# Brecht Devleesschauwer (°09/09/1986)

#### Senior epidemiologist, PhD DVM MVSc MStat

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### 1 Research interests

- Epidemiology, burden of disease, risk assessment, health economics;
- Bayesian data analysis, true prevalence estimation, disease transmission modeling;
- Zoonotic diseases, food safety, veterinary public health.

# 2 Employment

- Visiting professor, risk analysis, 04/2018–present Ghent University, Merelbeke, Belgium
- Senior epidemiologist, 04/2016-present Sciensano, Brussels, Belgium
- Visiting professor, advanced epidemiology, 10/2018–09/2019 Université catholique de Louvain, Brussels, Belgium
- Visiting professor, health economic evaluations, 10/2016–09/2018 Université catholique de Louvain, Brussels, Belgium
- Assistant scientist, global food safety and zoonoses, 06/2015–03/2016
   University of Florida, Gainesville, USA
- Post-doctoral researcher, 04/2015 Ghent University, Merelbeke, Belgium
- Contracted technical expert, 09/2013–12/2013, 02/2014–03/2014 World Health Organization, Geneva, Switzerland
- Doctoral researcher, 10/2010–03/2015
   Ghent University, Merelbeke, Belgium
   Université catholique de Louvain, Brussels, Belgium

## 3 Education

#### 3.1 Academic titles

• Ph.D. Veterinary Sciences & Ph.D. Public Health, 2010–2015

Ghent University, Merelbeke, Belgium

Université catholique de Louvain, Brussels, Belgium

Dissertation topic: "The Burden of Zoonoses in Nepal"

Promoters: Prof. Dr. P. Dorny, Prof. Dr. N. Speybroeck, Prof. Dr. L. Duchateau

• Doctoral Training Programme, 2010–2015

Doctoral School of Life Sciences and Medicine, Ghent University, Belgium

• M.Sc. Statistics (biometrics), 2011–2014

Katholieke Universiteit Leuven, Louvain, Belgium; Great distinction

Dissertation topic: "Quantitative Microbial Risk Assessment with R"

Promoters: Prof. Dr. G. Molenberghs, Prof. Dr. C. Faes

• M.Sc. Veterinary Medicine (research & industry), 2007–2010

Ghent University, Merelbeke, Belgium; Greatest distinction

Dissertation topic: "The Epidemiology of Taenia solium in Nepal"

Promoter: Prof. Dr. P. Dorny

• B.Sc. Veterinary Medicine, 2004–2007

Ghent University, Merelbeke, Belgium; Greatest distinction

#### 3.2 Short courses

- Introductory teacher training, Ghent University, 2019
- Speaking in Public With Exercises from the Theater, Klein Barnum, 2019
- Introduction to the Statistical Program to Assess Dietary Exposure (SPADE),  ${\rm RIVM,~2018}$
- Workshop Evaluation Interviews, WIV-ISP, 2017
- SAS Basics, BI Knowledge Sharing, 2016
- GBD Technical Training Workshop, IHME (University of Washington), 2014
- Advanced Academic English Conference Skills, UCT (Ghent University), 2013
- Introduction to Health Economics, Francqui Chair Pr. Annemans, Université catholique de Louvain, 2013
- Introduction to Infectious Disease Modelling and Its Applications, LSHTM, 2013

- Modelling Infectious Diseases and Health Economic Evaluation of Vaccines, Antwerp University, 2013
- Writing for Non-Specialists and Press, UCT (Ghent University), 2013
- Analyses and Graphics with RExcel, Université catholique de Louvain, 2012
- Getting Started with High Performance Computing, Ghent University, 2012
- Mathematical and Epidemiological Modeling of Endemic Infectious Disease, Cornell University, 2012
- Workshop Impact and Research Communication Skills, Ghent University, 2012
- Basic Course on Veterinary Epidemiology, Ghent University, 2011

# 4 Professional experiences

## 4.1 Contributions to peer review

- Guest Editor, 2019–present Archives of Public Health: burden of disease article collection
- Academic Editor, 2017–present Food and Waterborne Parasitology
- Academic Editor, 2017–present PLOS ONE
- Associate Editor, 2017–2019 BMC Veterinary Research, Parasitology section
- Reviewer for international scientific journals, e.g.:

Acta Tropica, Advances in Parasitology, Archives of Public Health, BMC Infectious Diseases, BMJ Case Reports, Bulletin of the World Health Organization, Epidemiology and Infection, Health Affairs, Parasites & Vectors, Parasitology International, PLOS Neglected Tropical Diseases, PLOS ONE, Risk Analysis, The Lancet, Transactions of the Royal Society of Tropical Medicine & Hygiene, Vector-Borne and Zoonotic Diseases

# 4.2 Participation in national projects

• ELLIS – Monitoring and mitigating environmental health inequalities in Belgium, 2019-2023

ELLIS is a BELSPO BRAIN-be project that aims to develop policy-relevant tools to monitor and mitigate environmental health inequalities in Belgium.

• WaIST – Contribution of excessive weight status to the social impact of non-communicable diseases, multimorbidity and disability in Belgium: past, present, and future, 2019–2023

Proactive policy support for the further development and implementation of evidencebased health policies for the prevention of excessive weight gain.

- Diagnosis-based morbidity statistics Pilot data collection, 2018–2019

  The overall objective of this Eurostat-funded project is to obtain nationally representative, comparable diagnosis-based morbidity data proceeding from the 2018 Shortlist of Morbidity Indicators developed by Eurostat.
- Belgian Health Status Report, 2017–present

The Belgian Health Status Report addresses the lack of an integrated view on the health status of the Belgian population. It provides health status information relevant for decision-makers, with focus on information useful for defining and/or evaluating health objectives.

• Belgian National Burden of Disease Study, 2016-present

The Belgian National Burden of Disease Study (BeBOD) aims to establish a coherent framework for routinely quantifying the burden of disease in Belgium using the DALY metric. The project supports capacity building, ensuring ownership and sustainability.

 Belgian contribution to the WHO/EURO Health for All Database, 2016– present

The HFA database is one of WHO's oldest sources of data. The indicators cover basic demographics, health status, health determinants and risk factors, as well as health care resources, expenditures and more. Each year, Belgium is requested to update the information in the HFA database.

• Belgian Health System Performance Assessment, 2016–2019

The HSPA project is a collaboration between Sciensano, KCE, RIZIV-INAMI and FPS Public Health. The report highlights strengths and weaknesses of the Belgian health system, through a dashboard of 121 indicators, divided over 5 transversal dimensions and 5 specific themes.

## 4.3 Participation in international projects

- Main Action Proposer and Chair, 2019–present
   COST Action CA18218 "European Burden of Disease Network"—www.burdeneu.net
- Country representative, 2017—present EUROSTAT Technical Group on Morbidity Statistics

- Country representative, 2016—present European Burden of Disease Network (WHO/EURO, IHME)
- Epidemiology workgroup leader, 2013–2018 COST Action TD1302 CYSTINET—www.cystinet.org
- Risk forecasting workgroup vice-leader, 2015–2016 COST Action FA1408 EURO-FBP
- Computational Task Force member, 2011–2015
   Country Studies Task Force member, 2011–2015
   Foodborne Disease Burden Epidemiology Reference Group, WHO

### 4.4 Participation in international development projects

- USAID Feed the Future Innovation Lab on Livestock Systems, 2015–2016 Project granted to UF, aiming to improve livestock systems in Mali, Burkina Faso, Ethiopia, Rwanda, Nepal and Cambodia
  - Contribution to project proposal
  - Participation in "Livestock Disease Management and Food Safety" AOI
- VLIR-UOS Institutional University Cooperation with Jimma University, Ethiopia, 2012–2015

Collaboration between Jimma University and different Flemish universities to strenghten institutional capacity

- Organisation of a workshop on design of experiments
- Supervision of Master students
- Doctoral research in Nepal, 2010–2015

Collection and analysis of data on the burden of zoonotic and foodborne diseases, during a 6 months' stay

Impact assessment and control of cysticercosis in the Indian Subcontinent, 2007–2009

VLIR-UOS collaboration between Institute of Tropical Medicine (Antwerp, Belgium) and National Zoonoses and Food Hygiene Research Centre (Kathmandu, Nepal)

- Field work, lab work, data analysis

## 4.5 Contributions as invited expert

• EFSA working group on foodborne parasites. European Food Safety Authority, Parma, Italy; 2017–2018.

- Steering committee of KCE project 292, Exploratory steps for the formulation of Belgian health system targets. Belgian Health Care Knowledge Centre, Brussels, Belgium; 2017.
- FAO/WHO expert meeting on verotoxigenic *Escherichia coli* (VTEC) / Shigatoxigenic *E. coli* (STEC). World Health Organization, Geneva, Switzerland; 2016–2017.
- Expert consultation on diet-related health problems to support the development of food-based dietary guidelines. Superior Health Council, Brussels, Belgium; 2016–2017.
- Expert panel on FDA-iRisk DALY templates. Research Triangle International, NC, USA; 2016.
- Expert consultation to discuss preliminary results of the joint WHO/IHME analysis
  of causes of death among children aged 5–14 years in the WHO European Region.
   WHO Regional Office for Europe, Copenhagen, Denmark; 2015.
- Trend analysis applied to parameter/matrix combinations from the the control plan. Federal Agency for the Safety of the Food Chain, Brussels, Belgium; 2014.
- FAO/WHO expert meeting on risk-based examples for control of *Trichinella* spp. and *Taenia saginata* in meat. World Health Organization, Geneva, Switzerland; 2013–2014.

## 4.6 Logistic responsibilities

#### 4.6.1 Institutional responsibilities

- Project leader, 2017—present Sciesano Translational Research Working Group
- Member, 2017–present Sciensano Redactional Council

#### 4.6.2 Management of research centers

• Founding member, 2014–present Center for Burden and Risk Assessment, www.cbra.be

#### 4.6.3 Organisation of national and international conferences

• Member of scientific committee
1st International CYSTINET Conference, 3–4 November 2015, Belgrade, Serbia

#### 4.6.4 Other

- Event organizer, 2012–2014 RBelgium, the Belgian R user group
- Rapporteur, November 2010 Fourth meeting of the Foodborne Disease Burden Epidemiology Reference Group WHO Headquarters, Geneva, Switzerland

## 5 Skills

### 5.1 Languages

• Dutch speaking+++ reading+++writing+++• English speaking+++ reading+++writing+++• French speaking++ reading+++writing++ • German speaking+ reading++ writing+ • Nepali speaking+ reading+ writing+

### 5.2 Computer skills

- Statistical software: R, JAGS, WinBUGS, OpenBUGS, SAS, Stata
- Advanced R skills: package development, Tcl/Tk interfaces, Shiny applications
- Design and programming: html, javascript, php, mysql, LATEX, markdown, C++
- Windows and MS Office: Word, Excel, Powerpoint, Access

# 6 Teaching

#### 6.1 Courses

- Advanced epidemiology
   WFSP2238, Université catholique de Louvain, 2018-present
- Health economic evaluations WFSP2103, Université catholique de Louvain, 2016–2018
- Quantitative microbial risk assessment of pathogens in food systems ANS 6932 / FOS 6936, University of Florida, February 26–March 4, 2016

## 6.2 Workshops

- Burden of Disease and the DALY metric, 2nd edition, 11–12 October 2017 WIV-ISP, Brussels, Belgium
- Burden of Disease and the DALY metric, 1st edition, 5–6 October 2016 WIV-ISP, Brussels, Belgium
- CYSTINET Epidemiology Training School, 1–3 September 2014 Institute of Tropical Medicine, Antwerp, Belgium Contents: introduction to R, systematic review and meta-analysis, GIS
- National Workshop on Design of Experiments for Statisticians and Practitioners, 28–29 March 2013

Jimma University, Jimma, Ethiopia

Partims: introduction to R, analysis of variance

#### 6.3 Lectures

- Topics in tropical veterinary medicine, 2013–2016 MSc Veterinary Medicine, Ghent University
- Food safety: an introduction, 2015 Environmental Health Concepts in Public Health, PHC 6313, University of Florida
- Concepts of health economics, 2013–2014
   MSc Public Health, Université catholique de Louvain
- Burden of disease and the Disability-Adjusted Life Year, 2013–2015

MSc Public Health, Université catholique de Louvain

MSc Health and Development, Université catholique de Louvain

MSc Occupational Medicine, Université catholique de Louvain

BSc Biomedical Sciences, Université catholique de Louvain

• Diagnostic test characteristics and true prevalence, 2013–2014

MSc Public Health, Université catholique de Louvain

MSc Health and Development, Université catholique de Louvain

#### 6.4 Practicals

- Biomedical statistics, 2012–2014 BSc Veterinary Medicine, Ghent University
- Applied biomedical statistics, 2013–2014
   MSc Veterinary Medicine, Ghent University

## 6.5 PhD students (3)

• Margot Cooreman-Algoed, 2018–2024

PhD Bioscience Engineering, Ghent University

Integrating environmental and nutritional aspects of diets

Promoters: Jo Dewulf, Carl Lachat, Brecht Devleesschauwer

• Lisa Van Wilder, 2018–2022

PhD Public Health, Ghent University

Quality of life in patients with chronic disease

Promoters: Delphine De Smedt; Els Clays, Brecht Devleesschauwer

• Sofie Theresa Thomsen, 2016–2019

PhD Nutrition, National Food Institute, Danish Technical University

Risk-benefit assessment of food substitutions

Promoters: Rikke Andersen; Sara Monteiro Pires, Morten Poulsen, Brecht De-

vleesschauwer

# 6.6 MSc students (43)

- Eva De Meulemeester (2021) The burden of neuromuscular disorders in Belgium: a registry-based study. MSc Health Care Management and Policy, Ghent University. Promoters: **Devleesschauwer B**, Cosyns M.
- Melanie Sioen (2021) The disease burden of injuries in Belgium. MSc Health Care Management and Policy, Ghent University. Promoter: **Devleesschauwer B**.
- Wendy Verlinde (2021) Drug-related mortality in Belgium, 2002-2016. MSc Health Care Management and Policy, Ghent University. Promoter: **Devleesschauwer B**.
- Emilie Lemaire (2020) The health and economic burden of lupus in Belgium. MSc Public Health, Université catholique de Louvain. Promoters: Speybroeck N, **Devleesschauwer B**.
- Gil Derycke (2020) Causes of death in Belgium, 2020-2050. MSc Statistical Data Analysis, Ghent University. Promoter: **Devleesschauwer B**.
- Hanab Adbinur Mahad (2020) Spatial distribution of smoking attributable mortality in Belgium. MSc Statistics, Hasselt University. Promoters: Devleesschauwer B, Faes C.
- Kristiaan Proesmans (2020) Trends and impacts of obesity in Belgium, 2020-2050: an agent-based microsimulation model. MSc Statistical Data Analysis, Ghent University. Promoter: **Devleesschauwer B**.
- Stacey Wilmaer (2020) The disease burden of Alzheimer's disease in Belgium. MSc
   Public Health, Université catholique de Louvain. Promoters: Devleesschauwer
   B, Speybroeck N.

- Delphine Losseau (2019) The health and ecomonic impact of low back and neck pain in Belgium. MSc Public Health, Université catholique de Louvain. Promoter: **Devleesschauwer B**.
- Ellen De Ren (2019) Comparative risk assessment of alcohol use in Belgium. MSc Health Care Management and Policy, Ghent University. Promoters: De Smedt D, **Devleesschauwer B**.
- Jinane Ghattas (2019) The state of health in Belgium, 1990–2017: A benchmarking analysis based on the Global Burden of Disease 2017 study. MSc Public Health, Université catholique de Louvain. Promoter: **Devleesschauwer B**.
- Judith Ngoufo (2019) The burden of coronary heart disease in Belgium. MSc Public Health, Université catholique de Louvain. Promoter: **Devleesschauwer B**.
- Korneel Van Den Driessche (2019) The disease burden of vaccine-preventable diseases in Belgium. MSc Health Care Management and Policy, Ghent University. Promoters: **Devleesschauwer B**, De Smedt D.
- Leen Van Doorslaer (2019) Comparative risk assessment of tobacco use in Belgium.
   MSc Health Care Management and Policy, Ghent University. Promoters: De Smedt D, Devleesschauwer B.
- Luna Gongal (2019) Knowledge, attitudes and practices on rabies in Nepal. MSc Tropical Animal Health, Institute of Tropical Medicine. Promoters: Dorny P, **Devleesschauwer B**.
- Marie Denis (2019) Comparative risk assessment of dietary risk factors in Belgium. MSc Public Health, Université catholique de Louvain. Promoter: Devleesschauwer B.
- Senne Terryn (2019) The disease burden of sexually transmitted infections in Belgium. MSc Health Care Management and Policy, Ghent University. Promoters: **Devleesschauwer B**, De Smedt D.
- Silke Thomas, Stephanie Marinus (2019) Health impact assessment of sugar reduction in Belgium. MSc Health Care Management and Policy, Ghent University. Promoters: De Smedt D, **Devleesschauwer B**.
- Aline Scohy (2018) The impact of chronic diseases on quality of life. MSc Demography, Université catholique de Louvain. Promoter: **Devleesschauwer B**.
- Astrid Cornez (2018) The disease burden of cancer in Belgium. MSc Public Health,
   Université catholique de Louvain. Promoters: Speybroeck N, Devleesschauwer
   B.
- Martina Otavova (2018) Impact of tobacco control interventions on health expectancies: use of dynamic modelling for health impact assessment in Belgium. MSc Statistics, Hasselt University. Promoters: Molenberghs G, **Devleesschauwer B**.

- Orchina Hanna (2018) Relations entre dénutrition et dépendances fonctionnelles chez les résidents d'une maison de repos et de soins. MSc Public Health, Université catholique de Louvain. Promoters: Boland B, **Devleesschauwer B**.
- Steff De Smet (2018) The disease burden of cystic fibrosis in Belgium. MSc Health Care Management and Policy, Ghent University. Promoters: De Smedt D, **Devleesschauwer B**.
- Thomas Pelseneer (2018) Self-reported morbidity and health-related quality of life in injecting drug users in Brussels, Belgium. MSc Public Health, Université catholique de Louvain. Promoters: Nicaise P, **Devleesschauwer B**.
- Angela Vega Rodriguez (2017) The burden of diabetes in Belgium and Spain. MSc Public Health, Université catholique de Louvain. Promoters: Speybroeck N, Devleesschauwer B.
- Damien Blondeau (2017) The disease burden of Yersinia enterocolitica in Belgium.
   MSc Veterinary Medicine, Ghent University. Promoters: Houf K, Devleesschauwer
   B.
- Jade Vincent Membrebe (2017) Development of an incidence-prevalence-mortality model. MSc Statistics, Hasselt University. Promoters: Shkedy Z, Devleesschauwer B.
- Alexia Lescart (2016) Socioeconomic inequalities in diarrhea in Nepal. MSc Public Health, Université catholique de Louvain. Promoters: Speybroeck N, Devleesschauwer B.
- Febe Vanpoucke (2016) Parasitic zoonoses in Ethiopia. MSc Veterinary Medicine, Ghent University. Promoters: **Devleesschauwer B**, Dorny P.
- Louise Vanhecke (2016) Vector-borne diseases in Nepal. MSc Veterinary Medicine, Ghent University. Promoters: **Devleesschauwer B**, Dorny P.
- Sara Hanna (2016) Burden of Crohn disease in Belgium. MSc Public Health, Université catholique de Louvain. Promoters: Speybroeck N, **Devleesschauwer B**.
- Sonia Chebac (2016) Clinical impact of *Giardia*. MSc Public Health, Université catholique de Louvain. Promoters: Speybroeck N, **Devleesschauwer B**.
- Eveline Jansen (2015) Rabies in Ethiopia. MSc Veterinary Medicine, Ghent University. Promoters: Dorny P, **Devleesschauwer B**.
- Judth Verduijn (2015) Tick-borne zoonoses in Belgium. MSc Veterinary Medicine, Ghent University. Promoters: **Devleesschauwer B**, Claerebout E.
- Tom Slegh (2015) Diapause in *Anopheles* mosquitoes. MSc Veterinary Medicine, Ghent University. Promoters: Duchateau L, **Devleesschauwer B**.

- Gerhardina (Gerdien) Huisman (2014) Zooprophylaxis: a malaria control strategy.
   MSc Veterinary Medicine, Ghent University. Promoters: Duchateau L, Yewhalaw D, Devleesschauwer B.
- Joke Yzerwyn (2014) *Opisthorchis* spp. in South-East Asia. MSc Veterinary Medicine, Ghent University. Promoters: Dorny P, **Devleesschauwer B**.
- Norbert van de Velde (2014) Toxoplasmosis in marine mammals. MSc Veterinary Medicine, Ghent University. Promoters: Dorny P, **Devleesschauwer B**.
- Eveline Jansen (2013) Rabies in Ethiopia. MSc Veterinary Medicine, Ghent University. Promoters: Dorny P, **Devleesschauwer B**.
- Gerhardina (Gerdien) Huisman (2013) Zooprophylaxis: a malaria control strategy.
   MSc Veterinary Medicine, Ghent University. Promoters: Duchateau L, Yewhalaw D, Devleesschauwer B.
- Norbert van de Velde (2013) Toxoplasmosis in marine mammals. MSc Veterinary Medicine, Ghent University. Promoters: Dorny P, **Devleesschauwer B**.
- Jani Van Pelt (2012) Echinococcosis in Ethiopia. MSc Veterinary Medicine, Ghent University. Promoters: Dorny P, **Devleesschauwer B**.
- Rudolf Spiekers (2012) Toxoplasmosis in wild felids. MSc Veterinary Medicine, Ghent University. Promoters: Dorny P, **Devleesschauwer B**.

# 6.7 BSc students (8)

- Carolina De La Rosa Mateo (2016) Burden of free-living protozoa in the USA. BSc Health Sciences, University of Florida. Promoter: **Devleesschauwer B**.
- Natalie Bonilla (2016) *Toxoplasma gondii* risk in different food items. BSc Health Sciences, University of Florida. Promoter: **Devleesschauwer B**.
- Ziqi Wang (2016) Epidemiology of *Taenia solium* in Central America. BSc Biochemistry, University of Florida. Promoter: **Devleesschauwer B**.
- Jolien De Keulenaer (2015) Taenia saginata taeniosis/cysticercosis in Belgium. BSc Biomedical Sciences, Antwerp University. Promoters: Devleesschauwer B, Smit S.
- Liene Bossaerts (2014) Lyme disease in the Benelux. BSc Biomedical Sciences, Antwerp University. Promoters: **Devleesschauwer B**, Speybroeck N.
- Nina Redzic (2013) Neurological symptoms of toxoplasmosis in adults. BSc Biomedical Sciences, Antwerp University. Promoters: Devleesschauwer B, Speybroeck N.
- Yannick Van der Venne (2013) Listeriosis in Belgium. BSc Biomedical Sciences, Antwerp University. Promoters: **Devleesschauwer B**, Speybroeck N.

Anne Declercq (2012) Rabies in Nepal. BSc Biomedical Sciences, Antwerp University. Promoters: Devleesschauwer B, Speybroeck N.

## 6.8 Short-term scientific missions (4)

• Fabian Dupont, October 2015

MSc Medicine, Technische Universität München

Health and economic impact of Taenia solium neurocysticercosis in Uganda

• Uffe Christian Braae, December 2014

PhD Veterinary Medicine, University of Copenhagen

Development of a *Taenia solium* transmission model

• Hardy Richter, September 2014

Research associate, Munich Global Neurology Group

Landscape analysis of *Taenia solium* neurocysticercosis in Europe

• Chiara Trevisan, July 2014

PhD Veterinary Medicine, University of Copenhagen

Burden assessment of Taenia solium cysticercosis in Tanzania

## 6.9 PhD examination committees (4)

• Lea Sletting Jakobsen, November 2017

PhD Nutrition, National Food Institute, Danish Technical University

Method development in the study of burden of disease of foodborne chemicals

Promoters: Morten Poulsen; Sara Monteiro Pires, Maarten Nauta

• Malgorzata Jennes, October 2017

PhD Veterinary Sciences, Ghent University

Novel insights in the host-pathogen interaction of porcine toxoplasmosis

Promoters: Eric Cox; Pierre Dorny, Stéphane De Craeye

• Elvire Mfueni Bikundi, June 2016

PhD Public Health, Université catholique de Louvain

Mieux comprendre les relations entre les déterminants socioéconomiques, la couverture en moustiquaires et la prévalence du paludisme chez les enfants en R.D Congo et en Afrique

Promoters: Niko Speybroeck; Robert Snow

• Marco Coral Almeida, February 2016

PhD Veterinary Sciences, Ghent University

Epidemiological transmission patterns of *Taenia solium* cysticercosis in endemic areas: The case of Ecuador

Promoters: Pierre Dorny; Sarah Gabriël, Emmanuel Nji Abatih, Washington Benitez

# 7 Scientific output

### 7.1 Book chapters

- [6] Devleesschauwer B, Scharff RL, Kowalcyk BB, Havelaar AH (2018) Burden and Risk Assessment of Foodborne Disease. In: Roberts T (ed) Food Safety Economics: Incentives for a Safer Food Supply, pp 83-106. doi: 10.1007/978-3-319-92138-96
- [5] Kowalcyk BB, Pires SM, Scallan E, Lamichhane A, Havelaar AH, Devleesschauwer B (2018) Improving Burden of Disease and Source Attribution Estimates. In: Roberts T (ed) Food Safety Economics: Incentives for a Safer Food Supply, pp 143-174. doi: 10.1007/978-3-319-92138-99
- [4] Devleesschauwer B, Haagsma JA, Mangen M-JM, Lake RJ, Havelaar AH (2018) The Global Burden of Foodborne Disease. In: Roberts T (ed) Food Safety Economics: Incentives for a Safer Food Supply, pp 107-122. doi: 10.1007/978-3-319-92138-97
- [3] Devleesschauwer B, Dorny P, Faes C, Havelaar AH, Torgerson PR, Speybroeck N (2018) Burden and Risk Assessment of Foodborne Parasites. In: Ortega Y, Sterling C (eds) Foodborne Parasites, 2nd ed., pp 341-365. doi: 10.1007/978-3-319-67664-7<sub>1</sub>5
- [2] Devleesschauwer B, Bouwknegt M, Mangen M-JJ, Havelaar AH (2017) Health and Economic Burden of Campylobacter. In: Klein G (ed) Campylobacter: Features, Detection, and Prevention of Foodborne Disease, pp 27-40. doi: 10.1016/B978-0-12-803623-5.00002-2
- [1] Levecke B, Anderson RM, Berkvens D, Charlier J, **Devleesschauwer B**, Speybroeck N, Vercruysse J, Van Aelst S (2015) Mathematical inference on helminth egg counts in stool and its applications in mass drug administration programmes to control soil-transmitted helminthiasis in public health. In: Anderson RM, Basáñez MG (eds) Advances in Parasitology, Volume 87, Mathematical Models for Neglected Tropical Diseases: Essential Tools for Control and Elimination, Part A, pp 193-247. doi: 10.1016/bs.apar.2015.01.001

## 7.2 Peer-reviewed papers

Google Scholar metrics: 5319 citations · h-index 31 · i10-index 71

[138] Wyper GM, Assunção RM, Cuschieri S, Devleeschauwer B, Fletcher E, Haagsma JA, Hilderink H, Idavain J, Lesnik T, Von der Lippe E, Majdan M, Santric-Milicevic M, Pallari E, Peñalvo JL, Pires SM, Plass D, Santos JV, Stockton DL, Thomsen ST, Grant I (2020) Population vulnerability to COVID-19 in Europe: a burden of disease analysis. Arch Public Health, in press

- [137] Kalenda NK, Malekita DY, Tshibangu-Kabamba E, Rosas-Aguirre A, Tuan VP, Yamaoka Y, Devleesschauwer B, Mvumbi DM, Wemakoy EO, De Mol P, Hayette M-P, Mvumbi GL (2020) Spatial and molecular mapping of the PfKelch13 gene polymorphism in Africa in the era of emerging Plasmodium falciparum resistance to artemisinin: A systematic review. Lancet Infect Dis, in press
- [136] Gabriël S, Mwape KE, Dorny P, Hobbs EC, **Devleesschauwer B**, Van Damme I, Zulu G, Chembensouf M, Mubanga C, Masuku M, Mambwe M, De Coster T, Phiri IK, Berkvens D, Colston A, Bottieau E, Speybroeck N, Ketzis J, Willingham AL, Trevisan C (2020) Evidence for potential elimination of active *Taenia solium* transmission in Africa? *N Engl J Med*, in press
- [135] Hobbs EC, Mwape KE, Phiri AM, Mambwe M, Mambo R, Thys S, Zulu G, Chembensofu M, Trevisan C, Van Damme I, Phiri IK, **Devleesschauwer B**, Ketzis JK, Dorny P, Willingham AL, Gabriël S (2020) Perceptions and acceptability of piloted *Taenia solium* control and elimination interventions in two endemic communities in eastern Zambia. *Transbound Emerg Dis*, in press. doi: 10.1111/tbed.13214
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## 7.3 Submitted manuscripts

- [6] Pelgrims I, Bastiaens H, **Devleesschauwer B**, Guyot M, Keune H, Nawrot TS, Remmen R, Saenen N, Trabelsi S, Thomas I, De Clercq EM. Association between urban environment and mental health in Brussels, Belgium. *Sci Total Environ*
- [5] Cuschieri S, Pallari E, Terzic N, Alkerwi A, Sigurvinsdottir R, Sigfusdottir ID, **Devleesschauwer B**. Conducting national burden of disease studies in small countries in Europe A challenge or a feasibility? *Arch Public Health*
- [4] Dehanne F, Gourdin M, **Devleesschauwer B**, Bihin B, Van Wilder, Philippe, Mareschal B, Leclercq P, Pirson M. Comparison cost/DALY of hip replacement care in 12 Belgian hospitals. *BMC Health Serv Res*
- [3] Fastl C, **Devleesschauwer B**, van Cauteren D, Lajot A, Leroy M, Laisnez V, Schirvel C, Mahieu R, Pierard D, Michel C, Jacquinet S. The burden of Legionnaires' disease in Belgium, 2013 to 2017. *Arch Public Health*
- [2] Van Wilder L, Clays E, **Devleesschauwer B**, Pype P, Boeckxstaens P, Schrans D, De Smedt D. Health-related quality of life in patients with non-communicable disease: study protocol of a cross-sectional survey. *BMC Public Health*
- [1] Van Goethem N, Struelens Marc J, De Keersmaecker SCJ, Roosens NHC, Robert A, Quoilin S, Van Oyen H, **Devleesschauwer B**. Perceived utility and feasibility of pathogen genomics for public health practice: a survey among public health professionals working in the field of infectious diseases, Belgium, 2019. *BMC Public Health*

# 7.4 Oral presentations

- [16] **Devleesschauwer B** (2017) Estimates of the global and regional burden of foodborne parasites as determined by the World Health Organization. Presented at the WAAVP 2017; 6 Sep 2017; Kuala Lumpur, Malaysia.
- [15] **Devleesschauwer B** (2017) WHO/FERG Estimates of the Global and Regional Burden of STEC. Presented at the *Joint FAO/WHO Expert Meeting on Shiga Toxin-producing Escherichia coli (STEC)*; 25 Sep 2017; Rome, Italy.
- [14] Devleesschauwer B (2017) The disease burden of infectious diseases in Belgium. Presented at the Seminar diagnosis and surveillance of infectious diseases WIV-ISP; 18 May 2017; Brussels, Belgium.

- [13] **Devleesschauwer B** (2016) Estimating the true burden of infectious diseases: methodological considerations. Presented at the *UCL Doctoral Day*; 29 Sep 2016; Brussels, Belgium.
- [12] **Devleesschauwer B** (2016) Methodology to estimate disease burden. Presented at the *IAFP 2016*; 3 Aug 2016; St. Louis, MO, USA.
- [11] **Devleesschauwer B** (2015) Methodological framework for WHO estimates of the global burden of foodborne disease. Presented at the *FERG symposium: Global burden foodborne diseases-from data to action*; 15-16 Dec 2015; Amsterdam, Netherlands.
- [10] **Devleesschauwer B** (2015) Tips and tricks on writing a paper and getting it published. Presented at the *Animal Genetics Seminar*; 1 Dec 2015; Gainesville, FL, USA.
  - [9] Devleesschauwer B, Claes L, Dorny P (2015) Foodborne parasites in Belgium. Presented at the 1st EURO-FBP Working Group Meeting; 26 Oct 2015; Zagreb, Croatia.
  - [8] **Devleesschauwer B** (2015) Quantifying uncertainty in Disability-Adjusted Life Year calculations. Presented at the *6th SIMID Workshop*; 29 Apr 2015; Antwerp, Belgium.
  - [7] **Devleesschauwer B**, Torgerson P, Charlier J, Levecke B, Praet N, Roelandt S, Smit S, Dorny P, Berkvens D, Speybroeck N (2014) Bayesian estimation of true prevalence from apparent prevalence in R: Introducing the "prevalence" package. Presented at the *Berliner Kolloquium—Statistische Methoden in der Empirischen Forschung*; 9 Dec 2014; Berlin, Germany.
  - [6] **Devleesschauwer B** (2014) Unravelling the burden of zoonoses in Nepal. Presented at the *University of Florida*, *Emerging Pathogens Institute*, *Seminar Series*; 18 Nov 2014; Gainesville, FL, USA.
  - [5] **Devleesschauwer B**, Speybroeck N (2014) Understanding, interpreting and calculating Disability-Adjusted Life Years. Presented at the *Scientific Institute of Public Health (WIV-ISP)*, Seminar Series; 11 Mar 2014; Brussels, Belgium.
  - [4] **Devleesschauwer B**, Praet N, Dorny P, Duchateau L, Speybroeck N (2013) DALY calculation in practice: a stepwise approach. Presented at the 6th European Public Health Conference (EUPHA 2013): Health in Europe, are we there yet?; 14-16 Nov 2013; Brussels, Belgium.
  - [3] **Devleesschauwer B**, Dorny P, Duchateau L, Speybroeck N (2013) Unravelling the burden of parasitic zoonoses in Nepal. Presented at the *Joint NVP/BSP scientific meeting 2012: Challenges for the control of parasites*; 19 Oct 2013; Antwerp, Belgium.

- [2] **Devleesschauwer B** (2013) DALY's and burden of disease. Presented at the *Institute of Tropical Medicine*, *Methodological Seminar Series*; 7 Jun 2013; Antwerp, Belgium.
- [1] **Devleesschauwer B**, Dorny P, Duchateau L, Speybroeck N (2012) Élucidation du fardeau des zoonoses parasitaires au Népal. Presented at the 5ième Congrès international d'Épidémiologie (ADELF-EPITER): Épidémiologie et santé mondialisée; 12-14 Sep 2012; Brussels, Belgium.

### 7.5 Poster presentations

- [8] Maertens de Noordhout C, Devleesschauwer B, Speybroeck N (2017) Changes in health in Belgium 1990–2015: a benchmarking analysis based on the Global Burden of Disease 2015 study. Presented at the GBD 20th Anniversary Event; 25-27 Sep 2017; Seattle, WA, USA.
- [7] Levecke B, Ghebretinsae AH, Anderson RM, Berkvens D, Vlaminck J, **Devleess-chauwer B**, Speybroeck N, Vercruysse J, Van Aelst S (2016) Guidance in designing surveys for monitoring the progress of school-based deworming programmes to control soil-transmitted helminths. Presented at the 65th Annual Meeting of the American Society of Tropical Medicine and Hygiene; 13-17 Nov 2016; Atlanta, GA, USA.
- [6] Steckling N, Plass D, Winkelnkemper J, Fischer F, **Devleesschauwer B**, Krämer A, Hornberg C, Bose-O'Reilly S (2016) Disability weights for chronic metallic mercury vapor intoxication to improve estimates of the burden of disease resulting from mercury use in gold mining. Presented at the 28th Annual Conference of the International Society For Environmental Epidemiology; 1-4 Sep 2016; Rome, Italy.
- [5] Smit GSA, Padalko E, Van Acker J, Dorny P, Speybroeck N, Claerebout E, **Devleesschauwer B** (2016) The public health impact of congenital cytomegalovirus infection in Belgium. Presented at the *European Congenital Cytomegalovirus Initiative Conference*; 24-26 Apr 2016; Venice, Italy.
- [4] van de Velde N, **Devleesschauwer B**, Decraeye S, Barnett J, Begeman L, Brownlow A, Davison N, Ijzer J, Jauniaux T, Hiemstra S, Siebert U, Dorny P (2014) Toxoplasma gondii in marine mammals. Presented at the 28th Annual Conference of the European Cetacean Society: Marine mammals as sentinels of a changing environment; 5-9 Apr 2014; Liège, Belgium.
- [3] **Devleesschauwer** B, Havelaar A, Haagsma J, Praet N, Dorny P, Duchateau L, Speybroeck N (2012) Le "DALY Calculator": une interface graphique pour le calcul des DALYs en R. Presented at the 5ième Congrès international d'Épidémiologie (ADELF-EPITER): Épidémiologie et santé mondialisée; 12-14 Sep 2012; Brussels, Belgium.

- [2] Nalon E, Maes D, **Devleesschauwer B**, Millet S, Van Riet M, Janssens G, Tuyttens F (2012) Assessment of mechanical nociception thresholds in lame versus non-lame sows with two methods. Presented at the 4th European symposium of Porcine Health Management; 25-27 Apr 2012; Bruges, Belgium.
- [1] **Devleesschauwer B**, Dorny P, Duchateau L, Speybroeck N (2011) Unravelling the burden of parasitic zoonoses in Nepal. Presented at the *Journée des doctorants:* école doctorale thématique: santé publique, santé et société; 17 Nov 2011; Brussels, Belgium.

### 7.6 Reports

- [13] Food and Agriculture Organization of the United Nations, World Health Organization (2019) Attributing illness caused by Shiga toxin-producing *Escherichia coli* (STEC) to specific foods. JEMRA Microbiological Risk Assessment Series. http://www.fao.org/publications/card/en/c/CA5758EN
- [12] Devos C, Cordon A, Lefèvre M, Obyn C, Renard F, Bouckaert N, Gerkens S, Maertens de Noordhout C, Devleesschauwer B, Haelterman M, Léonard C, Meeus P. Performance of the Belgian health system report 2019. Health Services Research (HSR) Brussels: Belgian Health Care Knowledge Centre (KCE). 2019. KCE Reports 313. D/2019/10.273/34. https://kce.fgov.be/en/performance-of-the-belgian-health-sysE2%80%93-report-2019
- [11] Renard F, Devleesschauwer B (2019) Health Status Report 2019: De gezondheidstoestand in België. Brussels, Belgium: Sciensano; 48p. Report number D/2019/14.440/4. https://doi.org/10.25608/reh4-ty02
- [10] Renard F, Devleesschauwer B (2019) Health Status Report 2019: L'état de santé en Belgique. Brussels, Belgium: Sciensano; 48p. Report number D/2019/14.440/3. https://doi.org/10.25608/a42z-ah78
  - [9] Federal Agency for the Safety of the Food Chain (2019) The FASFC analyses program regarding process contaminants (dossier SciCom 2018/03). http://www.afsca.be/scientificcommittee/opinions/2019/\_documents/Advice02-2019.pdf
  - [8] Federal Agency for the Safety of the Food Chain (2018) The analysis program regarding microbiological analyses in prepared products, fish products, vegetables, fruit, herbs, vegetable oil, fertilizers, beverages and water not intended for drinks (dossier SciCom 2017/24). http://www.afsca.be/scientificcommittee/opinions/2018/\_documents/Advice15-2018.pdf
  - [7] Food and Agriculture Organization of the United Nations, World Health Organization (2018) Shiga toxin-producing *Escherichia coli* (STEC) and food: attribution, characterization, and monitoring. JEMRA Microbiological Risk Assessment Series. http://www.fao.org/documents/card/en/c/CA0032EN

- [6] Graham H, Martijn Bouwknegt M, Devleesschauwer B, Robertson L, van der Giessen L (2016) COST Action FA1408: European ranking of foodborne parasites. Results of a workshop held to prioritise foodborne parasites in Europe using multicriteria decision analyses, 8–12 February 2016, RIVM Bilthoven.
- [5] World Health Organization (2015) WHO estimates of the global burden of food-borne diseases. Foodborne diseases burden epidemiology reference group 2007-2015. Geneva: WHO Press. http://www.who.int/foodsafety/publications/foodborne\_disease/fergreport/en/
- [4] Smit S, **Devleesschauwer B**, Apers L, Macq J, Beutels P, Speybroeck N (2015) Evaluation of the cost-effectiveness of the tuberculosis policies in Flanders. Report submitted to the Agency for Care and Health.
- [3] Food and Agriculture Organization of the United Nations, World Health Organization (2014) Risk based examples for control of *Trichinella* spp. and *Taenia saginata* in meat. Report of a joint FAO/WHO expert meeting, 22–25 October 2013, WHO Headquarters, Geneva, Switzerland. ftp://ftp.fao.org/codex/meetings/CCFH/ccfh46/TrichinellaMtgReport241014.pdf
- [2] World Health Organization (2014) WHO initiative to estimate the global burden of foodborne diseases: fifth formal meeting of the Foodborne Disease Burden Epidemiology Reference Group (FERG), 8–12 April 2013, Geneva, Switzerland. Geneva: WHO Press. http://www.who.int/foodsafety/publications/ferg5/en/
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# 7.7 R Packages

- [8] Devleesschauwer B, McDonald S, Haagsma J, Praet N, Havelaar A, Speybroeck N (2016) DALY: The DALY Calculator—Graphical User Interface for Probabilistic DALY Calculation in R. R package version 1.5.0. https://cran.r-project.org/ package=DALY
- [7] **Devleesschauwer B**, Braae UC (2016) cystiSim: Agent-Based Model for *Tae-nia solium* Transmission and Control. R package version 0.1.0. https://cran.r-project.org/package=cystiSim
- [6] **Devleesschauwer B** (2016) bd: brechtdv's helper functions. R package version 0.0.11. https://github.com/brechtdv/bd
- [5] **Devleesschauwer B**, Faes C, Havelaar A, Speybroeck N (2016) **QMRA**: Parametric Models for Quantitative Microbial Risk Assessment. R package version 0.0.14.

#### https://github.com/brechtdv/QMRA

- [4] **Devleesschauwer B** (2016) HFA: R Interface to European Health for All Database (HFA-DB). R package version 0.0.0.9004. https://github.com/brechtdv/HFA
- [3] **Devleesschauwer B**, McDonald S (2015) FERG: DALY Calculation Framework for WHO/FERG. R package version 0.1.0. https://github.com/brechtdv/FERG
- [2] **Devleesschauwer B**, Willimès S, Van Malderen C, Konings P, Speybroeck N (2015) rineq: Statistical Analysis of Health Inequalities. R package version 0.0.1. https://github.com/brechtdv/rineq
- [1] **Devleesschauwer B**, Torgerson PR, Charlier J, Levecke B, Praet N, Roelandt S, Smit G, Dorny P, Berkvens D, Speybroeck N (2015) prevalence: Tools for Prevalence Assessment Studies. R package version 0.4.0. https://cran.r-project.org/package=prevalence

### 7.8 Vulgarizing articles

- [6] In a tobacco-free world, life expectancy increases by 2 years. Sciensano news, 11 December 2019. https://www.sciensano.be/en/press-corner/a-tobacco-free-world-life-expectancy increases by 2 years.
- [6] Acute gastroenteritis cost the Belgian economy hundreds of millions euros every year.

  Sciensano news, 26 June 2019. https://www.sciensano.be/en/press-corner/
  acute-gastroenteritis-cost-belgian-economy-hundreds-millions-euros-every-year
- [6] New! Belgian Health Status Report available online. Sciensano news, 22 February 2019. https://www.sciensano.be/en/press-corner/new-belgian-health-status-report-a
- [5] Belgium drops from 8th to 15th place on the European ladder of healthy life years. Sciensano news, 16 July 2018. https://www.sciensano.be/en/press-corner/belgium-drops-8th-15th-place-european-ladder-healthy-life-years
- [4] One in 10 globally suffer from foodborne diseases, WHO study finds. EPI News, 3

  December 2015. http://news.ufl.edu/articles/2015/12/one-in-10-globally-suffer-from php
- [3] Des nombres pour des aliments sûrs. La Libre Belgique, 12 April 2015.
- [2] Comment les nombres rendent vos aliments plus sûrs. Le Soir, 8 April 2015.
- [1] Hoe getallen je voedsel veiliger maken. De Morgen, 7 April 2015. https://www.demorgen.be/opinie/hoe-getallen-je-voedsel-veiliger-maken-b7910eb9/

## 8 Scientific honors and awards

- Odile Bain Memorial Prize, Parasites & Vectors; 2018
- PhD Scholarship, Special Research Fund (BOF), Ghent University; 2010

- Pfizer Award for the best Master thesis in Veterinary Medicine; 2010
- Dr Paul Janssen Award for the best Master student in Veterinary Medicine; 2010
- Floribert Jurion Fund, Royal Academy for Overseas Sciences; 2009
- Travel grant, BIOS, Ghent University; 2008
- Travel grant, Flemish Inter-University Council—University Development Cooperation (VLIR-UOS); 2007

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21 May 2020