



IOCB: Goals and Organization 2021–2025

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

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IOCB yesterday and today

The Institute of Organic Chemistry and Biochemistry (**IOCB**) of the Czech Academy of Sciences (CAS) was **established in 1953**. During more than six decades, IOCB has gained a reputation as a prominent research institute in the areas of organic, medicinal, computational and physical chemistry as well as biochemistry. The most remarkable achievement of the institute has been the discovery of several antiviral compounds by **Antonín Holý** and his coworkers, including the drugs tenofovir and tenofovir alafenamide (TAF). These drugs, developed by Gilead Sciences, Inc., currently help millions of people worldwide and the thus generated royalties provide a significant income to IOCB. Today, IOCB is a dynamic and attractive research center with a **flat organizational structure** based on independent scientific groups, headed by internationally renowned researchers. What singles out IOCB in the Czech academic environment is a strong and productive interplay of fundamental and applied research. To further foster this, the Institute has established **IOCB Tech**, a technology-transfer daughter company that explores commercial implications of IOCB's research.

IOCB mission and goals

The principal mission of IOCB is to promote exploratory and curiosity-driven research that integrates chemical, biological and physical disciplines. A major emphasis is placed on the identification, characterization, and exploitation of targets for therapeutic interventions in human and veterinary diseases. This includes the design, synthesis, and screening of new lead structures, investigations of the mechanisms of their action including transport into the cell, target identification, and the exploration of relationships between their structure and activity. Organic chemistry at IOCB provides fundamental insight into catalysis, methodology development, natural products, photochemical processes, and materials-oriented chemistry. Physical and computational chemistry at the Institute explores the fundamentals of spectroscopic methods, biophysical processes, interactions of small molecules with biological targets, and the function of material-oriented molecules. Structural biology, protein function, nucleic acid research, and virology comprise the core directions of biology-oriented research at IOCB.

Main goals:

- To promote excellence and international visibility in fundamental research in medicinal chemistry, chemical biology, and related scientific disciplines including biology, biochemistry, organic synthesis, physical chemistry, theoretical chemistry, and computational chemistry.
- To explore practical applications and commercial opportunities that may arise from basic research, and to promote mutually beneficial relationships with the commercial sphere while maintaining respect for academic freedom and exploratory, curiosity-driven research.
- To be an attractive work place that offers an exciting combination of education and discovery for bachelor, master, and doctoral students, as well as for professional growth of postdocs and independent early-career researchers.

Fundamental research at IOCB

General guidelines

The Institute provides an exceptional environment for conducting cutting-edge scientific research providing both direct support of research and fostering a friendly and collaborative working environment. Following an internal reform which abolished departments, the Institute has acquired a flat structure where group leaders have complete freedom in choosing research directions and collaborators, as well as full responsibility for maintaining the highest intellectual, work ethics, and lab safety standards in their groups. To this end, group leaders are provided with sufficient laboratory and office space, technical and administrative support, financial means to cover a part of the running costs of their research, and competitive salaries. Newly hired junior group leaders are offered mentoring by senior colleagues to assist them on their tenure track. In parallel to fostering fundamental research, IOCB, together with its technology transfer daughter company IOCB Tech, provide full support to research units focusing on translating results of basic research to practical applications.

The Institute prides itself on successfully encouraging cooperation within the Institute, leading to fruitful combinations within the broad expertise at IOCB in biological, chemical, and physical disciplines. Within regular evaluations of the research of individual groups by the International Advisory Board, the Institute emphasizes qualitative over quantitative criteria. Scientometry, even when properly done, has only a limited value and cannot, in principle, judge scientific excellence; to this end, we rely primarily on peer review. Following a maxim “we do not count papers, we read them”, the Institute organizes an annual competition of the most significant papers from the Institute, encouraging researchers to familiarize themselves with the latest accomplishments of their colleagues at the Institute.

Organizational structure and operation

As a productive and efficient research institute, IOCB has grown in recent years, with 900 employees as of December, 2020. This translates into 691 full time equivalents (FTEs), with 475 FTEs in research and research-service groups. IOCB strives to maintain a balance within the dynamics of scientific development. To address the constant growth of scientific challenges, IOCB continues to encourage new hires in junior positions while maintaining the continuity of ongoing high-quality research and safeguarding key methodologies and expertise. This needs to be partnered with a clear vision of personnel development that is based on available space and that guarantees lab safety at IOCB. Finding the optimal size of the Institute under these boundary conditions will be one of the most difficult managerial tasks in the coming years. Transparent mechanisms that govern the organization of IOCB for all research-oriented organizational units (including establishing, evaluating, and terminating individual groups) should guide further development. This should go hand in hand with existing strong organizational, administrative, and educational support for research at IOCB.

Research groups – formation, evaluation, and termination

IOCB aims to host and promote break-through science. This is being realized primarily by actively identifying important trends and new research directions, and then attracting strong scientific personalities working in these fields as group leaders. IOCB group leaders are also encouraged to identify crucial new research fields, to contribute to identifying potential emerging leaders in their fields, and then to actively encourage them to compete for internationally advertised new group leader positions. Selected candidates are invited for an interview, with the selection process coordinated by the director in cooperation with the IOCB International Advisory Board (IAB). Typically, IOCB opens junior group leader positions for early-stage scientists with excellent research projects in competitive, emerging research areas. In exceptional cases, IOCB may offer a Senior or Distinguished Chair position to a scientist who is considered extraordinary, based on international standards. A strong recommendation and

support of the IAB is a prerequisite in such cases, with preference given to individuals who are expected to promote scientific development at IOCB, establish strong collaborations with existing research groups, and stimulate a productive atmosphere.

As of December, 2020, IOCB has two groups in the Distinguished Chair category, 19 Senior groups, two Distinguished emeriti groups, eight junior groups, four targeted research groups, seven research-service groups, and five service groups (47 [groups](#) in total). In addition, four Research core facilities exist within research groups that provide additional service components. SWAT teams are established within individual groups if specific research results provide strong application potential and require a concerted effort to develop it.

The Distinguished Chair position is granted in exceptional cases to esteemed scientists, and these groups no longer undergo regular evaluations. Senior groups undergo evaluations every five years, while junior groups are established for a five-year period, after which they are either promoted to the senior research group category or terminated. The system is similar in its essential features to the standard academic “tenure track”. Individual groups are autonomous, and group leaders are fully responsible for their scientific programs as well as the resulting outputs. Targeted research groups are established by the management of IOCB and evaluated annually by the management following specifically defined milestones.

Regular peer-review evaluation is the basic instrument to follow up on the research progress of individual research groups. The management of the Institute, together with the IAB, organizes the evaluation of research groups in regular intervals and guarantees a transparent process for all groups. The peer review process is based on a written report covering the scientific achievements in the evaluated group and their scientific plans for the next evaluation period. In addition to an objective and thorough assessment of the group’s scientific plans and achievements, the evaluation also considers specific aspects of the particular research area, current trends in chemical and biological science, educational activities carried out by the group, the collaborative potential of the group, etc. After the evaluation reports are made available to the research groups, group leaders have an opportunity to further discuss and to respond to points raised by the review report in an on-site visit of the IAB. Evaluations also provide a means to appreciate the success of past research, as well as a chance to initiate new research programs. Most importantly, it provides a basis for incentives to support the most successful research groups, as well as to open a constructive dialogue with less well evaluated groups.

Establishing new groups in a sustainable way also requires a mechanism for closing groups. A research group will be terminated if a group leader retires or decides to leave the institute. If a junior group fails in the promotion evaluation or a senior group fails in the regular 5-year evaluation, they will also be terminated. A terminated group may be given an additional period of typically up to one year to complete running grants and to cease its activities in a controlled manner. This is a matter of a specific negotiation between the group leader and the IOCB Director. For group members, a one-year interim period applies during which they can reorient themselves toward employment in another group at IOCB or elsewhere. For senior scientists in such groups, specific arrangements may be negotiated. IOCB commits to providing viable solutions to PhD students in such groups to enable them to continue pursuing their work toward their degree. The termination of a group is understood as a reorganization according to the Labor Code.

The general age limit of 65 should be a recommended default for retirement of most senior research group leaders. If the last successful evaluation of the group occurred eight years or less before a group leader reaches the retirement age, the position can be automatically guaranteed until retirement, and there is no need to undergo evaluation three or less years prior to the regular five-year period. However, ambitious and successful group leaders may request an extension of their position. For this to be granted, they need to continue to be evaluated, making a convincing case to the IAB that termination of the group would result in a significant loss to the scientific output of the Institute and that continuation of the group would be more beneficial for the institute than the alternative of starting one or two new junior groups in its place. An assessment of

the extension request will be provided by the IAB, with the final decision made by the IOCB director.

Retired scientists of undisputable reputation and recognized achievements may be offered the status of emeritus scientist on an individual basis. Emeriti scientists at IOCB are offered adequate conditions for continuing involvement at the institute, typically in the form of an office space, ideally within or close to the groups where their expertise matters.

Distinguished Chairs may continue operation of their groups after reaching retirement age without requesting it specifically. A transition to retirement should be negotiated on an individual basis with the IOCB management.

Distinguished Chair

The Distinguished Chair status is awarded only in exceptional cases of internationally highly recognized scientists conducting exceptional research. Such a chair is established by the IOCB director. The nomination typically comes from the IOCB Director or the IAB, and the IOCB Board is consulted. IOCB provides adequate laboratory space and a significant part of the salary budget for sustaining the group in order to promote continued success. It is at the discretion of the chair to build the group as needed from senior scientists, postdoctoral fellows, Ph.D. students, and technicians within the limits of the budget. In addition, however, it is expected that the group secures significant external funding. Distinguished chairs are not subject to regular evaluation, but are expected to define their research directions independently at the highest level.

Senior research groups

The senior research group is a standard scientific unit at IOCB. They commonly start by promotion from junior research groups, but the position can also be offered upon consultation of the IAB and the IOCB Board directly with internationally renowned scientists, such as recipients of ERC Advanced or Consolidator grants, as well as EMBO gold medal winners who would significantly contribute to the scientific development of IOCB. IOCB support consists of an adequate laboratory space and an annual institutional salary budget to partially support the group. It is at the discretion of the group leader to assemble the group according to the research program with senior scientists, postdoctoral fellows, Ph.D. students, and technicians. Senior research groups undergo regular evaluations every five years. The position of the senior research group leader is extended for the next five-year period after successful evaluation. Exceptionally successful senior groups may be promoted to the Distinguished Chair category.

Distinguished Emeritus group

The Distinguished emeritus status is awarded only in exceptional cases to highly recognized senior or distinguished group leaders after retirement to allow for the continuation of successful and competitive research. Such a group is established by the IOCB director. The nomination will typically come from the IAB and be approved by the IOCB Board. IOCB provides limited laboratory space according to need, and a part of the salary budget for sustaining the group. The group is expected to gradually reduce operation over time. Distinguished emeriti groups are not subject to regular evaluation, but expected to define their research directions to the IOCB director.

Junior research groups

The junior group leader position is the main entry point to IOCB research. It is the most competitive type of position, both with respect to the initial selection process and the final evaluation, similar to the standard tenure track system abroad. The opening of junior positions is dependent on space and the age of current senior group leaders in the BIO, CHEM and PHYS clusters. After the management and the IOCB Board agree to open a new position, an open call is placed. Typical candidates for junior research group leader positions are young scientists who have obtained their Ph.D. degree within seven years (excluding parental or social service breaks), with appropriate postdoctoral experience. They demonstrate a strong scientific record, a high degree of competence and

independence, and provide excellent and innovative research plans. The research projects and scientific personalities of the candidates are evaluated by the IAB, which also assists at the on-site interviews of the shortlisted applicants. In exceptional cases, such positions can be offered directly to specific candidates with the consent of the IAB and the IOCB Board. Currently, 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' for initial investments, and an institutional salary budget that enables the establishment of a successful research group. After the successful initiation of their research programs, junior group leaders are expected to compete for external funding for their research, becoming gradually more independent of institutional funding while broadening their research portfolio. Junior groups are subject to an interim evaluation which is carried out by the IAB after three years. This evaluation results in recommendations to the groups in order to optimize their performance and to define priorities toward their final evaluation. After five years, the outcomes of the research program and the prospects for further development are evaluated by the IAB by peer-review, as indicated above. A tenure recommendation is provided to the IOCB Director, who makes the final decision about promotion. High-quality and well-performing young researchers at an internationally competitive level are considered for promotion to the senior group level; otherwise, the junior research group is terminated. In exceptional cases, if a final decision about the fate of a group is ambiguous, a short extension period may be granted before the final decision is made.

Research-service groups

Research-service groups provide services which are indispensable for major parts of IOCB research operations, but they also have a significant scientific component inherent to the service provided. The priority is to guarantee and maintain the highest quality service. The service component is fully covered by IOCB, and its budget is negotiated with the director, based on an annual report covering the provided service of the previous year. RSGs are strongly encouraged to finance their research component by external support. Research service groups are supposed to be evaluated with respect to research and service components in five-year periods by the IOCB Board and IOCB Director. The research component is directly evaluated by the IOCB Board, while a Board of Users assists in the evaluation of the service component. If the research component of a research service groups significantly outgrows the service component, the corresponding group leader may apply for a status change to a Senior research group. Such an application is submitted to peer-review evaluation by the IAB, which subsequently issues a recommendation. The final decision is made by the director. In case the service provided by the research service group is not in high demand and only a limited user community exists, the service personnel and space may be reduced. Conversely, if the service demand cannot be met within the current limits, increase of personnel and space should be considered, with emphasis on the efficient use of space and other resources. Less effectively performing research-service group are not necessarily terminated, particularly if their services are essential for the IOCB research groups. In such cases, a new group leader may be hired after a transparent public search and/or the group may be reorganized to improve the service.

Research core facilities

Research core facilities are small units usually consisting of 0.5–3 FTE that are embedded in individual research groups. These units operate special equipment for research in that group and for a larger number of users from other groups at the Institute. IOCB covers personal costs, operational costs, repair costs, and equipment upgrades for the provided service. The budget of a research core facility is negotiated with the Director, based on an annual report of the provided service. Research core facilities can be established upon demand of a broader pool of users, followed by a formal application to the IOCB Board and subsequent negotiation with the Director. Research core facilities submit a yearly report which should contain information documenting the usage of the core facility, achievements and acknowledgements from users. Research core facilities are closed if the demand from IOCB users ceases.

Service groups

Service Groups are units that provide indispensable routine services for major IOCB research operations. Service groups are expected to provide services to at least three research groups at IOCB, but preferably more. The operations of service groups are fully funded by the IOCB. The performance of service groups is regularly evaluated and monitored by the research and research-service group leaders, as well as by the IOCB Board.

Applied research at IOCB

Main goals

The fundamental role of IOCB is to perform excellent, fundamental, and curiosity-driven research. Such research may result in applications that are beneficial to society. Therefore, it is the responsibility of IOCB to help scientists convert their discoveries into inventions, and then to subsequently apply them in a practical way. To promote these efforts, IOCB has established a technology transfer company, IOCB Tech s.r.o. (formerly IOCB TTO s.r.o.). Its four main goals can be defined as:

- 1) To generate positive financial results from IOCB Tech's activities;
- 2) To secure the financial sustainability of IOCB for the future;
- 3) To help scientists to achieve their commercialization goals, and
- 4) To secure the transfer of inventions to practice.

Following an initial development phase, IOCB Tech supported IOCB scientists in patent applications, resulting in more than 17 Czech patents being awarded, and in over 200 granted international patents in the years 2016–2020. As a result of these efforts, 17 licenses have been signed in the same period.

Organizational structure and operation

The major roles of IOCB Tech can be defined as:

- 1) Identifying application-promising projects at IOCB and analyzing them with respect to their commercial potential;
- 2) Securing professional protection of intellectual property;
- 3) Professionally managing selected projects with the help of external advisors;
- 4) Communicating and presenting these projects to potential commercial partners, and
- 5) Preparing, together with the IOCB legal office, commercial agreements with future customers.

To accomplish these tasks, IOCB Tech employees actively interact with scientists at IOCB in order to organize and supervise project work. This is done within the framework of Targeted Research Groups, or SWAT Teams. Additional major activities of IOCB Tech consist of providing non-project-based consultation and exploration services to interested scientists at IOCB and beyond.

Targeted research groups

Targeted Research Groups have the status of an independent group within the structure of IOCB research. These groups are mainly organized around major novel approaches in medicinal chemistry, with the goal of bringing projects to the stage where they are ready for the involvement of pharmaceutical companies as commercial partners. This includes lead structure optimization, obtaining detailed insight into the mechanism of action, safety *in vivo*, pharmacokinetics, and other attributes. IOCB supports these groups by providing adequate lab space and full financial backing with respect to materials and salaries. A group leader of a successful targeted research group may apply for promotion to a Senior research group. The application is submitted to peer-review evaluation by the IAB. Based on the recommendation of the IAB, the final decision is made by the IOCB director.

SWAT teams

SWAT teams are based within existing research or research-service groups to develop the application potential of a method or discovery made in that group. IOCB fully funds these projects with respect to materials and salaries of the SWAT team members working on the project. SWAT teams typically do not require additional lab space. Their existence is usually planned for a period of two to three years, with the goal of exploring the possibility of transforming a discovery into a patented invention, which may be further developed toward commercialization.

Management of applied research projects

The decision to support an applied research project, in the form of a Targeted Research Group or a SWAT Team, is based on the background material provided by the particular IOCB scientist involved in the project and the expert opinions of the IOCB Director, IOCB Tech, and external advisors, with the help of the International Business Advisory Board of IOCB Tech.

Once such a unit is established, the IOCB principal investigator is assigned to an IOCB Tech project manager. The progress of projects is monitored on a monthly basis at regular team meetings, led by the IOCB Tech project manager with the participation of external advisors. The decision to continue the project will be based on annual evaluations.

Support of external applied research

An important strategy at IOCB is to support promising applied research outside of the Institute. This role is performed by [i&i Prague s.r.o.](#), a daughter company of and 100% owned by IOCB Tech s.r.o. Established in 2017, i&i Prague has developed into a major player in the area of technology transfer in Central Europe. It currently holds shares in ten companies, including the promising company, Dracen Pharmaceuticals. The main objective of i&i Prague is to maintain the long-term financial security of IOCB by providing early investments into promising, newly established companies or spin-offs in the Czech Republic and Central Europe that will continue to prosper. This pre-seed funding of i&i Prague was recently recognized by the European Investment Fund, a European Union-based investment fund, which allocated €25 million at the end of 2020 to establish a common EU-i&i-based Biotech Investment Fund for projects in the life sciences. This is the first investment fund of this type in post-communist countries, and its goal is to create revenues for IOCB in 10–15 years.

Collaboration with industry and funding agencies

After more than ten years of existence, IOCB Tech has established strong contacts with numerous companies, mainly in the pharmaceutical industry sector. This gained expertise has enabled effective communication with industrial partners and the presentation of projects for potential collaborations. An important part of IOCB Tech activities consists of leveraging grant opportunities for applied research provided by the Technology Agency of the Czech Republic and by the Ministry of Industry and Trade. As a result, productive contacts have been established within both institutions, and many projects at IOCB are now supported by grants from these agencies.

Commercialization of results

A strategic goal of applied research at IOCB is to support the establishment and commercial success of spin-off companies that are based on inventions resulting from basic research at IOCB. In a recent example, [DIANA Biotechnologies s.r.o.](#) was founded in 2018 and is presently developing successfully. The management of both IOCB and IOCB Tech assists in providing the legal framework of incorporating spin-offs as well helping to identify investors.

Research support at IOCB

International Advisory Board

The International Advisory Board ([IAB](#)) is the major advisory body to the IOCB Director and the [IOCB Board](#). It provides external and independent expertise and feedback relating to scientific performance and development at the IOCB. The IAB consists of renowned scientists from abroad who specialize in the major research areas pursued at IOCB. One of its major roles is to ensure the independent evaluation of the quality of research carried out at the IOCB. As such, it is a key player in evaluating the performance of scientific groups and in recruiting and interviewing candidates for newly opened positions.

HR Award

In 2020, IOCB joined the EU program “[HR Excellence in Research Award](#)”, thus explicitly endorsing the European Charter & Code for Researchers. In practical terms, this means reviewing scientific conduct, hiring, and career development procedures at IOCB such that they comply with the highest EU standards. As result of this joint effort, two respected scientists were elected as ethical proxies for mediating potential work-related conflicts between IOCB employees, and an Ethical Committee is being established at IOCB.

IOCB PhD student program

IOCB makes a concerted effort to attract the best Ph.D. students from both the Czech Republic and abroad, acknowledging that much of the scientific work at IOCB is performed by outstanding and motivated [Ph.D. students](#) and [post-doctoral fellows](#). It also acknowledges that young scientists are crucially important for the future of the IOCB. IOCB organizes Ph.D. Recruitment days and actively cares for the needs of Ph.D. students by providing adequate conditions for their scientific and personal development. IOCB also fosters interactions among Ph.D. students by organizing activities such as an annual bootcamp and a monthly Ph.D. Science Club.

IOCB postdoctoral and sabbatical program

IOCB seeks to maintain an international and multidisciplinary environment as one of its major strengths. To this end, IOCB supports both short-term and long-term visits of post-doctoral researchers and visiting scientists/professors via the IOCB postdoctoral and IOCB sabbatical fellowships. IOCB strives to become a ‘national incubator’ for young scientists, with the hope that they obtain senior research positions at other academic institutions in the Czech Republic.

IOCB intramural grant support

In order to support collaborative and interdisciplinary research, the IOCB has established internal grants for fund projects that require expertise from multiple scientific disciplines (such as chemistry, biology, and computations/theory). This program thus actively encourages collaboration among scientists in different fields within the institute. Recently, the program has been extended to also support early career researchers via bridging grants.

Support for working mothers

IOCB provides direct financial [support](#) to mothers of small children. The aim is to facilitate their return to science after maternity leave by providing the means for covering babysitting costs.

IOCB educational program

IOCB supports a broad range of educational activities of and for its employees. Senior researchers organize regular seminars within their groups, and many of them also teach at local universities. Since 2003, IOCB has organized the [Invited Lecture Series](#), which presents the most important scientific topics by distinguished speakers from all over the world, and also helps to maintain high international visibility of the Institute. Since 2015, IOCB's annual [Tony Holý lectures](#) have been recognizing the discoverers of breakthroughs in medicinal chemistry that have led to pharmaceutical applications. In addition, emerging fields are covered at IOCB by presentations of local scientists and international rising stars within the [Detlef Schroeder Seminar series](#).

IOCB administration

Management

The aspiration to be a globally leading scientific institute, IOCB requires ambitious and skilled management. In an increasingly competitive world, [management](#) will focus on flexibility, transparency of decision making, and timely execution of particular tasks. Effective communication of the director with members of the management team, the IOCB Board and with the CAS leadership are essential success factors.

Administration

Administrative sections at IOCB have undergone a noticeable and positive development over the past decade. Initially, when the institute was roughly half its present size, many functions, especially those supporting research, were staffed by active or former scientists, often on a part-time basis. As the institute has expanded, with a welcome influx of scientists from abroad, essential offices such as Human Resources, Public Relations, the Grant office, and Information Technology Services have evolved from single-person operations into dedicated teams with an emphasis on professionalism and English-speaking proficiency. In this respect, more work remains to be done in Economic Administration – with emphasis on a smooth, user-friendly and fully electronic process flow as an overarching goal. The IOCB administration aims to serve the needs of IOCB employees, and operates a Dental office, a Medical office and a quality catering in-house facility, Café Organica.

IOCB serving science Nationally and internationally

An important part of the IOCB mission is [cultivating science](#), both in national and international contexts. IOCB does not view itself and does not want to be viewed 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 activities beyond the Institute. In collaboration with the Faculty of Science of the Charles University and the University of Chemistry and Technology, IOCB has established joint laboratories and two endowed chairs in medicinal chemistry that have attracted leading international experts. Leading researchers at IOCB serve as chairs of international conferences, and, together with the Weizmann Institute, IOCB organizes an annual Summer School on Drug Development. Together with the Institute of Physical Chemistry of the Polish Academy of Sciences, IOCB organizes a worldwide competition for “rising stars” and their projects called the [Dream Chemistry Award](#). Czech Ph.D. students and postdocs who are primary caregivers of pre-school children are supported by the [Martina Roeselová Memorial Fellowships](#). IOCB, together with the Czech Technical University and the University of Chemistry and Technology, is involved in scientific and cultural activities within the local initiative, [Campus](#)

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

Mid-to-long term development at IOCB

IOCB aims to further increase the quality of research. Because of the space limitations at IOCB, groups cannot further expand in size, but must concentrate on developing their research programs based on the quality of project work at their present size. An important means to accomplish scientific progress under these conditions is to increase internal and external collaboration. This can be achieved by participation in larger international grant consortia and increased competition for attractive national grants with larger collaborative components. The age structure at IOCB calls for constantly opening junior groups, which in turn allows for an influx of competitive new research directions. While the financial start-up for new groups is adequate, the chances of success of the newly established groups must be improved on one hand by careful selection and on the other hand by providing mentoring and non-material support. For the biology-oriented groups at IOCB, the capacity of structural biology will be significantly expanded by the installation of a cryo-electron microscopy facility on the IOCB campus. As a consequence of the COVID 19 pandemic, IOCB was offered a directing position in framing an infectious disease alliance. This alliance aims to unify and expand quality research in virology and infectious diseases in the Czech Republic.

IOCB aims to encourage the transfer of results from research to commercial use, especially in the field of drug development. To these ends, IOCB will establish a new institute which would focus on preclinical and phase I/IIa drug development. The Translational Research Institute will aim to develop promising projects from the drug discovery stage to drug candidates in preclinical testing, and to then transition them to clinical phase I and IIa testing. The plan for the next few years consists of developing a strategy, analyzing the financial investments in cooperation with external advisory bodies, and to start the construction of such infrastructure (potentially in connection to the above-mentioned infectious disease research alliance). At the same time, project acquisitions and the installment of groups will begin. In parallel, an incubator of future spin-off companies, both initiated by IOCB Prague and other research organizations in the Prague area, will be founded on the IOCB property on Papírenská street in Prague 6, which would also serve as a space for the Development Center of IOCB Prague. Given the complicated approval process in this area by Prague authorities, the ambition is to finish all preparatory work and to start construction by the end of 2024.