



**Institute of Experimental Botany
of the Czech Academy of Sciences**

The Director's Monthly

May 2026

Foreword



72 million

Dear Colleagues,

About a month ago, on 14 April 2026, the spring session (because it is held twice a year) of the Academy Assembly took place. This is the body that elects the Academy's leadership, including the president, determines the Academy's key direction, and oversees its operations.

The Assembly has 275 members, and when it meets, it fills the entire large hall of the National House in Prague's Vinohrady district. In practice, therefore, it is not exactly a dynamic body (except during elections), nor is it a suitable venue for any kind of discussion. It is more of an informational platform and a necessary official confirmation of the fact that the Academy has spent some funds and produced something in return, and that no major screw-up occurred during this activity.

Politicians, both from the government and the opposition, regularly attend the Academy Assembly as guests, regardless of who is currently in charge at the (Straka) Academy, the seat of the national government. Everyone declares that science is important, a matter of high priority. But this is not reflected in the funding.

Two things, however, pleased me at the Assembly a month ago. In his opening speech, CAS President Radomír Pánek presented seven representative achievements for the year 2025 on behalf of the entire Academy. Among them was an achievement by our institute, specifically by Hana Šimková and her colleagues: “the creation of genomic and epigenomic resources for barley research and breeding.”

The second piece of encouraging, though not entirely surprising, news came from the Report on CAS Financial Management in 2025. Our institute spent nearly 72 million on investments in 2025. Of that, nearly 60 million went toward equipment and 7.8 million toward construction. That’s a significant sum for an institute with an annual budget of roughly 400 million (excluding investments). In my view, it’s an investment in the future. If we could keep this up for a while longer, the future—at least in this regard—could be quite bright.

Speaking of the future, a quick reminder from the last issue of the Newsletter. To paraphrase the words of Lenka Burketová, Chair of the IEB Board: “The current Board’s term is ending; participate in the election of the new Board this fall, and... ladies, don’t be afraid to run.” And I’ll add: gentlemen, don’t be afraid either.

Now, looking a bit further into the future. Do you want to see a positive future? Do you want to experience interest and enthusiasm? Visit the Science Fair. Or get involved right away at our booth. It’s joyful, it’s uplifting—you’ll reward yourself and others, and you’ll be rewarded in return. ☺

To those participating in the Bike to Work event, I wish you plenty of strength in conquering the hills, whether by bike, jogging, or on foot. Actually, I wish this for everyone—successful hill climbing.

Jan Martinec, director

CONGRATULATIONS and ACKNOWLEDGEMENTS

On 27 April, **Certificates of Appreciation** from the CAS, awarded for long-term and dedicated work in the service of science, were ceremoniously presented in Prague. Among the honorees were two of our long-time employees: Mr. **Josef Bartoněk** from the Olomouc facility and Dr. **Jana Pospíšilová**.

The awards once again highlighted that scientific achievements are not solely the result of researchers, but also of the people who ensure the day-to-day functioning of the facilities.

Each laureate contributed to the IEB development in a different way: Mr. Bartoněk as a reliable pillar of the technical infrastructure, and Dr. Pospíšilová as a scientific figure and distinguished editor of journals published by the institute.



Jana Pospíšilová (center) during the presentation of the certificate

CONGRATULATIONS and ACKNOWLEDGEMENTS



Josef Bartoněk (center) during the presentation of the certificate. On the left is Radomír Pánek, President of the CAS; on the right is Miroslava Anděrová, Vice-Chair of the Academy Council. Both photos by Josef Landergott, Division of External Relations, Centre of Administration and Operations CAS.

I would like to thank Pavel Hladík, Tereza Miksteinová, and Jakub Lemberk for organizing this year's [IEB Young Researcher Meeting](#), which took place on 20–22 April in Hrubá Voda.

Ota Blahoušek from the Laboratory of Growth Regulators [won second place](#) in the prestigious **Jazz World Photo competition**. The contest attracted 120 photographers from 29 countries around the world. Congratulations!

Notable Publications

Researchers from our institute, Palacký University in Olomouc, and other institutions have discovered that the plant hormones **cytokinins** induce a specific state in leaves left in the dark for a long time. One could say that the leaves switch to a sort of “**sleep mode**”. This ensures the preservation of the photosynthetic apparatus and a rapid and safe restart of photosynthesis upon re-exposure to light. The results were published in the prestigious journal *New Phytologist*.

IEB contributors to the research were **Veronika Kábrtová** (co-first author), **Ivo Chamrád**, **René Lenobel**, **Martin Hudeček**, **Miroslav Strnad**, and **Ondřej Plíhal** (co-corresponding author) from the Laboratory of Growth Regulators, and **Jaroslav Nisler** from the Isotope Laboratory.

[\(Cytokinin downregulates Photosystem II photochemistry during prolonged darkness in a phytochrome B-dependent manner\)](#)



A part of the research team. The first authors Zuzana Kučerová and Veronika Kábrtová in the foreground, corresponding authors Martina Špundová and Ondřej Plíhal behind them.

News from the IEB

Organizational change

As of 1 May 2026, the organizational structure of our institute has changed. It no longer includes the Laboratory of Virology and the Laboratory of Plant Reproduction.

The **Laboratory of Plant Reproduction** has been integrated into the Laboratory of Pollen Biology, where it will continue its research activities. The **Laboratory of Virology** has been dissolved. Some of its staff members are continuing their work in the Laboratory of Pathological Plant Physiology.

These changes were discussed by the IEB Board at its meeting on 29 January 2026, and the board recommended them to the director for approval. The director accepted the recommendation on 18 March 2026.

Visit by the President of the CAS

On 2 June, we will welcome the President of the Czech Academy of Sciences, Professor [Radomír Pánek](#), accompanied by Vice-Presidents of the Academy Council, to our Prague facility.

The visit will begin at 9:00 a.m., and the tentative program is as follows:

- a brief introduction to the facility and its scientific activities,
- discussion of current topics and issues,
- a meeting and discussion between the President and the employees,
- a tour of the facility.

The **discussion with employees** will take place in the reading room on the first floor of building B1. It will **begin at 10:00 a.m.** and [will be streamed online](#) so that colleagues from Olomouc, Prague-Krč, and Střížovice can also participate. In-person attendance is welcome for Prague-Lysolaje, and the online broadcast will serve here as an alternative for those interested who may not be able to get into the reading room.

Thanks to employees for their cooperation

The Human Resources and Payroll Department thanks all employees who completed the **updated personal questionnaire**:

"Your cooperation was crucial for us. It is only thanks to you that we were able to meet the new legal obligation effective 1 April 2026, which requires employers to record an expanded range of data about employees and regularly submit it to the state.

Failure to comply carries heavy penalties. Our institute does not have access to the state's basic registries and can therefore obtain the necessary data only from employees. Thanks to your cooperation, we were able to complete and update the data in the HR and payroll system in a timely manner. Thank you for helping us navigate this challenging period."

Job opportunities at IEB

The institute is hiring [a specialist for the implementation of AI tools](#). This is a shared position with the Institute of Chemical Process Fundamentals CAS, and the **application deadline is 31 May**.

The apple breeding station is seeking a [Postdoc / Junior Researcher in apple molecular genetics and genomics](#). The **application deadline is 10 June**.

If you know of any suitable candidates for these positions, please let them know.

Professional events

A **seminar** focused on **intellectual property** will take place in Prague-Lysolaje on the afternoon of 2 June. The speaker will be the European patent attorney Dr. Kateřina Hartvichová.

The first part is intended for all researchers interested in the topic. It will address the following questions: when does a result have the potential for patent protection; when does publication lead to the inability of protection; what is and is not patentable in the field of biological or plant-related results. The second part of the seminar is suitable for those interested in more detailed information, particularly updates in legislation and other specific topics. You will receive more information via email.

News from the IEB

Imaging Facility is organizing the **summer school** [Basics of Light Microscopy in Plant Research](#) on 26–27 May. It includes lectures and hands-on workshops on basic microscopy techniques as well as image analysis. Undergrad students, grad students, and researchers are welcome to attend.

The conference [Agricultural Adaptation to Climate Change](#), held on 13 April in Brno as part of the AgriShow trade fair, confirmed that the topic of climate change and its **impact on food production** is critical today. The meeting, organized in large part by Professor Jaroslav Doležal from the IEB genomics center, brought together scientists, farmers, representatives of professional organizations, and public administration officials. Discussions focused on adaptation to extreme weather, water management, and the use of modern technologies in agriculture.

On 24 March, another **meeting of the Interministerial Council for Genetics and Genomics**, which has been active for over a year, took place at the Government Office. Director Jan Martinec and Jan Šafář represented the IEB. The Council, composed of representatives from the Ministries of Agriculture, Health, and the Environment, the Agricultural Chamber of the Czech Republic, and breeders, addressed key topics—such as crop adaptation to climate change, new genomic techniques, and crop resistance to diseases and drought.



The poster is divided into several sections. The top left features the IF IEB logo and a stylized plant icon. The top right contains the dates '26 - 27 May, 2026' and the location 'Imaging Facility, Institute of Experimental Botany CAS, Prague'. The middle section has the title 'BASICS OF LIGHT MICROSCOPY IN PLANT RESEARCH' in large white letters. Below the title, it says 'GROUND YOUR KNOWLEDGE IN PLANT IMAGING' and 'REGISTER VIA E-MAIL IFIEB@UEB.CAS.CZ'. The bottom section displays logos for the European Union, the Ministry of Education, Youth and Sports (MŠMT), CZECH BIOIMAGING, EURO BIOIMAGING, and ZEISS. A circular inset image on the right shows a plant in a growth chamber.

IF IEB

26 - 27 May, 2026

Imaging Facility
Institute of Experimental
Botany CAS, Prague

BASICS OF LIGHT
MICROSCOPY IN
PLANT RESEARCH

GROUND YOUR KNOWLEDGE
IN PLANT IMAGING

REGISTER VIA
E-MAIL IFIEB@UEB.CAS.CZ

Co-funded by
the European Union

MŠMT
MINISTRY OF EDUCATION,
YOUTH AND SPORTS

CZECH
BIOIMAGING

EURO BIOIMAGING

ZEISS

Open Science agenda

If you need to **meet Open Access / Open Science** requirements and also want to avoid high open access publication fees in journals, please contact our data manager Arzuv Čaryjeva (caryjeva.a@ueb.cas.cz). She will walk you through the available options for meeting the requirements of funding agencies—including alternative publishing routes and depositing publications in repositories.

Research datasets are increasingly recognized as valuable and citable outputs, much like traditional scientific publications. In line with the latest developments in the Czech national framework for research evaluation, datasets are now **recognized as standalone publications**.

You can report them as a specific type of research output “T” (research dataset) in one of the following categories: “T-open” for openly accessible datasets or “T-ost” for other datasets with restricted or controlled access. If you publish a dataset with persistent identifiers (e.g., DOI), it can also be cited in publications, which may contribute to your scientific recognition.

Intranet

The **institute’s new intranet** has been launched at ueb.cas.cz/intranet/en/ and is gradually being filled with content. The old version at intranet.ueb.cas.cz/ remains operational for now. However, plans are in place to eventually shut it down and transfer all relevant content to the new intranet.

Science outreach opportunities

Would you like to present your research to the public in other ways than a press release, a website article, or a social media post? Here are a few current options. Please consult the respective organizers whether an event is open to English speakers.

[I’m into Science](#) (*“Jedu vědu” in Czech*). This project by the CAS offers lectures by CAS scientists to high schools to liven up the classroom. You can give a lecture on a selected topic either in person or online.

News from the IEB

[FameLab](#). Present your scientific topic in three minutes. [Register by June 30](#) and send the organizers a video of your presentation. The jury will select the 8–12 best participants, who will compete in the national finals in front of a live audience on 21 September. You may find inspiration in Lukáš Maryška from the Laboratory of Pathological Plant Physiology, who won the national round in 2019.

[Falling Walls](#). A format similar to FameLab, but intended primarily for university students and young scientists who want to present innovative research significant to the society. Applications due by 30 June; national finals on 15 September.

[Photogenic Science](#). The traditional photography competition of the CAS—the beauty of science through the lens of scientists. You can submit your photos by June 15. Will you build on the successes of your colleagues from the IEB in previous years?

Other news

The Institute of Sociology CAS is conducting research on the topic “career paths in the context of repeated failure to obtain targeted grant support.” [The study is open](#) to researchers with a Ph.D. who work in basic research, have repeatedly applied for grant funding (particularly from the GA ČR) in recent years without success, and perceive the lack of project funding as a factor affecting their careers.

New Colleagues

Since the publication of the March newsletter, these persons have joined the IEB:

- **Zuzana Korchanová** (postdoctoral researcher, Centre of Plant Structural and Functional Genomics),
- **Hana Panchártková** (research assistant, Laboratory of Hormonal Regulation in Plants),
- **Karolína Synková** (research assistant, Laboratory of Hormonal Regulation in Plants),
- **Thi Thuy Linh Phan** (Ph.D. student, Laboratory of Pollen Biology),
- **Nathan Vallier** (Ph.D. student, Laboratory of Pathological Plant Physiology),
- **David Veselka** (gardener, Centre of Plant Structural and Functional Genomics),

We wish them all the best in their work and hope they enjoy their time with us.

The main highlight of this section is the delight at seeing more and more colleagues making sophisticated use of AI tools. It's no longer just about sending queries to AI chatbots.

With Míla Juříček, we used Claude Code to program an **application** in just a few hours **that facilitates work in apple tree breeding**, and it actually works (including trained machine learning models for predicting crossbreeding). Judith from the Imaging Facility is also already making extensive use of Claude Code and Codex. Even our director is programming with the help of Claude Code. Matyáš Fendrych, for his part, came to like the **literature search tool** provided by Edison Scientific.

Several others among you have also had positive (as well as negative) experiences with the tools I've mentioned in previous issues of this newsletter. We can only hope that **positive experiences and efficient work** will continue to grow. The activities of the biggest giants in the field of AI promise an exciting future.

[OpenAI: Introducing GPT-Rosalind for life sciences research](#)

[Anthropic: Evaluating Claude's bioinformatics research capabilities with BioMysteryBench](#)

Karel Müller, institute's coordinator for AI

Do you have a question or idea related to AI, have you read an inspiring article, or do you know about an interesting lecture or application?

Then don't hesitate to contact our coordinator (muller@ueb.cas.cz).

Grant Opportunities

- 29 May 2026** Deadline for submitting applications to the [EIG CONCERT Japan](#) program, which focuses on supporting the formation of international multilateral research teams. The project must have at least three participants—one Czech entity, one partner from Japan, and at least one partner from another country. The maximum grant amount is EUR 200,000 for a project with a duration of 36–42 months; 3 projects will be funded.
- 8 Jun 2026** Deadline for submitting applications to the [Mobility Plus](#) program of the CAS.
- 24 Jun 2026** Deadline for submitting projects to [the 16th public call of the TA CR SIGMA program, Sub-objective 4](#). The call is aimed at supporting international cooperation in applied research through joint projects between Czech entities (supported by TA CR) and foreign partners. The project duration is 12–36 months. A research organization may act as a co-applicant.
- 30 Jun 2026** Deadline for submitting applications to the [MSTC Danube](#) program. Project duration is 24 months, and the funding amount depends on the number of participating partners.
- Ongoing until 31 Aug 2026** The IEB Project Department is accepting applications for the Academy of the Future programs until this date. Please send the completed application form from [the intranet](#), along with a signed Letter of Intent, to projekty@ueb.cas.cz. The physical completion of the internships must take place by the end of 2026.

For more information, contact Zuzana Hroncová
(B2/223, hroncova@ueb.cas.cz, phone 225 106 802).

Project annotations for Executive Board approval should be sent in advance to the Board secretary Barbora Jindřichová (jindrichova@ueb.cas.cz).

IEB in the Media

On 6 April, amid great media interest, two **genetically modified barley lines** created using CRISPR molecular scissors were sown at the experimental field in Olomouc. Scientists are testing a line in which the modification of a single gene affects when the plant begins to flower and form ears. The second line produces rhizomes and, thanks to its ability to grow for a long time, has earned the nickname “immortal barley”. The experiment is one of the first of its kind in Czech and European plant research.

A **large number of media outlets** reported on this event. On television, coverage came from CNN Prima News, [Czech Television](#), and a number of smaller regional stations ([TV Morava](#), TV Brno 1, TV Praha, V1 TV, RTM+, TV Slovácko). News was also provided by the Czech Radio, specifically its stations Radiožurnál, Olomouc, Zlín, Ostrava, Plus, and Radio Prague International, as well as the website [iRozhlas.cz](#).

Other media included the daily newspaper Mladá fronta DNES, the magazine Zemědělec, and news and industry websites such as [iDNES.cz](#), [Tyden.cz](#), Enviweb.cz, casopis-czechindustry.cz, [Ekolist.cz](#), [Priroda.cz](#), [Newstream.cz](#), Sciencemag.cz, and Uroda.cz.

Scientists from the Laboratory of Pollen Biology discovered that the eIF3E protein maintains the **optimal rate of pollen tube elongation**—in a unique way using genetic “switches” that control protein production. The discovery was reported by the industry websites [Sciencemag.cz](#), casopisczechindustry.cz, and Uroda.cz.

The **Lyra apple variety** from our breeding station was awarded the title of **Liberec Region Product of the Year**. The Czech Press Agency’s news service, as well as the daily newspapers Mladá fronta DNES and [Liberecký deník](#), covered the successful products.

Information from the conference [Adaptation of Agriculture to Climate Change](#), which our institute co-organized, was reported among others by the websites Enviweb.cz, Energie21.cz, and [Agroaktualne.cz](#).



*Sowing of genetically modified barley
at the Olomouc facility*

Do you have an **article** coming out in a prestigious journal, did you get a major **grant project**, or are you organizing a **scientific event**?

Please inform the Communications and PR Office
(komunikace@ueb.cas.cz) and discuss the possibilities for publicity.

Prague

On Saturday, 25 April, [Ekofest](#) took place in Malešický park in Prague. Petr Soudek gave a lecture on **phytoremediation** (cleaning the environment using plants) at the event. Thanks for participation and for representing the IEB.

Over the weekend of 9–10 May, the institute participated in [Maker Faire Prague](#), a fair dedicated to modern DIY and creativity. At the booth, visitors tried their hand at art-inspired **chemistry experiments** with colorful flowers and **chromatography** using marker dyes. The program was complemented by a workshop on anatype—an historical technique similar to photography that utilizes the instability of plant dyes when exposed to sunlight. These activities are primarily intended for families with children and are being developed as part of the Strategy AV21: Epicenters of Civilization project.

In May and June, several elementary schools, high schools, and professional tertiary schools **will visit the IEB** in Prague and Olomouc. Students from the Masaryk University in Brno and the Faculty of Science of the Charles University will also arrive for excursions.

June will bring two **major outreach events**. The first is the [Science Fair](#) on 4–6 June at the exhibition grounds in Prague-Letňany. We will offer visitors a glimpse into how laboratories work, activities related to DNA, and a fluorescence room.

On Wednesday, 24 June, [VědaFest](#) will follow at Vítězné náměstí in Prague-Dejvice, where the program will be similar. For both events, you can still [join the organizing team](#) and **get involved in presenting the institute**.

Liberec Region

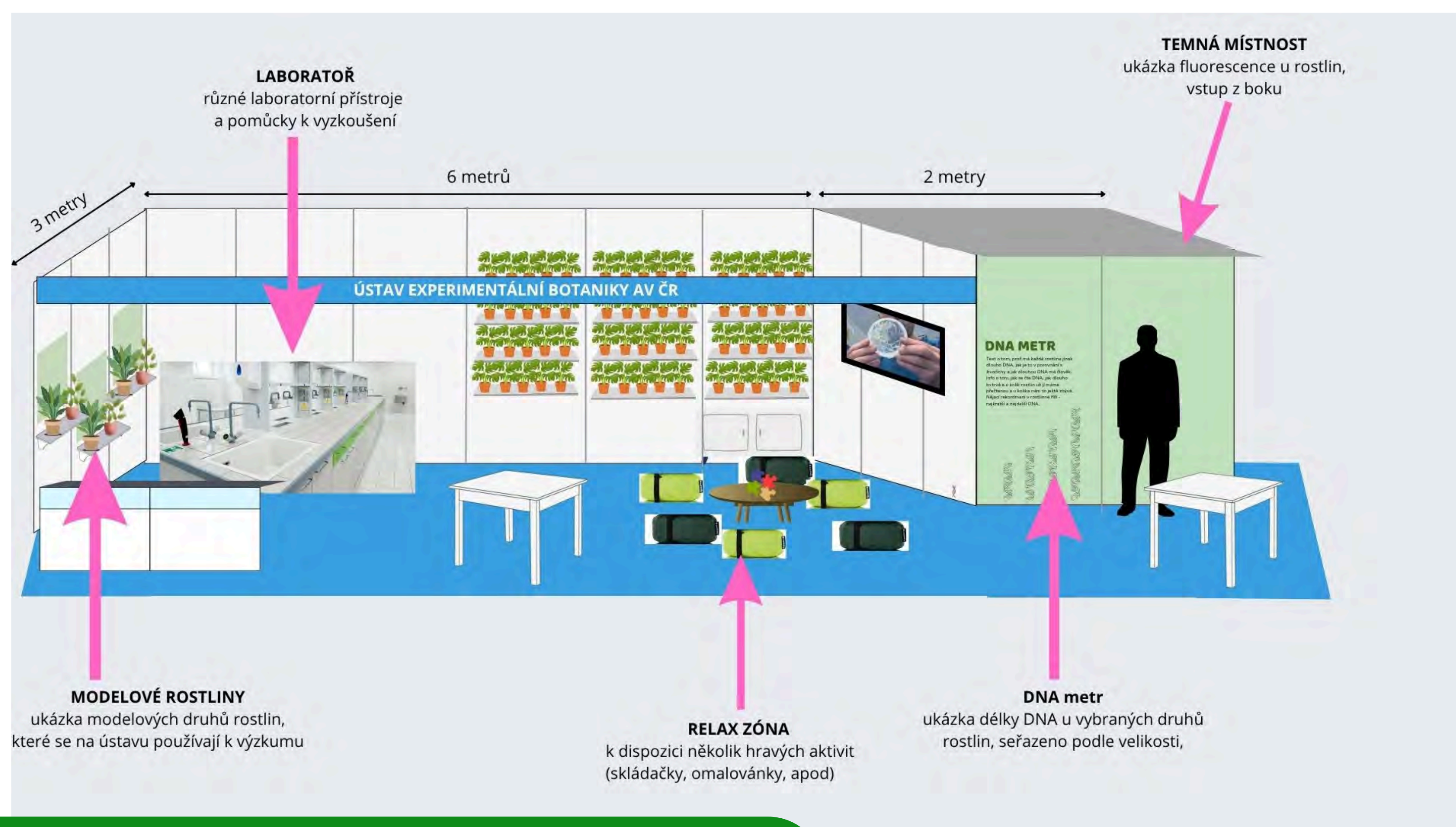
The **apple breeding station** presented its work and selected apple varieties at several events in the Liberec Region. It also welcomed students from the Mnichovo Hradiště High School to its premises, where they learned about the station's operations through an interactive presentation and toured the facility.

Science Outreach Events

Olomouc

The Centre of Administration and Operations CAS filmed [a 15-minute popular science video](#) at the Centre of Plant Structural and Functional Genomics. It explains how genetically modified crops are created and how these techniques differ from traditional breeding. It shows that humans have been modifying the genetic information of plants for a long time and **places GMOs in the context** of science and food safety.

On 17 March, **students of a biology seminar** from the Hranice High School visited our genomics center. During the tour, they learned about the research, viewed the laboratories, and tried their hand at selected laboratory procedures.



Visualization of the IEB booth at the Science Fair

For more information about IEB's outreach events, please contact the Communications and PR Office (komunikace@ueb.cas.cz).



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Please send suggestions for other scientific comics (publishable under a Creative Commons license) to the newsletter editor Jan Kolář at kolar@ueb.cas.cz.