

## Geconcentreerde Onderzoekacties

1. Identification of adaptive mechanisms leading to reduced antibiotic susceptibility in bacterial biofilms using experimental evolution and machine learning approaches (2020-2024)  
Prof. Tom Coenye, prof. Filip Van Nieuwerburgh, prof. Willem Waegeman, prof. Serge Van Calenbergh
2. Integration of novel thin films with photonic circuits for telecom, quantum optics and neuromorphic computing (2020-2024)  
Prof. Dries Van Thourhout, prof. Jeroen Beeckman, prof. Peter Bienstman, prof. Klaartje De Buysser, prof. Xin Yin
3. The Role of Supporting Entrepreneurship (SE) Actors for Early Stage High Tech Firms (2020-2024)  
Prof. Mirjam Knockaert, prof. Tom Vanacker, prof. Sophie Manigart, prof. Jonas Lang
4. Unraveling belowground de novo organogenesis in plants: one cell at a time (2020-2025)  
Prof. Tom Beeckman, prof. Tina Kyndt, prof. Bert De Rybel
5. The role of cognitive effort in motivated behaviour: a neurocognitive approach (2020-2024)  
Prof. Roeljan Wiersema, prof. Wim Notebaert, prof. Nico Böhler, prof. Ruth Krebs
6. Non-thermal plasma technology as innovative strategy for food preservation (2020-2024)  
Prof. Nathalie De Geyter, prof. Frank Devlieghere, prof. Peter Ragaert, Prof. Bruno De Meulenaer (BW23)
7. Precision medicine in inherited blindness using integrated omics in human and animal models (2020-2025)  
Prof. Elfride De Baere, prof. Björn Menten, prof. Lieven Clement, prof. Kris Vleminckx, prof. Bart Leroy
8. Forest biodiversity and multifunctionality drive chronic stress-mediated dynamics in pathogen reservoirs (2020-2025)  
Prof. Kris Verheyen, prof. An Martel, prof. Luc Lens, dr. Diederik Strubbe
9. Making Nanomaterials Work (2019-2024)  
Prof. Zeger Hens, prof. Christophe Detavernier, prof. Iwan Moreels, dr. Jolien Dendooven
10. Language productivity at work (2019-2024)  
Prof. Peter Lauwers, Prof. Johanna Barddal, Prof. Timothy Coleman, Prof. Renata Enghels, Prof. Robert Hartsuiker, Prof. Miriam Taverniers, Dr. Ludovic De Cuypere, Dr. Alice Foucart, Dr. Anne-Sophie Ghyselen
11. High Tide – Low Tide. Bruges' late-medieval harbor system as a maritime cultural landscape (2019-2024)  
Prof. Wim De Clercq, Prof. Jan Dumolyn, Prof. Stephen Louwye
12. A comprehensive chemical-biology approach to understand the bioactivity of Pseudomonas cyclic lipopeptides on eukaryotic membranes (2019-2023)  
Prof. Monica Höfte, Prof. Christophe Ampe, Prof. Annemieke Madder, Prof. José Martins
13. RNA-MAGIC: RNA-based bioMArkers and tarGets In Asthma and Chronic Obstructive Pulmonary Disease (COPD) (2019-2024)  
Prof. Guy Brusselle, Prof. Guy Joos, Prof. Pieter Mestdagh, Prof. Stefaan De Smedt, Prof. Koen Raemdonck, Prof. Tania Maes, Prof. Ken Bracke
14. Combining plasma treatment and (photo)catalysis towards an energy-efficient technology for abatement of polluted air (COP-CAT) (2019-2025)  
Prof. Dirk Poelman, Prof. Geraldine Heynderickx, Prof. Joris Thybaut, Prof. Rino Morent
15. Impact van CO2 en H2 op materiaaldegradatie tijdens elektrochemische processen (2019-2024)  
Prof. Korneel Rabaey, prof. Kim Verbeken

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16. Elucidating the details of the interaction between specific nutrients-microbiota-intestinal health and the consequences for inflammatory diseases (2019-2024)  
Prof. Claude Libert, Prof. Rudi Beyaert, Prof. Filip Van Immerseel, Dr. Jens Staal
17. Search for new physics beyond the Standard Model of particle physics (2018-2022)  
Prof. Dirk Ryckbosch, Prof. Didar Dobur
18. Generic materials study towards high quality advanced medical, food and engineering 3D structures (2018-2022)  
Prof. Geert De Schutter, Prof. Koen Dewettinck, Prof. Pieter Cornillie, Prof. Ludwig Cardon
19. Understanding biotic stresses in plant roots through molecular interactomics in tomato (2018-2022)  
Prof. Alain Goossens, Prof. Godelieve Gheysen, Prof. Sofie Goormachtig
20. Unravelling cellular heterogeneity and dynamics in normal and malignant hematopoiesis using single-cell bioinformatics (2018-2022)  
Prof. Yvan Saeys, Prof. Martin Guilliams, Prof. Tom Taghon, Prof. Pieter Van Vlierberghe
21. Ex ovo omnia: from stem cell to oocyte (2018-2022)  
Prof. Ann Van Soom, Prof. Dieter Deforce, Prof. Petra De Sutter, Prof. Luc Peelman
22. Promoting news diversity: An interdisciplinary investigation into algorithmic design, personalization and the public interest (2018-2021)  
Prof. Lieven De Marez, Prof. Luc Martens, Prof. Eva Lievens, Prof. Veronique Hoste
23. Literatuur, natuur en ecologie. Een eco-poëtische benadering van hedendaags Frans, Duitstalig, Engelstalig en Italiaans verhalend proza (2018-2021)  
Prof. Pierre Schoentjies, Prof. Benjamin Biebuyck, Prof. Stef Craps, Prof. Sabine Verhulst
24. Multi-biofortification of rice: a molecular and analytical study (2018-2023)  
Prof. Dominique Van Der Straeten, Prof. Christophe Stove
25. Dynamic modulation of disease progression in chronic gut and joint inflammation in spondyloarthritides (2017-2021)  
Prof. Dirk Elewaut, Prof. Filip Van den Bosch, Prof. Martine De Vos, Prof. Tom Van de Wiele, Prof. Debby Laukens, Dr. Pieter Hindryckx, Prof. Peggy Jacques
26. Role of protein crystals in asthma (2017-2021)  
Prof. Bart Lambrecht, Prof. Hamida Hammad, Prof. Savvas Savvides
27. Assessing the biological capacity for marine ecosystem resilience: Acclimation and adaptation in a rapidly changing environment (2017-2022)  
Prof. Ann Vanreusel, Prof. Marleen De Troch, Prof. Olivier De Clerck, Prof. Bernard De Baets, Dr. Jan Baetens, Prof. Tom Moens
28. Understanding and exploiting protein glycosylation in vaccine design (2017-2020)  
Prof. Nico Callewaert, Prof. Peter Geldhof, Prof. Xavier Saelens
29. Development of 3D elemental, structural and isotopic microanalysis techniques for the study of unique meteoritic materials (2017-2021)  
Prof. Laszlo Vincze, Prof. Frank Vanhaecke, Prof. Luc Van Hoorebeke, Prof. Dr. Philippe Claeys
30. Alphaherpesviruses and the innate antiviral defence at the respiratory and genital mucosa: a fight for supremacy (2017-2021)  
Prof. Hans Nauwynck, Prof. Herman Favoreel, Prof. Bruno Verhasselt, Dr. Koen Van Crombruggen
31. Model based synthesis of Covalent Organic Frameworks (COFs) for heterogeneous catalysis in flow (2017-2021)  
Prof. Veronique Van Speybroeck, Prof. Christian Stevens, Prof. Pascal Van Der Voort

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32. Connections for cognition: A cognitive neurocomputational perspective on human flexibility (2017-2021)  
Prof. Tom Verguts, Prof. Marcel Brass, Prof. Wim Fias, Prof. Daniele Marinazzo
33. Emotion Regulation in the Prevention and Treatment of Obesity in Young Adolescents (2017-2021)  
Prof. Caroline Braet, Prof. Stefaan De Henauw
34. Intraperitoneal Drug Delivery for Peritoneal Carcinomatosis: from Bench to Bedside (2016-2019)  
Prof. Wim Ceelen, Prof. Jan Van Bocxlaer, Prof. Katrien Remaut, Prof. Chris Vervaet, Dr. Pieter Colin, An Vermeulen
35. Mitigating an amphibian pandemic by embedding biodiversity conservation in contaminant exposed agricultural landscapes (2016-2021)  
Prof. Frank Pasmans, Prof. Siska Croubels, Prof. Peter Goethals
36. Long non-coding RNAs in cancer: deciphering the functional role of the dark matter of the human cancer genome (2016-2020)  
Prof. Franki Speleman, Prof. Joke Vandesompele, Mevr. An Hendrix, Prof. Sven Eyckerman, Prof. Olivier Thas
37. Dynamic polymeric systems as basis for reusable high performance materials and polymer therapeutics (2016-2020)  
Prof. Filip Du Prez, Prof. Richard Hoogenboom, Prof. Bruno De Geest
38. Improving resilience and well-being in depression: The Development of innovative neurocognitive interventions (2016-2020)  
Prof. Rudi De Raedt, Prof. Gilles Pourtois, Prof. Chris Baeken, Prof. Ernst Koster
39. Procedural Fairness in Local Approaches to Multicultural Conflicts (2016-2020)  
Prof. Eva Brems, Prof. Alain Van Hiel, Prof. Bart Van de Putte
40. Disposable and biodegradable wireless networks for extreme conditions (2016-2021)  
Prof. Ingrid Moerman, Prof. Jan Vanfleteren, Prof. Hendrik Rogier
41. Prediction of Turbulent Reactive Flows by means of Numerical Simulations (PRETREF) (2016-2020)  
Prof. Bart Merci, Prof. Sebastian Verhelst, Prof. Ingmar Nopens, Prof. Kevin Van Geem, Prof. Steven Verstockt, Prof. Jan Vierendeels
42. Poetry from the Margins. Literary, linguistic, philological and cultural-historical analysis of a new corpus of Byzantine book epigrams (800-1453) (2015-2019)  
Prof. Kristoffel Demoen, Prof. Marc Janse, Prof. Marc De Groote, Prof. Peter Van Nuffelen, Prof. Koen De Temmerman, Tjamke Snijders, Klaas Bentein, Floris Bernard
43. Induction of intestinal mucosal immune responses in a pig model (2015-2019)  
Prof. Eric Cox, Prof. Anna Depicker, Prof. Niek Sanders
44. Economic growth and inequality. Explaining divergent regional growth paths in pre-industrial Europe (Late Middle Ages – 19th century). (2015-2019)  
Prof. Erik Thoen, Prof. Eric Vanhaute, Prof. Thijs Lambrecht, Prof. Koen Schoors
45. Sex signaling and life cycle evolution in pennate diatoms (2015-2020)  
Prof. Lieven De Veylder, Prof. Wim Vyverman, Prof. Klaas Vandepoele, Prof. Sven Mangelinckx, Prof. Lieven Clement
46. Personalized functional genomics in Mendelian diseases: from DNA variants to clinical and bioethical implications (2015-2019)  
Prof. Elfride De Baere, Prof. Kathleen Claes, Prof. Paul Coucke, Prof. Kris Vleminckx, Prof. Björn Menten, Prof. Filip Van Nieuwerburgh, Prof. Ignaas Devisch, Prof. Björn Heindryckx
47. ENCLOSE: an Embedded sensor Network in Composites for Local Sensing (2015-2020)

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Prof. Joris Degrieck, Prof. Isabel Van Driessche, Prof. Philippe Smet, Prof. Diederik Depla

48. Collaboromics: identifying and engineering core and satellite populations in (synthetic) microbial ecosystems (2015-2020)  
Prof. Nico Boon, Prof. Peter Vandamme, Dr. Kim Heylen
49. Inducible lectins and their importance in stress signaling for plant growth and crop protection (2015-2019)  
Prof. Els Van Damme, Prof. Guy Smagghe
50. Bacterial and host factors involved in gastric colonization and induction of lesions by *Helicobacter suis* and *Helicobacter heilmannii* (2014-2019)  
Prof. Freddy Haesebrouck, Prof. Richard Ducatelle, Bram Flahou, Annemieke Smet
51. Scaling up functional biodiversity research: from individuals to landscapes and back (2014-2019)  
Prof. Luc Lens, Prof. An Martel, Prof. Kris Verheyen, Prof. Dries Bonte