





PERSONAL INFORMATION

Arie Hendrik Havelaar



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Sex Male | Date of birth 05/09/1949 | Nationality the Netherlands

POSITION

Professor

WORK EXPERIENCE

2014-current

Preeminent Professor

Institute for Sustainable Food Systems, Emerging Pathogens Institute and Animal Sciences Department

University of Florida

Gainesville, FL, USA

- Research on global food systems, foodborne and livestock-related diseases

Business or sector Research, teaching and extension

2007-2014

Professor (emeritus since 2014)

Institute for Risk Assessment Sciences

Faculty of Veterinary Medicine

University of Utrecht

Utrecht, the Netherlands

- Research on risk assessment and burden of foodborne diseases

Business or sector Research and teaching

1978- 2014

Principal scientist

Centre for Zoonoses and Environmental Microbiology

National Institute for Public Health and the Environment

Bilthoven, the Netherlands

- Research, risk assessment and policy advice on food and water safety and zoonoses

Business or sector Governmental research organisation

1974- 1978

Head, Biology Section

Chemical and Bacteriological Service

Rotterdam Waterworks

Rotterdam, the Netherlands

- Quality assurance of drinking water, limnology of raw water storage reservoirs

Business or sector Drinking water supply

EDUCATION AND TRAINING

- 1996-1998 **Epidemiology, MSc**
Netherlands Institute for Health Sciences, Rotterdam., the Netherlands
 - Epidemiology and biostatistics

- 1986 **Mathematics and Biology, PhD**
Utrecht State University, Utrecht, the Netherlands
 - Thesis: F-specific RNA bacteriophages as model viruses in water treatment processes
 - Promotores: prof. dr. W.P.M. Hoekstra (Utrecht University, prof. dr. L. Lijklema (Wageningen University)

- 1967-1973 **Chemical Engineering, MSc (with honours)**
Delft University of Technology,, Delft, the Netherlands
 - Major in technical microbiology

PERSONAL SKILLS

Mother tongue(s) Dutch

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French, German	B1	B1	B1	B1	B1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Good communication skills obtained through participation in scientific committees and other professional activities
- Experienced speaker at scientific conferences
- Experienced teacher at university level (BSc, MSc, PhD)

Organisational / managerial skills

- Experience as manager of a microbiological laboratory (30-70 persons) in a governmental research organisation
- Leading projects funded by Dutch authorities or research funders and the EU
- Organizer of scientific conferences

Job-related skills

- Supervision of MSc and PhD students

Computer skills

- Good command of Microsoft Office™ tools
- Intermediate experience with mathematical and statistical computer software (@RISK, Analytica, Mathematica, R)
- Intermediate experience with Adobe Photoshop and Lightroom
- Training courses in water treatment, public health microbiology, quality assurance, management skills and mathematical modelling

Other skills

- Photography (hobby)

Driving licence

- B/E (Netherlands) and E (Florida)

ADDITIONAL INFORMATION

- Advisory activities**
- Member Scientific Panel on Biological Hazards, European Food Safety Authority, Parma, Italy (2006-2015; vice-chair since 2012)
 - Chair, Foodborne Disease Burden Epidemiology Reference Group, World Health Organization, Geneva, Switzerland (2007-current)
 - Member External Advisory Board College of Public Health and Health Professions, University of Florida (2016-current)
 - Chair External Advisory Board New Zealand Food Safety Research Consortium (2016-current)

Honours and awards

- 1995: Fellow of the American Academy of Microbiology (USA)
- 2001: Rudolf Schülke Hygiene Award (Germany)
- 2014: Jenner Medal (RIVM, Bilthoven, the Netherlands)
- 2014: Risk Analysis Best Paper Award (USA)

Memberships

- Nederlandse Vereniging voor Microbiologie
- American Society for Microbiology
- Society for Risk Analysis
- International Association for Food Protection

PUBLICATIONS

See separate file.

PRESENTATIONS SINCE 2002

American Society for Microbiology, Salt Lake City, 19/22-05-2002, invited paper and poster
 EFFI Symposium "Microbiologische risico's in de keten", Wageningen, 30-05-2002, invited paper.
 1st International Conference on Microbiological Risk Assessment, College Park, MD, 24/26-07-2002, invited paper.
 American Association of Agricultural Economists, Long Beach, CA, 28/31-07-2002, invited paper.
 Nationaal Congres Voedselveiligheid, Rotterdam, 25-09-2002, invited paper.
 XIIIth National Microbiological Congress, Bilbao, Spain, 18/19-09-2002, invited paper.
 Nederlandse Vereniging voor Microbiologie, Sectie Levensmiddelenmicrobiologie, Wageningen, 03-10-2002, invited paper.
 Workshop Pathogenic Viruses in Water, RIVM, Bilthoven, 12-03-2003, invited paper.
 12th International Meeting on Campylobacter, Helicobacter and Related Organisms, Aarhus, Denmark, 6/10-09-2003, keynote paper and posters.
 Food Law Enforcement Practitioners in Europe, Working Group on Emerging Risks, Den Haag, 26-10-2003, guest lecture.
 Nederlandse Vereniging voor Microbiologie, Sectie Levensmiddelenmicrobiologie, Wageningen, 20-11-2003, invited paper.
 5th World Congress Foodborne Infections and Intoxications, Berlin, 7/11-06-2004, keynote paper and poster.
 Workshop on Approaches to Predictive Modeling to Support a Framework to Prioritize Opportunities to Reduce Food Safety Risk, June 15-16, 2004, Iowa State University, Ames, IA, invited paper.
 Symposium "Ons eten gemeten", RIVM, Bilthoven, the Netherlands, September 3, 2004. Jungbauern- und Jungwinzertag, 24 Oktober 2004, Ettelbrück, Luxemburg, keynote paper.
 Swedish Seminar on possibilities for Campylobacter risk management. Stockholm, 28-29 October 2004, invited paper.
 Society for Risk Analysis 2004 Annual Meeting, December 5-8, 2004, Palm Springs, California, USA, offered paper and poster.
 Conference on Food Risk Assessment, April 5, 2005, Bilbao, Spain, invited speaker.
 Workshop on DALYs, April 26, National Food Administration, Uppsala, Sweden, keynote speaker.
 105th General Meeting American Society for Microbiology, 5-9 June 2005, Atlanta, Georgia, USA. Symposium Campylobacter: from farm to phylogeny, invited speaker
 COST 920 Working Group 3 Workshop on microbiological risk assessment, 26-28 June 2005, Dubrovnik, Croatia, session chair and invited speaker.
 Institute for Environmental Science and Research, Christchurch and Wellington, New Zealand, 30 August and 1 September 2005, international fellow.
 New Zealand Food Safety Administration, Wellington, New Zealand, 2 September 2005, invited speaker.
 13th International Workshop on Campylobacter, Helicobacter and related organisms, 4-8 September 2005, Gold Coast, Queensland, Australia, offered paper and panel discussion.
 Cambridge Conference: Interventions against Campylobacter, 14-15 September 2005, Cambridge, UK, invited speaker.
 Challenges in managing food-derived risk, 13 December 2005, National Academy of Sciences, Washington, DC, USA, invited speaker.
 FAO/WHO Preconference workshop on Microbial Risk Assessment, Sydney, Australia, 20 February 2006, invited speaker.
 2nd International Conference on Microbial Risk Assessment: Foodborne Hazards, Sydney, Australia, 21-23 February 2006, opening address.
 Journées Scientifiques de l'Agence Française de Sécurité Sanitaire des Aliments (AFSSA), Maisons-Alfort, France, 15 March 2006, invited speaker.
 World Poultry Science Association, Forli, Italy, 30 March 2006, invited speaker.
 Med-Vet-Net Annual Meeting, Malta, 3-6 May 2006, speaker.
 International Conference on Priority setting of Foodborne and Zoonotic Pathogens, 19-21 July, Berlin, Germany, invited speaker.
 ILSI Europe General Assembly, 27-28 February 2007, Brussels Belgium, invited speaker.

Conference Zoonoses: from Science to Policy, 4-7 November 2007, Glasgow, Scotland, invited speaker.
 Health Protection Agency Annual Conference, Warwick, UK; 15 September 2008, invited speaker.
 Japan Food Safety Commission, Tokyo; 16-17 November 2008, guest lecturer.
 Society for Risk Analysis Annual Meeting, Boston, USA; 7-10 December 2008, workshop speaker.
 15th International Workshop on Campylobacter, Helicobacter and related organisms, Niigata, Japan; 3-5 September 2009, keynote speaker.
 International Association for Food Protection, Anaheim, CA, USA; 1-4 August 2010, invited speaker.
 Food Micro, Copenhagen, Denmark; 30 August-2 September 2010, keynote speaker.
 European Commission, DG Sanco. Second round table conference on revision of meat inspection. Future pig meat inspection. Brussels, 25 October 2010.
 Current public health problems related to pork, invited presentation.
 International Association for Food Protection, European Symposium, Ede, the Netherlands, 18-20 May 2011, keynote speaker.
 Safe Pork, Maastricht, the Netherlands, 19-22 June 2011, keynote speaker.
 Institute for Food Research, Norwich, UK, 21 July 2011, invited lecturer.
 16th International Workshop on Campylobacter, Helicobacter and related organisms, Vancouver, Canada; 3-5 September 2009, session starter talk.
 VITAL Conference "Advances in monitoring and control of viruses in food supply chains", Ljubljana, Slovenia, 5-7 September 2011, keynote speaker.
 EFSA/ECDC/EC DG Sanco seminar "Animal-to-human diseases: How does Europe protect its citizens?", European Parliament, Brussels, 10 October 2011, invited speaker.
 Wetenschappelijk Comité van het FAVV, Brussel, België, 25 November 2011, invited speaker.
 International Conference on Emerging Infectious Diseases, Atlanta, GA, 14 March 2012, oral presentation.
 European Veterinary College Voorjaarsdagen Amsterdam, 6 April 2012, invited speaker.
 International Association for Food Protection, Providence, RI, USA; 22-24 July 2012, invited speaker.
 European College for Veterinary Public Health, Maastricht, the Netherlands; 23 August 2012, keynote speaker.
 EFSA@10 Scientific Conference, Parma, Italy; 7-8 November 2012, keynote speaker.
 Seminar on Burden of Foodborne Diseases, DTU Food, Lyngby, Denmark; 19 February 2013, keynote speaker.
 2013 Campylobacter Strategy Workshop BBSRC/DEFRA/FSA, Birmingham, UK, 12-14 March 2013, invited international speaker.
 Global Health Metrics and Evaluation Conference, Seattle, WA, USA, 17-19 June 2013, oral presentation.
 International Association for Food Protection, Charlotte, NC, USA; 28-31 July 2013, invited speaker.
 CHRO 2013, Aberdeen, UK, 15-19 September 2013, plenary opening address.
 SfAM-MVNA Summer Conference, Brighton, 30 June-3 July 2014; invited speaker.
 International Association for Food Protection, Indianapolis, IN, USA; 3-6 August 2014; invited speaker.
 American Society for Tropical Medicine and Hygiene, New Orleans, LO, USA; November 1-4 2014; invited speaker.
 Florida Association for Food Protection Annual Educational Conference, Altamonte Springs, FL, May 29, 2015; invited speaker.
 Sri Lanka College of Microbiologists Annual Meeting, Colombo, Sri Lanka, August 12-14, 2015; invited speaker (2 presentations).
 EFSA's 2nd Scientific Conference "Shaping the Future of Food Safety, Together", Milan, Italy, October 14-16, 2015; invited speaker.
 18th International workshop on Campylobacter, Helicobacter and related organisms, Rotorua, New Zealand, November 2, 2015; invited speaker.
 The Global Burden of Foodborne Diseases - from data to action, Amsterdam, the Netherlands, December 15-16, 2015; chair scientific committee and speaker.
 The Global Burden of Foodborne Diseases. Bill and Melinda Gates Foundation, Seattle, WA, January 11, 2016.
 The Global Burden of Foodborne Diseases, webinar. IAFF, February 9, 2016.
 Global Burden of Disease: Foodborne Pathogens, The FERG Approach" May 26th, 2016, Wageningen, the Netherlands, invited speaker.
 International Association for Food Protection, St. Louis, MO, USA; July 31 - August 3, 2016; session organizer and speaker.
 Michigan State University, East Lansing, MI, USA; September 19, 2016; G. Malcolm Trout Lecture.
 GlobalG.A.P. Summit, Amsterdam, the Netherlands; September 27-28, 2016; keynote speaker
 Symposium "Food, Health and Microbes", Minnesota State University, Minneapolis St Paul, USA; October 27, 2016; invited speaker.
 Symposium "New science for food safety", Nanyang Technical University, Singapore; November 7-10; 2016; invited speaker.
 Meeting on Campylobacter, Bill & Melinda Gates Foundation, Seattle, WA, USA; December 15-16, 2016; invited speaker.
 Annual Meeting, New Zealand Institute for Food Science and Technology, Nelson, NZ, July 3-5, 2017; keynote speaker: Global trends in food safety.
 Retirement symposium Dr. A.H.C. Van Bruggen, University of Florida, Gainesville, FL, January 16, 2018; invited speaker: Contamination cycles of zoonotic and foodborne pathogens.
 Inception meeting Global Burden of Animal Diseases, World Association for Veterinary Health, Paris, March 20-21, 2018; invited speaker: Global Burden of Foodborne Disease - Approach and lessons learned.
 International Association for Food Protection, Salt Lake City, UT, July 7-11, 2018; presentation Food Safety in Low- and Middle-Income Countries; panel member roundtable discussion: The Conundrum of Campylobacter Source Attribution.
 Tropentag, Ghent, Belgium, September 17-19, 2018; poster presentation Food Safety Research in the Feed the Future Innovation Lab for Livestock Systems.
 8th Boehringer Ingelheim Expert Forum on Sustainable Pork Production, Bangkok, Thailand, May 7-9, 2019; invited speaker. Global disease burden of pathogens in animal source foods.
 1st Annual Scientific Meeting of the One Health European Joint Programme OHEJP on foodborne zoonoses, antimicrobial resistance and emerging threats, Dublin, Ireland, May 22-24, 2019; invited speaker. The global public health significance of (asymptomatic) enteric infections from livestock reservoirs.
 American Dairy Science Association Annual Meeting, Cincinnati, OH, June 23-26, 2019; invited speaker. Foodborne Diseases from Dairy Products in Developing Countries: Hazards and Health Implications.
 Feed the Future Innovation Lab for Livestock Systems, Symposium: Ensuring children's cognitive and physical development through animal-source foods, Washington DC, June 5, 2019; invited speaker. Ensuring the safety of animal-source foods.
 International Association for Food Protection, Louisville, KY, July 21-24, 2019; session organizer; presentation Source Attribution of Illnesses Transmitted Commonly by Food and Water in the United States using Structured Expert Judgment.
 CHRO 2019 Campylobacter, Helicobacter and Related Organisms, Belfast, Ireland, September 8-11, 2019; session organizer; presentation Children, chickens, eggs, environmental enteric dysfunction and Campylobacter: the CAGED study.
 5th International Congress on Pathogens at the Human-Animal Interface, Quebec City, Canada, September 24-26, 2019; plenary speaker The global public health significance of (asymptomatic) enteric infections from livestock reservoirs; panelist Emergence of antimicrobial resistance in the era of drug use and misuse.

TEACHING AT UNIVERSITY OF FLORIDA

Quantitative microbial risk assessment (3 credits). February 26 – March 4, 2016; June 5 – 16, 2017.

PHD STUDENTS AT THE UNIVERSITY OF FLORIDA

Completed

Elizabeth Beshearse. Attribution of diseases to water and food, an expert elicitation, 2018.
 Lindsey Laytner. A One Health approach to understand livestock ownership and nutrition status in children under five in Southern Haiti, 2018.
 Yi Su. Socio-environmental characteristics and geostatistical modeling of soil-transmitted helminth infections among children under five in urban Maputo, Mozambique.

Ongoing

Alan Gutierrez. Persistence of *Salmonella* spp. in poultry litter and litter-amended soils.
 Billy (Dehao) Chen. *Campylobacter* genomics, environmental enteric dysfunction and stunting in rural Ethiopia.
 Bruce (Xialong) Li. Genomic and spatial epidemiology of human salmonellosis in Florida.

MSC STUDENTS AT THE UNIVERSITY OF FLORIDA

Completed

Amanda Tiblier. Risk profile Salmonella on tomatoes, 2016
 Ashenafi Beyi: Economics of dairy management, 2017.
 Kathleen Vazquez: Modeling bacteriological quality of agricultural waters, 2017.
 Taylor Langford. Hygiene training of butchers in Ethiopia.

PHD STUDENTS AT UTRECHT UNIVERSITY

Completed degrees

W. Hijnen, Elimination of micro-organisms in water treatment, 29 January 2009. Utrecht, the Netherlands.
 F.M. Schets, The microbiological safety of bathing water – waterborne pathogens beyond bathing water legislation, 3 March 2011. Utrecht, the Netherlands.
 J.H. Smid, Biotracing microbial contaminants of food chains, 5 June 2012. Utrecht, the Netherlands.
 K. Verhaelen, Sources and persistence of human noroviruses in fresh produce chains and associated public health risks. 7 July 2014. Utrecht, the Netherlands.
 J. van Leuken, Airborne transmission of *Coxiella burnetii*: Spatial dispersion modelling and the effects of meteorological and environmental conditions on Q fever incidence. 8 September 2015. Utrecht, the Netherlands.
 E. Pacholewicz, Improving processing hygiene and broiler meat safety in the slaughterhouse in relation to *Campylobacter* spp. An intervention study. 24 May 2016. Utrecht, the Netherlands.
 F. Franssen, *Trichinella* in wildlife in the Netherlands and evaluation of risk-based monitoring systems. 14 June 2016. Utrecht, the Netherlands.
 C. Maertens de Noordhout, Towards an improved estimation of the burden of bacterial foodborne disease. 20 March 2017. Brussels, Belgium.
 L. Tariq, Study Perspective in Health Economic Evaluations of Prevention and Acute Care: Fit for purpose, fit for future. 4 July 2019. Utrecht, the Netherlands.

Co-promotor

G.J. Medema, *Cryptosporidium* and *Giardia*: new challenges to the water industry, 29 July 1998. Utrecht, the Netherlands
 P.H. in 't Veld, The development and evaluation of reference materials for food microbiology, 7 December 1998. Wageningen, the Netherlands

Evaluator

M.J. Beekwilder, Secondary structure of the RNA genome of bacteriophage Q β , 30-05-1996. Leiden, the Netherlands.
 M. Muniesa, Bacteriophages carrying the Stx2 gene in water, 28-11-97. Barcelona, Spain
 J.F. Schijven, Virus removal from groundwater by soil passage, 02-04-2001, Delft, the Netherlands.
 G. Johnsen, *Campylobacter* in Norwegian poultry - molecular epidemiological aspects. 10-11-2006, Oslo, Norway.
 B. Vousough Ahmadi, Cost effectiveness of *Escheria coli* O157:H7 control in the beef chain. 25-05-2007, Wageningen, the Netherlands.
 S.A. Burt, Antibacterial activity of essential oils: potential applications in food. 29-11-2007. Utrecht, the Netherlands.
 T.K.H. Ho, *Arcobacter*, what is known and unknown about a potential foodborne zoonotic agent. 22-01-2008. Utrecht, the Netherlands.
 P.W.M.H. Smeets, Stochastic modelling of drinking water treatment in Quantitative Microbiological Risk Assessment. 15-04-2008, Delft, the Netherlands.
 B. Bokkers, Extrapolation in human health hazard characterization: a probabilistic approach. 26-02-2009. Utrecht, the Netherlands.
 T.J.W.M. van Gerwe, *Campylobacter* colonization of broilers. 17-12-2009. Utrecht, the Netherlands.
 M. C. Khandai, Detection, occurrence, growth and inactivation of *Cronobacter* spp. (*Enterobacter sakazakii*). 23-04-2010, Wageningen, the Netherlands.
 A. B. Knol, Health and the environment: assessing the impacts, addressing the uncertainties. 20-05-2010. Utrecht, the Netherlands.
 M.E. Thomas. *Salmonella* Enteritidis colonization of laying hens - diagnosis, population dynamics and surveillance. 20-05-2010. Utrecht, the Netherlands.
 M.P. Janssen. Modelling blood safety. 19-10-2010. Utrecht, the Netherlands
 J.A. Haagsma. Disability Adjusted Life Years and Acute Onset Disorders: Improving estimates of the non-fatal burden of injuries and infectious intestinal disease. 03-11-2010. Rotterdam, the Netherlands.
 M. Opsteegh. *Toxoplasma gondii* in animal reservoirs and the environment. 19-05-2011. Utrecht, the Netherlands.
 M.D. Kirk. Understanding gastroenteritis in the elderly. 06-10-2011. Canberra, Australia.
 H. Graveland. Livestock associated MRSA in veal farming. Risk factors for MRSA carriage in veal calves and humans. 29-09-2011. Utrecht, the Netherlands.
 I. Jongenburger. Distributions of microorganisms in food and their impact on food safety. 02-03-2012. Wageningen, the Netherlands.
 L. Boysen. *Campylobacter* in Denmark - Control, human risk and source attribution. 11-05-2012. Lyngby, Denmark.
 I. Sompers. Kwantitatieve risicoanalyse betreffende *Campylobacter* spp. in pluimveevleesbereidingen in België. 14-09-2012. Ghent, Belgium.
 J. Hordijk. Quinolone resistance and ESBL/AmpC's in commensal *Escherichia coli* in veal calves. 28-02-2013. Utrecht, the Netherlands.
 C. Dierikx. Extended-Spectrum beta-lactamases and AmpC beta-lactamases in Dutch broilers. 30-05-2013. Utrecht, the Netherlands.
 G. Voets. Broad-spectrum β -lactamase in Enterobacteriaceae: detection, prevalence, and source tracking. 12-12-2013. Utrecht, the Netherlands.
 H. de Man. Best urban water management practices to prevent waterborne infectious diseases under current and future scenarios. 08-04-2014. Utrecht, the Netherlands.

Netherlands.

W. Lodder. The role of water in human picornavirus transmission. 11-06-2014. Utrecht, the Netherlands.

R. Enserink. Gastroenteritis in child daycare centers. 10-12-2014. Utrecht, the Netherlands.

R.J. Brooke. Human dose-response models for Q-fever: estimation of *Coxiella burnetii* exposure and disease burden. 23-03-2016. Utrecht, the Netherlands.

K.I. Metselaar. Quantitative and ecological aspects of *Listeria monocytogenes* population heterogeneity. 25-05-2016. Wageningen, the Netherlands.

W. Oei. Modelling the risk of emerging infections for blood transfusion. 21-06-2016. Utrecht, the Netherlands.