

François Verheggen

Chemical & Behavioural Ecologist — Associate Professor and Senior Research Scientist

Gembloux Agro-Bio Tech, University of Liège (ULiège), Belgium

Born 25 February 1980, Namur (Belgium) · Belgian · [fverheggen@uliege.be](mailto:verheggen@uliege.be)

EDUCATION

- PhD, Agronomical Sciences & Biological Engineering, University of Liège (2008)
- Advanced Studies Diploma (DEA), Agronomical Sciences & Biological Engineering (2005, great distinction)
- MSc, Chemical and Bio-industries Engineering, University of Liège (2003, great distinction)
- BSc, Agronomical Sciences (2000)

LANGUAGES

French (native) · English (fluent) · Spanish (Good)

AREAS OF EXPERTISE

Entomology · Chemical ecology · Invasive and quarantine species · Biological control of insect pests · Integrated pest management (IPM) · Plant protection · Insect behaviour and behavioural ecology · Volatile organic compounds sampling and GC-MS analysis · plant–insect–microorganism multitrophic interactions · Entomopathogenic fungi and nematodes · Plant health and phytosanitary risk assessment · Forensic entomology · Science communication.

RESEARCH PROFILE

Over the past 20 years I have built chemical ecology — the study of chemically mediated interactions among living organisms and with their environment — at the University of Liège, where the discipline did not previously exist. My work spans the chemistry of semiochemicals (collection, separation and identification), the characterisation of the behavioural responses of insects and, increasingly, mammals, and the ecological integration of these signals within multitrophic systems. I focus on species of agronomic importance — crop pests, invasive insects and beneficial organisms — and on developing semiochemical- and microorganism-based alternatives to synthetic insecticides, including identification of the sex pheromones of the walnut husk fly and the harlequin ladybird, now applied in biocontrol programs.

Bibliometrics (Scopus): ca. 200 peer-reviewed articles · h-index 42 · ca. 5,000 citations.

Publications include *Science*, *Nature Communications*, *Global Change Biology* and the *Journal of Chemical Ecology*, with an invited review in *Annual Review of Entomology*.

EXPERT EVALUATION & SCIENTIFIC ADVISORY EXPERIENCE

Regular evaluator of research proposals for:

- Marie Skłodowska-Curie Actions
- Horizon H2020 – Farm to Fork
- Research Foundation – Flanders (FWO, Belgium), panel SBBio10
- Agence Nationale de la Recherche (ANR, France)
- Belgian Federal Public Service Health, Food Chain Safety and Environment (SPF Santé Publique)
- European Food Safety Authority (EFSA)

Scientific advisory roles: member of the Scientific Committee of the Belgian Federal Agency for the Safety of the Food Chain (AFSCA/FAVV); member of the Specialised Expert Committee on Plant Health of ANSES (France) — contributing to phytosanitary risk analysis of emerging and quarantine insect species in Europe.

EDITORIAL & PEER-REVIEW ACTIVITIES

- Editor, *Entomologia Generalis* (IF 6.9), since 2016
- Associate Editor, *Physiological Entomology* (2015–2025)
- Associate Editor, *Biotechnologie Agronomie Société Environnement (BASE)*, since 2013
- Science Communication Coordinator, COST Action e-Niche (chemical ecology)
- Peer reviewer (ca. 20 reviews/year) for *Journal of Chemical Ecology*, *Journal of Pest Science*, *Pest Management Science*, *Arthropod-Plant Interactions*, *Crop Protection*, and others

SELECTED PUBLICATIONS

- Epstein Y, Chapron G, Verheggen F (2021). EU court to rule on banned pesticide use. *Science* 373. doi:10.1126/science.abj9226
- Roggatz C, Saha M, Blanchard S, et al. & Verheggen F (2022). Becoming nose-blind: climate change impacts on chemical communication. *Global Change Biology*. doi:10.1111/gcb.16209
- Leroy P, Sabri A, Heuskin S, et al. & Verheggen F (2011). Microorganisms from aphid honeydew attract and enhance the efficacy of natural enemies. *Nature Communications* 2:348. doi:10.1038/ncomms1347
- Verheggen F, Cherif A, Martin C (2020). The production of sex pheromone in lady beetles is conditioned by the presence of aphids and not by mating status. *Journal of Chemical Ecology* 46:590–596. doi:10.1007/s10886-020-01197-z
- Verheggen F, et al. (2022). Producing sugar beets without neonicotinoids: an evaluation of alternatives for the management of virus-transmitting aphids. *Entomologia Generalis* 42:491. doi:10.1127/entomologia/2022/1511

MAJOR RESEARCH FUNDING (AS PRINCIPAL INVESTIGATOR)

Approximately €10M secured as principal investigator, including:

- Walloon Region (DGO3/DGO6): ca. €4M — biological control of invasive and soil-dwelling pests (e.g. Biofuni €1.6M; Attract&Kill €1.1M)
- F.R.S.-FNRS: ca. €1M in research projects/credits, plus ca. €1.6M in FRIA doctoral fellowships (10 grants)
- European / cross-border: INTERREG “Trans-Pest” (€0.33M, 2024–2027); BiodivERsA/BELSPO “EXOTIC” (€0.1M)
- International (France): ca. €2M (LOTO, PEPIT, Taupifast I & II)

DOCTORAL SUPERVISION & EXAMINATION

Supervised ca. 20 doctoral candidates (17 PhD theses defended; 3 ongoing) as main or co-promoter. External PhD jury member or president for more than 25 defenses across France, Belgium, Germany, Italy, Australia, Morocco and beyond (2013–2025).

SELECTED AWARDS & DISTINCTIONS

- Fellow of the Royal Entomological Society (2019)
- Prix Adolphe Wetrems, Royal Academy of Belgium (2018)
- Wernaers Fund for science communication, F.R.S.-FNRS (2025)
- Young Researcher Prize, Agence Universitaire de la Francophonie (2017)

SCIENCE COMMUNICATION

Founder of *Science Bestiale*, a French-language science-communication initiative on animal biology and behaviour (since 2023): YouTube channel (ca. 62,000 subscribers; >9 million views), a regular science chronicle on RTBF La Première radio, a blog (sciencebestiale.com), and two popular-science books published by Delachaux et Niestlé (>11,000 copies sold).