetanus care protocol implementation in a sub-Saharan African intensive care unit. *PLoS Negl Trop Dis*. 2018 Aug 30;12(8):e0006667. www.doi.org/10.1371/journal.pntd.0006667
12. **Colombe S**, Machemba R, Mtenga B, Lutonja P, Kalluvya SE, de Dood CJ, Hoekstra PT, van Dam GJ, Corstjens PLAM, Urassa M, Chagalucha JM, Todd J, Downs JA. Impact of schistosome infection on long-term HIV/AIDS outcomes. *PLoS Negl Trop Dis*. 2018 Jul 2;12(7):e0006613. www.doi.org/10.1371/journal.pntd.0006613
13. **Colombe S**, Lee MH, Masikini PJ, van Lieshout L, de Dood CJ, Hoekstra PT, Corstjens PLAM, Mngara J, van Dam GJ, Downs JA. Decreased Sensitivity of *Schistosoma* sp. Egg Microscopy in Women and HIV-Infected Individuals. *Am J Trop Med Hyg*. 2018 Apr;98(4):1159-1164. www.doi.org/10.4269/ajtmh.17-0790
14. **Colombe S**, Togami E, Gelaw F, Antillon M, Fuentes R, Weinberger DM. Trends and correlates of cystic echinococcosis in Chile: 2001-2012. *PLoS Negl Trop Dis*. 2017 Sep 15;11(9):e0005911. www.doi.org/10.1371/journal.pntd.0005911
15. Santos MM, Rubagumya DK, Dominic I, Brighton A, **Colombe S**, O'Donnell P, Zubkov MR, Härtl R. Infant hydrocephalus in sub-Saharan Africa: the reality on the Tanzanian side of the lake. *J Neurosurg Pediatr*. 2017 Nov;20(5):423-431. www.doi.org/10.3171/2017.5.PEDS1755
16. Marti AI, **Colombe S**, Masikini PJ, Kalluvya SE, Smart LR, Wajanga BM, Jaka H, Peck RN, Downs JA. Increased hepatotoxicity among HIV-infected adults co-infected with *Schistosoma mansoni* in Tanzania: A cross-sectional study. *PLoS Negl Trop Dis*. 2017 Aug 17;11(8):e0005867. www.doi.org/10.1371/journal.pntd.0005867
17. Hinjoy S, Wongkumma A, Kongyu S, Smithsuwan P, Suangtho P, Yingyong T, Chanvatik S, **Colombe S**. An Assessment of Epidemiology Capacity in a One Health Team at the Provincial Level in Thailand. *Vet Sci*. 2016 Oct 17;3(4). pii: E30. www.doi.org/10.3390/vetsci3040030
18. **Colombe S**, Chereau F, Wolff E, Larsson S, Wallensten A, Rehn M, Jernberg C, Kühlmann-Berenzon S. Burden of disease and cost-of-illness associated with domestic campylobacteriosis during the 2016-2017 outbreak in Sweden. *In preparation*
19. **Colombe S**, Jernberg C, Dryselius R, Ågren P, Pääjärvi A, Skarin H, Lahti E. A large *Campylobacter* outbreak in Sweden, 2016-2017: cross-agency challenges and the importance of surveillance and molecular epidemiology. *In preparation*
20. Veličko I, Hansson D, **Colombe S**, Berglund T, Axelsson A, Sparén P, Kühlmann-Berenzon S. Estimation of *Chlamydia trachomatis* prevalence among individuals 15-29 years of age in Sweden: a mathematical modelling study. *In preparation*
21. **Colombe S**, Hansson D, Berglund T, Axelsson A, Sparén P, Kühlmann-Berenzon S, Veličko I. Estimation of *Chlamydia trachomatis* prevalence among individuals 15-29 years of age at the regional level: a mathematical modelling study using surveillance data, Sweden, 2015-2018. *In*

preparation

22. **Colombe S**, Axelsson M, Ederth JL, Dahl V. The path to elimination of hepatitis B and C in Sweden: estimation of core indicators for 2015 and 2018. *In preparation*

OTHER TYPES OF PUBLICATIONS

1. **Colombe S**, Jancloes M, Rivière A, Bertherat E. A new approach to rodent control to better protect human health: first international meeting of experts under the auspices of WHO and the Pan American Health Organization. *Wkly Epidemiol Rec.* 2019 Apr 26;94(17):197-912. <https://apps.who.int/iris/bitstream/handle/10665/312103/WER9417-197-203.pdf?sequence=1&isAllowed=y>
2. **Colombe, S.** HIV and Schistosoma spp. interactions: epidemiology and consequences for detection and prevention in the lake region of Tanzania. Doctoral Thesis. Leiden University. January 2020 <https://openaccess.leidenuniv.nl/handle/1887/82478>

CONFERENCES

1. **Colombe S**, Chereau F, Rehn M, Wallensten A, Wolff E, Larsson S, Jernberg C, Kuhlmann-Berenzon S. Increased burden of disease associated with domestic campylobacteriosis in Sweden during the 2016/17 outbreak. European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE): 2019 Nov 27-29: Stockholm, Sweden.
2. **Colombe S**, Mtenga B, Lutonja P, Safari W, Beard B, Downs J, Urassa M, ToddJ, Chungalucha J. Cascade of Care For HIV-Seroconverters in Rural Tanzania: A Longitudinal Study. International Workshop on HIV Observational Databases, (IWHOD) 2018; Fuengirola, Spain.
3. **Colombe S**, Lee MH, Masikini PJ, van Lieshout L, de Dood CJ, Hoekstra PT, Corstjens PLAM, Mngara J, van Dam GJ, Downs JA. Decreased sensitivity of Schistosoma sp. egg microscopy in women and HIV-infected individuals. 66th Annual Meeting of the American Society of Tropical Medicine and Hygiene; 2017 Nov 5-9; Baltimore, USA.

TEACHING ACTIVITIES

- 01/2020: **Guest lecturer** at Karolinska Institute, Sweden
Half day of teaching on outbreak investigation in disaster settings for medical students
- 11/2019: **Workshop facilitator** for RECON (R Epidemics Consortium)
Two days of workshop on the use of R, beginner level, targeted to public health professionals
- 04/2019: **Guest lecturer** at Södertörn University, Sweden
One day teaching on the principles of epidemiology and surveillance for master students in control of infectious diseases
- 01/2019: **Case-study facilitator** at Uppsala Faculty of Veterinary Medicine and Animal Science,

Sweden

Facilitation of a case study on outbreak investigation for a class on epidemiology targeted to veterinary students

●07/2016-07/2017: **Guest lecturer** at Bugando Medical School (Catholic University of Health and Allied Sciences), Tanzania

Guest lecturer within the microbiology department, taught zoonoses to ~300 medical and nursing students, mentored junior researchers.

●01/2016-06/2016: **Teaching fellow** for Principles of Infectious Diseases class, Yale School of Public Health, USA

Participated to the organization of classes, led weekly office hours and class discussions, graded homeworks and finals

●03/2015: **Workshop facilitator** in association with the Timber Re-introduction Program, Haiti

One day workshop in French in Haiti to explain the importance of goat farming practices for production and communities' health

MEMBERSHIPS

R for Epidemics Consortium – Secretary since September 2020

International Biometric Society of Tanzania – Active member since 2018

EPIET Alumni Network – Active member since 2018