

DR LAURE BINDELS

Université catholique de Louvain (UCL)
Louvain Drug Research Institute, Metabolism and Nutrition Research Group
Avenue E. Mounier, 73, B1.73.11, 1200 Brussels, Belgium
laure.bindels@uclouvain.be
Belgian, born in Brussels, August 23th, 1985
<http://www.uclouvain.be/laure.bindels>
<https://uclouvain.be/en/research-institutes/ldri/metabolism-and-nutrition-mnut.html>

RESEARCH STATEMENT

The gut microbiota consists of the trillions of microbes that reside in the gastrointestinal tract of mammals, and has a vast impact on host physiology and metabolism. My research program is dedicated to the investigation of the role and therapeutic potential of the gut microbiota in the progression of non-gastrointestinal cancers and associated cachexia. Cancer cachexia refers to the metabolic alterations linked to cancer progression. Cachexia leads to patient weight loss; it affects up to 50% of cancer patients, causing mortality in 20% of them. Studying the gut microbiota as a therapeutic target constitutes an innovative approach to this pathology, an approach currently followed by my newly established team.

PROFESSIONAL EXPERIENCE

2016 – ongoing	Professor in Metabolomics (UCL)
2014 –2016	FNRS Post-doctoral Researcher (UCL), N. Delzenne's lab
2013 –2014	Post-doctoral Research Associate (University of Nebraska-Lincoln, NE, US) A. Ramer-Tait and J. Walter's lab
2008-2013	FNRS fellow (UCL), N. Delzenne's lab

EDUCATION

2015	15.071x The Analytics Edge (MITx-edX)
2015	European Nutrition Leadership Program (ENLP)
2013	Perl Programming for Biological Applications (UNL)
2013	PhD in Biomedical and Pharmaceutical Sciences (UCL)
2009	Master in Animal Experimentation (UCL)
2008	Pharmacist (UCL) with the highest honors, research option

Maternity leave from May 2018 to September 2018

THE 5 MOST IMPORTANT PUBLICATIONS OF MY CAREER

- Pötgens SA, Brossel H, Sboarina M, Catry E, Cani PD, Neyrinck AM, Delzenne NM, Bindels LB, *Klebsiella oxytoca* expands in cancer cachexia and acts as a gut pathobiont contributing to intestinal dysfunction, *Sci Rep*, 2018.
- Bindels LB, Segura Munoz R, Gomes Neto JC, Mutemberezi V, Martínez I, Salazar N, Cody EA, Quintero-Villegas MI, Kittana H, de los Reyes-Gavilán CG, Schmaltz RJ, Muccioli GG, Walter J, Ramer-Tait AE. Resistant starch can improve insulin sensitivity independently of the gut microbiota. *Microbiome*, 2017.
- Bindels LB, Neyrinck AM, Claus SP, Le Roy CI, Grangette C, Pot B, Martinez I, Walter J, Cani PD, Delzenne NM. Synbiotic approach restores intestinal homeostasis and prolongs survival in leukaemic mice with cachexia, *The ISME J*, 2016.
- Bindels LB, Delzenne NM, Cani PD, Walter J. Opinion: Towards a more comprehensive concept for prebiotics, *Nat Rev Gastroenterol Hepatol*, 2015.
- Bindels LB, Porporato P, Dewulf EM, Verrax J, Neyrinck AM, Martin JC, Scott KP, Buc CP, Feron O, Muccioli GG, Sonveaux P, Cani PD, Delzenne NM. Gut microbiota-derived propionate reduces cancer cell proliferation in the liver, *Br J Cancer*, 2012.

Bibliometric data (As reported by Scopus, on May 24th, 2019)

- Total number of publications: 61
- Total number of citations: 3279
- Hirsh index: 24

Google Scholar account: <https://bit.ly/2BVb4to> ; Full list of publication: <https://bit.ly/2IHuOSk>

THE 5 MOST IMPORTANT ORAL COMMUNICATIONS IN MY CAREER

- Keystone Symposium “Microbiome, Host Resistance and Disease”, Banff, Canada, 4-8 March 2018. Invited Speaker.
- The 6th Beneficial Microbes Conference, Amsterdam, the Netherlands, 9-11 October 2017. Invited speaker, keynote topic.
- The 6th Exploring Human Host-Microbiome Interactions in Health and Disease (Wellcome Trust Scientific Conference), Hinxton, United Kingdom, 13-15 September 2017. Invited speaker.
- ASM Microbes - Annual Meeting of the American Society for Microbiology (ASM), Boston, US, 16-20 June 2016. Invited by Lita Proctor (NIH Project Coordinator) for a plenary session.
- The 8th Cachexia Conference, Paris, France, 4-6 December 2015. Oral communication. Young Investigators Award (selected among 265 accepted abstracts).

Invited speaker in 17 international events and 3 national events. 4 local seminars abroad, 4 local seminars in Belgium, 3 local seminars in the US. 4 oral communications abroad, 1 oral communication in Belgium. 12 poster communications in international events, including 2 Keystone meetings, and 3 poster communications in national events. 8 travel grants and 1 poster award. 7 educational seminars in Belgium and France.

PRIZES AND AWARDS

- Pharmabiotics Young Investigators Award (2018)
- Prix Docteur Maurice Godin-Maria Savelkoul (Académie royale de Médecine de Belgique) (2016)
- Scholarship Next Gen Immunology 2016 meeting, Weizmann Systems Biology initiative (2016)
- Award Danone Institute for the best popular article in nutrition (2015)
- Young Investigator Award from the Society on Cachexia and Wasting Disorders (2015)
- Nebraska Gateway to Nutrigenomics Research Award (2014)
- Honorary Fellowship from the B.A.E.F. (Belgian American Education Foundation) (2014)
- Early Career Investigator Travel Fellowship from the New York Academy of Sciences (2013)
- Keystone Symposium Scholarship, grant from the NIH/US (2012)
- Prize of Excellence for the research activities conducted as undergrad student, UCL (2008)
- “Pharmacist & Doctor Nedeljkovitch” Award, Belgian Society of Pharmaceutical Sciences (2008)

THESIS PROMOTION

- Sarah Pötgens, UCL teaching assistant (director) – 2016/2022
- Morgane Thibaut, UCL FSR fellow (director) – 2018/2022
- Alexandra Degraeve, UCL FSR fellow (codirector) – 2018/2022
- Justine Gillard, UCL fellow (codirector) – 2018/2022

TEACHING

Drug-oriented informatics and bibliography workshop; Pharmacokinetics and drug metabolism; Genetics and pharmaceutical biotechnologies; Discovery, development and commercialization processes for drugs; Pharmacogenomics and toxicology; Instrumental analytics: case studies; Nutrition & environment: biological and toxicological aspects; Nutrition & environment: societal aspect; Neurobiology of addiction and toxicomania; Special issues in cancerology; In-session seminars in biomedicine.

SERVICES PROVIDED TO THE COMMUNITY

- Referee for the British Journal of Nutrition, Gut Microbes, BMJ, Gut, Plos ONE, Science Translational Medicine, eBiomedicine, Journal of Functional Foods, Molecular Nutrition Food Research, Clinical Nutrition, Clinical Science, AEM, among others.
- Written and oral communications to health actors (clinicians, GP, nurses, dietitians)
- Representative of the scientific members at UCL Councils until May 2016.
- Treasurer of the ISAPP-SFA (Students and Fellows Association of the International Scientific Association for Probiotics and Prebiotics) from July 2013 to July 2015. Contributed to the organization of the annual meeting in Aberdeen, UK (2014) and Washington DC, US (2015).

LANGUAGES

- French: mother tongue
- English: C1 level according to the Common European Framework of Reference for Languages.
- Dutch: B1 level according to the Common European Framework of Reference for Languages.