# Brecht Devleesschauwer (°09/09/1986)

#### Senior epidemiologist, PhD DVM MVSc MStat

Sciensano, Department of Epidemiology and Public Health

Center for Burden and Risk Assessment—www.cbra.be

brecht.devleesschauwer@sciensano.be | Skype: brecht.devleesschauwer

Rue Juliette Wytsmanstraat 14, 1050 Brussels, Belgium | +32 2 642 5035

### 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
- Guest lecturer, health economic evaluations, 10/2016-present 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

• Introduction to the Statistical Program to Assess Dietary Exposure (SPADE), 2018

RIVM & WIV-ISP, Brussels, Belgium

• SAS Basics, 2016

BI Knowledge Sharing

• GBD Technical Training Workshop, 2014

IHME (University of Washington) @ Crete, Greece

• Advanced Academic English Conference Skills, 2013

UCT (Ghent University), Ghent, Belgium

• Introduction to Health Economics, Francqui Chair Pr. Annemans, 2013 Université catholique de Louvain, Brussels, Belgium

• Introduction to Infectious Disease Modelling and Its Applications, 2013 LSHTM, London, UK

Modelling Infectious Diseases and Health Economic Evaluation of Vaccines, 2013

Antwerp University, Antwerp, Belgium

• Writing for Non-Specialists and Press, 2013 UCT (Ghent University), Ghent, Belgium

• Analyses and Graphics with RExcel, 2012 Université catholique de Louvain, Louvain-la-Neuve, Belgium

• Getting Started with High Performance Computing, 2012 Ghent University, Merelbeke, Belgium

 Mathematical and Epidemiological Modeling of Endemic Infectious Disease, 2012

Cornell University @ ISVEE congress, Ghent, Belgium

- Workshop Impact and Research Communication Skills, 2012
   Ghent University, Merelbeke, Belgium
- Basic Course on Veterinary Epidemiology, 2011 Ghent University, Merelbeke, Belgium

# 4 Professional experiences

# 4.1 Contributions to peer review

- Academic Editor, 2017–present Food and Waterborne Parasitology
- Academic Editor, 2017–present PLOS ONE
- Associate Editor, 2017–present 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 international projects

• 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 EU COST action TD1302 CYSTINET—www.cystinet.org
- Risk forecasting workgroup vice-leader, 2015–2016 EU 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

### 4.3 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

### 4.4 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.

### 4.5 Logistic responsibilities

#### 4.5.1 Management of research centers

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

#### 4.5.2 Organisation of national and international conferences

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

#### 4.5.3 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

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

    Nepali

             speaking+
                          reading+
                                        writing+
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### 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

- Health economic evaluations
  WFSP2103, Université catholique de Louvain, March-April, 2017
- 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 (2)

• Lisa Van Wilder, 2018–2022

PhD Public Health, Ghent University

Quality of life in patients with chronic disease

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

vleesschauwer

• Sofie Theresa Thomsen, 2016–2018

PhD Nutrition, National Food Institute, Danish Technical University

Risk-benefit assessment of whole diet

Promoters: Delphine De Smedt; Els Clays, Brecht Devleesschauwer

# 6.6 MSc students (32)

• Thomas Pelseneer, 2018–19

MSc Public Health, Université catholique de Louvain

Self-reported morbidity and health-related quality of life in injecting drug users in Brussels, Belgium (original research)

Promoters: Nicaise P, Devleesschauwer B

• Astrid Cornez, 2018–19

MSc Public Health, Université catholique de Louvain

The disease burden of cancer in Belgium (original research)

Promoters: Speybroeck N, Devleesschauwer B

• Steff De Smet, 2018–19

MSc Health Care Management and Policy, Ghent University

The disease burden of cystic fibrosis in Belgium (original research)

Promoters: De Smedt D, Devleesschauwer B

• Judith Ngoufo, 2018–19

MSc Public Health, Université catholique de Louvain

The burden of coronary heart disease in Belgium (original research)

Promoter: Devleesschauwer B

• Martina Otavova, 2018–19

MSc Statistics, Hasselt University

Impact of tobacco control interventions on health expectancies: use of dynamic modelling for health impact assessment in Belgium (original research)

Promoters: Molenberghs G, Devleesschauwer B

• Aline Scohy, 2018–19

MSc Demography, Université catholique de Louvain

The impact of chronic diseases on quality of life (original research)

Promoter: Devleesschauwer B

• Els Van Mol, 2018–19

MSc Public Health, University of Liverpool

The disease burden of burnout in Belgium (original research)

Promoter: Devleesschauwer B

• Marion Louvel, 2018–19

MSc Statistical Data Analysis, Ghent University

The disease burden of diabetes in Belgium (original research)

Promoters: Van Oyen H, Devleesschauwer B

• Leen Van Doorslaer, 2018–19

MSc Health Care Management and Policy, Ghent University

Comparative risk assessment of tobacco use in Belgium (original research)

Promoters: De Smedt D, Devleesschauwer B

• Silke Thomas, Stephanie Marinus, 2018–19

MSc Health Care Management and Policy, Ghent University

Health impact assessment of sugar reduction in Belgium (original research)

Promoters: De Smedt D, Devleesschauwer B

• Ellen De Ren, 2018–19

MSc Health Care Management and Policy, Ghent University

Comparative risk assessment of alcohol use in Belgium (original research)

Promoters: De Smedt D, Devleesschauwer B

• Orchina Hanna, 2017–18

MSc Public Health, Université catholique de Louvain

Relations entre dénutrition et dépendances fonctionnelles chez les résidents dâĂŹune maison de repos et de soins (original research)

Promoters: Boland B, Devleesschauwer B

• Kinda Atiyeh, 2016–17

MSc Public Health, Université catholique de Louvain

Overall and cause-specific mortality in Belgium (original research)

Promoters: Speybroeck N, Devleesschauwer B

• Angela Vega Rodriguez, 2016–17

MSc Public Health, Université catholique de Louvain

The burden of diabetes in Belgium and Spain (original research)

Promoters: Speybroeck N, Devleesschauwer B

• Damien Blondeau, 2016–17

MSc Veterinary Medicine, Ghent University

The disease burden of Yersinia enterocolitica in Belgium (original research)

Promoters: Houf K, Devleesschauwer B

• Jade Vincent Membrebe, 2016–17

MSc Statistics, Hasselt University

Development of an incidence-prevalence-mortality model (original research)

Promoters: Shkedy Z, Devleesschauwer B

• Louise Vanhecke, 2015–16

MSc Veterinary Medicine, Ghent University

Vector-borne diseases in Nepal (literature review)

Promoters: **Devleesschauwer B**, Dorny P

• Febe Vanpoucke, 2015–16

MSc Veterinary Medicine, Ghent University

Parasitic zoonoses in Ethiopia (literature review)

Promoters: **Devleesschauwer B**, Dorny P

• Alexia Lescart, 2015–16

MSc Public Health, Université catholique de Louvain

Socioeconomic inequalities in diarrhea in Nepal (original research)

Promoters: Speybroeck N, Devleesschauwer B

• Sonia Chebac, 2015–16

MSc Public Health, Université catholique de Louvain

Clinical impact of *Giardia* (original research)

Promoters: Speybroeck N, Devleesschauwer B

• Sara Hanna, 2015–16

MSc Public Health, Université catholique de Louvain

Burden of Crohn disease in Belgium (original research)

Promoters: Speybroeck N, Devleesschauwer B

• Judth Verduijn, 2014–15

MSc Veterinary Medicine, Ghent University

Tick-borne zoonoses in Belgium (literature review)

Promoters: **Devleesschauwer** B, Claerebout E

• Eveline Jansen, 2014–15

MSc Veterinary Medicine, Ghent University

Rabies in Ethiopia (original research)

Promoters: Dorny P, Devleesschauwer B

• Tom Slegh, 2014–15

MSc Veterinary Medicine, Ghent University

Diapause in *Anopheles* mosquitoes (literature review)

Promoters: Duchateau L. Devleesschauwer B

• Joke Yzerwyn, 2013–14

MSc Veterinary Medicine, Ghent University

Opisthorchis spp. in South-East Asia (literature review)

Promoters: Dorny P, Devleesschauwer B

• Norbert van de Velde, 2013–14

MSc Veterinary Medicine, Ghent University

Toxoplasmosis in marine mammals (original research)

Promoters: Dorny P, Devleesschauwer B

• Gerhardina (Gerdien) Huisman, 2013–14

MSc Veterinary Medicine, Ghent University

Zooprophylaxis: a malaria control strategy (original research)

Promoters: Duchateau L, Yewhalaw D, Devleesschauwer B

• Eveline Jansen, 2012–13

MSc Veterinary Medicine, Ghent University

Rabies in Ethiopia (literature review)

Promoters: Dorny P, Devleesschauwer B

• Norbert van de Velde, 2012–13

MSc Veterinary Medicine, Ghent University

Toxoplasmosis in marine mammals (literature review)

Promoters: Dorny P, Devleesschauwer B

• Gerhardina (Gerdien) Huisman, 2012–13

MSc Veterinary Medicine, Ghent University

Zooprophylaxis: a malaria control strategy (literature review)

Promoters: Duchateau L, Yewhalaw D, Devleesschauwer B

• Rudolf Spiekers, 2011–12

MSc Veterinary Medicine, Ghent University

Toxoplasmosis in wild felids (literature review)

Promoters: Dorny P, Devleesschauwer B

• Jani Van Pelt, 2011–12

MSc Veterinary Medicine, Ghent University

Echinococcosis in Ethiopia (original research)

Promoters: Dorny P, **Devleesschauwer B** 

# 6.7 BSc students (8)

• Ziqi Wang, 2015–16

BSc Biochemistry, University of Florida

Epidemiology of *Taenia solium* in Central America (original research)

Promoter: Devleesschauwer B

• Carolina De La Rosa Mateo, 2015–16

BSc Health Sciences, University of Florida

Burden of free-living protozoa in the USA (original research)

Promoter: Devleesschauwer B

• Natalie Bonilla, 2015–16

BSc Health Sciences, University of Florida

Toxoplasma gondii risk in different food items (original research)

Promoter: Devleesschauwer B

Jolien De Keulenaer, 2014–15

BSc Biomedical Sciences, Antwerp University

Taenia saginata taeniosis/cysticercosis in Belgium (literature review)

Promoters: Devleesschauwer B, Smit S

• Liene Bossaerts, 2013–14

BSc Biomedical Sciences, Antwerp University

Lyme disease in the Benelux (literature review)

Promoters: **Devleesschauwer B**, Speybroeck N

• Yannick Van der Venne, 2012–13

BSc Biomedical Sciences, Antwerp University

Listeriosis in Belgium (literature review)

Promoters: Devleesschauwer B, Speybroeck N

• Nina Redzic, 2012–13

BSc Biomedical Sciences, Antwerp University

Neurological symptoms of toxoplasmosis in adults (literature review)

Promoters: **Devleesschauwer B**, Speybroeck N

• Anne Declercq, 2011–12

BSc Biomedical Sciences, Antwerp University

Rabies in Nepal (literature review)

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 Craeve

#### • 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, in press. 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, in press. 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, in press. 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: 1972 citations · h-index 19 · i10-index 43

- [87] Laranjo-González M, **Devleesschauwer B**, Jansen F, Dorny P, Dupuy C, Requena-Méndez A, Allepuz A (2018) Epidemiology and economic impact of bovine cysticer-cosis and taeniosis caused by *Taenia saginata* in North-eastern Spain (Catalonia). *Parasit Vectors*, in press
- [86] Schwingshackl L, Schlesinger S, **Devleesschauwer B**, Hoffmann G, Bechthold A, Schwedhelm C, Iqbal K, Knüppel S, Boeing H (2018) Generating the evidence for risk reduction a contribution to the future of food-based dietary guidelines. *Proc Nutr Soc*, in press. doi: 10.1017/S0029665118000125
- [85] Bechthold A, Boeing H, Schwedhelm C, Hoffmann G, Knüppel S, Iqbal K, De Henauw S, Michels N, **Devleesschauwer B**, Schlesinger S, Schwingshackl L (2018) Food groups and risk of coronary heart disease, stroke and heart failure: a systematic review and dose-response meta-analysis of prospective studies. *Crit Rev Food Sci Nutr*, in press. doi: 10.1080/10408398.2017.1392288
- [84] Maertens de Noordhout C, Van Oyen H, Speybroeck N, Devleesschauwer B (2018) Changes in health in Belgium, 1990-2016: a benchmarking analysis based on the Global Burden of Disease 2016 study. BMC Public Health 18:775. doi: 10.1186/s12889-018-5708-y
- [83] Torgerson PR, Rüegg S, Devleesschauwer B, Abela-Ridder B, Havelaar AH, Shaw A, Rushton J, Speybroeck N (2018) zDALY: an adjusted indicator for the burden of zoonotic diseases. One Health 5:40-45. doi: 10.1016/j.onehlt.2017.11.003
- [82] Schwingshackl L, Schwedhelm C, Hoffmann G, Knüppel S, Preterre AL, Iqbal K, Bechthold A, De Henauw S, Michels N, Devleesschauwer B, Schlesinger S, Boeing H (2018) Food groups and risk of colorectal cancer. Int J Cancer 142:1748-1758. doi: 10.1002/ijc.31198
- [81] Deng H, Devleesschauwer B, Liu M, Li J, Wu Y, van der Giessen J, Opsteegh M (2018) Seroprevalence of *Toxoplasma gondii* in pregnant women and livestock in the mainland of China: a systematic review and hierarchical meta-analysis. *Sci Rep* 8:6218. doi: 10.1038/s41598-018-24361-8
- [80] Jansen F, Dorny P, Trevisan C, Dermauw V, Laranjo-González M, Allepuz A, Dupuy C, Krit M, Gabriël S, Devleesschauwer B (2018) Economic impact of bovine cysticercosis and taeniosis caused by *Taenia saginata* in Belgium. *Parasit Vectors* 11:241. doi: 10.1186/s13071-018-2804-x

- [79] Al-Kappany YM, Abbas IEA, Devleesschauwer B, Dorny P, Jennes M, Cox E (2018) Seroprevalence of anti-Toxoplasma gondii antibodies in filter paper elutes from sera of Egyptian sheep and goats. BMC Vet Res 14:120. doi: 10.1186/s12917-018-1440-1
- [78] Trevisan C, Devleesschauwer B, Praet N, Pondja A, Assane YA, Dorny P, Thamsborg SM, Magnussen P, Johansen MV (2018) Assessment of the societal cost of Taenia solium in AngAşnia district, Mozambique. BMC Infect Dis 18:127. doi: 10.1186/s12879-018-3030-z
- [77] Hobbs EC, Mwape KE, Van Damme I, Berkvens D, Zulu G, Mambwe M, Chembensofu M, Phiri IK, Masuku M, Bottieau E, **Devleesschauwer B**, Speybroeck N, Colston A, Dorny P, Willingham III AL, Gabriël S (2018) Preliminary assessment of the computer-based *Taenia solium* educational program 'The Vicious Worm' on knowledge uptake in primary school children in rural areas in eastern Zambia. *Trop Med Int Health* 23:306-314. doi: 10.1111/tmi.13029
- [76] Bouwknegt M, Devleesschauwer B, Graham H, Robertson LJ, van der Giessen J, EURO-FBP Workshop Participants NA (2018) Prioritization of foodborne parasites in Europe, 2016. Euro Surveill 23:17-00161. doi: 10.2807/1560-7917.ES.2018.23.9.17-00161
- [75] Moyersoen I, Lachat C, Cuypers K, De Ridder K, **Devleesschauwer B**, Tafforeau J, Vandevijvere S, Vansteenland M, De Meulenaer B, Van Camp J, Van Oyen H (2018) Do current fortification and supplementation programs assure adequate intake of fat-soluble vitamins in Belgian infants, toddlers, pregnant women, and lactating women? *Nutrients* 10:223. doi: 10.3390/nu10020223
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# 7.3 Submitted manuscripts

- [10] Geebelen L, Van Cauteren D, **Devleesschauwer B**, Moreels S, Tersago K, Van Oyen H, Speybroeck N, Lernout T. Combining primary care surveillance and a meta-analysis to estimate the incidence of the clinical manifestations of Lyme borreliosis in Belgium, 2015-2017. *Ticks Tick Borne Dis* 
  - [9] Okello W, Okello A, Inthavong P, Tiemann T, Phengvilasouk A, **Devleesschauwer B**, Shaw A, Allen J. Improved methods to capture the total societal benefits of zoonotic disease control: Demonstrating the cost-effectiveness of an integrated control programme for *Taenia solium*, soil transmitted helminths and classical swine fever in northern Lao PDR. *PLOS Negl Trop Dis*
  - [8] Goudet S, Jayaraman A, Chanani S, Osrin D, **Devleesschauwer B**, Bogin B, Madise N, Griffiths P. Cost effectiveness of a community based prevention and treatment of acute malnutrition programme in Mumbai slums, India. *PLOS ONE*

- [7] Braae UC, Thomas LF, Robertson LJ, Dermauw V, Dorny P, Willingham AL, Saratsis A, **Devleesschauwer B**. Epidemiology of *Taenia saginata* taeniosis/cysticercosis: a systematic review of the distribution in the Americas. *Parasit Vectors*
- [6] Thomsen ST, Pires SM, **Devleesschauwer B**, Poulsen M, Fagt S, Ygil KH, Andersen R. Investigating the risk-benefit balance of substituting red and processed meat with fish in a Danish diet. *Food Chem Toxicol*
- [5] Zuhair M, Smit GSA, Wallis G, Jabbar F, Smith C, **Devleesschauwer B**, Griffiths P. Estimation of the worldwide seroprevalence of cytomegalovirus: a systematic review and meta-analysis. *Rev Med Virol*
- [4] Jennes M, **Devleesschauwer B**, De Craeye S, Praet N, Verhelst D, Czaplicki G, Vanrobaeys M, Dorny P, Cox E. True prevalence of anti-*Toxoplasma gondii* antibodies in Belgian pig farms. *PLOS ONE*
- [3] Teng KT-Y, **Devleesschauwer B**, Maertens de Noordhout C, Bennett P, McGreevy PD, Chiu P-Y, Toribio J-AL, Dhand NK. Welfare-Adjusted Life Years (WALY): A novel metric of animal welfare that combines the impacts of impaired welfare and abbreviated lifespan. *PLOS ONE*
- [2] Rahman AA, Smit S, **Devleesschauwer B**, Kostoulas PP, Abatih EN, Saegerman C, Shamsuddin M, Berkvens D, Dhand N, Ward M. Bayesian estimation of the true exposure prevalence, sensitivity and specificity of three serological tests for the diagnosis of bovine brucellosis in Bangladesh. *PLOS Negl Trop Dis*
- [1] Zeilmaker MJ, **Devleesschauwer B**, Mengelers MJB, Brandon E, Bokkers BGH. Health impact assessment of dioxins: a global perspective. *Risk Anal*

# 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, **Devlees-schauwer 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

- [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/
- [1] World Health Organization (2014) WHO initiative to estimate the global burden of foodborne diseases: fourth formal meeting of the Foodborne Disease Burden Epidemiology Reference Group (FERG): Sharing New Results, Making Future Plans, and Preparing Ground for the Countries. Geneva: WHO Press. http://www.who.int/foodsafety/publications/ferg4/en/

# 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

- [4] Havelaar AH, **Devleesschauwer B**. One in 10 globally suffer from foodborne diseases, WHO study finds. EPI News, 3 December 2015.
- [3] Speybroeck N, Maertens de Noordhout C, **Devleesschauwer B**. Des nombres pour des aliments sûrs. La Libre Belgique, 12 April 2015.
- [2] Speybroeck N, Maertens de Noordhout C, **Devleesschauwer B**. Comment les nombres rendent vos aliments plus sûrs. Le Soir, 8 April 2015.
- [1] Speybroeck N, Maertens de Noordhout C, **Devleesschauwer B**. Hoe getallen je voedsel veiliger maken. De Morgen, 7 April 2015.

# 8 Scientific honors and awards

- 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

 $Brecht\ Devleess chauwer$ 

26 June 2018