

1	CEIPEX RESEARCH TOPIC LEVEL2 production biology
2	RESEARCH GROUP Research Group of Advanced Biotechnologies and Environmental Analysis. (aBETA)
3	TOPICS/FOCUS Nutrient Recovery and Soil Enrichment via Algal Turf Systems
4	SUMMARY We aim to demonstrate Algal Turf Scrubber (ATS) technology for integrated water treatment and nutrient circularity. ATS units will remove nitrogen, phosphorus, and trace elements from agricultural wastewaters and aquaculture, producing nutrient-rich algal biomass. This harvested biomass will be processed into soil conditioners and biofertilizers that enhance soil organic matter, nutrient retention, and microbial activity. Research will optimize ATS design, hydrodynamics, and seasonal operation, while biochemical and agronomic tests will verify fertilizer quality and environmental safety. This aim provides a scalable, nature-based solution linking clean water production with sustainable soil management and circular nutrient flows.
5	RG WEBPAGE/CONTACT https://ucb.af.mendelu.cz/veda-a-vyzkum/vyzkumna-skupina-nanobiotech-rostlin-a-mikroras/ Ing. Pavel Chaloupský, Ph.D.