

Tereza Šustrová, Vasil Kostin and Markéta Kocmanová received the Government Award for Gifted Students

The Science, Research and Innovation Minister Marek Ženíšek handed out the 2023 Government Awards for Gifted Students on 16 September in the Straka Academy. In this edition, the government award was newly expanded to three categories: the prize is granted to students of secondary schools, of bachelor's or master's and of doctoral degree programmes, who have shown extraordinary talent and interest in research or scientific work.

“The Government Award for Gifted Students serves not only as a reward for exceptional success in science and research but also as symbolic recognition. All three laureates have shown exceptional talent and have achieved success that would be considered significant even by more senior scientists and researchers. As a society, we should care for such talents and reward them, and so I am pleased that the government award contributes to such recognition. We could spend endless sums on science and research but it would be to no avail without talented young people with zeal for their field,” said Minister Ženíšek during the ceremonial act.

The 2023 award was granted to **Tereza Šustrová** from Grammar School Brno (category of secondary and post-secondary vocational school students), **MUDr. Vasil Kostin** (category of bachelor's or master's degree programme students) and **Mgr. Tereza Kocmanová, Ph.D.** (category of doctoral degree programme students), both from Charles University.



The Science, Research and Innovation Minister Marek Ženíšek with the laureates of the 2023 Government Award for Gifted Students, 16 September 2024. Photo: Office of the Government of the

Czech Republic

“Although the areas of research and the scientific paths of all three laureates differ in many aspects, they have much in common - they have achieved excellent results already during their studies, they succeeded in keen international competition, they have a team spirit, but also they gladly share their knowledge with others and help when needed. And there’s one more thing I want to point out as it is very important for fostering more of such promising scientists - it is the strong family support and inspiring teachers,” said in his laudation Petr Dvořák, Vice-President of the Czech Rectors’ Conference and Rector (President) of the Prague University of Economics and Business.

The 2023 Government Award for Gifted Students had 47 nominees. The interest in participating in the call and the generally high quality of the proposals clearly prove that there are many young people involved in research with demonstrably beneficial results already during their studies.

Apart from the families of the awarded students, the award ceremony was attended by members of the Research, Development and Innovation Council chaired by Minister Ženíšek, representatives of the science and education committees of both chambers of the Parliament, presidents of the Grant Agency (GA CR) and the Technology Agency of the Czech Republic (TA CR), chair of the Science Council of the Czech Academy of Sciences and other important representatives of the academic community.

Laureates of the 2023 Government Award for Gifted Students

The awarded students studied at the above-listed institutions at the time of the nomination call.

Tereza Šustrová completed the Brno Grammar School and is interested in bioluminescence. Led by Dr Martin Marek from Loschmidt laboratories in the RECETOX institute and at the Experimental Biology Department of the Faculty of Science, Masaryk University, she explores marine luminescence of deep-sea shrimp and its use in biotechnologies, medicine or engineering of alternative light sources. Specifically, Dr Marek’s team, that includes Tereza, studies the structural biology of various bioluminescent proteins. Using various methods from molecular biology to physics, the team has unravelled the structure of one of the smallest yet most powerful enzymes - the nanoluciferase, and improved it to make it usable more easily in further research as well as in the above-mentioned potentials of bioluminescence, the mechanism of light emission by living organisms. The research was published in the Nature Communications journal.

In September 2024, Tereza Šustrová started studying general medicine at the Masaryk University.

MUDr. Vasil Kostin completed the General Medicine degree at the Third Faculty of Medicine, Charles University. During his studies, he departed for 11 foreign internships in 8 countries, including a humanitarian mission in Kenya (Itibo project of the ADRA NGO). Currently, Vasil is enrolled in a doctoral programme at the University of Oxford and is completing his postdoc position at the Harvard Medical School and his teaching at MIT – Massachusetts Institute of Technology.

Since 2019, he has been active in MedTech / HealthTech and has created innovative devices in various medical fields and obtained national and international awards for them. During the COVID-19 pandemic, in the Okoranivuru (AboutCoronavirus) team, he helped to provide scientifically verified information together with experts from the Czech Academy of Sciences, he volunteered at the University Hospital Královské Vinohrady, Prague, where his team developed an application that helped with the triage of patients (Chytratriaz.cz). He designed insulin pens with the innovation centre of Doctors Without Borders in Geneva. During his studies, Vasil was a principle investigator under the GAMA2 programme of TA CR and thanks to his research he was included in the prestigious Forbes 30 under 30 list. In the GAMA2

project, he focused on prevention of the carpal tunnel syndrome using a smart mouse pad. In his research at the University of Oxford, Vasil and his classmate Martin Horák examined 12-month results of various protocols of the treatment of macular oedema in retinal vein occlusion (RVO) in order to improve the patient care and reduce the frequency of anti-VEGF injections. In addition, he cooperates in a cross-cutting study examining patients with the Usher syndrome with MYO7A gene mutation to improve our understanding of retinal degeneration and to develop end-points for new genetic therapies in clinical studies.

Mgr. Markéta Kocmanová, Ph.D., was, until June 2024, a student of the International Relations doctoral programme at the Department of Security Studies, Faculty of Social Sciences, Charles University, where she defended her dissertation on *Why the Romani Make No Terrorists: Reassessing Contested Factors of Radicalisation*. It is an especially interesting and progressive contribution to the professional debate on radicalisation processes. As part of her research, Markéta actively developed relations with the Czech and other Romani communities on her research trips e.g. to Slovakia or Serbia. From the beginning of her doctoral studies, Markéta took part in teaching the Radicalization and Deradicalization course of her trainer Prof. Emil Aslan. She worked as researcher for three years in the project *Periculum / Human-Machine Nexus and International Order*, a centre of excellence based on a project of the same name and supported by Charles University through the UNCE programme for excellent researchers. In her activities, anchored mainly in research of the specific situation of the Czech Roma, Markéta has earned expertise sought by advisory bodies of Czech executive institutions. A crucial opportunity for Markéta's further professional development was her stay at the University of Maryland with a support from the prestigious Fulbright scholarship. Shortly after completing her doctoral study, she obtained a four-year prestigious grant to establish her own research group under the Primus competition through which Charles University supports aspiring top scientists.

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