

PERSONAL INFORMATION **Freddy Haesebrouck**

WORK EXPERIENCE

- November 1982-September 1988 **Assistant**
Ghent University, Sint-Pietersnieuwstraat 25, 9000 Ghent (Belgium)
Research, teaching in veterinary virology
- October 1988- Present **Professor in veterinary bacteriology and mycology at the Faculty of Veterinary Medicine**
Ghent University, Sint-Pietersnieuwstraat 25, 9000 Ghent, Belgium (Belgium)
Research, teaching veterinary bacteriology and mycology, including zoonotic agents
- October 1992- Present **Chair department of Pathology, Bacteriology and Avian Diseases at the Faculty of Veterinary Medicine**
Ghent University, Sint-Pietersnieuwstraat 25, 9000 Ghent (Belgium)
Research, teaching
- October 2018- Present **Chair Industrial Research Fund Ghent University Association**
Ghent University (Belgium)
Management

EDUCATION AND TRAINING

- October 1976-June 1982 **Veterinarian**
Ghent University (Belgium)
- October 1982-October 1987 **PhD (Doctor in veterinary science)**
Ghent University (Belgium)

ADDITIONAL INFORMATION

Expertise Veterinary bacteriology and mycology
Veterinary bacterial vaccines

- Publications** Articles in international journals from 2016-March 2021:
708. CALLENS B., HAESBROUCK F., DEWULF J., BOYEN F., BUTAYE P., CATRY B., WATTIAU P., DE GRAEF E. (2016). Risico op colistineresistentie neemt toe. Vlaams Diergeneeskundig Tijdschrift 85, 36-40. (IF 2016: 0.288, ranking Q4: 113/136)
709. VERHEGGHE M., CROMBÉ F., LUYCKX K., HAESBROUCK F., BUTAYE P., HERMAN L., HEYNDRIKX M., RASSCHAERT G. (2016). Prevalence and ay of liverstock-associated methicillin-resistant Staphylococcus aureus on Belgian Pork. Journal of Food Protection 79, 82-89. (IF 2016: 1.417, ranking Q3: 66/130)
710. DE VISSCHER A., PIEPERS S., HAESBROUCK F., DE VliegHER S. (2016). Teat apex colonization with coagulase-negative Staphylococcus species before parturition: distribution and species-specific risk factors. Journal of Dairy Science 99, 1427-1439. (IF 2016: 2,474, ranking Q1: 3/58)
711. SCHAECK M., DE SWAEF E., VAN DEN BROECK W., VAN NEVEL S., BOON N., DE GEYTER N., DEMEESTERE K., MORENT R., DUCHATEAU L., HAESBROUCK F., DECOSTERE A. (2016). Germ-Free Sea Bass (Dicentrarchus Labrax) Larvae: An Indispensable Tool In The Study Of Host-Microbe Interactions. Diseases of Aquatic Organisms 117, 177-185. (IF 2016: 1.549, ranking Q1: 32/136)
712. SCHAECK M., DE SPIEGELAERE W., DE CRAENE J., VAN DEN BROECK W., DE

- SPIEGELEER B., BURVENICH C., HAESBROUCK F., DECOSTERE A. (2016). Laser capture microdissection of intestinal tissue from sea bass larvae using an optimized RNA integrity assay and validated reference genes. *Scientific Reports* 6, 21092 (IF 2016: 4,259, ranking Q1: 10/64)
713. ANTONISSEN G., VAN IMMERSEEL F. PASMANS F., DUCATELLE R. JANSSENS G., DE BAERE S., MOUNTZOURIS K., SU S., WONG E., DE MEULENAER B., VERLINDEN M., DEVREESE M., HAESBROUCK F., NOVAK B., DOHNAL I., MARTEL A., CROUBELS S. (2016). The mycotoxins deoxynivalenol and fumonisins alter the extrinsic component of intestinal barrier in broiler chickens. *Journal of Agricultural and Food Chemistry* 63, 10846-10855. (IF 2016: 3.154, ranking Q1: 2/56)
714. DE BRUYNE E., DUCATELLE R., FOSS D., SANCHEZ M., JOOSTEN M., ZHANG G., SMET A., PASMANS F., HAESBROUCK F.* (shared senior author), FLAHOUB.* (shared senior author) (2016). Oral glutathione supplementation drastically reduces *Helicobacter*-induced gastric pathologies. *Scientific Reports* 6, article number 20169. DOI: 10.1038/srep20169. (IF 2016: 4,259, ranking Q1: 10/64)
715. ANTONISSEN G., EECKHAUT V., VAN DRIESSCHE K., ONRUST L., HAESBROUCK F., DUCATELLE R., MOORE R.J., VAN IMMERSEEL F. (2016). Microbial shifts associated with necrotic enteritis. *Avian Pathology* 45, 308-312. (IF 2016: 1,596, ranking Q1: 30/136)
716. VERBRUGGHE E., DHAENENS M., LEYMAN B., BOYEN F., SHEARER N., VAN PARYS A., HAESBROUCK R., BERT W., FAVOREEL H., DEFORCE D., THOMPSON A., HAESBROUCK F., PASMANS F. (2016). Host stress drives *Salmonella* recrudescence. *Scientific Reports* 6, 20849. DOI: 10.1038/srep20849 (IF 2016: 5,259, ranking Q1: 10/64)
717. GILLE L., PILO P., VALGAEREN B. R., VAN DRIESSCHE L., VAN LOO H., BODMER M., BÜRKI S., BOYEN F., HAESBROUCK F., DEPREZ P., B. PARDON P. (2016). A new predilection site of *Mycoplasma bovis*: postsurgical seromas in beef cattle. *Veterinary Microbiology* 186, 67-70. (IF 2016: 2,628, ranking Q1: 6/136)
718. SCHAECK M., DUCHATEAU L., VAN DEN BROECK W., VAN TRAPPEN S., VEREECKE C., COULOMBET C., BOON N., HAESBROUCK F., DECOSTERE A. (2016). *Vibrio lentus* protects gnotobiotic sea bass (*dicentrarchus labrax* L.) larvae against challenge with *Vibrio harveyi*. *Veterinary Microbiology* 185, 41-48. (IF 2016: 2,628, ranking Q1: 6/136)
719. MEZHOUD H., CHANTZIARAS I., IGUER-OUADA M., MOULA N., GARMYN A., MARTEL A., TOUATI A., SMET A., HAESBROUCK F.* (shared senior authorship), BOYEN F.* (2016). Presence of antimicrobial resistance in coliform bacteria from hatching broiler eggs with emphasis on ESBL/AmpC-producing bacteria. *Avian Pathology* 45, 493-500. DOI: 10.1080/03079457.2016.1167837 (IF 2016: 1,596, ranking Q1: 30/136)
720. CATRY B., DEWULF J., MAES D., PARDON B., CALLENS B., VANROBAEYS M., OPSOMER G., DE KRUIF A., HAESBROUCK F. (2016). Effect of antimicrobial consumption and production type on antibacterial resistance in the bovine respiratory and digestive tract. *Plos One* 11: 1 e0146488. (IF 2016: 2.806, ranking Q1: 15/64)
721. LIU C, ROSSI M., LINDEN S., PADRA M., BLAECHER C., BAUWENS E., JOOSTEN M., FLAHOUB., VAN DEN BROECK W., DUCATELLE R., HAESBROUCK F.* (SHARED SENIOR AUTHORSHIP), SMET A.* (2016). The *Helicobacter heilmannii* hofE and hofF genes are essential for colonization of the gastric mucosa and play a role in IL-1-induced gastric MUC13 expression. *Helicobacter*, DOI: 10.1111/hel.12307. (IF 2016: 3,429, ranking Q2: 38/125)
722. ARSENAKIS I., PANZAVOLTA L., MICHIELS A., DEL POZO SACRISTÁN R., BOYEN F., HAESBROUCK F., MAES D. (2016). Efficacy of *Mycoplasma hyopneumoniae* vaccination before and at weaning against experimental challenge infection in pigs. *BMC Veterinary Research* 12:63. (IF 2016: 1.750, ranking Q1: 24/136)
723. VERBRUGGHE E., VAN PARYS A., HAESBROUCK R., LEYMAN B., BOYEN F., HAESBROUCK F.* (shared senior authorship), PASMANS F.* (2016). Subtherapeutic tetracycline concentrations aggravate *Salmonella* Typhimurium infection by increasing bacterial virulence. *Journal of Antimicrobial Chemotherapy* 71, 2158-2166. (IF 2016: 5.071, ranking Q1: 9/84)
724. PICCART K., VERBEKE J., DE VISSCHER A., PIEPERS S., HAESBROUCK F., DE VLIEGHER S. (2016). Local host response following an intramammary challenge with *Staphylococcus fleurettii* and different strains of *Staphylococcus chromogenes* in dairy heifers. *Veterinary Research* 47:56. (IF 2016: 2.798, ranking Q1: 5/136)
725. ROUFFAER LO., LENS L., HAESBROUCK R., TEYSSIER A., HUDIN NS., HAESBROUCK F., PASMANS F., MARTEL A. (2016). House sparrows do not constitute a significant *Salmonella* Typhimurium Flanders, Belgium. *Plos One* 11, e0155366. (IF 2016: 2.806, ranking Q1: 15/64)
726. GOOSSENS E., VERHERSTRAETEN S., VALGAEREN BR., PARDON B., TIMBERMONT L., SCHAUVLIEGE S., RODRIGO-MOCHOLÍ D., HAESBROUCK F., DUCATELLE R., DEPREZ P.,

- VAN IMMERSEEL F. (2016). The C-terminal domain of *Clostridium perfringens* alpha toxin as a vaccine candidate against bovine necrohemorrhagic enteritis. *Veterinary Research* 47:52. (IF 2016: 2.798, ranking Q1: 5/136)
727. GEERAERTS S., DELEZIE E., DUCATELLE R., HAESEBROUCK F., DEVREESE B., VAN IMMERSEEL F. (2016). Vegetative *Bacillus amyloliquefaciens* cells do not confer protection against necrotic enteritis in broilers despite high antibacterial activity of its supernatant against *Clostridium perfringens* in vitro. *British Poultry Science* 57, 324-329, DOI: 10.1080/00071668.2016.1169246. (IF 2016: 0.884, ranking Q2: 28/58)
728. DECLERCQ A.M., AERTS J., AMPE B., HAESEBROUCK F., DE SAEGER S., DECOSTERE A. (2016). Cortisol directly impacts *Flavobacterium columnare* in vitro growth characteristics. *Veterinary Research* 47: 84. (IF 2016: 2.798, ranking Q1: 5/136)
729. MAHU M., DE PAUW N., VANDE MAELE L., VERLINDEN M., BOYEN F., DUCATELLE R., HAESEBROUCK F., MARTEL A., PASMANS F. (2016). Variation in hemolytic activity of *Brachyspira hyodysenteriae* strains from pigs. *Veterinary Research* 47, article number 66. (IF 2016: 2.798, ranking Q1: 5/136)
730. KILROY S., RASPOET R., HAESEBROUCK F., DUCATELLE R., VAN IMMERSEEL F. (2016). Prevention of egg contamination by *Salmonella* Enteritidis after oral vaccination of laying hens with *Salmonella* Enteritidis DtoIC and DacrABacrEFmdtABC mutants. *Veterinary Research* 47, article number 82. (IF 2016: 2.798, ranking Q1: 5/136)
731. DE WITTE C., SCHULZ C., SMET A., MALFERTHEINER P., HAESEBROUCK F. (2016). Other helicobacters and gastric microbiota. *Helicobacter* 21, 62-68. (IF 2016: 3.429, ranking Q2: 38/125)
732. PEETERS LEJ, DAESELEIRE E., DEVREESE M., RASSCHAERT G., SMET A., DEWULF J., HEYNDRIKX M., IMBERECHTS H., HAESEBROUCK F., BUTAYE P., CROUBELS S. (2016). Residues of chlortetracycline, doxycycline and sulfadiazine-trimethoprim in intestinal content and feces of pigs due to cross-contamination of feed. *BMC Veterinary Research* 12: 209 (IF 2016: 1.750, ranking Q1: 24/136)
733. EECKHAUT V., WANG J., VAN PARYS A., HAESEBROUCK F., JOOSSENS M., FALONY G., RAES J., DUCATELLE R., VAN IMMERSEEL F. (2016). The probiotic *Butyricoccus pullicaecorum* reduces feed conversion and protects from potentially harmful intestinal microorganisms in broilers. *Frontiers in Microbiology* 7: 1416 (IF 2016: 4.076, ranking Q1: 26/125)
734. HAESSENDONCK R., RASSCHAERT G., MARTEL A., VERBRUGGHE E., HEYNDRIKX M., HAESEBROUCK F., PASMANS F. (2016). Feral pigeons: a reservoir of zoonotic *Salmonella* Enteritidis strains? *Veterinary Microbiology* 195, 101-103. (IF 2016: 2.628, ranking Q1: 6/136)
735. CALLENS B., DEWULF J., KRONVALL G., CATRY B., HAESEBROUCK F., BOYEN F. (2016). Antimicrobial resistance surveillance in *Escherichia coli* by using normalized resistance interpretation. *Veterinary Microbiology* 197, 1-7. (IF 2016: 2.628, ranking Q1: 6/136)
736. ANTONISSEN G., ROEL HAESSENDONCK R., MATHIAS DEVREESE M., NATHAN BROEKAERT N., ELIN VERBRUGGHE E., WEERDENBURG S., DE SAEGER S., AUDENAERT K., HAESEBROUCK F., PASMANS F., CROUBELS S., MARTEL A. (2016). The impact of deoxynivalenol on pigeon health: occurrence in feed, toxicokinetics and interaction with salmonellosis. *Plos One* 11, Article Number: e0168205. (IF 2016: 2.806, ranking Q1: 15/64)
737. BLAECHER C., BAUWENS E., TAY A., PETERS F., DOBBS S., DOBBS J., CHARLETT A., DUCATELLE R., HAESEBROUCK F.* (shared senior authorship), SMET A.* (2017). A novel isolation protocol and probe-based RT-PCR for diagnosis of gastric infections with the zoonotic pathogen *Helicobacter suis*. *Helicobacter* 22:e12369, DOI: 10.1111/hel.12369. (IF 2016: 3.429, ranking Q2: 38/125)
738. PARDON B., SMET A., BUTAYE P., ARGUDÍN M. A., VALGAEREN B., CATRY B., HAESEBROUCK F., DEPREZ P. (2017). Nosocomial intravascular catheter infections with extended-spectrum beta-lactamase producing *Escherichia coli* in calves after strain introduction from a commercial herd. *Transboundary and Emerging Diseases* 64, 130-136. doi: 10.1111/tbed.12352. (IF 2016: 3.585, ranking Q1: 2/136)
739. DE VISSCHER A., PIEPERS S., HAESEBROUCK F., SUPRÉ K., DE VliegHER S. (2017). Coagulase-negative *Staphylococcus* species in bulk milk: prevalence, distribution and associated subgroup- and species-specific risk factors. *Journal of Dairy Science* 100, 629642. (IF 2016: 2.474, ranking Q1: 3/58)
740. VERMEULEN K., VERSPREET J., COURTIN CM., HAESEBROUCK F., DUCATELLE R., VAN IMMERSEEL F. (2017). Reduced particle size wheat bran is butyrogenic and lowers *Salmonella* colonization, when added to poultry feed. *Veterinary Microbiology* 198, 64-71. (IF 2016: 2.628, ranking Q1: 6/136)

741. BOSSCHEM I., FLAHOU B., VAN DEUN K., DE KOKER S., VOLF J., SMET A., DUCATELLE R., DEVRIENDT B., HAESBROUCK F. (2017). Species-specific immunity to *Helicobacter suis*. *Helicobacter* 22:e12375. (IF 2016: 3.429, ranking Q2: 38/125)
742. MICHIELS A. VRANCKX K., PIEPER S., DEL POZO SACRISTÁN R., ARSENAKIS I., BOYEN F., HAESBROUCK F., MAES D. (2017). Impact of diversity of *Mycoplasma hyopneumoniae* strains on lung lesions in slaughter pigs. *Veterinary Research* 48, article nr 2. (IF 2016: 2.798, ranking Q1: 5/136)
743. ZHANG G., DUCATELLE R., MIHI B., SMET A., FLAHOU B., HAESBROUCK F.* (2016). *Helicobacter suis* affects the health and function of porcine gastric parietal cells. *Veterinary Research* 47, 101. (IF 2016: 2.798, ranking Q1: 5/136)
744. DUMOULIN M., MARTENS A., VANDENABEELE A-M., BOYEN F., OOSTERLINCK M., WILDERJANS H., GASTHUYS F., HAESBROUCK F., PILLE F. (2017). Evaluation of direct Etest for antimicrobial susceptibility testing of bacteria isolated from synovial fluid of horses using enrichment bottles. *Veterinary Journal* 220, 55-62. (IF 2016: 1.802, ranking Q1: 21/136)
745. GOOSSENS E., VALGAEREN B., PARDON B., HAESBROUCK F., DUCATELLE R., DEPREZ P., VAN IMMERSEEL F. (2017). Rethinking the role of alpha toxin in *Clostridium perfringens*-associated enteric diseases: a review on bovine necro-haemorrhagic enteritis. *Veterinary Research* 48, article nr 9. (IF 2016: 2.798, ranking Q1: 5/136)
746. VAN DRIESSCHE L., VALGAEREN B., GILLE G., BOYEN F., DUCATELLE R., HAESBROUCK F., DEPREZ P., PARDON B. (2017). A deep nasopharyngeal swab versus non-endoscopic bronchoalveolar lavage for isolation of bacterial pathogens from preweaned calves with respiratory disease. *Journal of Veterinary Internal Medicine* 31, 946-953. (IF 2016: 2.016, ranking Q1: 12/136)
747. STEGEN G., PASMANS F., SCHMIDT B.R., ROUFFAER L.O., VAN PRAET S., SCHAUB M., LAUDELAUT A., KINET T., ADRIAENSEN C., SMITH H.K, HAESBROUCK F., BERT W., BOSSUYT F., MARTEL A. (2017). Drivers of *Batrachochytrium salamandrivorans* mediated salamander extirpation. *Nature* 544, 353-356. (IF 2016: 40.137, ranking Q1: 1/64)
748. GARMYN A., VERECKEN M., DEGUSSEM K., HAESBROUCK F., MARTEL A. (2017). Efficacy of tiamulin alone or in combination with chlortetracycline against experimental *Mycoplasma gallisepticum* infection in chickens. *Poultry Science* 96, 3367-3374. (IF 2016: 1.908, ranking Q1: 6/58)
749. VENKATAKRISHNAN V., QUINTANA-HAYASHI M., MAHU M., HAESBROUCK F., PASMANS F., LINDÉN S. (2017). *Brachyspira hyodysenteriae* infection regulates mucin glycosylation synthesis inducing an increased expression of core 2 O-glycans in porcine colon. *Journal of Proteome Research* 16, 1728-1742. (IF 2016: 4.268, ranking Q1: 14/78)
750. DE WITTE C., FLAHOU B., DUCATELLE R., SMET A., DE BRUYNE E., CNOCKAERT M., TAMINIAU B., DAUBE G., VANDAMME P., HAESBROUCK F. (2017). Detection, isolation and characterization of *Fusobacterium gastrois* sp. nov. colonizing the stomach of pigs. *Systematic and Applied Microbiology* 40, 42-50. (IF 2016: 3.931, ranking Q1: 31/160)
751. ROUFFAER L.O., BAERT B., VAN DEN ABEELE A-M., COX C., VANANTWERPEN G., DE ZUTTER L., STRUBBE D., VRANCKX K., LENS L., HAESBROUCK F., DELMÉE M., PASMANS F., MARTEL A. (2016). Low prevalence of human enteropathogenic *Yersinia* spp. in brown rats (*Rattus norvegicus*) in Flanders. *Plos one* 12, e0175648. (IF 2016: 2.806, ranking Q1: 15/64)
752. PEETERS L.J., CROUBELS S., RASSCHAERT G., IMBERECHTS H., DAESELEIRE E., DEWULF J., HEYNDRIKX M., BUTAYE P., HAESBROUCK F.* (shared senior authorship), SMET A.* (2017). Effect of residual doxycycline concentrations on resistance selection and transfer in porcine commensal *Escherichia coli*. *International Journal of Antimicrobial Agents* 51, 123-127. (IF 2016: 4.307, ranking Q1: 14/84)
753. STEPHEN-VICTOR E., BOSSCHEM I., HAESBROUCK F., JAGADEESH BAYRY J. (2017). The Yin and Yang of regulatory T cells in infectious diseases and avenues to target them. *Cellular Microbiology* 19, e12746 (DOI 10.1111/cmi.12746). (IF 2016: 4.554, ranking Q1: 22/125)
754. ARSENAKIS I., MICHIELS A., DEL POZO SACRISTÁN R., BOYEN F., HAESBROUCK F., MAES D. (2017). *Mycoplasma hyopneumoniae* vaccination at or shortly before weaning under field conditions: a randomised efficacy trial. *Veterinary Record* 181, DOI: 10.1136/vr.104075. (IF 2016: 1.737, ranking Q1: 25/136)
755. BOSSCHEM I., FLAHOU B., BAKKER J., HEUVELMAN E., LANGERMANS JAM., DE BRUYNE E., JOOSTEN M., SMET A., DUCATELLE R., HAESBROUCK F. (2017). Comparative virulence of in vitro-cultured primate- and pig-associated *Helicobacter suis* strains in a BALB/c mouse and a Mongolian gerbil model. *Helicobacter* 22:e12349. (IF 2016: 3.429, ranking Q2: 38/125)

756. MAES D., SIBILA M., KUHNERT P., SEGALÉS COMA J., HAESBROUCK F., PIETERS M. (2017). Update on *Mycoplasma hyopneumoniae* infections in pigs: knowledge gaps for improved disease control. *Transboundary and Emerging Diseases*, accepted DOI: 10.1111/tbed.12677. (IF 2016: 3.585, ranking Q1: 2/136)
757. MAHU M., PASMANS F., VRANCKX K., DE PAUW N., VANDE MAELE L., VYT P., VANDERSMISSEN T., MARTEL A., HAESBROUCK F.* (SHARED SENIOR AUTHORSHIP), BOYEN F.* (2017). Presence and mechanisms of acquired antimicrobial resistance in Belgian *Brachyspira hyodysenteriae* isolates belonging to different clonal complexes. *Veterinary Microbiology*. 207, 125-132. (IF 2016: 2.628, ranking Q1: 6/136)
758. QUINTANA-HAYASHI M.P., NAVABI N., MAHU M., VENKATAKRISHNAN V., FERNANDEZ H.R., HAESBROUCK F., PASMANS F., LINDÉN S. (2017). Neutrophil elastase and IL17 expressed in the pig colon during *Brachyspira hyodysenteriae* infection synergistically with the pathogen induce increased mucus transport speed and production via MAPK3. *Infection and Immunity* 85, e00262-17. (IF 2016: 3.593, ranking Q2: 23/84)
759. DE WITTE C., DEVRIENDT B., FLAHOUB., BOSSCHEM I., DUCATELLE R., SMET A., HAESBROUCK F. (2017). *Helicobacter suis* induces changes in gastric inflammation and acid secretion markers in pigs of different ages. *Veterinary Research* 48: 34. (IF 2016: 2.798, ranking Q1: 5/136)
760. BLOOI M., LAKING A.E., ALEXANDRA, MARTEL A., HAESBROUCK F., JOCQUE M., BROWN T., GREEN S., VENCES M., BLETZ M.C., PASMANS F. (2017). .Host niche may determine disease-driven extinction risk. *Plos One* 12, e0181051. (IF 2016: 2.806, ranking Q1: 15/64)
761. DE SWAEF E., DEMEESTERE K., BOON N., VAN DEN BROECK W., HAESBROUCK F., DECOSTERE A. (2017). Development of a reliable experimental set-up for Dover sole larvae *Solea solea* L. and exploring the possibility of implementing this housing system in a gnotobiotic model. *Research in Veterinary Science* 115, 418-424. (IF 2016: 1.298, ranking Q1: 41/136)
762. MICHIELS A., ARSENAKIS I., BOYEN F., KREJCI R., HAESBROUCK F., MAES D. (2017). Efficacy of one dose vaccination against experimental infection with two *Mycoplasma hyopneumoniae* strains. *BMC Veterinary Research* 13:274. (IF 2016: 1.750, ranking Q1: 24/136)
763. PEETERS L.E.J., DE MULDER T., VAN COILLIE E., HUYGENS J., SMET A., DAESELEIRE E., DEWULF J., IMBERECHTS H., BUTAYE P., HAESBROUCK F., CROUBELS S., HEYDRICKX M., RASSCHAERT G. (2017). Selection and transfer of an IncI1-tet(A) plasmid of *Escherichia coli* in an ex vivo model of the porcine caecum at doxycycline concentrations caused by cross-contaminated feed. *Journal of Applied Microbiology* 123, 1312-1320. (IF 2016: 2.099, ranking Q3: 81/160)
764. CHANTZIARIS I, SMET A., HAESBROUCK F., BOYEN F., DEWULF J. (2017). Studying the effect of administration route and treatment dose on the selection of enrofloxacin resistance in commensal *Escherichia coli* in broilers. *Journal of Antimicrobial Chemotherapy* 72, 1991-2001. (IF 2016: 5.071, ranking Q1: 9/84)
765. MAHU M., BOYEN F., CANESSA S., ZAVALA MARCHAN J., HAESBROUCK F., MARTEL A., PASMANS F. (2017). An avirulent *Brachyspira hyodysenteriae* strain elicits intestinal IgA and slows down spread of swine dysentery *Veterinary Research* 48, 59. DOI 10.1186/s13567-017-0465-y. (IF 2016: 2.798, ranking Q1: 5/136)
766. GILLE L., BOYEN F., VAN DRIESSCHE L, VALGAEREN B., HAESBROUCK F., DEPREZ P., PARDON B. (2017). Effect of freezer storage time and thawing method on the recovery of *Mycoplasma bovis* from bovine colostrum. *Journal of Dairy Science* 101, 609-613. (IF 2016: 2.474, ranking Q1: 3/58)
767. ONRUST L., PETZOLDT D., ECKHAUT V., DE MAESSCHALCK C., HAESBROUCK F., RAUTENSCHLEIN S., DUCATELLE R., VAN IMMERSEEL F., TARRAS D. (2017). *Caecibacterium sporofomans* gen. nov. sp. nov., an anaerobic, butyrate-producing, spore-forming bacterium isolated from the chicken cecum. *International Journal of Systematic and Evolutionary Microbiology* 67, 4589-4594. (IF 2016: 2.134, ranking Q3: 76/125)
768. VANMARSENILLE C., DÍAZ DEL OLMO I., ELSEVIERS J., HASSANZADEH GHASSABEH G., MOONEN K., VERTOMMEN D., MARTEL A., HAESBROUCK F., PASMANS F., HERNALSTEENS J-P, DE GREVE H. (2017). Nanobodies targeting conserved epitopes on the Major Outer Membrane Protein of *Campylobacter* as potential tools for control of *Campylobacter* colonization. *Veterinary Research* 48: 86. (IF 2016: 2.798, ranking Q1: 5/136)
769. ROUFFAER L.O., STRUBBE D., TEYSSIER A., SALEH HUDIN N., VAN DEN ABEELE A-M, COX I., HAESBROUCK F., DELMÉE M., HAESBROUCK F., PASMANS F., LENS L., MARTEL

- A. (2017). Effects of urbanization on host-pathogen interactions, using *Yersinia* in house sparrows as a model. *Plos One*, <https://doi.org/10.1371/journal.pone.0189509> (IF 2016: 2.806, ranking Q1: 15/64)
770. VAN DER MEE-MARQUET NL., BÉNÉJAT L., DIENE S.M., LEMAIGNEN A., GAÏA N., SMET A., HAESBROUCK F., CHERKAOUI A., DUCOURNAU A., LACOMME S., GONTIER E., BERNARD L., MÉGRAUD F., GOUDEAU A., LEHOURS P., FRANÇOIS P. (2017). A potential new human pathogen belonging to *Helicobacter* genus, identified in a bloodstream infection. *Frontiers in Microbiology* 8, article Number: 2533. (IF 2016: 4.076, ranking Q1: 26/125)
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847. VALCKENIER D.; PIEPERS S; SCHUKKEN Y H; DE VISSCHER A; BOYEN F; HAESEBROUCK F; DE Vlieghe S. (2020). Longitudinal study on the effects of intramammary infection with non-aureus staphylococci on udder health and milk production in dairy heifers. *Journal of Dairy Science*, DOI:10.3168/jds.2020-18685

848. DE GRANDE A., DUCATTELLE R., DELEZIE E., RAPP C., DE SMET S., MICHIELS J., HAESEBROUCK F., VAN IMMERSEEL F., LELEU S. (2020). Effect of vitamin E level and dietary zinc source on performance and intestinal health parameters in male broilers exposed to a temperature challenge in the finisher period. *Journal of Animal Physiology and Animal Nutrition*, DOI: 10.

849. NGASSAM TCHAMBA C., Duprez J-N, Lucas P., Blanchard Y., Boyen F., Haesebrouck F., Argudin MA, Mainil J., Thiry D. (2021). Comparison of the Staphylococcal Chromosome Cassette (SCC) mec in Methicillin-Resistant *Staphylococcus aureus* (MRSA) and Non-aureus Staphylococci (MRNAS) from animals and humans. 10, 256.

850. BERLAMONT H., DE WITTE C., SOFIE DE BRUYCKERE S., FOX J.G., BACKERT S., SMET A., BOYEN F, HAESEBROUCK F. (2021). Differentiation of gastric *Helicobacter* species using MALDI-TOF mass spectrometry. *Pathogens* 10, 366.

Projects

Project: 2016-2020

1.3.2013-28.2.2016

Antimicrobiële resistentie Impact van kruisbesmetting van diervoeders met antimicrobiële middelen op de resistentieontwikkeling. Project FOD volksgezondheid, DG4, met 2 doctoraatsbursalen. In samenwerking met P. Butaye, M. Heyndrickx, Siska Croubels, J. Dewulf. Bedrag: 300.000euro.

1.4.2013-31.6.2013 Role of genes encoding candidate adhesins of *Helicobacter heilmannii* sensu stricto in gastric colonization. Verblijf buitenlandse onderzoeker (Mirko Rossi), BOF UGent, 6.540euro

1.8.2013-31.7.2015 Bestrijding van cefalosporine resistentie overdracht met behulp van plasmiden. Project FOD volksgezondheid, DG4, met 1 doctoraatsbursaal. In samenwerking met P. Butaye en An Martel. Bedrag: 258.200.

1.1.2013-31.12.2014 Role of gastric non-H. pylori *Helicobacter* spp. in Parkinsons disease. Donation Maudsley Hospital, London, UK. Bedrag: 25.715

1.10.2013-30.9.2016 Host and bacterial factors involved in adhesion of *Helicobacter heilmannii* sensu stricto to the gastric mucosa. Postdoctoraal onderzoeksmandaat, FWO-Vlaanderen (Annemieke Smet).

1.01.2014-31.12.2017 Bescherming van kippen tegen *Campylobacter jejuni* door nanobodies van kameelachtigen. Project FOD volksgezondheid, DG4, met 1 doctoraatsbursaal. In samenwerking met H. De Greve, J-P Hernalsteens, Frank Pasmans en A. Martel. Bedrag: 300.000euro.

1.10.2014-30.9.2020 Bacterial and host factors involved in gastric colonization and induction of lesions by *Helicobacter suis* and *Helicobacter heilmannii*. Geconcerteerde onderzoeksactie, Bijzonder Onderzoeksfonds. Bedrag: 1.620.000

1.10.2014-30.9.2017 Effects of *Helicobacter suis* on the health and function of gastric acid-secreting parietal cells. Postdoctoraal onderzoeksmandaat, FWO-Vlaanderen (Bram Flahou).

1.10.2014-30.9.2018 Impact of a *Helicobacter suis* infection on the onset of neurodegenerative disorders in humans. Interdisciplinary Reserach Project, BOF UGent. Twee doctorandi + 68.000 euro werkingmiddelen.

1.10.2014-30.9.2018 Effect of a *Helicobacter suis* infection on the gastric micro-environment in pigs. Doctoraatsmandaat (Chloë De Witte), BOF UGent.

1.1.2015-31.12.2018 Inmmunisatie van kippen tegen *Campylobacter* infecties. Project FOD volksgezondheid, DG4, met 1 doctoraatsbursaal en 1 laborant. In samenwerking met Frank Pasmans, A. Martel, L. De Zutter en M. Heyndrickx. Bedrag: 400.000euro (waarvan 380.000euro

UGent).

1.10.2015-30.9.2018 Ontwikkeling en evalueren van eradiciestrategieën voor *Brachyspira hyodysenteriae* op geïnfecteerde varkensbedrijven. Project FOD volksgezondheid, DG4, met 1 doctoraatsbursaal en 1 laborant 20%. In samenwerking met Dominiek Maes, Philip Vyt en T. Vandersmissen. Bedrag: 350.000euro.

1.4.2016-31.3.2018 Vaccine and diagnostics development for swine dysentery. Project IOF-Advanced, met 1 wetenschappelijk medewerker. In samenwerking met F. Pasmans, A. Martel, S. Arnouts en F. Boyen. Bedrag: 250.000euro

1.10.2016-30.9.2019 Comparative genomics and transcriptomics of the zoonotic pathogen *Helicobacter heilmannii*: analysis of outer membrane proteins involved in adhesion and persistence. Postdoctoraal onderzoeksmandaat, FWO-Vlaanderen (Annemieke Smet).

1.10.2016-30.09.2020

Onderzoek naar het belang van de choroïd plexus tijdens systemisch inflammatie en herseninflammatie. Aspirant mandaat Nina Gorlé, FWO (in samenwerking met Roosmarijn Vandembroucke en Claude Libert

1.10.2017-30.9.2020 Snelle antimicrobiële resistentie bepaling d.m.v. MBT-ASTRA bij bacteriële pathogenen van long en uier bij runderen. Project FOD volksgezondheid, DG4, met 1 doctoraatsbursaal. In samenwerking met P. Deprez, P. Pardon, F. Boyen en P.-J. Ceyskens. Bedrag: 280.000.

1.1.2018-31.12.2021 Characterization of the pathogenicity and adhesion mechanisms of gastric non-*Helicobacter pylori* helicobacters (NHPH) in dogs and humans - A zoonotic threat? Doctroaatsmandaat (Rita Matos). Portuguese Foundation for Science and Technology.

1.6.2018 Bioveiligheidskasten. Aanvraag Basisuitrusting, Bijzonder Onderzoeksfonds UGent. Bedrag: 70.897,50.

2019-2022 CampyBroilerBreed, Immunisatie van vleeskuikenmoederdieren ter bescherming van vleeskuikens tegen *Campylobacter*. Project FOD volksgezondheid, DG4, met 1 doctoraatsbursaal. In samenwerking met A. Garmyn, A. Martel, F. Pasmans. Bedrag:

2019-2022 Flupoul, onderzoek naar de oorzaken van de hoge prevalentie van fluoroquinolone resistentie bij braadkippen. Project FOD volksgezondheid, DG4, met 1 doctoraatsbursaal. In samenwerking met J. Dewulf, M. Devreese, F. Boyen, S. De Keersmaecker. Bedrag: 47.000 (laboratorium voor diergeneeskundige bacteriologie en mycologie)

2020 Basistoestellen voor moleculaire biologie / Research equipment for molecular biology. Aanvraag Basisuitrusting, Bijzonder Onderzoeksfonds UGent. Bedrag: 101.261,30. Promotor: An Martel. Co-promotoren Frank Pasmans en Freddy Haesebrouck.

Memberships

- Associate editor of the scientific journal *Veterinary Research*, handling bacteriology-related manuscripts
- Diplomate of the European College of Porcine Health Management

Other Relevant Information

- Promoter of 90 successfully defended PhD theses (Doctor in Veterinary Science, Ghent University)
- Context and strategy of Freddy Haesebrouck's research group

The expertise of this research group relates primarily to the study of bacterium-host interactions and antimicrobial resistance in bacteria of veterinary and zoonotic importance. One of the main research topics relates to gastric non-*Helicobacter pylori* *Helicobacter* species. For several of these very fastidious bacteria, cultivation methods have only recently been optimized and the availability of pure isolates has brought new perspectives to the study of the interactions with their hosts. Initially research focused on *Helicobacter suis*, a species causing gastritis and decreased weight gain in experimentally infected pigs. It is also the most prevalent gastric non-*H. pylori* *Helicobacter* species in humans suffering from gastric disease. Other studies have dealt with the canine and feline gastric *Helicobacter* species which are also of zoonotic significance.