Forum

Charles University Magazine
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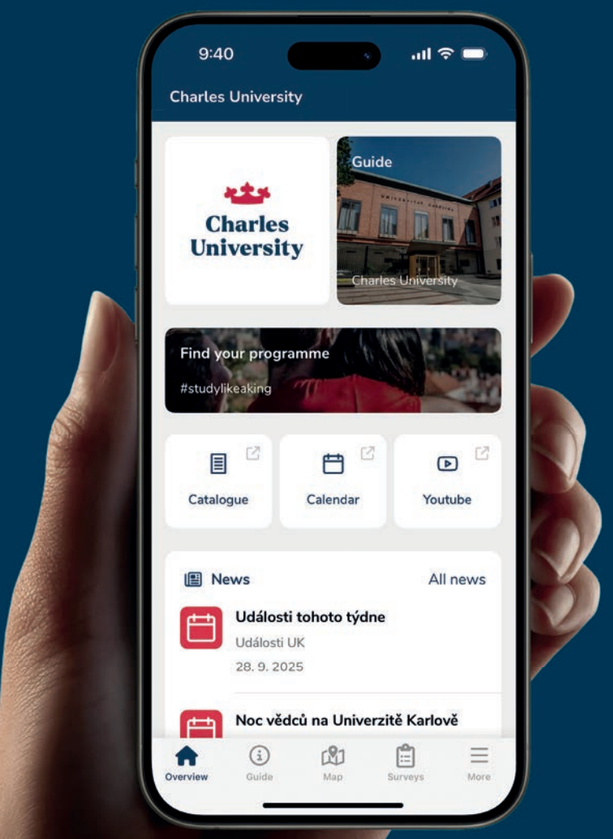
Initially, I wanted to study biology, but a summer job made me decide on art history, instead.

Olga Kotková:
A curator doesn't just walk around looking at paintings / 46

Mobile app of Charles University



For those who want to study at Charles University, we have prepared:

- Important news from the university or faculty
- A guide to Charles University – important information for applicants in one place
- A map of all important university buildings (or those where classes are held)
- A clear directory of important websites

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Charles University

PHOTO BY Vladimír Šigut

Dear readers,

In the past year, Charles University has welcomed a number of important visits by high-profile figures – both politicians and academics. Ukrainian President Volodymyr Zelenskyy spoke about the role of students in Ukraine's post-war reconstruction, Nobel Prize laureate Victor Ambros delivered a lecture on developmental timers in tiny worms, Portuguese President Marcelo Rebelo de Sousa met with the rector and students, and fresh recipients of honorary doctorates gave powerful speeches on the vital importance of truth, freedom, and democracy. Each of these encounters enriches us and forms an essential part of Charles University's internationalization efforts.

This issue of *Forum* highlights various opportunities – from prestigious scholarship programmes and renowned academic journals to CU's own international partnerships. Above all, it aims to inspire everyone to apply for a stipend, submit an article to a respected publication, trust in their abilities, and aim higher. And yes – even to consider an Erasmus stay, no matter what stage of life they are at, even if they have just welcomed a new baby.

Students from abroad describe how Charles University and its partner institutions have enabled them to pursue their academic and scientific work – whether through active research in tumour immunology or by providing a welcoming and supportive environment for a new family.

Esteemed academics then show us how history – both recent and ancient – can teach us important lessons not only about the present, but also about the future. These range from tangible legacies, such as the very bones of our ancestors, to more conceptual ideas from the rapidly developing field of memory studies, which nonetheless remain firmly rooted in direct historical events and first-hand human experience.

Enjoy these glimpses of the future and the opportunities they bring – and let them inspire you. As I stated in my key programme principles: the international dimension is not an addition to domestic activities but a strategic necessity. Our vision is for Charles University to be a Central European academic hub – a centre of excellence for the region of Central and Eastern Europe, united by tradition and innovation, education, science, diplomacy, and humanistic values. You, too, can be a part of it.

All the best,

Jiří Zima
Rector of Charles University

You can read our articles online too!
ukforum.cz/en

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Three generations of mathematical **linguists**

When Eva Hajičová started out in the field, only mainframe computers and punch cards were in use. She was followed in her research by her son Jan Hajič, who witnessed the rise of natural language programs and translators. And now Jan junior, the professor's grandson, is already exploring how to use machines to process music.

STORY BY Martin Rychlík PHOTOS BY Vladimír Šigut

A unique opportunity. Three generations of scholars, all members of the same family, gathered at the Institute of Formal Applied Linguistics (ÚFAL). What a time to learn about the development of mathematical linguistics at the Faculty of Mathematics and Physics! Legendary professor Eva Hajičová (EH), professor Jan Hajič (JH), and Dr. Jan Hajič Jr. (JR) answer questions in five sections devoted to their personal interest in the field, science, teaching, practice, and the future of the discipline.

Individual paths to the field

Professor, you first studied languages, Czech and English. How did you end up in mathematical linguistics? What got you interested in it at that time?

EH: It wasn't exactly straightforward. In secondary school, I was more inclined towards mathematics. But I wasn't attracted to physics, so I chose the Faculty of Arts at Charles University – and then I started teaching at a secondary school and a technical college. Then, in the early 1960s, I happened to go to a lecture at the Faculty of Arts and saw a notice board announcing a postgraduate course in algebraic linguistics. I was surprised, because it was something completely new to me!

There was also a bit of family motivation, as my husband, an expert in industrial automation, would tease me that my field was 'useless.' So I decided to see what algebraic linguistics was all about *(laughs)*. And I started attending the course; it was good, we were taught by Professor Petr Sgall, who provided us with texts by Noam Chomsky and others. About a year later, I joined the machine translation department. At that time, computers still used punch cards. And just a bit down the line, our son Jan generated Czech sentences on a programmable calculator, to the amazement of a professor in Hamburg, who could not believe it! He was only sixteen. ↪

And with that, you hand the floor to the professor. So, you couldn't really avoid the subject?

JH: Naturally, children watch what their parents do, so I was interested in both: industrial automation, which my dad did, as well as linguistics. And in my time, computers were already a little smaller.

EH: I still remember how you once scattered all my punch cards when you were a child …

JH: I was in the math track in secondary school, so in 1979 I chose to study at the Faculty of Mathematics and Physics. There, we already had programming and the basics of computer science. My field was called theoretical cybernetics, and my diploma from 1984 says "automatic computers and programming." I must say that the people at CU's Faculty of Mathematics and Physics were excellent in their fields – numerical mathematics, linear algebra, or computer science. Set theory and logic were difficult subjects, but you learned a lot from them – even in practical terms.

Jan, you must have heard nothing but praise for CU MATHPHYS at home, so the path was clear?

JR: I mainly perceived the underlying strength of MathPhys in the fact that both previous generations were still actively involved and devoted all their energy to it. And yes, I already had contacts with computational linguistics in secondary school. I remember that once my father, who was a professor, combined his holiday with a professional conference. I was fourteen, but after two weeks of hiking in the Alps with my brother, we had a week in Geneva ahead of us, which wasn't as nice as the mountains, so I talked my dad into smuggling me into the conference, where I even got a name tag and asked the keynote speaker a question … I feel like it must have looked really weird!

EH: I can confirm that. It was in 2004, I was there listening to a lecture given by Professor Nagao, an authority in machine translation and chairman of the international Association for Computational Linguistics! Simply put, he was someone everyone looked up to, and suddenly a fourteen-year-old boy raised his hand, but he had a name tag, so they had to take him seriously. And they did: his question was sensible.

JR: I was interested in the field because it was all real. I understood very little about it from a technical standpoint, but it was a challenge and I wanted to understand it. So MathPhys was my first choice. I went into general computer science, which was the most theory-based, which I somehow enjoyed more … even though I still had to catch up on a lot of software engineering.

Fascination with science and research

Let's get to the science. Going back to the 1960s, when Chomsky, Fillmore, and others "modernised" linguistics. Professor, what interested you back then, was it the big theories?

EH: Formal linguistics and its approach were a novelty. What was particularly great for us was that the pre-war Prague Linguistic Circle had, and still has, an excellent reputation. We were inspired by structuralism, and I was also interested in the semantic side of language and its social functions. I originally worked at the Faculty of Arts of Charles University, where I was involved in research at the language laboratory, but we were fired after the events of 1968… I have been at the Faculty of Mathematics and Physics since 1972. We were given asylum there and a chance to establish ourselves, for which I am still grateful to my colleagues to this day.
There were fifteen of us scientists, but we were not allowed to work together as a 'laboratory'; instead, they divided us individually into three departments. And just imagine – I, an English scholar, was suddenly working in the Department of Numerical Mathematics at the Faculty of Mathematics and Physics! Later, when it came to linguistic data, our research did not lag behind there either, quite the contrary. As early as 1995, inspired by the Penn Treebank project at the University of Pennsylvania in Philadelphia, we were essentially the second in the world to conceive the Prague Dependency Treebank (Pražský závislostní korpus; PDT) project, a digital corpus of the Czech language theoretically based on formal functional generative description, which we use in our description of Czech. This corpus has gradually grown to include almost four million linguistically detailed and comprehensively analysed words in the context of complete documents, both written and spoken.

Professor, what attracted you to this research topic?

JH: At first I was most interested in applications, because in the 1970s a lot of work was being done on machine translation. I went to the Research Institute of Mathematical Machines (VÚMS), where Czech–Russian translations were also being prepared – a large and complex project. And I was interested in whether it could actually be done. It was a combination of programming and language data preparation. In 1991, Professor Jelínek invited me to IBM in the US, where I worked on natural language translation. They were already using machine learning and were lucky that Canada translates between French and English, so they had a lot of available data; this was not the case anywhere else. I have been back at MathPhys since 1993, where we have been developing translation

machines (*for example, translation machines operated by LINDAT/CLARIH-CZ have beaten DeepL and others in some field competitions – editor's note*), and their quality is now completely different because the methods have moved from purely statistical to neural. And today, large language models (LLMs), in which Tomáš Mikolov has played a huge role, do this best.

And Jan, how did you find your way, considering you already knew all this – directly from your grandmother or father?

JR: On the contrary, I lost my way *(laughs)*. When I started working here at ÚFAL, I helped Kateřina Veselovská – now Dr. Lesch, a leading figure in Czech computer science – with her doctoral project on the analysis of sentiment in Czech text. Then I did things like multimodal image combinations, my thesis, started my doctorate, but after ten or eleven years, that 'spark' wasn't burning very brightly anymore. But I did an internship at Apple, where I was fortunate to have excellent mentoring. There were great managers there with whom I could talk about things that weren't directly related to the job. I came back wanting to do something completely different – I wanted to devote myself to music.

I did music in waves of varying degrees of enthusiasm; I was at the conservatory for a while studying piano, then I was at the academy for a little longer studying composition, which meant that I barely managed to fulfil my course credits at MathPhys. And while studying composition, I found that the most annoying thing is transcribing compositions into a computer after writing them by hand so that someone would be willing to play them. It takes a long time, it's tedious work … But surely that could be automated, right? That's why I started working on my PhD in handwriting recognition. And since my doctorate, I've been working on music – early music, and digital editions, and I'm glad that it's something new again. Perhaps similar to what mathematical linguistics once was.

The art of captivating through teaching

Let's turn to the teaching of mathematical linguistics. Professor, what was it like when you started out?

EH: We didn't teach much at the Faculty of Arts. We were a specialist department of the Department of Czech Studies, so teaching was not really expected of us. We would work on various projects. And then, at the Faculty of Mathematics and Physics, I wasn't allowed to teach even if I wanted to, because we were non-communists, 'bad elements.' It wasn't until the early 1980s that we were allowed to supervise a thesis, for example, under the auspices of someone 'reliable.' After 1989, my colleagues from the Faculty of Arts asked me to teach, as no one else was doing it, so I even taught in the compulsory curriculum of English and Romance studies, and then general linguistics on top of that. Interestingly, these lectures were also open to students from the Faculty of Mathematics and Phys- ↪

ics: there were thirty English students, who wanted to learn English and weren't interested in this, so they were terribly bored, while a few other people from MathPhys were deeply interested in language theory. I really enjoyed teaching them. And, of course, I really enjoyed supervising a number of doctoral students at the Faculty of Mathematics and Physics – or, to be more precise, female doctoral students.

Professor, you began teaching after 1989. What were – and are – the students in your field like?

JH: I started teaching the basics; formal processing of morphology, which I also dealt with in my dissertation. I have actually been teaching since 1995. I taught a basic course in which I tried to incorporate statistical methods and machine learning, and assigned practical tasks. The students saw the potential in this; it seemed like a special branch of study to them. We didn't even have our own field at the master's level yet, so it was motivated solely by personal interest. Later, about forty people enrolled in another field, artificial intelligence, and only about three came to us with a deep interest. However, with the rapid development of AI and large language models, interest has changed, and the word 'language' is now a 'sexy topic.' This year, the ratio is already fifty-fifty. It is an attractive topic that can be easily applied, so machine learning and language models are now what programming used to be.

Professor Eva Hajičová
Linguist, scholar of Czech and English, focusing on general and computational linguistics, semantics, and discourse. She originally studied Czech and English at Charles University's Faculty of Arts, and after 1968 she began working at the Faculty of Mathematics and Physics. She is the author of more than 500 studies with thousands of citations. She has received numerous honours for her research and teaching activities, including the Hlávka Prize, the Antonio Zampolli Prize, and the Smith Medal from the British Academy.

And how do you see the students, Jan? What will future mathematical linguists be like?

JR: I have no idea *(laughs)*. I started teaching this year, and I've just finished my first lecture. It was on music informatics, the basics of computer music processing, which is now a completely optional subject that only people who are really interested in it attend, so there aren't thirty bored students sitting there. It's hard to say where it will lead. Generating music is very popular right now. But what's interesting – and still underdeveloped – is the modelling of human emotions, i. e., it's difficult to describe how people feel when they listen to music.

Highly useful linguistics

You mentioned the practical application of your work. What was practice like in the early days, Professor?

EH: Mind you, even we had to prove that we were useful as linguists back then. Even in the early 1970s, the connection with practice was considered an important aspect. And that saved us, because we had to constantly prove that we had a reason to exist. It was truly a matter of survival. There were two government plans, one practical and the other purely scientific, and we had to prove ourselves in both.

And how do you perceive the pressure to put your knowledge into practice, to use what you know, Professor?

JH: I was interested in applications, in practical uses, from the very beginning. We developed automated spell checkers, dictionaries, legal information, and ASPI collections, and since the 1990s, we have continued to develop these at the faculty. It was used in all sorts of places. Take the translators that Associate Professor Ondřej Bojar worked on and continues to work on – he is famous today because we also contributed to tools that are used worldwide. We even won competitions, so such applications are definitely interesting. And today we have LLMs, which are rapidly learning and improving.

Doctor, you are bringing the humanities and mathematics closer together. What can this achieve?

JR: The way in which large models have become useful for almost any kind of language manipulation now leaves little room for developing applications in other ways. The difference between

Professor Jan Hajič
Mathematical linguist specializing in morphology, machine translation of natural languages, and the creation of language data for machine learning. He graduated in automatic computers and programming from Charles University's Faculty of Mathematics and Physics (1984). From 1991 to 1993, he worked as a researcher at IBM's research headquarters in New York. Since 1993, he has worked at the Institute of Formal Applied Linguistics in Prague, which he also headed. He has received numerous awards, including the university's Donatio.

Jan Hajič, PhD
Mathematical linguist and musicologist, focusing on optical music recognition (of musical notation), digital musicology (studying Gregorian chant using bioinformatics methods), and music generation under restrictive conditions. In addition to the Faculty of Mathematics and Physics (PhD defended in 2019), he also graduated from the Janáček Academy of Performing Arts, thus combining mathematics with the humanities. He teaches and leads several projects, such as *Genome of Melody*.

problem solving and the search for knowledge, between engineering and science, has become more pronounced. When I was considering which field of research to choose, I chose computational humanities, i. e., musicology, which is more about the science. But even this can lead to interesting and surprising applications.

On the meaning and significance of languages

Here, I'll make an exception and follow up with a question for you, Jan. What is the next step in your research?

JR: It doesn't apply only to my music 'reading', but I believe that more interesting and, in fact, more sustainable fields of research will be geared toward knowledge. Instead of solving problems, let's try to learn something completely new about the world. It does not have to be completely blue-sky research, but it should be about *understanding*.

Professor, what is your vision of the future?

JH: I believe the same applies to linguistic research as a whole. Even in research, the rule is that "money only comes first." When applying for projects from the 1970s until recently, the raison d'être of grant applications everywhere – in Czechia as well as in America – was that you had to demonstrate what the application would be good for in practical terms. That is one of the reasons why not much has happened in truly basic research – how the language system works in humans. And I hope that now, when applications have been largely solved and large AI models are rolling out across the world, fundamental research in linguistics, which has already 'earned its keep,' will also come into its own. And the language models that linguistics has helped so much could help it in return.

I cannot help but ask you, a legend in the field, the final question. What are your expectations?

EH: I can only agree with what my son says. The possibilities are enormous. New approaches, whether methodological or technical, will help linguistics itself. Interdisciplinarity is indisputable. And we haven't even mentioned the word 'meaning' yet, because the semantic level must be crucial as well, the search for the *meaning* of what we communicate. Let's try to do something that we don't even know the purpose of yet, let's look for new things and connections that will lead to something big.

A role for all in Ukraine's **post-war** revival

During his full programme in the Czech Republic, Ukrainian President Volodymyr Zelenskyy found time to visit Charles University.

STORY BY Helena Zdráhalová PHOTOS BY Vladimír Šigut

On 5 May, he took part in a discussion with students, moderated by CU rector Milena Králíčková. A range of topics, including the opportunities for graduates to contribute to Ukraine's post-war reconstruction, was discussed. The closely-watched event took place in the Patriotic Hall in CU's historic Carolinum building. There, he emphasised the importance of skilled human resources for the future rebuilding of Ukraine when the war ends – expertise that can be gained, for example, through study at Charles University. Students took part in a dynamic discussion with the president, asking how they might find roles in their country's future.

"I am absolutely convinced that rebuilding Ukraine will not depend solely on professions linked to construction. When we speak of reconstruction, we are also talking about mental health, science, education, and many other fields. That is why there will be a wide demand for various professions. Every European country has an interest in a strong Ukraine because, due to its geographical position, Ukraine is defending the whole of Europe. Therefore, investment will come not only from EU states but also from the United Kingdom and the United States. These countries will support and strengthen Ukraine, and wages will rise as a result. Although I am aware that reconstruction may take many years, I am absolutely certain that each of you will find a place and a role in Ukraine – if that is what you want," President Zelenskyy said. He added that no one would be forced to return to Ukraine. Rather, his aim is to create conditions in the country so appealing that Ukrainians will want to return after their studies and contribute to the country's post-war recovery.

President Zelenskyy also shared his deep and longstanding connection with the Czech Republic, recalling fond memories of his past visits with his family. "When I think back to my visits to the Czech Republic, I remember them being filled with light – regardless of the season – and that light came from the people here. You have wonderful architecture and an impressive history. I've visited many museums here, but your people are what matters most. I'm glad that the values of Ukrainians and Czechs are the same – that's what we're fighting for. I believe the courage of both Ukrainians and Czechs will save this world and defeat the evil unleashed by Vladimir Putin – or by whoever else may follow in his path," he said.

Among the audience of several dozen was Darja, originally from Kharkiv, a student of international relations and political science at the Faculty of Social Sciences, where she studied before the war. She came to the Czech Republic shortly after the Russian invasion, which severely affected her hometown. "I'm very glad I had the chance to speak directly with the president today and to represent fellow Ukrainians living here. I'm a member of the university group Generation for Ukraine, which helps Ukrainian students – and not only them – integrate into Czech society. Another topic I would like to speak with him about in the future is the prejudice held by some people who remained in Ukraine towards those who fled. I'd also love to ask him someday how he manages to cope with everything. He is a brave and incredibly hard-working man who is constantly under enormous pressure. I'd be really interested to know what psychological strategies he uses to stay calm and keep going," she reflected.

The Ukrainian delegation's working visit to the Czech Republic focused heavily on developing educational, scientific, and cultural cooperation between the two countries, as well as supporting Ukrainian studies. Over the course of two intensive working days, Volodymyr Zelenskyy, along with his wife Olena and a large delegation, met with Czech President Petr Pavel, Prime Minister Petr Fiala, Senate leader Miloš Vystrčil, and other political leaders. It was President Zelenskyy's second visit to Prague since the start of war in 2022, his first having taken place in 2023.

From the earliest days of the brutal Russian invasion of Ukraine, Charles University extended a helping hand to those fleeing the war. Both students and academics from Ukraine found refuge at the university when the conflict made it impossible for them to continue their studies or work at home. Since the outbreak of war, Charles University has maintained a dedicated online section called Charles University for Ukraine, offering up-to-date and useful information in Czech, Ukrainian and English:

Victor Ambros, awarded the Nobel Prize in Physiology or Medicine in 2024, is an American molecular biologist renowned for his pioneering discovery of microRNAs – tiny RNA molecules that regulate gene expression and play crucial roles in development, physiology, and disease. His groundbreaking work has transformed biology's understanding of genetic regulation and opened paths toward new therapeutic strategies.

STORY BY Tereza Kůstková PHOTOS BY Hynek Glos, Vladimír Šigut

Biology is always **surprising**

He has long collaborated with his wife, **Candy Lee Ambros**, who has served as his laboratory manager and co-researcher for decades. This interview was conducted on Victor Ambros's and his wife's visit to Charles University. *Forum* magazine had the opportunity to ask both a few questions.

What was your strongest emotion when you were awarded the Nobel Prize? What did you feel when you first learned about it?
Surprise. We were very surprised. That was the first emotion. Then apprehension about what is now going to happen, that we will not be able to control. That very day was scheduled, instantly filled with press conferences, departmental and university-wide celebrations, a visit with the president of the university, and so on. We knew that for at least a few days or weeks our schedule was no longer under our control.

Was winning the prize a game changer for you and your team? Did it change your research path?
It didn't really change our research direction. Everything we're doing now was already planned. We've continued with the projects we had set out, including work with the Argonaute Alliance and our collaborators focused on understanding and hopefully curing Argonaute Syndrome, a rare disease. That's actually the meeting we are heading to here in Prague as well. But the Nobel Prize did help accelerate the project – we were able to convene collaborators more effectively and move things along faster than we otherwise could have.

Was there ever a moment when you consciously sought the Nobel Prize? Could winning it be a motivation for a scientist? Or perhaps it shouldn't be motivation at all?
Once we moved to the University of Massachusetts in 2008, people there seemed to expect that Victor would win the Nobel Prize. That was a surprise to us – we didn't know. Each year the university even had a schedule prepared, and in late September they would ask where we would be the first Monday or Wednesday in October, and what phone number to reach us on the day of the announcement. We thought it was sweet of them to think like this, but it also made us very anxious. It was a lot of pressure. Each October we would be tense and then relieved when the announcement passed. But for about 16 years, nothing happened. Eventually UMass gave up and stopped sending those emails. The Chancellor admitted that he would always plan to be on campus during that week, except last year. He was in Greece. And even the chair of the department gave up. Because he used to keep champagne ready in the fridge, but by the end he had to borrow some from another lab. So, when the call finally came, it was a surprise to everybody.

But no – the Nobel Prize was never a motivation. People often ask what the steps are to win it. But there are no steps. It's largely luck – being observant when something unexpected appears. Many scientists notice strange results and dismiss them as mistakes. We were very, very lucky to pursue one of those oddities.

There are many smart people in science. In biology, it's almost impossible to predict what the next discovery would be. Because biology is always surprising. You can't decide, "I'm going to make this huge discovery that will win a Nobel Prize," and do it, because nobody knows what that discovery will be. But we know that if we work on something that we are super interested in, and colleagues around us are interested in, and the students are interested in, and it's really a fascinating problem, you know that will be a productive use of your energy and your career. That will produce something new – but whether it's transformative or modest, you can't know in advance.

In our case, it was something completely unexpected. Nobody had ever described these tiny microRNAs before. We weren't looking for them, nobody even imagined they existed. And then we found the first one. You're ↪

"If we work on something that we are super interested in, and colleagues around us are interested in, and the students are interested in, and it's really a fascinating problem, we know that will be a productive use of our energy and our career."

searching for objects in the universe and suddenly find something nobody has noticed before.

Over your life as a researcher, and now as a Nobel prize laureate, what has helped you most in overcoming obstacles and dead ends? How did you keep going at times when your work wasn't appreciated, for example, when you first published in 1993 about microRNAs, and at first, no one seemed to react? What kept you moving forward?
When we discovered microRNAs in this little worm, *C. elegans* (*Caenorhabditis elegans*), it interested only a very small field of scientists. But we were fortunate that the editor of the very important journal *Cell* was intrigued, so we could publish there, alongside a paper from Gary Ruvkun's lab. We were proud of those two papers together – it was very good work and a new discovery.

But generally, people looked at that, including us, and thought this could be just something that happened to be evolved in the little worm and not relevant for other animals. My wife Candy even looked for that particular microRNA in the human genome. And it turned out it is in this genome, as we know now, but the methods available at the time couldn't find it. Only after genomes were sequenced could it be identified.

We published more papers, but for years, the field was super small, just two or three labs. Then in 1999, advances showed that microRNAs were present across all animals, even plants. That year was a turning point. Suddenly, what seemed like a peculiar worm phenomenon became something of broad importance to almost everybody.

So the lesson learned is: never give up if you're convinced something matters?
Exactly. And meanwhile, we were publishing, learning about mechanisms, making progress. Still, it was worrying. Funding agencies like the National Institutes of Health want relevance to humans, and for a long time, it wasn't clear whether our work had that. It took about six years before its broader significance was recognized.

Has any of your research already resulted in clinical applications?
Not our research, no. But there are microRNA--based therapeutics being developed, and even more progress in related small RNA therapeutics based on RNA interference. Many companies are now developing therapies that use these small RNAs, which function with Argonaute proteins.

You've worked extensively with the *C. elegans* roundworm. With new technologies such as CRISPR-Cas9, is research with model organisms still important?
If you'll excuse me – hell yes! Model organisms are just as important as ever. In the Argonaute syndrome project, for example, our role is to use *C. elegans* as a biological vessel to test the effect of some of the mutations. We can do this very quickly because of its short life cycle. With CRISPR-Cas9 gene editing, we can introduce mutations efficiently.

There's a constant exchange between human genetics and model organism genetics. Quick, efficient experiments in worms can inform human physiology and guide our collaborators' work. And *C. elegans* continues to yield new discoveries in its own right. Researchers are studying learning and memory, neural integration, and behavior. Despite having only 302 neurons, the little worm shows a remarkable range of complex behaviors. With modern imaging and genetic tools, it's a powerful system for neuroscience.

For example, a former postdoc of mine, studies prion diseases – protein aggregates linked to Alzheimer's and similar conditions. *C. elegans* is proving to be an excellent system for investigating the mechanisms behind those processes. So yes, model organisms will continue to deliver important surprises, shaping research directions in humans and other mammals as well.

With the Trump administration and the changes happening in the United States, has it become more difficult for scientists to collaborate internationally?
Much more difficult! For one thing, the Trump administration cancelled all grants that included overseas partners. That funding simply disappeared, which had a major impact, also on labs in Europe that relied on those collaborations.

The situation in the U. S. itself has been disastrous – worse than you can imagine. Universities had to cut back on their research enterprises dramatically. For example, many U. S. researchers work on drug-resistant tuberculosis, but we don't have the patient population in the U. S. – we have it elsewhere. Funding for that research was cut, so those projects collapsed.

Universities have had to lay off staff and cancel graduate programs. They aren't recruiting new faculty, even though there are thousands of young scientists ready to step into those positions. They now have nowhere to go. So many of them are leaving for Canada, Europe, or Asia. The U. S. is losing thousands and thousands of young people.

The others thing that is disastrous is how this has disrupted profoundly the international nature of U. S research. At every U. S. university, the majority of scientists come from abroad, and many want to stay in the U. S. Now, they no longer feel confident they can remain. Many of them have been sent away. Some of them have even been arrested on the streets, deported.

I know of cases where international scientists were detained while abroad and prevented from returning. Is that true?
Yes. Nobody wants to leave the country, and nobody wants to come in. That has created enormous fear. People don't want to leave the U. S. because they worry they won't be allowed back in. Attendance at international conferences has dropped sharply for the same reason.

One of our French graduate students, for example, was afraid to go to Canada for her brother's wedding because she wasn't sure she would be allowed back into the U. S. The administration has succeeded in making everybody afraid about everything, creating an atmosphere of fear, undermining the very fabric of how research is conducted. Every detail of scientific life – collaborations, travel, conferences – has been threatened by fear.

The change has been breathtaking, a complete reversal of how the U. S. relates to the scientific community. But we are fighting this, and we will not let it become permanent.

One last question: you are life partners and collaborate as scientists. How does that work, Candy?
In fact, I was the one who did the laboratory work for the Nobel Prize-related discovery *(smiles)*. I've been working with Victor for about forty years. After I graduated, I worked elsewhere for a while, but once he had his own lab, I joined him. Since then, I've been his lab manager. We work together in life and in the lab.

Professor Victor Ambros is an American molecular biologist and professor at the University of Massachusetts Medical School. He is renowned for discovering microRNAs, small RNA molecules that regulate gene expression, a breakthrough that revolutionized biology and medicine. In 2024, he received the Nobel Prize in Physiology or Medicine.

He has long collaborated with his wife, Candy Lee Ambros. She is a scientist and was the first author of the seminal 1993 paper that contributed to the discovery of microRNA, the discovery for which her husband, along with Gary Ruvkun, received the 2024 Nobel Prize in Physiology or Medicine. Lee is a valued scientific collaborator, the lab manager of Victor Ambros and was acknowledged by Ambros as being vital to his work.

A good **surgeon** knows when not to operate

“I am grateful that I can contribute to the development of the next generation of those who will one day advance science and medicine even further,” says Radek Kaiser, visiting professor of neurosurgical sciences at Oxford University, graduate of two medical faculties at Charles University, and current researcher at the Institute of Anatomy at CU’s Second Faculty of Medicine.

STORY BY: Jitka Jiřičková PHOTOS BY: Michal Novotný, Radek Kaiser’s archive

How did you get into neurosurgery?
Already in primary school, I knew I wanted to study medicine. I never talked about any other profession, which my parents still like to remind me of *(laughs)*. Similarly, when I started university, I knew pretty early on that I wanted to go into surgery.

Was it the precision and adrenaline that attracted you?
More than anything, I’ve always enjoyed manual work, even at home. Assembling furniture, cabinets, things like that … What I liked about surgery was the combination of medical theory and knowledge with practical skills. Plus, you can see the results right away – you know whether an operation was successful or not. I didn’t decide on neurosurgery until after my fifth year of medical school. At that time, I went on an internship in Vienna, and that’s when I said to myself: this is it.

Have you always been “worldly”?
Yes, I am quite the adventurous type *(laughs)*. Whenever the opportunity arose, I went for it. I spent six months on Erasmus in Germany and took part in other internships offered by the First Faculty of Medicine – a month-long stay at the neurosurgery department in Vienna and the orthopaedics department in Khartoum, Sudan. About ten years ago, I spent a year in Nottingham, England. After returning, I joined the Military University Hospital in Prague, but I still knew that I wanted to go somewhere else. I felt that I had mastered neurosurgery at a high level, but at the same time I was aware of the global context of my field – and that appealed to me. Originally, I was thinking about another internship, but in the end, due to various circumstances, I decided to leave for a longer period.

You got into Oxford. Leading scientists often agree that at the top, in the final selection for a given position, all candidates are already at the same level. They all have excellent results, experience, and skills. So the one who wins must have something extra that is not entirely related to knowledge, but rather a certain interpersonal chemistry. Do you agree?
Definitely. At that moment, I found myself in an environment where everyone was truly equal – on both a personal and a professional level. The scientific level is high, and the atmosphere is excellent.

↪

Professor Radek Kaiser graduated from Charles University's First Faculty of Medicine and completed his postgraduate studies in neuroscience at CU's Third Faculty of Medicine. He began his medical career in 2007 at the Department of Neurosurgery of the Královské Vinohrady University Hospital, and since 2015 he has worked at the Dept of Neurosurgery and Neuro-oncology of the Military University Hospital in Prague. Since 2023, he has been working at Oxford University Hospital. He is a researcher at the Institute of Anatomy at the Second Faculty of Medicine, Charles University, and was a supervisor of three successful PhD candidates at Charles University's First Faculty of Medicine. His book *Surgery of the Cranial and Peripheral Nerves with an Atlas of Approaches* (Chirurgie hlavových a periferních nervů s atlasem přístupů) received the Czech Medical Association's Prize for the Best Books of the Year and an award from the Czech Neurosurgical Society's Prize. He has published more than 70 articles in IF journals and is regularly invited to speak at international conferences. In May 2025, he was appointed visiting professor of surgical neurosciences at Oxford University.

And you can't impress anyone there just with your knowledge – that's a given. But I had the advantage of having worked in Nottingham years ago. And there, thanks to one consultant, Hossein Mehdian, a big name in spinal surgery, I came into contact with the Spine Society of Europe (EUROSPINE). There, I gradually worked my way up to become chairman of one of the committees and am now responsible for organizing about half of the programme at the society's annual congress, which usually has around three and a half thousand participants.

I invited a doctor from Oxford to speak at the event. I introduced him personally, listened to his lecture, he listened to mine, and we got talking. I told him I would like to visit England again, ideally for work. He said that a new position would soon be advertised at Oxford and that he would let me know. And he did indeed contact me later. So yes, personal connections, intuition, and impressions play a role everywhere in the world. When you have a choice of several very capable people, these more subtle factors also come into play, like whether you get along with the person and can imagine them on your team.

Do you have your own patients, or does the clinic management assign your work?

I have my outpatient and surgical days. However, in the UK, clinical workplaces are run differently, with smaller teams working independently on their own cases. I am part of Jeremy Reynolds' team, with whom I perform the most difficult operations, such as severe spinal deformities or complex tumours, and from whom I am constantly learning new surgical procedures. Oxford Hospital is also the referral hospital for a large part of England – specifically the southwest.

That means it accepts all the patients who need surgery of ...

... primary spinal tumours. It is an extremely specific field with very rare diagnoses, which has made Oxford world-renowned in the field of spinal surgery. And Jeremy Reynolds is a key figure in this system. He's a vocal advocate for centralizing these rare cases and one of the people behind dividing the UK into four main catchment areas, with Oxford responsible for southwest England – an area with a population of around 12 million people.

How many such operations on primary spinal tumours do you perform each year?

Given the large catchment area, there are certainly many more cases than at other facilities. However, we are still talking about rare tumours – we operate on about one such case every two weeks. But these are often very complex and time-consuming procedures that can take up to a whole day.

How did you manage to establish a scientific link between Oxford and the Second Faculty of Medicine at Charles University?

The main area of focus is anatomy – specifically, the application of new anatomical knowledge to clinical practice. Many people think that anatomy is a dead field. And indeed, all anatomical structures have been described. But new surgical techniques are emerging – and with each new technique, we need to know exactly what structures are in the way, what may be at risk, what may come up or behave differently during the procedure. Thanks to this collaboration, the Oxford–Prague Spine and Nerve Research Group, we have published several articles in leading international journals on this very topic in recent years – new clinical applications of anatomical knowledge. Oxford, of course, lends its name and prestige to it, there is no denying that.

Just recently, you were appointed visiting professor of neurosurgical sciences at Oxford University. What does that entail in practice, and what does it mean for you personally?

First and foremost, it is a tremendous recognition of my scientific and research work to date, which I greatly appreciate. It is a senior research position at Oxford University, which naturally comes associated with high expectations regarding my future scientific activities. It is also a sign of trust and recognition that the work of our research group has significance and meaning beyond the operating theatre. In addition, it means that I will be more involved in teaching, lecturing, and mentoring students and junior doctors. Teaching medical students at Oxford is significantly different from other universities. Specifically, one student comes to you for teaching at the clinic.

That sounds absolutely luxurious.

It is a complete luxury – truly individualized teaching. In addition to large lectures in the lower grades, such as anatomy, medical students attend internships or literally one-on-one lessons. A maximum of two students per teacher.

Why is that? Are there fewer students?

Significantly fewer. Of course, because it is a prestigious school, the selection process is very strict. And that prestige lies, among other things, in the quality of teaching, which is very intensive and very demanding. Students tell me that they have absolutely no free time during the academic year. Every week, they have a lot of assignments, consultations, seminars, and exams – a really demanding schedule.

And what is your impression when you come into contact with them?

Wonderful. I had the misconception that this university would feel elitist to me. That it would be full of very conservative, wealthy students from noble families – and sometimes, of course, that is the case – but mostly they are completely ordinary, natural, and modest people. At the same time, however, it is a selection of the most talented students from around the world. And every time I talk to one of them, I think to myself: Wow, you must be incredibly good! And it's not envy, rather admiration. And also a feeling of gratitude on my part that I have the opportunity to teach someone who has made it this far.

Does the range of operations in Oxford differ from what you did in Prague? Are there different patients, different diagnoses? Or is it simply the "usual" West, the first-world diseases – herniated discs and the like?

Herniated intervertebral discs or narrowing of the spinal canal are the bread and butter of every neurosurgery or spinal surgery department. Degenerative diseases of the spine are commonplace all over the world.

Doesn't it bore you?

It's routine. But even routine has its place. It is important to keep up with manual training – to keep your hands "in working order." If you want to be a good surgeon, you have to operate regularly. Keep your body in shape, as well as your mind. On the other hand, in practice, I never forget one of the greatest truths in medicine, which I heard from Professor Zeman – a leading figure in surgery at the General University Hospital. He said: "A good surgeon knows when not to operate."

When you deal with patients every day – whether they have degenerative diseases, injuries, or even rare tumours – does that affect your own lifestyle? Do you value your health more and the ability to be in shape in the operating room and perform surgery?

Absolutely. I am a very athletic person, which not only helps me maintain the physical condition necessary to perform longer operations, but is also the basis of a healthy lifestyle for me, along with a good diet and sufficient sleep. As a neurosurgeon, I am much more aware of the potential risks associated with, for example, speeding or dangerous sports. I would never go skiing or cycling without a helmet, for example. That's a given for me.

Where do you see your field in ten years? Where is spinal surgery headed?

Indication cases will clearly increase and there will be more and more procedures. Spinal surgery is currently the fastest growing subfield of neurosurgery. As the population ages, there will be more cases – both degenerative and tumorous, as we have already discussed. Therefore, there will be more complex spinal surgeries, and it will be more of an increase in frequency than the emergence of new types of diagnoses.

At the same time, however, oncological treatment itself will continue to advance. So if treatment development progresses far enough, it may even reduce the need for surgical intervention in advanced (metastatic) diseases in some cases.

The **bones** of our ancestors offer a prediction of what is to come

Between 2020 and 2024, Professor Václav Smrčka, from the Institute for History of Medicine and Foreign Languages at the First Faculty of Medicine of Charles University, and his colleague Zdenka Musilová explored dozens of ossuaries in the Czech Republic. Their research sought to identify patterns in the mortality of populations in the Czech lands over the last 1,000 years.

STORY BY Jiří Novák PHOTOS BY Michal Novotný

Your research resulted in the book *Tisíc let nemocí a válek z kostnic Čech a Moravy* (A Thousand Years of Disease and War from the Ossuaries of Bohemia and Moravia). An extraordinary publication, not only from a Czech perspective.
From a palaeopathological point of view, I have not come across such an extensive work; only articles about ossuaries exist. The book will also be published in English, thanks to an agreement between Grada and Karolinum Publishing.

In the book, you describe ossuaries as "a picture of the life and death of ordinary people."
Every ossuary provides information about locally occurring diseases, war events, and population mobility. Those in Bohemia and Moravia are unique in terms of the number and composition of skeletal remains, as Professor Matiegka demonstrated in the first third of the 20th century. Already then, he investigated how things were elsewhere and was informed that there were far fewer ossuaries in the world and that they were not precisely dated. Moreover, only some of them – or parts of them – are freely accessible.

Access isn't free everywhere in our country either; you had to ask the church and the municipality for permission to enter.
For nationwide research, we had to obtain permission from the Czech Bishops' Conference. That was at the beginning of 2020, with the main part of the research being conducted during the COVID pandemic. There are about 150 ossuaries in the Czech Republic, and we visited 50 of them (43 ossuaries contained bones, while the other 7 did not, but the bones were located in museums or anatomical institutes).

What criteria did you use to select and map these particular ossuaries?
We only studied ossuaries containing skeletal remains. It was not known from which period the skeletal remains in the ossuaries originated, so we conducted radiocarbon research. We sent the samples to the Radiocarbon laboratory in Poznań, Poland. In the ossuary, we usually performed a paleopathological analysis of 10 to 15 randomly selected bone samples with injuries or pathological changes, which we photographed in detail. In the case of bone walls and bone pillars, we used a photographic rasterization method with the possibility of subsequent computer processing. We determined the methods of storing bone remains in the ossuaries and also documented the ventilation openings and the environment of the ossuaries.

You received permission to research the ossuaries, but even so, some of them were difficult to access.
Some ossuaries are located underground, and sometimes we had to climb down to a depth of ten metres (Náklo). In other places, we had to crawl through a small window because the ossuary was walled up (Velíš, the Resurrection and Purgatory ossuaries, Kouřim).

In Křtiny, there were even traces of leprosy found on one of the bones.
The ossuary in Křtiny was discovered by speleologists in 1991. Before us, Associate Professor Horáčková and her colleague Vargová from the anatomy department in Brno identified leprosy in skull K12. We found another case of leprosy in K303, which was originally thought to be syphilis. Using 14C, we were able to prove that it was leprosy from the Crusades. Czechs participated in the Crusades as mercenaries, and since leprosy has an incubation period of three years, it only manifested itself after their return. There were hundreds of leprosariums in Europe; in Prague, for example, there was one at the Church of St. Lazarus on Lazarská Street.

The Křtiny ossuary also houses unique skulls decorated with painted laurel wreaths.
They originate from the plague epidemic in the 16th century and are said to be those of martyrs. The locals painted them with black charcoal mixed with fat, which is unique. This was discovered by Dr. Jambor from the Analytical Institute of Masaryk University in Brno.

Have you come across any other interesting facts? In many ossuaries, it is said that the bones of the dead were assembled by a blind boy.
This is a legend we have encountered several times. The truth is that the exposure of bones was usually handled by the undertaker. In Žehuň, the remains were transferred from the old ossuary to the new one by the teacher and the pastor. They were assisted by children. This is very difficult to imagine today.

It is also known that in the 1920s, there were no collections for medical students or anthropologists. Hundreds of bones were transferred from

ossuaries to the Anatomical Institute … From today's perspective, this may seem strange, but on the other hand, if it weren't for this, anatomy would only be taught using pictures today.

Thousands of human remains must have passed through your hands as a scientist, and as a palaeopathologist you probably don't notice it anymore, but still – do you ever feel uncomfortable in the environment of an ossuary?

Zdenka Musilová: Every time I enter an ossuary, I quietly tell the dead not to be angry, that we don't want to hurt them.

Václav Smrčka: The important thing is that we have never taken any bones from the ossuaries. We see ossuaries as places where the deceased rest in a beautiful environment. For example, Letařovice, an ossuary near Český Dub, is a very peaceful place.

But then there is the ossuary in Sedlec near Kutná Hora, where human bones were used to make chandeliers and other interior decorations. Isn't that a bit too much?

This was probably the idea of architect Jan Blažej Santini and later master builder František Rint. Sedlec is currently undergoing reconstruction, which my doctoral student is involved in, so we will learn many more interesting things about it. It is likely that individuals who died during the famines of 1315–1318 and 1328 are buried there, and there were unknown diseases. In the chronicles, they were described as the plague. We have determined that it was typhoid fever, which affected a large part of the Kingdom of Bohemia.

Actually, why were ossuaries created to begin with?

The oldest form of storing bone remains in our country was in charnels. These were brought to us from Austria, to southern Moravia, probably in the 12th century during German colonization. Charnels are characterized by the storage of bone remains under a chapel. It was a Romanesque, later Gothic, two-story building, the upper floor of which was adapted as a memorial chapel. The lower space served as a place to store skeletal remains exhumed from the cemetery. One of the oldest and best-preserved charnels in South Moravia is, for example, at the parish church of St. Peter and Paul in Hrádek u Znojma.

Ossuaries have a more general significance and their origins can be traced back to the 14th and 15th centuries. They are characterized by the fact that bones were displayed for worshippers to see. Their origins can be attributed to the fact that graves with skeletons accumulated in cemeteries near churches, and it was necessary to store them somewhere.

Was there a specific rule for deciding which remains to display and how?

There was no key to selecting skeletons, which is why we find various types of deposits in ossuaries. There is some evidence that the bones were treated by undertakers before being placed in ossuaries – they were mechanically cleaned, sometimes even boiled, with any remaining soft tissue cut off. For example, in Nížkov, it is known that the undertaker treated the bones in this way. Logically, this caused a horrible stench in the surrounding area, and people were afraid to go there.

The locals in Nížkov were against having their relatives displayed in the ossuary, so they collected bones from mass war graves in the area. This is how very old bones, such as a skull from the 12th century, ended up in the Baroque ossuary. Otherwise, however, no permission was sought from relatives. The dean of Polná ordered that the ossuary be filled, and people were instructed to bring bones there.

Professor Václav Smrčka
graduated from the secondary school in Sedlčany and went on to study at the Faculty of Medicine at Charles University. From 1976, he worked in the surgical department of the Regional Hospital in Příbram. After qualifying as a surgeon, he was accepted into the Plastic Surgery Clinic in Brno in 1980. In 1989–90, he worked as an intern at the French Institute of Hand Surgery in Paris while simultaneously studying palaeopathology at the Sorbonne. He received training in aesthetic surgery at the University of San Diego and at Dr. Wood's private clinic in Los Angeles, and in muscle reconstruction at the University of Toronto's Department of Plastic Surgery.

In 2001, he became associate professor at the First Faculty of Medicine of Charles University, and in 2016, he became a professor of medical history and paleopathology. He is currently a member of the Institute of the History of Medicine and Foreign Languages at CU's First Faculty of Medicine, where he teaches palaeopathology and the history of medicine. He has been a member of the World Paleopathology Association (PPA) since 1985 and served as president of the Czech and Slovak Society for Hand Surgery from 1992 to 1998. He is the author of more than 110 scholarly publications and co-author of 11 monographs, as well as co-author of six articles in *Nature* magazine concerning the evolution of plague, viral diseases, and population migrations in prehistoric times.

Nevertheless, it is very rare to find bones that belong together.

Many ossuaries were created as a result of war, and as a rule, each bone stored here is individual. It is difficult to match another bone to it, as you would in a burial ground with complete skeletons, where you can determine and date almost everything about a given person. For example, in Třešť there is a skull with a tumour on the head, and similar colouring is found on another bone of the pelvis. Of course, to confirm that it is the same individual, a DNA test would have to be done.

But that is really an exception; otherwise, bones cannot be matched, or it is very difficult to do so. In an ossuary, you have to deal with one bone to determine the diagnosis of the disease.

The bones of our ancestors can warn us about certain future developments, can't they?

Ossuaries not only show us the past, but also provide a certain prediction of the future. Using 14C dating, we determined the age of the skeletal remains in ossuaries and individual deposits. We found that the skeletal remains in the ossuaries were mainly deposited during periods of solar minimum, when mortality was increased due to cooling, poorer nutrition of the population, reduced immunity, famines, and related diseases in humans and animals.

76% of the analysed population died during two mediaeval minima, the Oort and Wolf, and three subsequent modern minima. Dating helped us classify bone remains from ossuaries over the last thousand years and create the hypothesis that a thousand-year climate cycle is repeating. We published this with Professor Martin Mihajlević in *Radiocarbon* (*a renowned magazine published by the University of Cambridge. The article was published in June 2024 – author's note*).

We also discussed this hypothesis with astrophysicists and together came to the conclusion that the thousand-year cycle could repeat. We are currently in the Oort minimum, as we were 1,000 years ago, when there were wars, epidemics, and animal diseases. Back then, it was the period from 1010 to 1050, now it falls between 2010 and 2050, with the worst phase theoretically awaiting us between 2030 and 2050. The years of COVID-19 and the protracted war in Ukraine may already serve as a warning.

You are planning to conduct follow-up research in a number of ossuaries. Why?

We returned to the ossuaries after establishing a chronology to determine the morbidity of the population in individual centuries. In the ossuaries, we found skeletal remains from the Crusades with leprosy in the 12th and 13th centuries. In the 14th century, in connection with famines, typhoid epidemics appeared and the second plague pandemic began. Plague epidemics recurred every eight to ten years. We found tuberculosis changes on bones in all centuries, and at the end of the 15th century, a syphilis epidemic began, the signs of which we observed on bones from the 16th to the 19th century. We can only assume the existence of plague ossuaries, given that plague does not manifest itself on bones. The same applies to smallpox in the 18th century and cholera epidemics in the 19th century. It was this stratification of pathologies over the millennia that forced us to return to the ossuaries to take samples and send them for processing to our partner universities in Zurich and Copenhagen.

Many ossuaries disappeared after the decree of 1787, which, however, was not strictly enforced …

The provincial decree of August 16, 1787 stipulated that all human bones should be removed and buried in the ground. However, as we have discovered, the emperor's hygiene recommendations were implemented in various ways, sometimes literally, sometimes seemingly, but usually not at all. Some ossuaries were walled up, in some the number of pillars was reduced – for example, in Velká Losenice the number of pillars was reduced by half. Some ossuaries were cleared out, which can be seen from the fact that of the 150 ossuaries in our country, only a third contain skeletal remains.

Ossuaries were disappearing at that time, and worse still, they have continued to disappear over the last 20 years; during this time, we have discovered the disappearance of about seven ossuaries due to a flawed law that only protects buildings, but not the bone material inside ossuaries. Pressure was put on parish priests to bury bone material affected by mould. We resolved this issue at two ossuaries in the Vysočina region with the help of a toxicologist. Recently, with the help of the Director General of Monument Preservation, it was agreed that these cases would be dealt with preventively using a methodology sheet to prevent further closures.

Where does the largest number of skeletal remains lie, and which ossuaries in the Czech Republic are the oldest?

Most skeletal remains are found in ossuaries with large bone pyramids, such as in Sedlec, where one pyramid contains up to 55,000 long bones. And there are four such pyramids there. The oldest ossuaries then date back to the 11th century, such as Křtiny and Zruč nad Sázavou.

How did you get into palaeopathology?

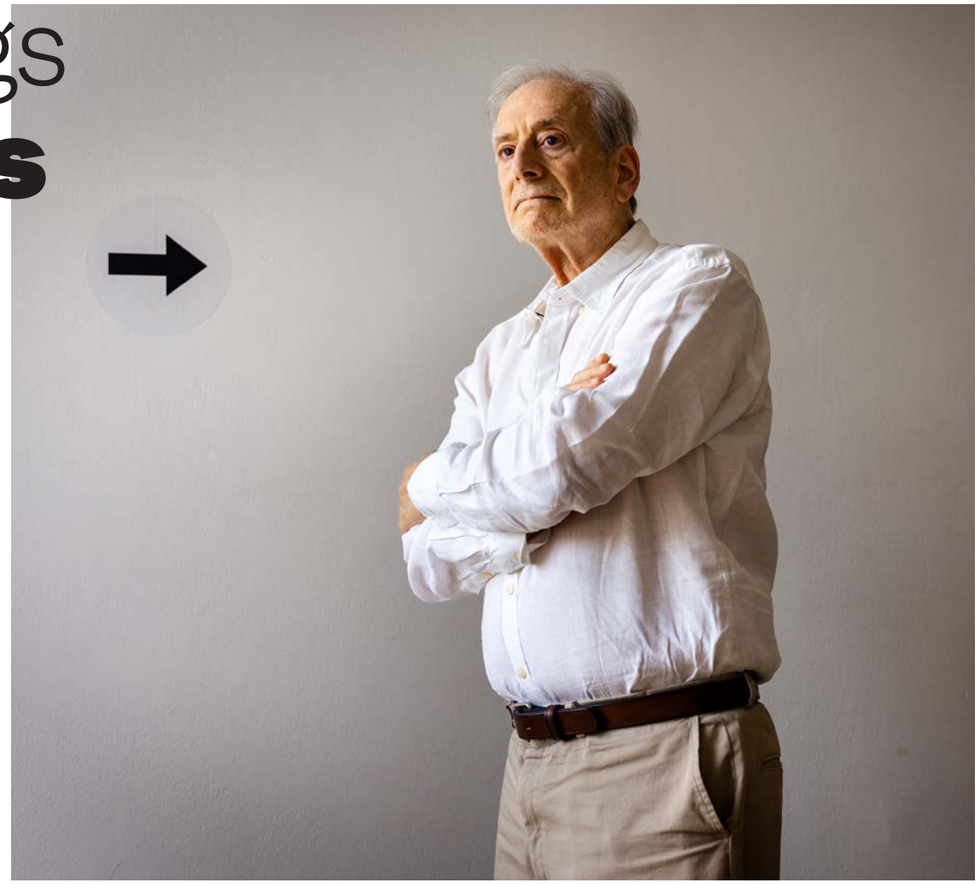
I was already interested in microbiology at secondary school. Later, when I was working in plastic surgery in Brno, an archaeologist friend introduced me to Professor Jelínek from Anthropos, who offered me the opportunity to collaborate on palaeopathological research and the reconstruction of the diets of ancient populations. I was there for 15 years and treated it mainly as a hobby.

Then, in 2004, when I came to Prague, Professor Strouhal from the Institute of the History of Medicine recruited me. Zdenka and I mainly worked on prehistory, and it wasn't until 2016 that we started working on ossuaries. And even then, it was only tentative, as there was no dating, so we just determined the period. It was only during Covid that we had more time for research, and eventually a book was written.

What joint work awaits you in the future?

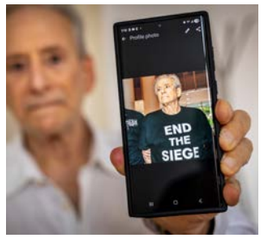
The Avars – research in Hungary. In September, we plan to explore two more burial grounds. Then we will have to conclude our research with the museum in Pécs, because we have to submit the manuscript to Karolinum Press by the end of the year.

When climate brings down **civilizations**



One of the most influential American archaeologists, Professor Harvey Weiss of Yale University is well known for his pioneering work in environmental archaeology and for advancing the theory that mega-droughts played a central role in the collapse of ancient civilizations in both Mesopotamia and Egypt.

STORY BY Martin Rychlík PHOTOS BY Hynek Glos, CIE CU Arts archive



Professor Harvey Weiss is a professor of Near Eastern Archaeology and Environmental Studies at Yale University, where he has taught for several decades. Weiss's research focuses on the relationship between environmental change and societal transformation in antiquity. He was among the first archaeologists to argue, based on hard data, that abrupt climate events – particularly multi-century mega-droughts – were key drivers in the collapse of complex societies. He continues to advocate for integrated approaches to understanding past societal resilience and vulnerability – lessons that are relevant to the global climate challenges we face today.

His research, including influential articles published in ***Science*** magazine, has reshaped how we think about the relationship between climate and societal resilience. "I've always been interested in how human societies were affected by their environments and by natural events," Weiss told the Charles University media and ***Forum*** magazine.

Harvey Weiss came to Prague in the beginning of July at the invitation of Professor **Miroslav Bárta** to participate in a major international Egyptology conference called *Old Kingdom Collapse at 4.2 ka BP Reconsidered: New Perspectives and New Agendas from the Environmental and Social Sciences*. This conference, held on 2 and 3 July at the Kampus Hybernská venue, was co-organized by Weiss and the Czech Institute of Egyptology at the Faculty of Arts of Charles University.

Thank you for your time, Professor Weiss. You've come to Prague – have you ever been here before? Have you visited the Czech Republic before?
No, this is my first time. I love Prague. I love Charles University. I love Mirek *(laughs)*. His influence on the field is significant.

Have you collaborated with Miroslav Bárta before?
No, this is our first opportunity.

So what led to your co-organization of this conference in Prague?
Well, Mirek is one of the world's leading authorities on the Old Kingdom of Egypt. He has done extensive and important research on the collapse of the Old Kingdom and has published widely on the topic. When you think about the collapse of the Old Kingdom, you think of Mirek – and Prague. So it was natural to be involved in a conference that he organized.

Historically, you published a couple of highly cited articles in *Science* magazine – in 1993 and 2001. What sparked your interest in the collapse of ancient civilizations?
I've always been interested in how human societies were affected by their environments and by natural events.

Over the past two decades, we've learned that past climates were not uniform or stable – they were punctuated by high-magnitude events, like mega-droughts. These events had a dramatic impact, even on highly developed, complex societies in regions like Mesopotamia and Egypt. If you want to understand that process, you come to Prague.

This seems to be a very interdisciplinary conference, doesn't it?
Yes, very much so. We've had presentations on archaeology, climate science, environmental history, and how ancient societies responded to changing environmental conditions. It's been fascinating to engage with colleagues from various disciplines whom I might not otherwise have met.

And you specialize in environmental archaeology?
Exactly. I work primarily in Mesopotamia – Syria and Iraq.

I read that you launched the Tell Leilan Project in 1978. What was its focus?
Tell Leilan is a major ancient city in northern Syria that had never been fully explored. I went there to study the ancient civilization of the region – to understand how they produced food, how their agricultural systems worked, and how society changed over time. It was a remarkable experience, particularly in those years before the war and the disaster that followed.

You've certainly travelled widely – to Syria, Iraq, Iran ... What have been your most meaningful experiences in Near East?
The people. The people of those countries are extraordinarily gracious, kind, and generous. Meeting and working with them has been the most rewarding part of my career.

What made you shift your focus from Mesopotamia to the Old Kingdom in Egypt?
The Old Kingdom of Egypt experienced the same kind of mega-drought as Mesopotamia. After researching the Mesopotamian collapse, I wanted to understand what happened in Egypt during the same period. That's how I met Mirek and how this conference came about.

Your famous *Science* article was titled *What Drives Societal Collapse*, right?
Yes, exactly. That article argued that significant climate events occurred in the past and that ancient societies were vulnerable to them. That was the central message of the article.

Were mega-droughts the only cause of collapse, or are there others? Professor Bárta, for instance, talks about seven laws of collapse – including bureaucracy and so on.
That's Mirek's framework. My research focuses primarily on mega-droughts because we have strong, empirical data for those events.

Do you see any parallels between ancient societal collapse and challenges we face today?
There is a fundamental difference. In the past, climate change events were entirely natural. Today, they are almost entirely anthropogenic, caused by human activity. That's the key difference. And that's the lesson for us.

What is it like doing science in the USA today, under the administration of President Donald Trump or secretaries such as Robert F. Kennedy Jr.?
The scientific community is being actively undermined. Science is being destroyed. And it's entirely unnecessary. It's a political agenda that is deeply disturbing.

Scholarship thrives when it crosses **boundaries**

Rose Smith's academic foundation includes an International Master's in Economy, State & Society from the University College London's School of Slavonic and Eastern European Studies and Charles University, a Master's in Political Philosophy from Ural Federal University in Russia, and a dual Bachelor's in Political Science and European Studies from Ateneo de Manila University in the Philippines. Currently, she is pursuing her PhD at the CU Faculty of Social Sciences' Department of Russian and East European Studies.

Her research is situated at the intersection of museum and memory studies, with a focus on how museum representations of the Communist past shape collective identities. She is currently a Junior Researcher at the Institute of Ethnology's Department of Memory Studies at the Czech Academy of Sciences. She is also actively engaged in several international research collaborations, including the Research Centre for Memory Studies at the Institute of International Studies and participating in initiatives with the Memory Studies Association and the COST Action *Slow Memory* project.

During her studies, Rose Smith, originally from the Philippines, travelled around the world. She has lived, worked, and studied across multiple countries, including the Czech Republic, the Netherlands, the United Kingdom, Russia, Chile, and her native Philippines, and has conducted research in the Czech Republic, Hungary and Poland.

STORY BY Jan Borek PHOTOS BY Veronika Vachule Nehasilová

For her Master's degree at the Faculty of Social Sciences, she studied the Museum of Communism in Prague. "My thesis advisor, Kateřina Králová, who is extremely supportive and kind, asked me why I don't do a PhD here. And I thought, I do enjoy studying things, I enjoy research, so I applied for my PhD. I stayed, and now I have a Czech husband, and I'm trying to integrate. I do see my future here in the Czech Republic. So I was looking for opportunities to stay and to fully integrate myself into Czech academia. An opportunity then opened in the Czech Academy of Sciences, and I took it, because this is my third 'last year' doing my PhD, and I hope that this is the *last* last year," she laughs.

Currently, Rose is about to complete her joint-degree doctorate at both Charles University and the University of Groningen in the Netherlands. However, she has already earned a position as a junior researcher at the Czech Academy of Sciences, at the Institute of Ethnology. An active individual in all respects, she also served as the newsletter editor for the Memory Studies Association and is a member of the Czech Studies Association, the COST Action Slow Memory Project, and the University Association for Contemporary European Studies.

"My research focuses on how museums in Budapest, Prague, and Warsaw represent the communist past through my concept of the 'post-communist exotic.' I examine how the memory of the Communist era is repackaged in museum exhibitions to serve contemporary political, social, and economic purposes, offering new insights into how the Communist past is represented in the context of national, European, and global memory politics," Rose describes her field of focus.

Now, how exactly did she come to pursue a joint degree? Let us hear from her:

During the early stages of my PhD studies at Charles University, our institute announced that it was signing a cotutelle agreement with the University of Groningen for doctoral students. The prospect immediately caught my attention. Once I learned the details of the program, I knew without hesitation that I wanted to participate. I applied right away and was fortunate to be accepted.

The cotutelle program enables doctoral candidates to be enrolled at two universities simultaneously, working under the guidance of supervisors at both institutions, and ultimately earning a doctoral degree from each. For me, this meant that in addition to my studies at Charles University, I would also become a PhD candidate at the University of Groningen. While the formal benefit of two degrees is significant, what I value most is the intellectual richness, such as access to two academic environments, two sets of resources, and two distinct scholarly traditions. This arrangement has been particularly meaningful given the interdisciplinary nature of my research; my advisor at Charles University specialises in history, while my supervisors at Groningen are rooted in cultural studies. Working between these two approaches has pushed me to think more broadly, bridging methods and perspectives that are often treated separately. At the same time, pursuing a cotutelle is not only an academic journey but also a personal and professional challenge. Navigating two systems, with their different expectations and cultures, has required flexibility and resilience, which are skills I have come to value as much as the academic training itself.

My semester in Groningen turned out to be immensely rewarding. The university supported me with a living allowance and provided me with an office, which immediately gave me a sense of belonging and integration into the academic community. I also joined several social and professional gatherings, which included the traditional *borrel*. These encounters were not only enjoyable but also intellectually stimulating, giving me a glimpse into the breadth of research being carried out across disciplines.

Ultimately, I see the joint degree programme as far more than the pursuit of a double degree. It has been an experience of learning to think across disciplines, cultures, and institutions. It has taught me adaptability, broadened my intellectual horizons, and widened my network of support as I write my dissertation. More than anything, it has reinforced my conviction that scholarship thrives when it crosses disciplinary, institutional, or national boundaries.

My semester in Groningen turned out to be immensely rewarding. The university supported me with a living allowance and provided me with an office, which immediately gave me a sense of belonging and integration into the academic community.

Don’t be afraid to apply for a prestigious **scholarship**

She is intimately familiar with American mentality, history, and politics. After all, she has been devoted to the United States since her studies at the Faculty of Social Sciences at Charles University, where she has been teaching American studies for more than fifteen years. For about the same amount of time, she worked at the US Embassy in Prague, where she was involved in public diplomacy. And since August of this year, Jana Sehnálková has been the new Executive Director of the Czech Fulbright Commission, which will celebrate 35 years of activity in the Czech Republic next year.

STORY BY Martin Rychlík PHOTOS BY Vladimír Šigut, Shutterstock

Congratulations on your appointment as Executive Director of the Fulbright Commission in the Czech Republic. It is a great responsibility, especially considering that your predecessor, Hana Ripková, served as director for thirty years … What are your priorities and key objectives in your new role? What do you want to represent in particular?

I believe that the Fulbright Commission has always been perceived as an institution that provides prestigious scholarships to Czech scientists and students and, at the same time, contributes to the internationalization of Czech universities and research institutes by bringing American scientists to the Czech Republic, whether as teachers or researchers. Thanks to our scholarships, Czech academics have the opportunity to travel to the United States, whether to work on their research projects, study, or learn new teaching methods. The primary priority is to maintain academic excellence.

Another important goal in these relatively turbulent times is to ensure stability and protect academic freedom. I would like our program to be seen not only in the context of large universities such as Charles University, but also regional universities in the Czech Republic. Fulbright should be understood mainly as an open and flexible program that can advance students and academics professionally, develop their personal and professional potential, and enable them to build strong international ties and cooperation.

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Fulbright Commission scholarships are highly competitive and prestigious. What are the chances that an applicant – a student or academic – will be successful and travel to the US?
According to long-term statistics, it is roughly one in three or four candidates. So, I think the chances of success are relatively high. I would be very happy if more people applied for the programs, even though this would, of course, change the ratio. However, a properly prepared and well-developed project is always a fundamental prerequisite for success.

Would you say that nowadays it is mainly truly determined and talented people who apply for programs – and thus compete for your scholarships – and who have the qualities necessary to receive a scholarship?
Definitely. I've only been here for two months, but based on the feedback I've received, Czech scholarship candidates are very competent and achieve excellent academic results. A lot has changed over the past thirty-five years. Candidates are at least on the same level as American academics who apply for scholarships in Czechia. That's great news for Czech science.

What would you recommend to students, doctoral candidates, and academics at Charles University? Which Fulbright programs can they apply for, and how should they apply?
I definitely recommend starting on our website www.fulbright.gov.cz and checking out what we offer. We offer not only traditional scholarships that work globally, but we also have specific Czech programs, such as the Fulbright-Masaryk Scholarship. It is intended for those academics who are involved in public life; the range of such activities is extremely broad, from science popularisation through leading scout troops to community activities. The program has been running for twenty-five years and is internationally prestigious, as the U. S. government only rarely approves so-called "hyphenated programs," where another name is added to the title. The Fulbright-Masaryk scholarship is fully funded by the Czech side, serving as a great showcase for Czechia, and we believe that it will continue successfully in the future.

Do you have any statistics on how many scholarships were awarded to Czech applicants in total?
There are a total of 1,268 scholarship recipients from the Czech Republic and 1,158 scholarship recipients from the US, for a total of around 2,500 people. If we add family members to that, we get more than 3,000 people who make up the "Fulbright family."

Can you say which fields scholarship applicants come from most often – undergraduate students, doctoral students, academics? Is it more often the natural sciences, medicine, or the humanities?
That varies from cycle to cycle; it's impossible to say in general terms. Sometimes life sciences are dominant, other times it's the humanities. We deliberately leave Fulbright scholarships as open as possible in terms of fields of study and choice of American institution. When I look at this year's group of Czech scholarship recipients, there are fields such as civil engineering, biology, computer science, law, neuroscience, psychology, physics, and international relations … It is the quality of the project that counts, regardless of the discipline.

And what about American scholarship recipients who come to the Czech Republic with Fulbright?
There is also a lot of variety there. This year, for example, we will have a doctor specializing in women's health, as well as experts in geology, healthcare, education, and even a specialist in nuclear technology. We are also happy to welcome Czech studies students – this year we have an American student of Czech studies who is interested in Karel Havlíček Borovský and Milan Kundera.

Jana Sehnálková, PhD
is an American Studies scholar and Executive Director of the Fulbright Commission in the Czech Republic since August 1, 2025. Throughout her career, she has combined academia with practical experience, teaching at the Department of North American Studies at CU's Faculty of Social Sciences since 2011, where she teaches courses on American history and the US political system, among other subjects. At the same time, she worked for fifteen years at the US Embassy in Prague.

You are still active at the Faculty of Social Sciences at Charles University, teaching in Jinonice. How do you manage to combine leading the Fulbright Commission with teaching? Both are considerable responsibilities.
Teaching gives me tremendous energy. It may sound strange, but I actually go to school to "relax" mentally. I supervise theses and teach courses, but it's a different kind of work. I've always appreciated that even though I worked at the U. S. Embassy in Prague, I remained connected to my original field. You never stop learning – not only through literature, but also through contact with students. For example, I am fascinated by how our students' perception of the United States is changing. For me, it has always been a great combination: having both practical and theoretical experience. In addition, my home faculty has always been very accommodating; I was able to teach courses in the afternoon after work, which suited me, but I'm not sure if my students appreciated it as much *(laughs)*.

How did you actually get into American Studies and the Faculty of Social Sciences at CU? You already studied in America in high school, so did your interest start there?
Yes, I received a scholarship from the Open Society Fund. I spent six months on Vashon Island, which is in Puget Sound, a bay near Seattle, Washington. I was fascinated by the country, so I decided to pursue that path. Additionally, I attended the Hejčín Grammar School in English …

You're from Olomouc?
I am from Přerov, but I studied at the Hejčín grammar school in Olomouc. Almost all of our lessons were taught in English, which naturally led me to American studies. I wanted to learn even more about that country. In the 1990 s, when I left, America was a fascinating country for many people in Czechia, who partly looked up to it. I wanted to gain a critical perspective, so I started studying it. And I'm glad I did, because I feel that many trends – whether positive or negative – appear in America first. So, we can draw inspiration from that, and take steps to perhaps mitigate the effects of phenomena that are being intensively addressed in the United States.

What did your studies at CU SOC actually give you?
Well, I studied American Studies directly. The Faculty of Social Sciences at Charles University is an excellent institution. I am proud of it because it provided me with a wealth of knowledge, skills, and an impressive array of soft skills. In addition, it has an amazingly strong network of people with whom I have been working for a long time. There's an enormous social capital here, especially for someone who came to Prague from Přerov. It's a joy to know that wherever I look, I'll always find someone who is a graduate of the Faculty of Social Sciences, and these people are also proud of their affiliation. And I am so glad I went there to study.

Since you mentioned graduates, can you name some of your classmates?
Many of my classmates stayed at CU SOC and teach there. Among American studies graduates, I would mention Radek Špicar, who is Vice-President of the Confederation of Industry of the Czech Republic, and Jakub Klepal, Executive Director of Forum 2000. Martin Jonáš from Czech Television (and now Seznam Zprávy) also studied American studies, although he later focused mainly on Germany.

And what about Fulbright alumni?
There are also a number of them, including academic "leaders." We even have several rectors among them – for example, Milena Králíčková from Charles University, who attended Harvard Medical School, English and American Studies scholar Petr Kopecký from the University of Ostrava, and physician Martin Bareš from Masaryk University. And Michal Pěchouček from the Czech Technical University is also one of "ours."

It's an incredibly interesting group of people. You can see and hear our graduates in the media as leading experts, and you'll find them in high positions in international politics, such as ambassadors and senior officials at NATO, among others. During the pandemic, for example, our alumni from the Technical University of Liberec developed nanotextiles that were then used to sew affordable face masks on a mass scale, and we can find many other examples. In general, I think we can say that our alumni are visible and not afraid to get involved in both academic and public life.

What would you have to say to people who are worried that the Fulbright scholarship is too difficult, too elite, and almost unattainable for the "ordinary" person?
They should definitely give it a try! Consultations can guide prospective applicants and alleviate unnecessary concerns. It is an extremely valuable experience that is worthwhile – if only for the process itself. Our colleagues are happy to provide advice, so there is nothing to fear. In addition, an academic career is always associated with grant applications, and compared to the ERC, applying for a Fulbright scholarship is relatively straightforward. It can greatly advance a person both professionally and personally. And I believe that Fulbright will continue to be the foundation for transatlantic cooperation, which will give rise to further international projects and partnerships.

A great internship with tangible **results**

In the lab: promising Master's students Sevval Ayhan (left) and Thrinethra Shankar with immunologist Jitka Palich Fučíková (right).

This September marks the conclusion of a six-month internship for students from Sorbonne Université in France, facilitated by the 4EU+ Alliance and the Erasmus programme. The internship was offered to Sevval Ayhan, Thrinethra Shankar (Thri for short), and Regina Shaikhutdinova as part of their Master's studies, thanks to the valuable collaboration between the Faculty of Science at Charles University and Sotio Biotech Laboratories.

STORY BY Marcela Uhlíková & Jan Velinger
PHOTOS BY Michal Novotný, Daniel Hotový & CU Archive

Forum magazine spoke with Professor **Jan Černý** from the Department of Cell Biology at Charles University's Faculty of Science, who supervised the students at the university, as well as Professor **Jitka Palich Fučíková**, under whose guidance at Sotio Biotech the students gained hands-on experience in tumour immunology.

What was the initial impulse that attracted the girls to come to Prague?

Jan Černý: This year, we celebrate the fifth anniversary of our collaboration with Sorbonne Université in the prestigious master's program *From Fundamental Molecular Biosciences to Biotherapies*. In 2019, we were honoured to be asked if we could help with teaching immunology, including implementing semester-long internships in selected laboratories. This request was the result of our efforts to teach a range of advanced and basic immunology courses in English.

Word spread, and we now regularly receive four students each summer semester. These students follow a rigorous immunology programme at the Faculty of Science and various immunology institutes. We are very pleased that they were satisfied with the conditions and are recommending the stay in Prague to new students.

Jitka Palich Fučíková: As part of the Erasmus program at the Faculty of Science, there is also an internship in a laboratory of the student's choice. The students chose Sotio both for the opportunity to engage in translational research within a biotechnology company and based on the recommendation of a colleague who interned with us in previous years and will return next year to the Second Faculty of Medicine at Charles University and Sotio's laboratories for her doctoral studies in medical immunology.

What exactly did the Master's students work on in the lab?

JPF: The students had the opportunity to participate in ongoing scientific projects which mainly focus on the role of the immune system in cancer treatment. During the internship, they became familiar with advanced methods in tumour immunology. They also learned the basics of scientific work and were able to collect and interpret their own scientific data.

At the same time, we strived to accommodate students' specific requests during their scientific internships. Regina, for example, expressed an interest in furthering her knowledge in bioinformatic data processing, so she spent most of her time analysing results from molecular sequencing, including single-cell sequencing and spatial sequencing of tumour tissues. Sevval and Thri focused on analysing tumour tissues from ovarian cancer patients using advanced digital pathology technologies and working with mouse models.

And the Faculty of Science mainly provided lectures, correct?

JČ: Yes, the students attended the *Immunology* program, where we offer quite a broad selection of lectures. It's important to note that most of the credits that Master's students need to earn come from their research internship. Our aim is always to select top workplaces and outstanding mentors – hence, Sotio under the guidance of Prof. Palich Fučíková.

Can we talk about results? What did the intern students gain?

JPF: Definitely. The outcome of their work is not only gaining new knowledge but also publishing their results in prestigious scientific journals, as was the case with their colleagues in the past. Additionally, students have the unique opportunity to regularly discuss their work with colleagues from various departments at Sotio Biotech and understand the preclinical and clinical testing that takes place during the development of new cancer drugs.

Did the students meet your expectations? How well did they fit into the established research team?

JPF: Like in previous years, the students were a significant asset to the entire research team. Thanks to their interest and the support of their colleagues, they joined ongoing research projects, which, among other things, focus on the role of so-called tertiary lymphoid structures (structures in tumour tissue resembling lymph nodes) in immunotherapy for solid tumours, the importance of NK (Natural Killer) cells in tumour tissue of immunologically active and passive tumours, and the possible combination and timing of standard chemotherapy with immunotherapy.

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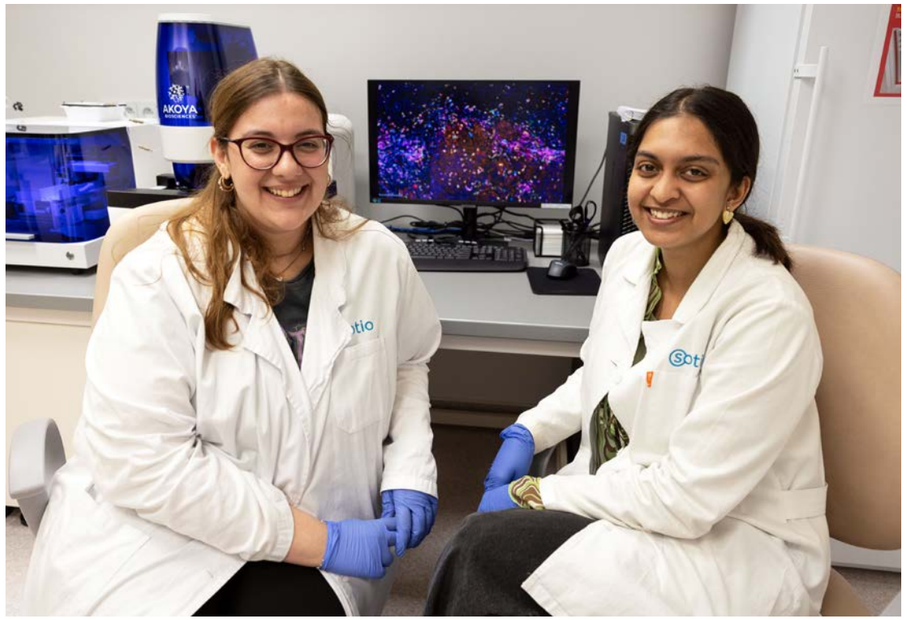

JČ: We are actually surprised by the interest from international students in our fields. In the undergraduate *Science* programme, we can choose from very high-quality applicants from all over the world, and the same goes for the *Immunology* program. In the doctoral programs, international applicants even dominate. They seem quite satisfied and many plan to pursue a scientific career in the Czech Republic. By the way, we have even had students apply for doctoral studies in immunology after completing our "Sorbonne internship" *(smiles)*; that is not uncommon.

JPF: Thanks to the support of the Faculty of Science, Charles University, and the PR department of Sotio Biotech, we are currently seeing considerable interest from international students for long-term internships in our lab. Students recognise that they have a unique opportunity to engage in translational research at a biotechnology company with the potential for clinical application. This opportunity allows them to cross the boundaries of the purely academic environment and opens doors to further studies or careers in biotechnology.

How did the students themselves view the opportunity and their time in Prague? They told us in their own words, just how important the stay was and how much they had learned. Forum *spoke to Sevval Ayhan and Thrinethra Shankar.*

How did you come to the subject of Immunology and related research which eventually brought you to Prague?

Thrinethra Shankar: In my Bachelor's I was focused on biotechnology but then I took a course on immunology and I was like 'Oh my god, this is what I want to do!' and so I applied to Sorbonne University and my first semester there was a more general focus, with a cellular biology molecular component, so a bit of everything. But I knew in advance that I wanted to focus on immunology once I came here to Charles University, and it was here that I really began to focus on it.

What about you, Sevval?

Sevval Ayhan: My Bachelor's was about molecular biology and genetics, and I didn't come across a specific immunology lecture, but I came across it throughout my studies and even did presentations about immunotherapy because they are quite new and a lot has changed over the last 20 years. After graduation, I worked for a company in Turkey within the university, focusing on developing Car-T cells *(Chimeric Antigen Receptor T-cells, which are used in immunotherapy used to treat certain cancers – editor's note)*. In the process I became more and more interested in immunology and immunological treatments specifically and I realised that I wanted to continue and to become an academic.

I am the first generation in my family that studied at university and I had a lot of issues during my university years; I didn't have my network and people to consult and wanted to find a way to help other students. Academia was the answer. I applied at Sorbonne and chose immunology and immunology therapies which led to my internship in Prague. I wanted to work at a place where I could learn more and Sotio Biotech, with its emphasis on research, gave me a lot of what I needed. I really became interested in cancer immunology and Dr Jitka Palich Fučíková's own work was very inspirational.

Tell me about the atmosphere here: how used to being in the lab were you before coming to Sotio?

TS: I had experience from my Bachelor's and other internships but I would say that working here was really cool. Because it is like a 'melting pot' of different scientists from all over the world and you can ask everyone the same question and each will give you a similar but slightly different answer. It really pushes you to think. I also really appreciated that any time I had a specific question, whether scientific or something mechanical relating to the process I was doing, I always got a quick answer. No matter how small the question was I always got a helpful response and that creates a really nice back and forth between everyone here and it made me feel very comfortable.

SA: I completely agree. I liked the environment because everyone was very friendly, there were other interns too so we could talk with each other and discuss work and our futures. We also had weekly meetings within the research group, so we learned about other research projects too, which helped me to appreciate other projects and expanded my knowledge of the topic. Every project looks at the tumour microenvironment from a different perspective and we were allowed to ask questions and that helped a lot.

TS: It is very student friendly and Prof. Jitka was extremely helpful and open, realising that we were new in the field and had to learn new techniques. Every week we also had a seminar with different personnel from different branches, whether pre-clinical to HR, and we really were able to see the different parts of the company and how they worked. The billion steps that connect the departments, how you market something, how everything works. It was really very helpful.

To sum up your internship at Sotio: what it did it feel like to know you were contributing to research that could lead to important advances in treatment?

SA: It feels really good. In my Bachelor's I decided I wanted to pursue bench-side research in translational medicine. In these projects I was able to do that and I can see how my research can be helpful for patients. As I said, I am first-generation so while my family doesn't understand what basic research can do, when I say I contribute medicines that can actually help someone and that make them happy and makes me happy too.

Also, it was fascinating to get on board an existing research that was coming to an end, because research usually takes years and it would be easy to miss the results To be here for a six-month period and to be able to [see something approach the finish] was fascinating.

Professor Jitka Palich Fučíková is a graduate of the Faculty of Pharmacy, Charles University in Hradec Králové. During her doctoral studies at the Second Faculty of Medicine, she focused on tumour immunology. Today, she leads her own research group in tumour immunology at the biotechnology company Sotio Biotech and teaches at the 2nd Faculty of Medicine. She is the author of dozens of foreign publications with significant citation impact and two international patents.

Professor Jan Černý is a graduate of the Faculty of Science, Charles University, in molecular biology and genetics. During his doctoral studies at the Faculty of Science, in immunology, he studied membrane microdomains. Today, he studies the immune system using a mouse model under various microbiome conditions, characterizing maternal-fetal microchimerism, and searching for molecular mechanisms of bioactive secondary metabolites. He also focuses on advanced microscopy techniques for observing processes in living cells and studying histological organisation using Light Sheet Microscopy.

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Going on
Erasmus+ with a newborn!

Tuukka Karjula, in his mid-twenties, is studying Sport education at the University of Jyväskylä in Finland. For the spring semester 2025, he decided to spend his Erasmus+ stay at the Charles University Faculty of Physical Education and Sport, just like many other students do every year. What makes him different is that he came with his family: his wife Jennimari and their daughter Lilja – who was born just one month before the semester in Prague began!

STORY BY Jelizaveta Getta
PHOTOS BY Michal Novotný, CU archive

According to Tuukka, a study abroad experience had been his dream from the high school. "I was really interested in different cultures, so this was a chance to acquire new experiences and knowledge". He says he considered the CU Faculty of Physical Education and Sport an "excellent place to learn many different teaching styles and tools" – to improve his capabilities as a sport teacher in Finland.
How did he combine studying with his family duties? And would he recommend other students with young children to do the same? Those are all questions he and his wife addressed when they met with Erasmus+ representatives recently at the school's rectorate.

Many people cannot imagine going abroad on vacation with a newborn, let alone studies. Did you have any concerns before taking the Erasmus+ opportunity? What helped you to make the right decision?

Tuukka: We learned that we are expecting our baby a little bit after my Erasmus+ application had been approved. Then, of course, I was asking myself: Do I have to cancel everything? We were discussing the opportunity a lot with specialists in the mother & child clinic in Finland and they suggested that we should go, since it was not harmful for the baby and also thanks to the good healthcare system in the Czech Republic. Basically, this was what encouraged me to ever think about not cancelling the stay. We had also many conversations with my wife and our family. Moreover, what helped a lot was that we were always seeing the positive side of what was going to happen. After all, the baby enabled us to go on Erasmus together, enjoy ourselves and explore the Czech Republic! My wife is studying to be a midwife, so our fields of study are different, and it would be difficult to go on Erasmus together just as a couple.

How did you like the family dormitory and the place where you lived, in general?

Tuukka: We like Kolej Hvězda. In the beginning, we were a bit concerned, especially after hearing some overall unpleasant experiences from living in residences. The other families living in the dorm are very friendly as well as the accommodation staff, who are always willing to help. Also, we were looking forward to trying some Czech cuisine in the Hvězda canteen!

How did you manage to balance your studies with family duties? You must have been very busy at the faculty …

Tuukka: There was one day in the week I was really busy, but usually, the classes did not last into the late evening. There were also no classes on Fridays in my schedule, which was very good. Of course, it is my wife who takes care of the baby when I am studying.

Jennimari: We go outside a lot – there are great parks in Prague! I think, in Finland, we don't have so many beautiful parks … Whenever I need something, people are ready to help. Communication is not problem either – although in the dorms, not everyone speaks fluent English, the staff members are very willing to use the Google translator. The only thing that I miss here is my Finnish family and friends, but they have already visited us.

How did you usually spend your free time?

Tuukka: We often went or still go running and enjoy playing discgolf – these are our favourite sports we usually do together.

What are your plans after finishing your Erasmus+ stay?

Jennimari: I am going to continue my studies the next spring and Tuukka will stay with the baby. After that, in autumn 2026, Lilja will go to kindergarten. All in all, I will be one year at home with the baby and as soon as it will be Tuukka's turn to go on parental leave, he won't even have to interrupt his studies, because he will be mostly writing his thesis for his Master's degree.

What did your families think about the idea to abroad with a newborn? Were they supportive, or did they persuade you to cancel and stay at home, at first?

Tuukka: At first, they were surprised about our wish to still go on Erasmus with the baby, but finally, they were not holding us back and did their best to support us. It took some time, but it worked out … On the other hand, it should be said that we are very lucky, because everything went well with the birth and our daughter is quite an easy-going baby, so we don't face any specific challenges that other families might experience. Therefore, even despite some initial natural challenges of being in a new environment, we have never thought of interrupting our stay and heading home. We quite liked it here from the very beginning. We were also very positively surprised by how much Charles University took care of us; it was really helpful! We appreciate a lot the opportunity to live in the family dormitory, the responsiveness of the international office as well as the Buddy programme we used in the beginning our stay. Now, we already have new friends from the faculty. We also plan to join some of the ESN events as well and use the Gratis market at Kampus Hybernská cultural and meet-up centre, to leave some things there before going back home.

How did you like your host faculty?

Tuukka: I liked most of the classes! The school offered not only good education opportunities and high-quality facilities but also enabled us to share diverse teaching methods we are used to in different countries. I also value very much that Erasmus+ students can have quite a flexible schedule and are allowed to try many subjects. The teachers have very good approaches to educate and are giving us inspiring ways of teaching we can transfer to our home countries. I really appreciate that we can meet not only physical education teachers in our classes, but also physiotherapists and professional coaches.

What was the most challenging experience and the best experience of the Erasmus+ stay?

Tuukka: As for the most challenging experience, I would say it was the different vaccination system in Finland and the Czech Republic. The rules and deadlines were a bit hard to navigate. At first, we planned to do the vaccination here in Prague, but since we missed the first three-month deadline, we had to go back to Finland.

Jennimari: However, it's also our mistake, so we cannot complain …

Tuukka: And the best experience? For me, it's been exploring the Czech Republic! We found time not only to explore Prague, but also the whole country, which is amazing! We visited so many places and would definitely recommend Czech Republic as a fantastic place to explore! Český Krumlov, for example, is the most wonderful town I have ever seen … Bohemian Switzerland is also amazing – we even managed to do a hike there with our baby!

For future Erasmus+ students who would like to travel with children, what advice would you give them?

Tuukka: The main thing, in my opinion, is to consult the medical system of the country you are going to visit. Also, it is very important to discuss things in advance on both sides – not only the healthcare, but also the education, accommodation etc. And finally – just have courage to go! That's it!

Jennimari: I think, it is even easier to travel with such a small baby, because she needs just us, milk and sleep, so she doesn't face many barriers. Also, it definitely enriched our relationship – we have been together for eight years, but in the new environment, we grew even closer, since we don't have our own family and friends here as we do in Finland. We have mainly each other, which made the connection even more tight.

The College of Europe gets you into the **EU bubble**

He completed an internship at the European Commission and has experience from study and research stays at universities across the world. He participated in preparations for the Czech EU Presidency in 2022. Recently, he has earned his degree at the College of Europe in Bruges. Jiří Culka, a doctoral student at the Faculty of Law of Charles University, is one of the first group of Czech university students to receive a government scholarship to study at this prestigious institution, which prepares graduates for work in EU, and other, institutions.

STORY BY Helena Zdráhalová
PHOTOS BY Veronika Vachule Nehasilová

He arrived at our meeting wearing a well-fitting suit and an elegant striped tie in the national colours. This was because we met immediately after he had been received by President Petr Pavel at the Prague Castle. Jiří Culka had been invited to the Castle along with a group of other Czech citizens studying at the College of Europe, an institution offering postgraduate education focused on European studies.

"The Czech Republic is interested in having Czechs apply to EU institutions and other international organizations, as we have long been underrepresented in them. The number of Czech employees in EU institutions is disproportionate to the number of employees from a number of other EU member states with similar populations," noted Jiří Culka.

Charles University, together with the University of Economics, has already responded to this in the past by introducing the *Gateway to the EU Institutions* course, which prepares those interested in applying for selection procedures for EU institutions. Jiří Culka also completed the inaugural year of the programme in 2023.

As a doctoral student at Charles University's Faculty of Law with a long-standing interest in EU issues, he subsequently decided to take advantage of a new offer from the Czech Ministry of Education, Youth and Sports. Last academic year, for the first time, the ministry made it possible for Czech university students to obtain a scholarship for a year of study in one of the fields offered by the College of Europe.

Until now, state scholarship incentives have been aimed only at civil servants. Jiří Culka managed to obtain one of the three scholarships awarded, and subsequently moved to Bruges, Belgium, where he has graduated in EU International Relations and Diplomacy Studies since.

The EU Bubble

"I have already studied at several foreign universities. For me, this is a truly unique experience, especially from a social perspective. You enter the 'EU Bubble,' a multicultural community of people who are interested in EU issues. You meet not only people from EU member states, because around 20 percent of students in Bruges come from non-member countries, including the UK, Colombia, Türkiye and several Caucasian countries. Most of the students are interested in working in one of the EU institutions in the future, so it is likely that we will continue to meet this community, and that is one of the valuable benefits of studying at the College, which I can see after the few months I have spent in Bruges," noted Jiří Culka.

Blue Book Traineeship

His interest in the EU really kicked off six years ago when he beat out tens of thousands of other applicants to get a Blue Book traineeship at the European Commission. "When I applied for the traineeship, I was working as a trainee lawyer at a big Czech law firm. At the time, I was going through a phase of disillusionment with working life in the corporate world. I didn't mind the high workload, but I began to realize that I didn't like contributing my work to the functioning of large multinational businesses and serving the interests of big business players. So I decided to apply for a Blue Book internship.

I succeeded and in March 2019 I left for Brussels. I didn't know what to expect, as I wasn't focused on EU issues or EU law at the time, but in the end I began to enjoy it immensely. At the European Commission's Directorate-General for Competition (DG COMP), I joined a team that dealt with antitrust law and investigated large businesses that violate competition rules. I basically switched to the other side of the fence. Suddenly, I was on the side of the public interest and began to see a deeper meaning in my work," recalled Jiří Culka.

Motivated by this, he returned to the Czech Republic and later found employment at the Czech Ministry of Justice, where he worked in the international criminal department. He also served as senior ministerial advisor at the ministry during the Czech Republic's EU presidency in 2022. At that time, he also began working on his doctorate. His research focuses on war crimes and crimes against humanity and their prosecution under international law.

When his term at the ministry ended, he headed back to Belgium. He studied at the College of Europe in Bruges until June last year. Now, he would like to see his future in one of the EU institutions, even though he knows that competition in this field is fierce.

Jiří Culka
graduated from the Faculty of Law at Charles University, where he is currently pursuing a doctoral degree in international law. In addition, he completed two other master's degrees at the Faculty of Social Sciences of Charles University, namely International Relations and Balkan, Eurasian, and Central European Studies. He has studied at universities in Durham, Hamburg, Melbourne, and Vienna. He completed a six-month Blue Book internship at the European Commission. He has worked in advocacy and at the Czech Ministry of Justice. He participated in the preparation and organization of the Czech Republic's Presidency of the Council of the EU in 2022. He has recently earned his master's degree in EU International Relations and Diplomacy Studies at the College of Europe as a Czech government scholarship holder.

To implement treatment that is as effective as possible for each individual patient and eliminate the undesirable effects of chemotherapy: these are the goals of Tereza Tesařová, a graduate of the Charles University Faculty of Medicine in Pilsen, who published an article in one of the renowned *Nature* journals.

STORY BY Helena Zdráhalová PHOTOS BY Hynek Glos

Believe in yourself; try to publish in **Nature**

While still a master's student in biochemistry at Charles University's Faculty of Science, she began studying cancer – one of the most common diseases of modern civilization, and the main focus of the pursuit for effective treatments in laboratories all around the world. Tereza Tesařová studied the functioning of cytostatics, which are commonly used to treat cancer, but have the disadvantage of affecting healthy cells as well as cancerous ones. Preventing this undesirable effect was the crux of her work.

"I worked on targeted anti-cancer treatment. We focused on one specific protein that has a cavity inside. When the cytostatic drug enters the cavity, it doesn't get released, so it doesn't have any side effects. But as soon as this specific protein with the cytostatic drug inside approaches the tumour's more acidic environment, it breaks down and the cytostatic drug is released in a targeted manner. In the basic phase of the research, I tried to get the cytostatic drug into this type of protein, investigating how it works and how it is released," explains the talented doctor.

At that time, she was conducting her research under the auspices of the Faculty of Science at Charles University, while her practical work took place in the laboratories of Professor Pavel Souček's team at the Biomedical Centre in Pilsen. Recognizing her talent, they encouraged her to continue her doctoral studies with them and to further develop her promising research work. Today, she works as a junior researcher at the Pharmacogenomics Laboratory, which is headed by Professor Souček. She is involved in the search for genetic biomarkers that can help predict how a tumour will develop in a given patient and how it will respond to treatment. She uses a method called pharmacogenomic analysis, which examines the relationship between genetics and response to drugs.

"I am currently testing new cytostatic drugs, focusing mainly on various predictions – responses to treatment or screening of patients with cancer using transcriptomics," explained the doctoral student, supervised in her research by Radka Václavíková.

The team's research findings may lead to an understanding of why some patients respond well to treatment and others do not, which would make it possible to tailor therapy to specific patients and improve the prognosis for patients with solid tumours, i. e., those that form in the body's solid tissues.

Tesařová praises the facilities available to her at the Biomedical Centre. "As doctoral students, we feel supported in every way. Great care is taken to ensure that we attend all kinds of conferences and are involved in the running of the entire laboratory. What's more, the Biomedical Centre has excellent laboratory equipment," she says.

As the lead author, Tesařová published an article last year in one of the prestigious *Nature* family of journals. The article, *Non-coding transcriptome profiles in clear-cell renal cell carcinoma*, appeared in *Nature Reviews Urology*. How difficult was it to get her study published in such a prestigious journal amid fierce competition? As she herself says, the main thing is to try, believe in yourself, and not get discouraged.

"When I came up with the idea, some people just scoffed and told me to go ahead and try it if I wanted to. So I kept pushing forward, convincing others that it made sense. I think there is still a belief in the Czech Republic that it's not worth trying because it's a waste of time. But we sent it in anyway, and since it was a journal in the *Nature* family, it went quite smoothly, although there were moments when I felt like giving up on the article.

I had to add and rephrase a lot, so much so that you could say I wrote a whole new article during the revisions. But I have to say that the editor was the right person for the job, and the questions she asked were genuinely relevant. In the end, I came away with a very positive experience," says the doctoral student.

Whether she will remain in science for the rest of her life, Tesařová does not yet know. In the future, she would like to focus mainly on teaching new generations, which is why she is already trying to help students with laboratory practicals.

And what has she gained from her doctoral studies? "As a doctoral student, you have to figure out a lot of things for yourself and make your own decisions. That's probably the biggest difference compared to bachelor's and master's studies. But I have a great supervisor, which is a great advantage for me. In general, doctoral studies are conceived more along the lines of 'throw them in the water and let them swim on their own.' But that's good for life!"

Tereza Tesařová, PhD graduated with bachelor's and master's degrees in Biochemistry from the Charles University Faculty of Science, Charles University. She recently obtained her PhD at the Faculty of Medicine in Pilsen, focusing on the early diagnosis of cancer and the personalization of its treatment. She has conducted her research at the Biomedical Centre of the Faculty of Medicine, where she is a member of Professor Pavel Souček's team, who heads its Pharmacogenomics Laboratory. Under the supervision of her advisor Radka Václavíková, she completed her dissertation entitled ***Identification and functional characterization of tumor prognostic and predictive genetic biomarkers in experimental models and patients with solid tumors.*** In 2024, she published an article entitled ***Non-coding transcriptome profiles in clear-cell renal cell carcinoma*** in ***Nature Reviews Urology*** as the lead author.

Slowing down isn't bad. It helped me get into Oxford

"Thanks to internships abroad, I can appreciate the level of Czech science and clinical medicine even more. Our hospital care is completely comparable to that in the West, and sometimes even better," says doctoral student Martin Horák, who flew in from University College London to receive the Rector's Special Award at Charles University.

STORY BY Jitka Jiřičková
PHOTOS BY Vladimír Šigut

Although Martin Horák is "just" a recent graduate of the Third Faculty of Medicine at Charles University, he has already earned a number of superlatives. A few days after the outbreak of war in Ukraine, he and his classmates organized a fundraiser at the faculty to help the attacked country, raising over 80 million CZK. As president, he led the local branch of the International Federation of Medical Students' Associations (IFMSA) and organises the annual Summer School of Practical Ophthalmology. He is also successful in science. During his internship at the University of Oxford, he led his own project focused on the treatment of retinal vein occlusion. His current postgraduate studies at University College London are supported by the Third Faculty of Medicine of Charles University with the prestigious *Donatio Facultatis Medicae Tertiae* grant.

Martin Horák, MD
Freshly graduated from the Third Faculty of Medicine at Charles University. At the outbreak of the war in Ukraine, he organized a fundraiser collecting 80 million CZK for the attacked country. He led the international branch of IFMSA, co-organized the Student Scientific Conference of the Third Faculty of Medicine at Charles University, and co-organizes the Summer School of Practical Ophthalmology. During his internship at the University of Oxford, he led his own project focused on the treatment of retinal vein occlusion. He is currently pursuing postgraduate studies at University College London. At the end of March 2025, he received the Rector's Special Award.

A fundraiser in the kitchen

"I hope not, no," laughs the young doctor when asked if he makes his friends and classmates nervous. "Most of these activities are not something I do alone, but with other people, so it's more of a team effort," he clarifies. "And since medicine stands at the intersection of the humanities and natural sciences, it extends into ethics, making it easier for people to get involved not only scientifically, but also socially and academically."

He organized a fundraiser for Ukraine with four other colleagues. "I remember that moment exactly. The war in Ukraine broke out in February, on a Thursday. We had a genetics lecture in the morning. The teacher tried to give his lecture, while we were all reading Twitter, updating the news, and watching what was happening. It was strange to see life around me going on as if nothing had happened, while at the same time realizing that something truly momentous was happening in the world. The very next day, we went to a demonstration in support of Ukraine on Wenceslas Square, and there, my classmate Standa Skamene and I decided that it would be good to get actively involved in some way. We prepared the concept for the collection on Friday, and over the weekend, our organizational team grew to include classmates and friends Jan Finsterle, Vojta Novotný, and Marťa Horáková," he recalls how quickly the campaign was put together.

In total, the initiative to coordinate donations yielded eighty million CZK, with the money used primarily to purchase medical supplies in coordination with the Ukrainian embassy. "It was amazing to see people's willingness to help, despite their own material uncertainty. It showed me how vibrant and value-driven our civil society is," says Martin Horák, who was already leaning towards ophthalmology at the time of the campaign.

Back with renewed energy

"Ophthalmology appealed to me because of its precision and diversity. Although the eye is a small organ, there are many different specializations. This fascinated me and confirmed that this is the field I want to pursue," explains the young doctor, who is currently completing part of his postgraduate studies at University College London, where he is focusing on the study of corneal dystrophies as part of the Experimental Surgery program. But he is quick to point out that studying medicine was by no means a walk in the park for him, and that in his fifth year he was on the verge of burnout.

He decided to ease up, extend his studies, and change his environment. He applied and was subsequently accepted into a selective program for fifty students from around the world at the University of Oxford, which helped him both professionally and mentally. He cleared his head, gained valuable experience, and confirmed his choice of field.

Support from those around

"Success is never without obstacles and cannot be navigated without help from those around you. It is normal to slow down, accept help, and not neglect yourself and your loved ones for the sake of work and success," adds Martin Horák.

In addition to the two internships mentioned above, he has also studied in St. Gallen, Switzerland, and Vienna. This also helped him realize the strengths of the Czech hospital and scientific environment. "In Czechia, we have really good clinical and scientific facilities, our hospital care is completely comparable to that in the West – sometimes even better, but you usually only realize this when you experience both environments," appreciates Martin Horák. And even now, when he is enjoying his studies in London, he sees his future in Czechia. "I have received tremendous support here from my family, friends, and the institutions where I studied, worked, or otherwise served. It was my stays abroad that showed me how important community and social ties are for a person. I would like to give back at least some of this support to society and enable others to benefit from it as well," sums up Horák.

A question about **female Old Masters** led to major new show

Olga Kotková has been surrounded by Old Masters like Cranach, Rubens, and Škréta for more than 30 years. Since graduating from Charles University, she has worked as a curator at the National Gallery and is now the director of the Old Masters collection.

STORY BY Helena Zdráhalová PHOTOS BY Veronika Vachule Nehasilová

Not long ago she finished preparations for a large and extraordinary exhibition titled *Women Artists 1300–1900* presented during the second half of 2025 at the Waldstein Riding Hall in Prague, which showed how women succeeded in asserting themselves in the traditionally male art world across centuries, and what themes they brought into art.

When did your interest in art begin?
My mother took me and my sister to theatres and galleries frequently. At first, we found it boring *(laughs)*, but a summer job at 16 in the regional galleries department of the National Gallery changed everything. Initially, I wanted to study biology, but that summer job made me decide on art history, instead.

Why did you start your doctoral studies at the Faculty of Education 20 years after graduating from the Faculty of Arts?
At the time of my first studies, I earned the PhDr. degree (a doctoral-level certificate), which was enough then. After university reforms, a full PhD became necessary to lead scientific projects. With two small children, I postponed my studies, but after they started school, I studied Czech and Slovak history at the Faculty of Education. This combination has proven valuable in my work.

What exactly does a curator of the Old Masters Collection do?
Contrary to popular belief, it's not just walking around looking at paintings. The work involves expert research, managing and administration, including legal matters and sometimes even building maintenance – for example, preventing leaks. Curators prepare catalogues, organise exhibitions, and accompany artworks during transportation, often spending hours on trucks or airplanes to ensure the safety of the pieces.

How do you approach understanding old paintings?
You need to study the historical context, artistic techniques, themes, and the environment of the period. Details matter: the hands in paintings are especially telling, because the master usually painted faces and hands himself, while the workshop painted the rest. The backs of paintings can also reveal clues, such as signatures or changes made over time.

Why are you so interested in the hands of the figures in the painting?
Painting a good hand is true mastery. Usually, the master himself painted the main parts – especially the face and hands – while the rest was done by his workshop. When I see hands that look rubbery or as if the figure is wearing gloves, I immediately think the workshop was involved, or that the entire painting might be a workshop piece. It also makes me wonder whether it could be a later copy or even a forgery, which does sometimes appear, even in old art. However, I avoid using the term "forgery" until restorers and chemists have examined the work. ↪

Olga Kotková, PhD has been a curator at the Czech National Gallery's Old Masters Collection since 1990 and its director for three years. She specialises in German, Austrian, and Dutch painting and sculpture from the 15th and 16th centuries, as well as Rudolphine and Flemish painting of the 17th century. She also lectures on Art History at the Catholic Theological Faculty of Charles University.

I expect that you work a lot with specialists?
You'd be surprised how many people I've worked with. Besides the restorers and chemists who work here at the gallery, I often have to consult experts from other fields. For example, a key procedure in Dutch art research is dendrochronology – a scientific method for dating wood based on tree ring analysis. But we also consult specialists about the subject matter of a painting. For instance, in our collection, we have a portrait of a musician with musical notation visible in the background. Since it's a Dutch painting, I reached out to several musicologists and eventually to Professor Ignace Bossuyt from the University of Leuven, who was able to pinpoint the exact five-year period the notation corresponds to.

When I was preparing the exhibition of Roelandt Savery, a painter who worked for Rudolf II and depicted various animals, colleagues from the National Museum helped me a lot. I especially needed bird specialists, since his paintings feature many parrots and cockatoos. I also consulted entomologists. We often collaborate with botanists, fashion experts, historians, and specialists in historical objects, daily life, or applied arts, who can tell you when and where certain items – like the dishes shown in a painting – were used.

It almost sounds like detective work …
When I was preparing the exhibition of Lucas Cranach the Elder, I also worked with a painting from our collection that shows a girl staring blankly ahead, holding a green plant in her hand. Nobody was quite sure what to make of it, and some even said that Cranach – or any good painter – would never have painted it that way. So I started investigating. I found out that the portrait was created by mechanically transferring the girl's likeness from a drawing onto the painting using tracing paper. What stood out was the girl's vacant stare and the plant she was holding. My experience told me that the plant was the key to understanding the painting. That's why I reached out to the Berlin botanist Eckhard von Raab-Straube, who also studies the history of botany and medicine. He explained that it wasn't an ordinary fern but a resurrection plant *(Selaginella lepidophylla)*, which has a remarkable trait – it withers when dry but turns green again when watered. Bingo!

It was a reference to resurrection. The portrait was painted after the woman's death as a memorial. The plant symbolised eternal life. This explained her empty gaze as well. Such a small detail became the key to understanding the entire work. Every art historian must constantly seek answers. It's very rare that a painter would include something randomly in a painting. This mostly happens with copies, when the copyist doesn't correctly understand an originally meaningful element. Objects and plants depicted in paintings almost always carry significance. The people who commissioned paintings in the 16th and 17th centuries were highly educated, and this was reflected in the artworks.

How do you update the Old Masters for a contemporary audience?
Old art is primarily about interpretation. An exhibition must be expertly curated but also tell a story that engages the public. If you just hang a few old paintings on the wall, no one will come. Sometimes, though, it's a real challenge.

I believe that a large state institution like the National Gallery should not give up on specially targeted exhibitions that, in turn, attract great international attention. A good example was our Roelandt Savery exhibition. When foreign galleries organize shows including his works, they still consult us to this day. Thanks to efforts like this, the National Gallery recently participated in the Rudolfine Art exhibition at the Louvre in Paris. Globally, the National Gallery is relatively small, but through such projects, we place ourselves among the top-tier museums, like the Louvre.

This time, you are building a story around women artists. What can we expect from the newly opening National Gallery exhibition?
You probably noticed the posters for our permanent exhibitions, *Old Masters I* and *Old Masters II*, as you came into Šternberk Palace. I walk past them every day and often wondered, "Where are the female Old Masters?" The idea attracted so much attention that the National Gallery's top management suggested the topic deserved a larger project. I accepted the challenge and prepared the exhibition *Women Artists 1300–1900*.

The life roles and paths of women artists were very complex, and they truly had to fight to claim their place. First, we want to show that female Masters existed and were perhaps overlooked. The National Gallery has extensive collections of Italian and Dutch art, so we chose to highlight the works of women from these regions and present the situation in Central Europe.

It is remarkable how active convent sisters were, creating beautiful works of art in monasteries. In contrast, it may surprise some that women in the Czech lands could not lead painting workshops. A woman could only become a master of a workshop if she was a widow. Official art education for women here only began after the founding of Czechoslovakia, when, around 1918–1919, women were first admitted to study at the Academy of Fine Arts. Some women even used male pseudonyms to avoid scandal while working. It was only at the end of the 19th century that female artists in our country ceased to be seen as curiosities and began receiving recognition.

Which story of a woman artist featured in the exhibition is your personal favourite?
A real highlight is a painting titled *The Chess Game*, created by the Italian painter Sofonisba Anguissola from Cremona. Sofonisba came from a noble family – she had five sisters and one brother. Their father was highly educated and ensured all his children received a good education. Sofonisba wasn't interested in marriage; she devoted herself entirely to caring for her siblings and to painting. Even Michelangelo admired her work. Later, she worked for the Spanish king Philip II, who held her talent in high esteem. He even arranged a marriage for her to provide stability so she could continue creating art.

In *The Chess Game*, she depicts her younger sisters playing chess. What makes it so interesting? At the time, chess was considered an intellectual pursuit primarily for men. By showing her younger sisters engaged in the game, Sofonisba made a subtle statement – that even "little girls" could handle something intellectually demanding.

Do you surround yourself with art at home as well, or do you prefer bare walls to rest your eyes?
I often visit exhibitions even in my free time, but I'm very selective. I'm also careful about what I allow into my own home – no oil paintings are allowed there! *(laughs)* I have some beautiful old prints, a stunning antique map, and a drawing by a contemporary Dutch artist. At home, I also pay close attention to lighting – no direct sunlight on anything!

But when I really need to clear my head, I go to the mountains. There's nothing more beautiful than looking out over the snow-covered Alps or the Czech Giant Mountains.

Memory studies is about the future

Memory is not just a slippery function of the human mind. At the heart of memory studies – a still relatively young field at the intersection of the social sciences and humanities – are the memories of cultures and nations, shaped by shifting generational narratives and historical emotions. The field explores how societies relate to the past and how the meanings of that past evolve in the present. It takes a deeply interdisciplinary approach, drawing on history, sociology, anthropology, psychology, film and literary studies, as well as artistic research.

STORY BY Jan Borek PHOTOS BY Veronika Vachule Nehasilová

A leading memory studies scholar, Prof. **Joanna Wawrzyniak** from the University of Warsaw, is a founding director of the Center for Research on Social Memory as well as former President of the Memory Studies Association. During MSA's annual conference in Prague, held in mid-July, Joanna Wawrzyniak kindly agreed to share her insights and talk about the current challenges at the heart of memory studies.

What exactly is memory studies? What does it deal with?

What memory scholars do isn't always immediately obvious. Many people outside the field associate memory with psychological workings of the mind and may assume we're cognitive psychologists. But memory studies is less concerned with individual cognition and remembering. Memory studies focuses above all on how representations of the past are formed, maintained, and contested within societies. It explores the cultural, political, and historical dimensions of memory: how the past is mobilised in the present. At its core, memory studies asks, who uses the past, for what purposes, and in which contexts?

The foundation of memory studies is inherently interdisciplinary. To understand how the past operates in the present – and how our individual memories connect to broader patterns of remembering – we need insights from sociology, anthropology, history, literature, political science, and beyond.

How does your own academic work and experience fit into this broader field of memory studies?

I'm from Warsaw, not far from Prague, in a region where the past is not only ever-present but also highly contested. For decades, people here have grappled with complex legacies – of empires, occupiers, wars, dictatorships, resistance, and silence – often under shifting political regimes that shaped how history was told. In this context, memory studies offered me a language and a framework to explore how societies in Eastern and Central Europe confront, negotiate, or avoid difficult pasts.

That's why the Memory Studies Association is so important. It connects scholars from Latin America, Africa, Asia, and other parts of the world who are asking similarly urgent questions – though in different historical and cultural settings. ↪

Memory studies allows us to draw comparisons and reflect on how societies reckon with past violence, injustice, or rupture – not only to understand those pasts better, but to inform how we live with them in the present and respond to them in the future.

Could we say, then, that memory studies is a kind of "applied history"?
That's a nice way to put it. But I'd add that it's very difficult – rather impossible – to fully grasp how the past really was. Historians work with available evidence to reconstruct events and offer interpretations, but they're also well aware that history is always written from a particular perspective. In memory studies, we shift the focus from what happened, to how people *remember* what happened. That's why we sometimes say memory studies is history to the second degree: we study how the past is used, represented, and made meaningful in different contexts.

We explore the narratives people construct, how they use the past in the present, and how their interpretations of the past shape politics or cultural expression. Our role as memory scholars is to study how the past is mobilised in different contexts – to understand why it matters and how it functions in society. This also means examining not just how people remember what they experienced, but how they *imagine* the past – their own or that of others – and the meanings they attach to it.

You mentioned people "imagining" the past, not just experiencing it. That is not the same, is it?
Actually, there's an ongoing debate about what *experience* really is. What we call experience is never raw or untouched. We live through experience, yes – but to make sense of it, we have to represent it, whether through stories, images, rituals, or other forms. In that sense, all experience is constructed to some degree. So memory studies is about how the past is *represented* – how people give shape and meaning to what they've lived, or what they think others have lived, through cultural forms.

The current state of affairs throughout the world seems more than ripe for future re-consideration or reflection, research, conferences and publications. How do you, with your expertise, view this future "material" unfolding in the present?
The field of memory studies has historically developed in close dialogue with Holocaust scholarship and human rights discourse. That foundation remains vital, but recent years have brought an important debate – sparked by scholars such as Michael Rothberg and A. Dirk Moses – about how we approach comparisons between different histories and memories of mass violence. This so-called *comparability debate* raises difficult but necessary questions: to what extent can, or should, the Holocaust be compared to other genocides, including those unfolding in the present? One of the key challenges for our field – and for policymakers as well – is how to expand our analytical frameworks beyond a Eurocentric lens, while still learning from the historical legacy of the Holocaust.

In a sense, memory studies has always been concerned with how societies make sense of extreme violence. But moments like these compel us to reflect on how the field itself must evolve – to remain relevant, globally attuned, and sensitive to the diverse contexts in which memory is being shaped today.

One might imagine "memory studies" as being in an archive and wading through old stuff. But it is in fact a study focused on the *present*, correct?
Even more than that – we often say memory studies is about the *future*. To have a past is to have a future. Societies without a usable past often struggle to imagine what lies ahead. Memory shapes the possibilities for action, identity, and hope going forward.

Is there something we can take away from the findings and outcomes of memory studies? We know of the saying, "those who don't learn from history are doomed to repeat it." But can you give an example of an application beyond academia?
Memory studies is very much practice-oriented. Some of us collaborate closely with heritage professionals, museum curators, oral historians, educators, and artists. For example, the Memory Studies Association has an active working group called *Museums and Memory*, which examines how museums around the world represent the past – a task that is both deeply practical and deeply political.

One of the key contributions of memory studies is that it cultivates *awareness*. It invites us to ask: how is the past constructed? Who gets to tell the story? Most of us are taught in school that "this is how it was" – a single, authoritative version of history. But when you travel to another country, visit a museum, or read a history book written from a different perspective, you often discover a strikingly different account. That's a reminder that history is always told from somewhere, and that memory is shaped by context, politics, and emotion.

What we do in memory studies is analyse the mechanisms and strategies behind those representations – how they are created, circulated, and contested. While not all of our work is directed at the general public, it has direct relevance for those who are: teachers, museum professionals, cultural practitioners, journalists, and others involved in shaping public understanding. In that sense, memory studies doesn't just study the past – it contributes to how societies *live with* their pasts, and how they imagine their futures.

Professor Joanna Wawrzyniak,
associate Professor of Sociology at the University of Warsaw and founding director of the Center for Research on Social Memory, is a leading figure in memory studies, specializing in oral history, museum representation, and the collective memory of socialism, neoliberal transformation, and deindustrialization. Her extensive publication record includes co-authored and co-edited works in English such as *Veterans, Victims and Memory: The Politics of the Second World War in Communist Poland* (2015), *The Enemy on Display: The Second World War in Eastern European Museums* (2015), *Memory and Change in Europe: Eastern Perspectives* (2016), *Regions of Memory: Transnational Formations* (2022) or the recent *Remembering the Neoliberal Turn* (2023) co-edited with Veronika Pehe, as well as award-winning Polish edition *Cięcia. Mówiona historia transformacji* (2020). She also co-chairs the *Slow Memory* COST Action, where – together with Jenny Wüstenberg, Kateřina Králová, and scholars from nearly all EU countries – she explores long-term memory processes related to the environment, deindustrialisation, welfare, politics and conflict.

Museums then play an important role educating the general public as well, also providing a view of the past.
Absolutely – they offer narratives of the past that reach far beyond academic circles. Museums tell stories through objects, images, and exhibitions that shape public understanding of history.

Education more broadly is a key area for us as well. At this conference, for instance, we've had several sessions on how history is taught in schools – how national narratives are constructed, what is included or left out, and how students engage with difficult pasts. Memory studies contributes to these conversations by offering tools to reflect on how the past is presented and how it might be taught in more inclusive, critical ways.

There is surely a feeling of responsibility on the part of memory institutions, not least in safeguarding and cultivating the past. You've just talked about the way museum can shape, protect, or "gatekeep" history. What are some of the current challenges in this regard?
One of the biggest challenges today, in my view, is the global rise of populism. These movements are highly strategic in their use of the past – they understand its political power and often mobilise memory for antagonistic or revisionist purposes. What makes this particularly complex is that they, too, rely on institutions like museums and schools to frame and legitimise their narratives.

In countries like Poland, I can easily imagine nationalist forces returning to unresolved or painful episodes – such as hostile moments in Polish–Ukrainian relations – to stoke division. These are not just abstract concerns; when revisionist versions of history become politically weaponised, they pose real dangers.

Fake news and conspiracy theories add another layer to the problem. Many of them rely on distorted or entirely fabricated histories, making it even harder for the public to distinguish between credible and manipulative narratives.

If you had to offer the general public one insight from memory studies, what would it be?
That memory isn't simply something we inherit – it's something we *construct*. By becoming more aware of how representantions of the past are shaped and circulated, we can better understand the forces that influence our societies today – and make more deliberate choices about the kind of world we want to live in.

Alatyr, son of Tolkien

Jan Alatyr Kozák, PhD is a graduate of the Faculty of Arts at Charles University, where he studied Latin and religious studies. He currently teaches at the Department of Philosophy and Religious Studies, specialising in pre-Christian Scandinavian religion, myth theory, and its interpretive history. He also explores modern mythologies, conspiracy theories, conspirituality, and pop culture. He is the author and co-author of several monographs, including *Óðinn: Myth, Sacrifice, and Initiation* (2018) and *Monomyth: A Synthetic Treatise on Myth Theory* (2022). His debut novel *The Saga of Lundir* won the 2024 Magnesia Litera award for fantasy. He also practises historical fencing.

It was a formative experience that opened a gateway into another world. Shortly before the Velvet Revolution, when he and his brother were boys, his parents brought home a samizdat translation of Tolkien's *The Lord of the Rings*. They began reading the book aloud to their sons at bedtime. They probably didn't expect it would change Jan's life.

STORY BY Helena Zdráhalová PHOTOS BY Michal Novotný

"My mum is an antiquarian, we always had loads of interesting books at home. But when my parents got hold of a samizdat copy of *The Lord of the Rings*, it was something extraordinary. We never had mediaeval manuscripts at home, but this was something similar – just from the 1980 s, typed on a typewriter, a blurry nth-generation copy. They read it to us like people read the Bible. I was captivated by Tolkien's escapism and the feeling that normality is, at its core, oppressive – but through a barred window, one might still glimpse a radiant world. It was a secret book that no one else had at the time, yet it was ten times better than anything else. That's when I said to myself: I'd like to one day awaken in others what *The Lord of the Rings* awakened in me."

There and back again

J. R. R. Tolkien took Jan A. Kozák to a world from which there was no return – a world of fantasy. He even jokingly refers to Tolkien as his 'third parent.' "I didn't start writing straight away. As a child, I used to draw various labyrinths and design board games. When I was about 13, I had a high fever and found myself in a world that offered me a welcome escape from my illness. It became my safe place, around which my fantasy world began to crystallise," recalls Kozák who chose the fictional name Alatyr to distinguish himself from namesakes. Alatyr is an Old Slavic and Old Russian distortion of the Greek name for amber – a legendary stone from which rivers are said to spring, and which fascinates him.

As a secondary school student, he read not only fantasy and sci-fi but also Carl Gustav Jung, Ladislav Klíma, and Friedrich Nietzsche. His father was interested in Eastern philosophy, and they studied Sanskrit together. Naturally, this led Jan to the Faculty of Arts at Charles University, where he focused on Latin and religious studies. He became increasingly fascinated by ancient languages, learning Ancient Greek and Biblical Hebrew, before turning his attention to Northern Europe and learning Old Norse.

"I spent many years studying dead languages. Even while reading academic literature or listening to lectures and making notes about Roman religious practices, my brain would run parallel fan fiction. I'd immediately start imagining what it would be like if the Romans had a different culture – what if, for example, the Vestal Virgins weren't just one cult among many, but the central one? That's how fantasy worlds form in my mind – worlds rooted in reality. This is how I function all the time. I let myself be 'possessed' by a ritual or symbol, and in my imagination I let it blossom, reveal its hidden potential," he explained.

Today he teaches at the Department of Philosophy and Religious Studies at Charles University. Alongside ancient myths, he also studies modern ones – conspiracy theories and pop culture, which he calls the myths of the 21st century. In 2021, he co-founded the research group Conspirituality, whose aim "is not to debunk conspiracy theories but to understand how they form and function, much like religion scholars do with faiths and mythologies," as explained on their website.

The World of Qurand

Alongside the exacting world of academia, he gradually created his own world full of legends and magic, where he or those who join him set the rules. He named it Qurand, and it draws inspiration not only from Tolkien's Middle-earth but also from Persian and Indian traditions – and, of course, from Norse mythology. For a time, it existed only through the website Siranie.net, maintained by Kozák and a group of collaborators, named after one of the lands of Qurand. Encouraged by a friend, Kozák eventually shared his writings with a publisher. The result was *The Saga of Lundir: Son of Winter, Stargazer and Builder*, published by Malvern, which unexpectedly earned him the Magnesia Litera award for fantasy in 2024.

The Saga of Lundir introduces readers to a meticulously developed world populated by humans, elves, wizards, and various dark creatures. Part encyclopaedia, part fictional narrative, it includes an inserted map and academic-style commentary. Kozák does not appear as the book's author but – as a nod to Czech humourist Jára Cimrman – as its translator and scholarly annotator. The ruse worked so well that some bookshops and libraries filed it under "myths and legends" or even "history." Kozák is able to imitate the saga style perfectly, thanks to years of study. In fact, he prepared and annotated the first Czech translation of the *Saga of Hervor*.

Although Jan A. Kozák continues writing academic texts and is also undergoing psychotherapeutic training – both of which demand a lot of his time – he is working on further instalments set in Qurand. "The seeds of the next saga are already sprouting. So, we're probably not leaving this world any time soon. But I definitely won't go the route of typical fantasy, of which there's far too much these days. I want to keep experimenting with style!"

There is nothing like climbing **Everest**

“I just wanted to see what it’s like up there. I was curious,” explains Eva Perglerová, a graduate of Charles University Faculty of Medicine in Pilsen, where she now teaches. It’s this curiosity that fuels her drive to climb the world’s highest mountains. “Perhaps even more important to me is the journey I take to reach my goal. When everything goes well, it’s beautiful,” she says.

STORY BY **Marcela Uhlíková** PHOTOS FROM **Eva Perglerová’s archive**

Her determination – bordering on stubbornness – is something her family has long come to expect. And the fact that her travel calendar is booked up two years in advance? That's par for the course. It's the only way she can juggle her dental practice, medical training, and climbing expeditions. A native of Přeštice, she traces her passion for adventure back to 1997, when, as a medical student in Pilsen, she travelled to Colombia to treat indigenous communities and climbed Pico Cristóbal Colón, the highest mountain in the country (5,775 metres above sea level). As she tells *Forum*, she's still relishing regular doses of travel and mountains to this day.

With a vibrant personality and infectious positivity, Eva is already planning more unforgettable experiences – not only in the highest altitudes but also deep below: "To live a happy life, I need a meaningful job, a strong family support system, and time for my hobbies," she reflects.

The Magnificent Seven

Since the spring of 2022, Eva Perglerová has ticked off one of her most coveted achievements, becoming only the third Czech climber to summit Mount Everest (8,848 metres) on 24 May 2023. Yet, in more than twenty-five years of mountain obsession, she had already conquered several of the world's highest peaks. These included Kilimanjaro (5,895 metres) in Africa, Puncak Jaya (also known as Mount Carstensz or Carstensz Pyramid, 4,884 metres) in Indonesia's Papua province, Mont Blanc (4,807 metres), the highest mountain in the Alps and Western Europe, Mexico's Pico Orizaba (5,636 metres), Ecuador's Chimborazo (6,263 metres), Cotopaxi (5,897 metres), and South America's highest peak, Aconcagua (6,961 metres). Many of these peaks are part of the famed "Crown of the Planet," or the Seven Summits – the collection of the highest mountains across each of the seven continents.

Reaching the very top

"You just can't go any higher!" Eva laughs, recalling her triumph in 2023 as part of the Madison Mountaineering Mount Everest expedition. Climbing the world's highest peak had been a dream since childhood, when she first gained a love for mountains while climbing with her father. Almost a decade of preparation went into her attempt to conquer the 8,000+ metre giant. For a long time, she wasn't sure she had what it took. "The most important thing is to want it, to be physically fit, and to be resilient – not to fear the challenges and to endure long-term discomfort," Eva explains.

A year ago, in January 2024, Eva achieved another significant milestone in her climbing journey: summiting the Vinson Massif (also known as Mount Vinson, 4,892 m). While it wasn't the most physically challenging climb, facing temperatures as low as –40°C (feeling like –55°C) made it a unique adventure. During her eight-day journey on cross-country skis, harnessed to a 60-kilogram sled, she listened to the Cimrman play *The Conquest of the North Pole*. She celebrated Christmas with a tree made of skis and poles, and New Year's Eve with a box of wine for a midnight toast.

To complete the Seven Summits challenge, Eva needed to summit Denali in Alaska, which she prepared for with a disciplined training routine: running 80 kilometers a week, swimming, cycling, and running on a treadmill in the evenings (albeit without the oxygen mask she had used for Everest). A few months later, on July 4, 2024, at 7:30 a.m., she reached the peak of Elbrus in the Caucasus (5,642 m), successfully completing one of the world's most renowned and gruelling challenges.

At least one tooth …

Eva sees a connection between her career as a dentist and her mountaineering pursuits. On expeditions, she often assumes the role of the team doctor, sometimes even stitching up others when necessary. "The mountains are the best psychotherapy: they make me look forward to going back to my dental practice and teaching dental students much more. But the reverse is also true: I would love to drill – at least one tooth while away!" she laughs. To ensure she never lets her patients down when she's home, she practices on weekends or evenings, though she also has a dentist who steps in while she's away. "When I come back from the mountains, on the way back from the airport, I already know there's a patient waiting for me in the chair. The physical return to reality is very quick," she reveals.

Eva is deeply grateful to the Pilsen faculty for shaping who she is today. "I appreciate the people there, the heads of the dental department, and all the teachers who helped me become a dentist. I feel it's my duty to pass on that knowledge. Teaching also strengthens my everyday practice." She believes the key to good patient care lies in common sense and humanity, and not just accumulating 'vast amounts' of knowledge.

Pushing the envelope

Her love for mountains runs in the family. "I come from a hiking and boating family. As kids, we were involved in many sports. Before, you couldn't just go anywhere; the most my dad could do was go to the Alps. But by 1989, things had changed, and I could finally satisfy my curiosity." Has she reached the limit of her physical strength? "I've waited for it to come a few times, but it never has. I don't even know where the limit is. You know what the runner Emil Zátopek said: 'If you think you can't continue, you still have 75% of your strength left.' I believe I have reserves. All the difficult climbs and challenges came at the right time. Every experience, good or bad, makes you stronger, and you're ready for even greater challenges."

Conquering Everest

- The ascent was divided into three acclimatisation phases. During the first eight days of the trek, the team reached base camp at 5,400 m above sea level. This was followed by climbing Mount Lobuche East (6119 m) and then building high altitude camps and taking out equipment and luggage, this is called rotation.
- During the first day of the actual climb, the climbers went to the second camp, after a day of rest to the third camp (7200 m), and the next day to the fourth camp. The final assault from the 4th altitude camp (7950 m) started on 24 May 2023 at 2 a.m. local time, after a short snowstorm. In about eight hours (it was a few minutes after six in Europe) Eva Perglerová and her personal Sherpa Dhana Diaries stood on the summit. And they spent 45 minutes there!
- "The view was beautiful; we were lucky with the weather. You stay silent for a while, attach a prayer flag for good luck, I still managed to show the beauty to my talismanic stuffed animals while waiting for my colleagues, and then you climb back down. You're in the death zone and there's at least an equally challenging descent back to the fourth site," explains the climber. She firmly rejects the idea that climbing Everest is anything like 'a cakewalk': "That's something only someone who has never been there could say." It is common knowledge that many factors can lead to expeditions having to abort – from sudden weather changes to overcrowding to adverse health effects and poor planning combined with a lack of time. She told *Forum* that only around 20 percent of climbers actually summit.

Eva Perglerová, MD comes from Přeštice. After graduating from the Gymnasium of Jaroslav Vrchlický in Klatovy, she studied dentistry at the Faculty of Medicine in Pilsen, Charles University. She had applied to several faculties, including Education, Chemical Technology, and Medicine, and got into all of them, choosing dentistry. "I've never regretted it, and I still enjoy it immensely," she admits. She confesses that her biggest vice is difficulty in time management: "I never keep up with anything and I'm always late. I try to arrange ten things in one hour, believing I can make it, and then I end up a little frustrated."

Life at CU

Cardinal Kurt Koch received honorary doctorate

8/1 The awarding of this title to Cardinal and Bishop Emeritus of Basel Kurt Koch was proposed jointly by all three theological faculties of the University, i. e. Evangelical, Hussite and Catholic, for the promotion and development of dialogue between Christian denominations and between Christianity and Judaism.

Portuguese President met with rector and students

6/2 President Marco Rebelo de Sousa and Rector Milena Králíčková discussed the possibilities of deepening cooperation between Charles University and the University of Coimbra. The president also met students from Portugal at the Carolinum; more than a hundred Portuguese nationals are currently studying at CU, in various study programmes across all faculties.

Great science, top sport, educational campaigns – the best students have won awards

31/3 Interesting scientific topics, excellent study or sporting results, as well as community activities and helping others, were all recognised by the Rector of Charles University Milena Králíčková, who presented awards to students from Charles University for their extraordinary activities.

Charles University retained prestigious HR Award

12/6 As the first university in the Czech Republic, CU has successfully retained the prestigious HR Excellence in Research Award, granted by the European Commission to institutions that adhere to the principles of the European Charter for Researchers. “This award confirms that Charles University provides a high-quality, open, and fair environment for everyone engaged in science and research,” said Vice-Rector Věra Jourová.

CU hosted 4EU+ Migration & Health Days

19–20/6 This interdisciplinary event, dedicated to exploring the impact of migration on health, access to healthcare, and the impact of migration on national and global health systems. It brought together not only representatives of the university alliance but also key experts, policymakers, UN, WHO and NGO representatives.

Timothy Garton Ash received honorary doctorate from CU

9/10 Oxford University professor, world-renowned historian and political commentator Timothy Garton Ash has made a significant contribution to the understanding of the history and political events of Central and Eastern Europe, particularly the former Eastern Bloc countries. Not only a respected academic but also an influential public intellectual, he has been a vocal advocate for free speech, democracy, and human rights. In his speech, he emphasized the importance of truth and recalled the long-lasting historical ties between the universities of Oxford and Prague.

Innovation in Healthcare conference

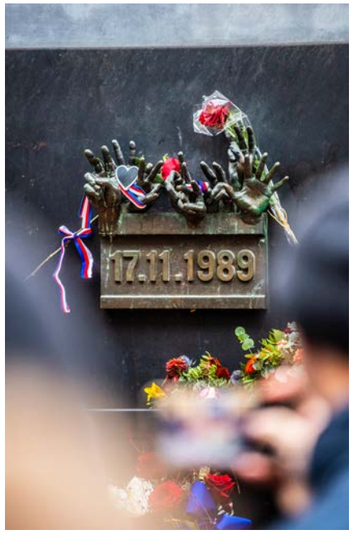
14/10 On October 14, the historical Carolinum saw the Innovation in Healthcare Conference, continuing the long-standing partnership between Lahey Hospital and Medical Center in Boston, the University of Massachusetts, and Charles University. Medical experts from these and other institutions offered their insights into innovation and education in medicine, current trends and projects in healthcare innovation.

Jiří Zima elected as new rector

31/10 The Academic Senate of Charles University elected professor Jiří Zima as candidate for rector for the 2026–2030 term. Zima, an analytical chemist from the Faculty of Science, bested the current rector, Milena Králíčková, by gaining 40 votes in the second round. Twenty-seven senators voted for Králíčková. The new rector will take office on 1 February 2026, after being appointed by the President of the Czech Republic. "I want to be a rector of all the faculties and the entire university community," Zima declared in his speech.

Freedom cannot be taken for granted

17/11 Czech universities commemorated the legacy of the turbulent student protests of 1939 and 1989 with memorial ceremonies throughout Prague. Representatives of the academic community, students, and the public emphasized that freedom and democracy cannot be taken for granted and must be actively defended. In her speech, President of the European Students' Union Lana Par called on students across Europe to continue to speak out, stand up for the oppressed, and defend democratic values wherever they are threatened.



CU awarded honorary doctorates to two renowned medical scientists

3/12 Cardiologist and Rector of Semmelweis University in Budapest, Professor Béla Péter Merkely, and virologist at the University of Leuven, Belgium, Professor Marc Van Ranst received the titles of doctor honoris causa for their extraordinary contributions to the field of medicine as well as their long-time cooperation with Czech researchers.

Hot on the trail of a new cancer treatment

Monika Holubová, PhD graduated in Biology from Constantine the Philosopher University in Nitra. Defended her dissertation at the Czech University of Agriculture. Worked as a postdoc at Imperial College London for one year. Today, she heads the Laboratory of Tumour Biology and Immunotherapy at the Biomedical Centre of the Faculty of Medicine at Charles University in Pilsen and the Laboratory for Preclinical Research at the Department of Hematology and Oncology at the University Hospital Pilsen. At the turn of 2023–2024, she was one of the first two Czechs ever to graduate from the Clinical Science Scholars Program at Harvard.

They are referred to as the immune system's special forces. Their main task is to kill and control. Among the world's pioneers in iNKT cell research is the Laboratory of Tumor Biology and Immunotherapy at the Biomedical Centre of the Faculty of Medicine in Pilsen, led by Monika Holubová.

STORY BY Helena Zdráhalová PHOTOS BY Michal Novotný

Invariant natural killer T cells, or NKT cells, are named after one of their main functions – killing. In a healthy human body, they make up only a tiny part of the immune system, tasked with destroying anything that does not belong in the body, and supporting other components of immunity. They have been known for about thirty years, but only recently has the scientific community begun to take a keen interest in them.

"Research into these cells has only developed over the last fifteen years or so, because they are such a tiny fraction of the immune system that is difficult to grasp and detect. Thanks to the development of new instruments and reagents, we are able to better identify and characterise these cells and determine how important they are in various pathological states. It turns out that even though their population is tiny, it is highly significant for immunity," explained Monika Holubová. This is precisely where their potential lies for the possible treatment of the most serious diseases, such as cancer, severe COVID-19, and various autoimmune disorders. Unlike traditional chemotherapy, which can be toxic and ineffective, iNKT cells can precisely target and eliminate resistant tumour cells.

Monika Holubová's group has a long-standing collaboration with a research team at the University of Pennsylvania and data analysts at the University of West Bohemia in Pilsen. Together, they also founded the CiRT research consortium in 2024, which aims to bring together world-class experts engaged in iNKT cell research, raise awareness in scientific communities about the extraordinary potential of these cells in the field of treatment, and proceed from laboratory research to clinical trials. However, Monika Holubová also believes that no scientific team can function well without supporting emerging talent. That is why her laboratory is open and encouraging to doctoral students who wish to participate in her research.

One of the paths that the international team would now like to pursue is therapy based on so-called CAR iNKT cells, which would use healthy cells from donors for treatment rather than the patients' own cells, which may be weakened after previous chemotherapy or may have suppressed immunity.

CERGE-EI Anniversary

35 Years of Ideas That Matter

CERGE-EI (Center for Economic Research and Graduate Education - Economics Institute) is a joint workplace of **Charles University** and the **Economics Institute of the Czech Academy of Sciences**, combining the strengths of a leading university and a top research institute.

ranked in the top **5%** of the research institutions worldwide

3 European Research Council (ERC) grants

20+ permanently faculty members

3 Nobel laureates in the Executive and Supervisory Committee

650+ graduates

students from **58** countries

Graduates work in **40+** countries

There will be several academic and community events to mark the anniversary. Please follow our website for updates and detailed information.

CERGE EI

“Medicine makes it easier for people to get involved not only scientifically, but also socially and academically,” explains Oxford intern and CU graduate his motives behind an 80-million CZK fundraiser for Ukraine.

Martin Horák:
Slowing down isn’t bad. It helped me get into Oxford **44**

Charles University