the Central European Institute of Technology, Štěpánka Vaňáčová, Group Leader at the lab and studying the topics that I enjoy. I’m certain I would not be where I am if I didn’t initially have a specific plan but retrospectively, didn’t initially have a specific plan to have a career as a Group Leader. “I was attracted to science, did not have dreams of building a career, she says. “I was always interested in science, but I was not sure what kind of career I would like.” She says: “The most important thing about EMBO is that it joins together such excellent scientists from different kinds of disciplines. Not just life sciences – nowadays it’s also computational, chemical, biologists and others. And it makes this network and interconnection between the different fields, countries, nationalities.”

The role of EMBO

Vaňáčová sees EMBO as critical in improving national research systems by setting up networks and by helping provide examples of best practice in conducting research. She says: “The most important thing about EMBO is that it joins together such excellent scientists from different kinds of disciplines. Not just life sciences – nowadays it’s also computational, chemical, biologists and others. And it makes this network and interconnection between the different fields, countries, nationalities.”

Switching fields

Her attention turned to pioneering the RNA research, and she switched fields to join Wolter Rüger’s lab in Basel. Explaining her reasoning, she says: “It’s about taking the next step to learn something new. This was a really significant step in my career. Since then, I always recommence to my students to, at some point of their career, make a significant change in the direction they’ve taken. I’ve learned to think about experiments and science from a completely different perspective.”

With recent European Union funding, she and fellow Czech researchers now aim to combine their basic research on the RNA processing, synthesis and translation, to search for new RNA-based tools or even new RNA therapies.

Meet scientists from the EMBO communities

Zdena Palkova Interview: Participation in the EMBO Programmes

EMBO Delegate | Group Leader at Charles University, Faculty of Science, BIOCEV, on the future of the life sciences in her country

“The fun is in the concept!” she says. “If I accept them in itself,” she says. “If I accept them in translation, to search for new RNA-based tools or even new RNA therapies.

Karel Říha Advice for young researchers

Senior Group Leader at the Central European Institute of Technology (CEITEC) at Masaryk University | EMBO Member and former Installation Grantee

“EMBO was the most important element in building my scientific career,” he says. After working in the United States and Switzerland for eight years, Svoboda stresses the importance of the EMBO network in helping adjustment to the reverse culture shock on return- ing to the Czech Republic.

“EMBO Young Investigator meetings were one of those where you can calibrate your benchmark for quality – for communication, presentation, writing grants, managing groups,” he says. “As a junior PI that’s where I learned from others how they manage a group.”

Svoboda says that although moving in the right direction, more could be done in the Czech Republic to connect basic and applied research – including better advice about students than work.

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The Czech Republic and EMBO in numbers

EMBO Postdoctoral Fellowships
Fund internationally mobile research- ers for a period of up to two years. Five additional fellowships are reserved for those applying or in work in participating countries. Applications open all year.

EMBO Scientific Exchange Grants
Fund research exchanges of up to three months to facilitate collabora- tions with research groups with ex- pertise, techniques, or infrastructure unavailable in the applicant’s labora- tory. Applications open all year.

EMBO Advanced Collaboration Grants*
Fund exchange visits of group leaders with scientists from EMBC Member States to develop or carry out collabora- tive projects, or to prepare joint grant proposals. Application deadline: 31 August 2024

EMBO New Venture Fellowships
Help early career scientists to explore topics outside their current area and enter a new research direction. They fund research visits of up to three months. Applications open all year.

EMBO Core Facility Fellowships
Support training for staff of core facili- ties that provide services to research institutions or universities. They fund international exchanges of up to one month. Applications open all year.

The EMBO Young Investigator Programme
Supports group leaders in the early stages of setting up their independent laboratories for a period of four years. Networking is a key aspect. Application deadline: 3 April.

EMBO Installation Grants*
Support group leaders establishing new laboratories in the Czech Repub- lic and becoming part of an interna- tional young investigator network. Application deadline: 15 April.

EMBO Courses & Workshops
Stimulate exchanges of the latest sci- entific knowledge and provide training in experimental techniques. Application deadlines: 1 March and 1 August.

EMBO Early Career Lecture Courses*
Are designed to provide training for PhD students and postdoctoral re- searchers. Funding is available for courses in the Czech Republic. Application deadlines: 1 February, 1 June and 1 October.

The EMBO Lecture Series*
Scheme providing funding to invite EMBO Members, Associate Members and Young Investigators to give lecture series in institutions in the Czech Republic. Applications open all year.

EMBO Prize
Publishes five journals that serve the global life science community: The EMBO Journal, EMBO Reports, EMBO Molecular Medicine, Molu- lar Systems Biology and Life Science Allison, which is published in part- nership with Rockefeller University Press and Cold Spring Harbor Lab- oratory Press. EMBO is working the Articulate Processing Charge for Open Access publication in the EMBO Press journals for scientific works in the Czech Republic provided they are not covered by a Springer Nature Open Access Agreement and do not have scientific publishing support or alter- native funding available.

Find more EMBO schemes at embo.org/funding

**The Czech Republic hosts its own EMBO Satellite Meeting in Prague.**

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**Key figures**

Population: 10,875,1951

R&D spending: 2.5% of GDP

People employed in R&D: 85,000

Foreign researchers: 175,000

Patients (European Patent Office): 210

Higher education institutions: 50

Higher education enrolment: 280,000

Horizon 2020 funding: 1,891 organizations including 370 SMEs involved in H2020 projects

ERC-funded principal investigators: 234 organizations funded through Marie Skłodowska-Curie Actions

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**Facts and figures**

**The regions now forming the Czech Republic have a long history of in- dependent states and technology.**

The Charles University was estab- lished in 1348 as the first ‘Studium Generale’ in the Kingdom of Bohemia and the famous Prague Astronomical Clock in 1410, the oldest still in operation.

The Charles University remains the country’s largest, and there are now 14 higher education institutions across the country, with more than 280,000 students enrolled totalling more than 50,000 in life sciences fields.

Around 35% of young adults in the Czech Republic remain in tertiary education.

In 2021, nearly 81,000 people in the Czech Republic were employed in R&D work. The government-supported research institutions, such as the scientific institutes of the Czech Acad- emy of Sciences, and support from the Technology Agency of the Czech Republic, the country supports a range of research business networks including Digital Innovation Hub. The European Patent Office granted 215 patents with stars proving residing to the Czech Repub- lic in 2022, and the Czech Patent Office received 1,891 patent applications.

Research and development in the Czech Republic benefitted from major inward investment. Gross expenditure on research and development (GERD) increased slightly from 2015 to 2021, to 2.5% of GDP, according to data from the Czech Science Foundation (GACR) increased slightly from 2015 to 2023, to 2.9%. The number of projects receiving GACR were business enterprises, pro- viding 50% of the 2021, the Czech govern- ment (32.3%) and indirect investment (38.5%). Total R&D spending rose 6% between 2012 and 2016 to reach 122 billion Korun.

Life scientists in the Czech Republic have a long history of independent states and technology. The Charles University was estab-