



Inštitut za hmeljarstvo
in pivovarstvo
Slovenije

Summary of the Self-Evaluation Report on the Scientific Research Activities of IHPS

for the period: 2022-2026

Prepared by: IHPS Stable Funding Committee

INFORMATION ON THE RECIPIENT OF STABLE FUNDING

Name: Slovenian Institute of Hop Research and Brewing

Research Organisation Registration No. 0416

Website: <https://www.ihps.si/>

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IHPS manager: Bojan Cizej

The scientific research activities of the Slovenian Institute of Hop Research and Brewing (IHPS) are based on interdisciplinary and application-oriented research conducted within the Plant, Soil and Environment Research Group (ARIS 0416-004) and four research programmes implemented in cooperation with the University of Ljubljana and the National Institute of Chemistry. This organizational framework enables the integration of fundamental and applied research, facilitates the efficient transfer of knowledge into practice, and supports the development of innovative solutions for the sustainable advancement of agriculture and the agri-food sector.

The research programme Agricultural Plants: Genetics and Modern Technologies focuses on hop genetics and breeding, the development of advanced diagnostic methods, and the study of plant diseases through molecular genetics, bioinformatics, and biotechnological approaches. The programme Chemistry and Structure of Bioactive Compounds addresses bioactive substances, their chemical and biological properties, and the development of sustainable methods for their extraction and utilization. The programme Biochemical and Biophysical-Chemical Characterisation of Natural Substances investigates bioactive components of natural resources and explores opportunities for the valorisation of agri-food by-products within a circular economy framework. The programme Economics of Agri-Food Systems and Natural Resources contributes to understanding economic and developmental processes in the agri-food sector through analyses of competitiveness, market dynamics, and the techno-economic aspects of agricultural production and processing.

The strategic development of scientific research activities is guided by the vision of IHPS as a leading research institution in the fields of hop production, brewing, plant protection, and sustainable agriculture. A particular strength of IHPS lies in the close integration of research activities with public services, statutory responsibilities, and professional tasks. This organizational model enables the direct transfer of research results to ministries, professional institutions, advisory services, producers, and other stakeholders, while simultaneously ensuring the rapid identification of emerging challenges from practice. Consequently, research activities are strongly oriented toward solving practical problems and generating measurable societal and economic impacts.

IHPS systematically implements the principles of Open Science and aligns its research activities with national and European policies concerning open access, research data management, and responsible research practices. The Institute promotes an inclusive and supportive research environment through transparent recruitment procedures, mentoring activities, career development support, and flexible working arrangements. High standards of research ethics and integrity are ensured through internal regulations, procedures for managing conflicts of interest, and systematic measures for maintaining the traceability of research data. As part of its quality assurance system, IHPS is progressively developing a comprehensive self-evaluation framework based on internal regulations, standard operating procedures, accreditation requirements, and Open Science principles.

Strengthening human resource capacity represents an important component of research development. During the last five years, six doctoral candidates have been actively involved in research activities, contributing to research projects, scientific publications, laboratory and field work, and the development of new hop cultivars. Nevertheless, the rejuvenation of the research community remains a significant challenge, primarily due to the instability of project-based funding and the limited opportunities for long-term employment of early-career researchers.

The research infrastructure of IHPS provides essential support for research in plant protection, molecular biology, chemical analytics, irrigation, hop production, and brewing, enabling activities ranging from laboratory diagnostics to pilot-scale validation of innovative technologies. Future development efforts will focus on the modernization of research equipment, digitalization of research processes, expansion of infrastructure-sharing opportunities, and strengthening laboratory capacities. A major developmental challenge remains the regular upgrading and renewal of research equipment, as limited investment resources and restricted access to dedicated

infrastructure funding schemes complicate the long-term planning of research infrastructure development.

Stable institutional funding during the period 2022–2026 enabled the preservation of key research competencies, successful participation in international research projects, the development of new hop cultivars, the implementation of sustainable technologies, and the strengthening of knowledge transfer to practice. In the coming period, IHPS will focus on ensuring the continuity of these activities, with particular emphasis on enhancing scientific excellence, international collaboration, the digitalization of research processes, and the development of advanced analytical techniques.

STRATEGIC MANAGEMENT OF RESEARCH ACTIVITIES AT IHPS Institute of Hop Research and Brewing Slovenia

Research for the Sustainable Future of Agriculture and Brewing

