

IOCB Mission and Goals 2026–2030

Institute of Organic Chemistry and Biochemistry of the Czech Academy of Sciences

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IOCB Yesterday and Today

The <u>Institute of Organic Chemistry and Biochemistry (IOCB)</u> of the Czech Academy of Sciences (CAS) was established in 1953. Over more than seven decades, IOCB has earned a reputation as a leading research institute in the fields of organic, medicinal, and computational chemistry, biochemistry, and chemical biology.

From the outset, the application of excellent basic research to drug development has been central to the IOCB legacy, spanning some of the first peptide hormone analogs, powerful anti-leukemia therapies, and more. The institute's most iconic achievement is the discovery by Antonín Holý and his coworkers of antiviral compounds which led to the development of antiviral drugs such as tenofovir alafenamide (TAF) by Gilead Sciences, Inc. These drugs became game-changers in the treatment of HIV and hepatitis B and now benefit millions of people worldwide, with the resulting royalties also providing substantial support for research at IOCB.

Today, IOCB is a dynamic and attractive research center with a flat organizational structure composed of independent scientific groups, each led by an internationally recognized researcher and supported by a range of in-house core facilities (the most recent addition being a state-of-the-art cryogenic electron microscopy unit).

What sets IOCB apart within the Czech academic environment is the strong and productive interplay between fundamental and applied research. To further cultivate this synergy, the institute established <u>IOCB Tech</u>, <u>i&i Prague</u>, and <u>PharmTheon</u> as technology transfer and startup incubator companies that pursue the commercial potential of IOCB research. In 2024, with both fundamental and translational science in mind, the institute also founded <u>IOCB Boston</u> as the first branch of a CAS institute in the United States.

IOCB Goals

The principal mission of IOCB is to promote exploratory and curiosity-driven research that integrates chemical, biological, and physical disciplines. Major emphasis is placed on the identification, characterization, and exploitation of targets for therapeutic interventions in human and veterinary diseases. To this end, the following goals are set to advance IOCB's vision for 2030:

- IOCB is firmly established as an excellent research institution, clearly visible within the international research landscape.
- IOCB conducts innovative, high-quality fundamental research aimed at breakthrough discoveries and significant applications. This research is typically supported by prestigious grants, with results published in reputable international journals.
- IOCB hosts successful technology transfer and incubation organizations, recognized as role models in the Central European region and beyond.
- IOCB is internationally regarded as an attractive training environment for PhD students and postdocs.
- IOCB is a well-recognized hub for promoting the importance of science and scientific reasoning in national discourse.



- IOCB is a respected voice in shaping national science and higher education policy.
- IOCB hosts effective, top-quality core facilities.
- IOCB benefits from a seamlessly and efficiently functioning administration.
- IOCB Boston is an internationally recognized and economically sustainable overseas branch of the Institute, attracting global talent, funding, and investment

IOCB Values

IOCB is recognized as a scientifically vibrant and welcoming workplace that offers an exciting education and discovery environment for master's and doctoral students, as well as opportunities for professional growth for everybody, in particular for postdocs and independent early-career researchers. To achieve this, we are guided by the following key values:

- Excellence in research
- Outstanding scientific education
- Academic freedom
- International and interdisciplinary approach
- Adherence to research ethics
- Collaborative atmosphere
- Friendly and open communication
- Inclusivity and respect
- Service to the scientific community

Fundamental Research at IOCB

General Principles

The Institute provides an excellent environment for conducting cutting-edge research, offering both direct support for scientific work and fostering a collegial, welcoming atmosphere. As the saying goes, "At IOCB, we do not compete with each other – we collaborate."

The Institute has a flat structure with no formal departments above individual research groups, which are informally organized within CHEM, BIO, and PHYS research clusters. Group leaders have complete freedom in choosing their research directions and collaborators, and full responsibility for maintaining the highest standards of intellectual integrity, work ethics, and lab safety within their groups. To support this, group leaders are provided with appropriate laboratory and office space, access to state-of-the-art core facilities, administrative assistance, financial resources to cover part of their research costs, and competitive salaries. Newly appointed junior group leaders are also offered mentoring by senior colleagues to assist them in succeeding on the tenure track.

In parallel with its support of fundamental research, IOCB – together with its technology transfer daughter company, IOCB Tech – provides full backing to research units focused on translating basic research results into practical applications.



The Institute takes pride in successfully fostering internal collaboration and creating synergies across its broad expertise in biological, chemical, and physical disciplines. In the regular evaluation of individual research groups by the International Advisory Board (IAB), the Institute emphasizes qualitative over quantitative criteria. Scientometric data, even when properly prepared, have limited value and cannot capture scientific excellence. To this end, IOCB relies primarily on peer review. In the spirit of the maxim "We do not count papers – we read them," the Institute organizes with the help of the IAB an annual selection of the most significant papers, while also encouraging IOCB researchers to familiarize themselves with the latest accomplishments of their colleagues.

Organizational Structure and Operation

As a productive and efficient research institute, IOCB has grown significantly in recent years, employing 1,028 people as of January 2025. This corresponds to 787 full-time equivalents (FTEs), with 528 FTEs in research and core facilities. Women make up 45% of the scientific personnel, and foreign nationals represent 25% of the total workforce.

IOCB continues to promote recruitment into junior positions while maintaining continuity in high-quality research and preserving key methodologies and expertise. This effort must be accompanied by a clear vision for personnel development, grounded in the availability of space and a commitment to lab safety at IOCB. Determining the Institute's optimal size under these constraints will be one of the most challenging managerial tasks in the coming years.

Transparent mechanisms governing the organization of all research-oriented units – including the establishment, evaluation, and termination of individual groups – guide further development. This is directly supported by the Institute's strong organizational, administrative, and educational infrastructure for research.

Research Groups - Formation, Evaluation, and Termination

IOCB aims to host and promote breakthrough science. This is realized primarily by actively identifying key trends and emerging research directions and by attracting strong scientific personalities working in these fields as group leaders. IOCB group leaders are also encouraged to recognize crucial new areas of research, help identify potential emerging leaders, and actively support their candidacy for internationally advertised group leader positions.

Selected candidates are invited for interviews, with the selection process coordinated by the director in cooperation with the IAB. As the main entry point into the IOCB research ecosystem, the Institute opens junior group leader positions for early-stage scientists with excellent research projects. In exceptional cases, IOCB may offer a Senior or Distinguished Chair position to a scientist considered extraordinary by international standards. In such cases, strong support and recommendation from the IAB is a prerequisite. Preference is given to individuals expected to promote a novel area of research at IOCB, establish strong collaborations with existing groups, and contribute to a productive and dynamic atmosphere.

As of January 2025, IOCB comprised 4 junior groups, 24 senior groups, 5 groups in the Distinguished Chair category, 2 Distinguished Emeriti groups, 4 targeted research groups, 1 research-service group, and 12 core facilities. Additionally, 4 embedded service units operate within research groups, providing supplementary services. A recent addition to the IOCB system is the establishment of joint laboratories with Czech and international research institutions; there are currently three. These labs are designed to expand available methodologies and



strengthen collaboration. By offering modern facilities and shared infrastructure, they help attract top researchers while also addressing space limitations. This strategic approach enhances IOCB's ability to innovate, use resources effectively, and achieve long-term research goals.

The career ladder at IOCB functions as follows: Junior groups are typically established for a five-year period, after which they are either promoted to senior group status or terminated. The system closely resembles the standard academic tenure track. Senior groups undergo evaluation every five years. The Distinguished Chair position is granted in exceptional cases to particularly esteemed senior group leaders, and these groups are no longer subject to regular evaluation. All groups operate autonomously, with group leaders bearing full responsibility for their scientific programs and the results they produce.

Regular peer-review evaluation is the fundamental tool used to track the research progress of individual groups. The Institute's management, together with the IAB, organizes evaluations of research groups at regular intervals and guarantees a transparent process. The peer review is based on a written report that covers the scientific achievements of the evaluated group, along with its research plans for the next evaluation period.

In addition to an objective and thorough assessment of the group's scientific performance and future plans, the evaluation also considers specific aspects of the research field, current trends, educational activities carried out by the group, and its collaborative potential, among other factors. Once the evaluation reports are made available, group leaders have the opportunity to discuss and respond to the points raised during the IAB's on-site visit. Evaluations serve to recognize the success of accomplished research, as well as a chance to encourage the launch of new research programs. Most importantly, evaluations form the basis for providing incentives to support the most successful groups and for opening constructive dialogue with those evaluated less favorably.

Establishing new groups in a sustainable way also requires a mechanism for closing existing ones. A research group is terminated if its leader retires or chooses to leave the Institute. If a junior group fails its promotion evaluation or a senior group receives repeated unfavorable evaluations during the regular five-year cycle, it is also subject to termination. In such cases, the group may be granted an additional period – typically up to two years – to complete ongoing grants and wind down its activities in a controlled manner. These terms are negotiated specifically between the group leader and the IOCB Director. For affected group members, a one-year interim period applies, during which they may seek employment in another group at IOCB or elsewhere. Specific arrangements may be negotiated for senior scientists in such groups. IOCB is committed to providing viable solutions for PhD students to ensure they can continue working toward their degrees. The termination of a group is understood as a reorganization in accordance with the Labor Code.

The official age limit for retirement (currently approximately 65) is the recommended default for most senior research group leaders. If the group's most recent successful evaluation occurred within eight years of the leader reaching retirement age, the position may be automatically extended until regular retirement, without further evaluation.

However, ambitious and successful senior group leaders reaching retirement age may request an extension of their appointment. To obtain such an extension, they must continue to undergo regular evaluations and make a compelling case to the IAB that disbanding the group would represent a significant loss to the Institute's scientific output, and that continued operation would be more bene-



ficial than launching one or two new junior groups in its place. The IAB provides an assessment of the request, and the final decision rests with the IOCB Director.

Distinguished Chairs may continue operating their groups for up to five years after reaching retirement age without needing to request an extension. Any subsequent arrangement – including, among other options, a transition to a Distinguished Emeritus group – is to be negotiated individually with the IOCB Director.

Retired scientists of undisputed reputation and recognized achievements may also be offered the status of Emeritus Scientist on a case-by-case basis. Emeriti scientists at IOCB are provided with appropriate conditions to remain engaged with the Institute, typically in the form of office space, ideally located within or near groups where their expertise remains relevant.

Further details concerning individual types of research groups are provided below:

Junior Research Groups

The junior group leader position is highly competitive, both in the initial selection and in the final evaluation. Junior positions are opened regularly, based on current needs and available space in the BIO, CHEM, and PHYS clusters.

Once the IOCB management and Board agree to advertise a new position, an open call is published. Typical candidates for junior group leader roles are scientists who have obtained their Ph.D. within the past eight years (excluding parental or societal service breaks), possess appropriate postdoctoral experience, demonstrate a strong scientific record, and show a high degree of competence and independence. They are expected to submit excellent and innovative research proposals.

Candidates' research projects and scientific profiles are evaluated by the IAB, which also participates in the on-site interviews of shortlisted applicants. In exceptional cases, positions may be offered directly to specific candidates – with the consent of both the IAB and the IOCB Board – outside the scope of an open call. At present, this may apply to holders of ERC Starting Grants.

IOCB supports newly appointed junior groups with appropriate laboratory facilities, mentoring, a negotiable start-up package, and an institutional salary budget, including a full group leader salary. After successfully launching their research programs, junior group leaders are expected to secure external funding for their work, gradually becoming less dependent on institutional support while broadening their research portfolio.

Junior groups are subject to an interim evaluation conducted by the IAB after three years. This evaluation results in recommendations aimed at optimizing the group's performance and setting priorities in preparation for the final review. In case of very poor results, the interim evaluation may lead to early termination of the group.

After five years, the outcomes of the research program and prospects for further development are evaluated by the IAB based on peer review. A tenure recommendation is then provided by the IAB to the IOCB Director, who makes the final decision regarding promotion. In well-justified cases, a one- or two-year extension of junior status may also be granted.

A successful junior group leader is expected to publish significant research results – independent of previous supervisors – in reputable scientific journals; to acquire competitive grant funding; to build a functioning group, including students; to establish meaningful intra- and extramural collaborations; and to become an internationally recognized scientific personality. Researchers who



meet these standards at a competitive international level may be considered for promotion to senior group status; otherwise, the junior research group is terminated.

Senior Research Groups

Senior research groups represent the core scientific units at IOCB. These groups typically originate through the promotion of junior groups. In exceptional cases, the position may be offered – following consultation with the IAB and the IOCB Board – directly to internationally renowned scientists, such as recipients of ERC Advanced or Consolidator Grants, who would significantly contribute to the scientific development of the Institute.

IOCB support includes adequate laboratory space and an annual institutional salary budget, including a full group leader salary, to partially fund the group's operations. Group leaders have full discretion to assemble their team according to the research program, including senior scientists, postdoctoral fellows, graduate and undergraduate students, and technicians.

Senior research groups undergo evaluation every five years. Upon successful evaluation, the group leader's position is extended for the next five-year period. Outstandingly successful senior groups may be promoted to the Distinguished Chair category.

Distinguished Chairs

The Distinguished Chair status may be awarded to highly recognized senior group leaders conducting outstanding research. Such a chair is established by the IOCB Director, with nominations typically originating from the Director or the IAB, and with the IOCB Board consulted in the process.

IOCB provides adequate laboratory space and a significant portion of the salary budget, including a full group leader salary, to support the continued success of the group. The group leader has full discretion to assemble the group – comprising senior scientists, postdoctoral fellows, graduate and undergraduate students, and technicians – within the limits of the available budget. In addition, the group is expected to secure substantial external funding.

Distinguished Chairs are not subject to regular evaluation but are nonetheless expected to present research highlights to the IAB every five years.

Distinguished Emeritus Groups

The Distinguished Emeritus status may be awarded to highly recognized senior or Distinguished group leaders upon retirement, allowing for the partial continuation of successful and competitive research. Such a group is established by the IOCB Director. Nominations typically originate from the IAB and require approval by the IOCB Board.

IOCB provides limited laboratory space according to need, along with partial salary support to sustain the group. The group is expected to gradually scale down its activities over time. Distinguished Emeritus groups are not subject to regular evaluation but are expected to define their ongoing research directions to the IOCB Director.



Core Facilities

Core Facilities represent a vital part of IOCB's research infrastructure, providing shared equipment, expert support, and high-quality services that assist numerous research groups across the Institute. While they may participate in collaborative projects and contribute to method development, their primary role is to support IOCB researchers. This ensures that scientists from all areas have access to advanced tools and expertise, enabling them to focus on their research and enhance productivity.

Each Core Facility is led by a designated head responsible for managing and expanding services in response to the evolving needs of the IOCB scientific community. This leadership role requires strong management skills to ensure smooth operation and sustainable development. Core Facility leaders oversee essential areas such as finances, human resources, and team development. They also cultivate robust user networks to support long-term success and operational stability. In addition, they are responsible for ensuring that the results generated by the facility are protected and effectively utilized.

The performance and usage of Core Facilities are reviewed annually. Oversight is provided by the Institute's management in collaboration with a steering committee composed of users. The annual budget is discussed with the Director and is based on a report detailing services rendered and their impact. Service demand is regularly evaluated: if demand is low, reductions may be made to staffing or space allocation; if demand increases, additional resources – such as expanded staff or infrastructure – are considered, with a focus on efficient use of available resources.

Core Facilities play a key role in IOCB's strategy to support high-quality science, foster knowledge sharing, and amplify the overall impact of research conducted at the Institute.

Embedded Service Units

Embedded Service Units are small operations (0.5–3 FTE) integrated within research groups, responsible for managing specialized equipment used by both the host group and other users across the Institute. IOCB covers personnel costs, operations, repairs, and upgrades associated with these units.

Each unit's budget is negotiated annually with the Director, based on a report summarizing services provided. Units are established in response to demonstrated demand and require formal approval from the IOCB Board. An annual report is submitted, detailing usage, achievements, and user feedback.

This structure enables flexible, tailored services that enhance collaboration and operational efficiency. Units may be closed if demand from IOCB users decreases significantly.

Translational Research at IOCB

Main Goals

In line with IOCB's mission to promote exploratory and curiosity-driven research, a key strategic objective is to explore the practical applications and commercial opportunities that may arise from such research. As the ultimate aim is to make research results accessible to the public, IOCB considers translational research – and the related process of technology transfer – a priority, and strives to address every aspect of it. The goal is to generate positive financial outcomes from tech-transfer activities, thereby securing the long-term financial sustainability of the Institute.



Organizational Structure and Operation

Key components of the translational research and technology transfer ecosystem at IOCB (whether embedded or associated) include:

- Targeted research groups
- SWAT teams
- Technology transfer office (<u>IOCB Tech</u>)
- Life science incubator (i&i Prague)
- Seed financing vehicle (venture capital fund <u>i&i Bio</u>)

Targeted Research Groups and SWAT Teams

Targeted Research Groups are independent groups within the IOCB research structure. These groups are typically centered around major innovative approaches in medicinal chemistry, with the aim of advancing projects to a stage where commercial partnerships with companies can be initiated. This includes lead structure optimization, gaining detailed insight into mechanisms of action, in vivo safety studies, pharmacokinetics, and related attributes. IOCB supports these groups by providing appropriate laboratory space and full financial backing for materials and salaries.

A group leader of a successful Targeted Research Group may apply for promotion to a Senior Research Group. The application is subject to peer review by the IAB and the final decision is made by the IOCB Director based on the IAB's recommendation. Currently, there are four active Targeted Research Groups at the Institute.

SWAT Teams are project-specific teams composed of members from existing research or research-service groups, formed with the aim of developing the application potential of a method or discovery originating within those groups. IOCB provides full funding for these projects, covering both materials and salaries of participating team members. SWAT Teams typically do not require additional laboratory space. Their activities are generally planned for a period of two to three years, with the goal of assessing whether the discovery can be transformed into a patented invention. Currently, there are ten active SWAT Teams at the Institute.

Both SWAT Teams and Targeted Research Groups serve as key interfaces between translational research and technology transfer. Their projects are supervised by the technology transfer office, IOCB Tech. The decision to support an applied research project – either as a Targeted Research Group or a SWAT Team – is based on background materials provided by the initiating IOCB scientist and the expert opinions of the IOCB Director, IOCB Tech, and external advisors, with input from the International Business Advisory Board of IOCB Tech.

Once such a unit is established, its progress is overseen by an IOCB Tech project manager. Projects are monitored on a monthly basis during regular team meetings, led by the IOCB Tech project manager and attended by external advisors. Decisions about continuing support for the project are made following annual evaluations.

IOCB Tech

Technology transfer services at IOCB are provided by IOCB Tech, a wholly owned subsidiary of IOCB established in 2009.

The major roles of IOCB Tech include:

 Identifying promising research projects at IOCB with commercial potential and performing in-depth analyses of that potential



- Defining the commercialization strategy for selected projects
- Securing professional protection of intellectual property (In the period 2021-2025, 17 local and 210 international patents were awarded, and 13 licenses granted)
- Managing selected projects with input from external advisors
- Outlicensing projects to commercial partners, if aligned with the selected strategy
- Advancing projects to incubation at i&i Prague if the preferred path is the creation of a spin-off company

The newest addition to IOCB Tech's portfolio of services is the translational research center <u>PharmTheon</u>, established in 2024 as an integral part of IOCB Tech. The center brings together diverse expertise in organic chemistry, molecular biology, and Al-driven methodologies, creating a platform for innovative drug development research.

i&i Prague and i&i Bio

The next step in the transfer process – once a commercialization strategy has been defined – is often the incubation of a spin-off company. This role is fulfilled by i&i Prague, a wholly owned subsidiary of IOCB Tech. Established in 2017, i&i Prague has developed into an incubator focused on drug discovery, diagnostics, MedTech, and related projects, with operations extending across Central Europe.

In addition to projects originating at IOCB, i&i Prague also supports promising initiatives from other scientific institutions in the region. Its main objective – aligned with the broader tech transfer strategy coordinated by IOCB Tech – is to contribute to the long-term financial stability of IOCB by providing early-stage investments to promising new companies and spin-offs in the Czech Republic and Central Europe that are expected to prosper.

Between 2021 and 2025, i&i Prague recorded three successful exits from its portfolio of incubated or invested companies. It currently holds equity in 11 startup companies and manages more than 10 additional projects in the pre-incubation phase. For its startups, i&i Prague has raised over EUR 70 million in external funding to date. In response to its expanding scope of operations, and to strengthen governance practices, a Supervisory Board was established in 2025.

Recognizing that initial (seed) financing is a critical stage in the life cycle of a startup, the venture capital fund i&i Bio was established in 2021. The fund raised total commitments of EUR 53 million, with substantial participation from the European Investment Fund, Česká spořitelna, and other investors. As the first fund of its kind in the region, i&i Bio became a pioneer in life science seed investment across the Czech Republic and other post-communist countries.

The fund currently holds equity in 14 companies. Exits are expected during the 2026-2031 period.

Research Support at IOCB

Management and Administration

The aspiration to be a globally leading scientific institute requires ambitious and capable management. In an increasingly competitive world, management must focus on flexibility, transparency in decision-making, and the timely execution



of key tasks. Effective communication between the Director, the management team, the IOCB Board, and CAS leadership is a critical success factor.

Administrative sections at IOCB have undergone noticeable and positive development over the past decade. In earlier years – when the Institute was roughly half its current size – many administrative functions, particularly those supporting research, were handled by active or former scientists, often on a part-time basis. As the Institute has grown, accompanied by a welcome influx of international scientists, essential offices such as Human Resources, Communications, the Project Office, Project Administration, and Information Technology Services have evolved from single-person operations into dedicated teams, with a strong emphasis on professionalism and English-language proficiency.

Board

The <u>IOCB Board</u>, composed of six elected internal members and three elected external members, plays a key role in shaping the long-term scientific strategy of the Institute in cooperation with the Director. In addition, the Board provides essential support in addressing day-to-day matters related to the scientific operation of IOCB. These responsibilities include organizing calls for new group leaders, participating in the selection of the IOCB Director, submitting nominations for scientific prizes and awards, approving major scientific equipment purchases, and coordinating significant scientific events such as the Dream Chemistry Award and the biennial IOCB Scientific Retreat.

International Advisory Board

The <u>International Advisory Board</u> (IAB) is the principal external advisory body to the IOCB Director and the IOCB Board. It provides independent, expert feedback on the scientific performance and strategic development of the Institute. The IAB is composed of internationally renowned scientists from abroad, specializing in the key research areas pursued at IOCB.

One of its main roles is to ensure the independent evaluation of the quality of research conducted at the Institute. As such, the IAB plays a central role in assessing the performance of scientific groups and in recruiting and interviewing candidates for newly opened positions.

Members of the IAB are appointed by the Director following consultation with the IOCB Board and senior principal investigators. Membership is honorary; however, members are reimbursed for expenses incurred during their service to IOCB.

Doctoral and Postdoctoral Support

IOCB makes a concerted effort to attract top PhD students from both the Czech Republic and abroad, recognizing that a significant portion of the Institute's scientific work is carried out by outstanding and motivated PhD students and post-doctoral fellows. The Institute also acknowledges that young scientists are vital to its future.

IOCB organizes PhD Recruitment Days and actively supports PhD students by providing favorable conditions for both their scientific and personal development. A new form of support is the Mentoring Program, which helps students with goal setting, timely completion of their studies, overcoming challenges, and developing time management skills. Applications to the program are accepted year-round, and mentors may be selected from among experienced researchers at the Institute.

IOCB also fosters interaction among PhD students by organizing activities such as an annual Bootcamp. In addition, students are supported by the PhD Coordinator in organizing a series of educational activities aligned with their learning



needs. The Institute also offers doctoral fellowships for short-term visits to support collaboration with foreign laboratories.

Maintaining an international and multidisciplinary environment is one of IOCB's core strengths. To that end, the Institute supports stays of postdoctoral researchers and visiting scientists or professors through its <u>IOCB Postdoctoral</u> and <u>IOCB Sabbatical Fellowships</u>. IOCB aspires to serve as a "national incubator" for young scientists, with the goal of preparing them for senior research positions at academic institutions throughout the Czech Republic.

Intramural Grant Support

The IOCB Intramural Support program is an internal funding scheme designed to support high-risk, high-reward research projects at IOCB. It provides resources for the early stages of innovative projects that aim to generate proof-of-principle data and are too risky for conventional funding sources. The program is open to IOCB group leaders, with an emphasis on encouraging multidisciplinary teams.

This support helps researchers advance their ideas to a stage where they can seek larger external grants. The program also includes bridging grants for early-career researchers, fostering new collaborations and promoting the development of novel research directions.

Educational Program

IOCB supports a wide range of educational activities for and by its employees. Senior researchers organize regular seminars within their groups, and many also teach at local universities. Since 2003, IOCB has hosted the <u>Invited Lecture Series</u>, which features presentations by distinguished international speakers on important and timely scientific topics. This series also helps maintain the Institute's high international visibility.

Since 2015, IOCB's annual <u>Tony Holý Lectures</u> have honored the discoverers of groundbreaking achievements in medicinal chemistry that have led to pharmaceutical applications. In addition, the <u>Dana Hocková Seminar Series</u> brings distinguished female scientists to IOCB as role models for women in science.

Research Data Management

In line with the goals of its internal HR Award program, IOCB established a Research Data Management (RDM) Steering Group in early 2023, composed of representatives from various research groups. In 2024, IOCB adopted a formal Data Policy that promotes data management in accordance with the FAIR (Findable, Accessible, Interoperable, Reusable) principles, reinforcing the Institute's commitment to building a centralized and supportive data environment.

As part of these efforts, IOCB appointed a Data Coordinator and Data Steward, forming the first dedicated RDM team at the Institute. This year also marks the launch of an extensive testing phase to identify the best-fit Electronic Laboratory Notebook (ELN) system and the development of a platform for electronic service inquiry-result exchange between researchers and core facilities.

IOCB has also secured access to the official data repository of the Czech Academy of Sciences (ASEP) and is actively responding to new requirements from funding agencies regarding data management plans by offering comprehensive support for their preparation.

Recognizing that communication is central to effective service, each research group now nominates a Group Data Steward, who collaborates with the central RDM team. In support of this network, IOCB has introduced a newsletter, an



intranet site, and a regular bimonthly in-person platform for coordination and information sharing.

Human Resources Policy

Strategic Approach to Human Resources

IOCB is committed to fostering a workplace that nurtures talent and innovation while ensuring the well-being of all employees. The IOCB Human Resources (HR) Department serves as the central link in the Institute's personnel system, overseeing qualification structure, international representation, recruitment processes, and researcher evaluation. In 2023, IOCB established a Research Support Office, which monitors international trends in research institution development and helps to translate them into IOCB's strategic framework through specialized functions including a Scientific Coordinator, PhD Coordinator, Equal Opportunities Officer, Data Coordinator, and Data Steward. In particular, the Research Support Office became responsible for coordinating the European Commission initiative of Human Resources Strategy for Researchers (HRS4R).

In 2020, IOCB joined the European Union's <u>HR Excellence in Research Award program (HR Award)</u>, thereby explicitly endorsing the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. In January 2024, IOCB successfully passed the interim assessment by the European Commission, ahead of the planned on-site award renewal visit in 2028.

The Institute continually adapts its human resources policy in areas such as talent attraction, workplace development, and research data management, aligning with the evolving needs of researchers. IOCB applies Open, Transparent, and Merit-based Recruitment (OTM-R) principles to ensure fairness and effectiveness in its hiring processes. The Institute strongly supports internationalization and avoids academic inbreeding by targeted international recruitment efforts and promoting researcher mobility, particularly at early career stages. All scientific positions are broadly advertised both nationally and internationally through platforms such as EURAXESS, Nature Jobs, Jobs.cz, and others.

Ethics and Equal Opportunities

As part of its commitment to high ethical standards, IOCB has appointed Ethical Proxies, who serve as mediators in potential workplace conflicts. The Institute has also established its own Code of Ethics, formed an Ethics Commission, and introduced a whistleblower protection mechanism. A culture of ethical practice continues to evolve as the Institute actively addresses new cases and incorporates lessons learned from experience. Ethical training sessions are regularly conducted, and the Institute is continually developing its ethical framework and methodology.

IOCB has implemented a comprehensive <u>Equal Opportunities Plan</u>, coordinated by the Equal Opportunities Officer, which aims to foster an inclusive environment where all employees feel welcome – regardless of gender, ethnicity, nationality, or background. In December 2024, IOCB published its annual report, Equal Opportunities at IOCB Prague in Numbers, presenting up-to-date statistics and analysis of equal opportunity efforts across the Institute.

Professional Development and Wellbeing

Employee development is a priority at IOCB, with training opportunities regularly offered based on identified needs. Surveys conducted among employees have revealed demand for training in soft skills, particularly in the areas of burnout prevention, stress management, effective communication, presentation skills, and the use of AI in research. Lectures and workshops on these topics are now offered on a regular basis.



Medical services are readily available, including an on-site dental office and medical office providing occupational health services. Since September 2024, psychological counseling has also been available at the Institute, offering individual support, psychotherapy, and crisis intervention to help employees manage challenges related to work, studies, or personal life.

Employee Benefits and Work-Life Balance

IOCB offers a comprehensive benefits package that supports both the professional and personal needs of its employees. The Institute provides attractive housing options, particularly for international staff and those with permanent residence outside Prague.

For recreation and leisure, IOCB maintains two mountain chalets, and employees have access to an on-site fitness facility located near the main campus. All employees receive a meal allowance as part of their salary and can enjoy meals and refreshments at the on-site Café Organica, which offers breakfast and lunch options.

The Institute also provides language courses, including Czech classes for foreign employees and English courses primarily for administrative staff.

IOCB actively supports flexible working arrangements, including the option to work remotely when compatible with job responsibilities. For employees in difficult life circumstances, the Institute offers interest-free loans.

Working parents receive special support through a range of family-friendly policies, including:

- Financial support for parents returning to work while caring for children under 4 years of age
- Priority consideration for parking in the Institute's garage system
- Access to the Academy of Sciences nurseries and preschools for children from 18 months of age
- Contributions for children's recreational camps
- Participation in the annual IOCB Family Day, which includes activities for employees and their families

The IOCB Trade Union Organization represents employees' interests and is open to all staff members. The union provides a range of member benefits, with a particular focus on supporting employees' development through cultural and sporting activities.

Community Initiatives

IOCB supports several bottom-up initiatives that enhance the local research community:

<u>Women in Science at IOCB</u> organize career workshops and motivational lectures on balancing work and personal life, aiming to encourage women to take active roles in the workplace and increase their representation in leadership positions.

<u>PostDoc Club</u> is organized by postdoctoral researchers to foster collaboration, knowledge exchange, and professional development through networking events and career support activities.



PhD Peers have been introduced to provide networking among students, helping them to voice their needs and organize community events such as PhD breakfasts, mingles, and career talks.

<u>Green Club</u> promotes environmental awareness and sustainability practices within the institute, encouraging environmentally responsible behavior among employees.

IOCB Service to National and International Science

An important part of the IOCB mission is cultivating science in both national and international contexts. IOCB does not view itself as an "ivory tower," but rather as an active supporter of positive developments in academia. In addition to supporting in-house research, IOCB has developed and funded a range of activities beyond the Institute – both directly and through the recently established <u>IOCB</u> Tech Foundation.

In collaboration with the Faculty of Science at Charles University and the University of Chemistry and Technology, IOCB has established joint laboratories and two endowed chairs in medicinal chemistry, which have attracted leading international experts. Researchers at IOCB are encouraged to lecture at local universities and serve at committees organizing graduate education therein. Prominent IOCB researchers also serve as chairs of international scientific conferences.

Notable international activities include the annual <u>Summer School on Drug Development</u>, organized in cooperation with the Weizmann Institute, and the <u>Dream Chemistry Award</u> – a global competition for "rising stars" and their dream research projects – organized jointly with the Institute of Physical Chemistry of the Polish Academy of Sciences.

Public outreach is another key area of IOCB activity. The <u>Martina Roeselová Memorial Fellowships</u> provide support to Czech PhD students and postdocs who are primary caregivers of preschool-aged children. IOCB also collaborates with the Czech Technical University and the University of Chemistry and Technology on scientific and cultural initiatives within the local <u>Campus Dejvice</u> community.

In addition, IOCB is a partner of two science-oriented film festivals and collaborates with the Czech Deaf Youth organization.

IOCB strives not only to communicate its scientific results to the public but also to promote scientific reasoning and evidence-based decision-making in wider areas of public life. In doing so, IOCB contributes to the promotion and defense of democratic values and the humanistic ideals of European civilization. The Institute continues to influence and shape national policy in research, higher education, and technological development, helping to ensure the continued advancement of this vital sector of public life.

Future Development

IOCB is in an excellent personal, organizational, and financial position to further enhance the quality of its research. A key mechanism for continued growth will remain the regular opening of new junior groups, which allows for the influx of



competitive and innovative research directions. This natural and necessary generational shift – accompanied by the gradual retirement of certain research areas – will bring challenges related to the transfer of expertise, institutional spirit, and know-how to the next generation of IOCB scientists.

Due to space limitations at IOCB, the Institute cannot continue to expand its personnel. Instead, research groups will be encouraged to focus on developing their programs based on the quality of project work while maintaining their current size. A key strategy for advancing scientific excellence under these conditions is to foster both internal and external collaboration, supported by competitive national and international grants. Applications for such grants will continue to be strongly encouraged.

A major challenge facing IOCB in the coming years involves securing adequate funding. Many European framework and project funds are expected to diminish, demand on national grant agencies will increase significantly, and royalty income from existing licenses will decline sharply. A prudent investment strategy and careful use of accumulated funds will be essential – but not sufficient – to maintain current research conditions. IOCB will need to become more proactive in seeking international funding and private donations.

To meet these challenges, IOCB will continue to promote the transfer of research results into commercial applications, particularly in drug development. With the aim of maximizing returns on IOCB's investments and establishing a stable financial income stream beyond 2030, the Institute will pursue the following top priorities: (i) continuous improvement of tech-transfer services for IOCB investigators to streamline the process, (ii) establishment of a commercialization platform at the premises of IOCB Boston, (iii) co-development of the first brick-and-mortar life sciences incubator in Prague, with capacity for at least 15 new companies by 2030, (iv) first successful exits of companies invested in by the i&i Bio fund, followed by successful fundraising for a new venture capital fund, (v) launch of sustainable educational activities to train startup managers and investigators.