

Curriculum Vitae

Aleš Buček, Ph.D.

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Education and research experience

- 2017-present **Postdoctoral researcher** on evolutionary genomics (PI: Thomas Bourguignon)
Okinawa Institute of Science and Technology, Japan
- 2016 – 2017 **Postdoctoral researcher** on evolution of termite defense (PI: Jan Šobotník)
Czech University of Life Sciences in Prague, Czech Republic
- 2009 – 2016 **Ph.D. in Biochemistry**: "Study of evolution of insect pheromone biosynthetic fatty acyl desaturases" (PI: Iva Pichová)
Charles University in Prague, Institute of Organic Chemistry and Biochemistry of the CAS, Czech Republic
- 2013 **Visiting researcher** (2 months) on functional characterization of pheromone-producing enzymes (PI: Aleš Svatoš)
Max Planck Institute for Chemical Ecology, Germany
- 2004 – 2009 **M.Sc. in Biochemistry**
Charles University in Prague, Institute of Organic Chemistry and Biochemistry of the CAS, Czech Republic

Research interests and selected publications

1. Evolution of insect pheromone biosynthesis
 - [eLife 2019](#); [PNAS 2015](#)
2. Molecular phylogenetics of termites
 - [Mol. Biol. Evol. 2022](#); [Curr. Biol. 2019](#)
3. Molecular mechanisms of termite defense
 - [Mol. Biol. Evol. 2016](#)
4. Evolution of microbial communities (in termite guts, in environment)
 - [Microbiome 2022](#); [Sci. Adv. 2020](#)

Grants and awards

- 2023-2027 JUNIOR STAR GAČR, 24,000,000 CZK
- 2018-2020 Grant-in-Aid for Early-Career Scientists, from the Japanese Society for the Promotion of Science, 2 years, 3,500,000 JPY (~800,000 CZK).
- 2015 Publication¹⁵ awarded as TOP3 most significant biochemistry and molecular biology paper in 2015 published at Institute of Organic Chemistry and Biochemistry AS CR (~ 200.000 CZK).

Teaching and outreach

- 2022 International termite research course (Florida), invited lecturer, 4x lecture
- 2021-present Citizen science database curator (<https://www.inaturalist.org/people/alesbucek>)
- 2019-present 2x supervision of semestral PhD research projects
- 2017-present 3x school lectures and presentations, Okinawa, Japan
- 2018-present Lecturer of PhD program courses (microtomography, phylogenetic methods)
Okinawa Institute of Science and Technology, Japan
- 2019 Invited presentation at Insect Experience Day, Tokyo, Japan

Field research expeditions

Cameroon (2016, 2020); Ecuador (2017); French Guiana (2013); Japan (2017-2022), Madagascar (2019); Malaysia (2018, 2019)

Selected oral presentations

- 2022 Evolution of symbiosis, colony organization and defense in termites. *International congress of entomology*
- 2022 Convergent evolution of defensive adaptations in termites. *Annual Meeting of the Ecological Society of Japan*
- 2019 Evolution of digestive symbiotic systems in termites in the light of termite transcriptome phylogeny. *Association for Tropical Biology and Conservation annual meeting*
- 2018 Reconstructing termite evolution with transcriptome- and mitochondrial genome-based phylogenies. *International Union for the Study of Social Insects*
- 2015 Molecular basis of male sex pheromone diversity in bumblebees. *Biology and Genomics of Social Insect (awarded with United States Department of Agriculture & National Institute of Food and Agriculture Award)*

Journal Peer Review

BMC Genomics, European Journal of Entomology, Journal of Tropical Ecology, Scientific Reports

Publication activity

- h-index 10, citations 309 ([Google Scholar](#))
- h-index 9, citations 215 ([Web of Science](#))
- 19 publications: 9 as first or co-first author in eLife, PNAS, Current Biology, Molecular Biology and Evolution