SEMINAR/WEBINAR

SPACE BIOTECHNOLOGY

14th September 2023

12:30 – 17:00 CEST

UCT Prague Technická 3, Praha 6 building B, room BI	online via the ZOOM platform: https://us06web.zoom.us/j/81705660288

Seminar will be simultaneously translated from CZ to ENG.

Registration via info@biotrin.cz is FREE of charge and open until 10th September 2023.

With the support of

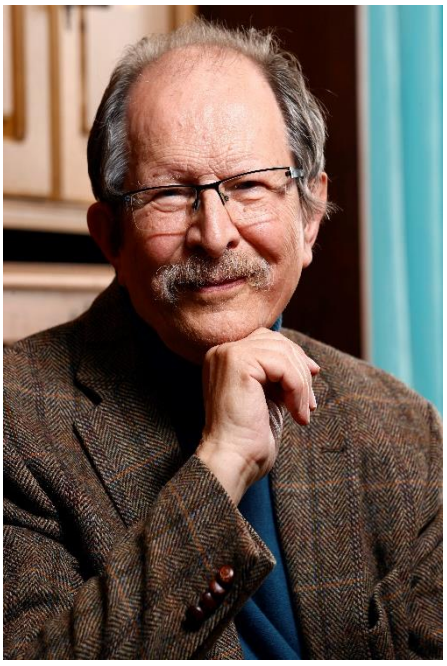
Agenda

12:30 – 13:00	**Registration** (onsite participants)
13:00 – 13:10	**prof. Ing. Kateřina Demnerová, CSc.** **Ing. Simona Lencová, Ph.D.** *Opening remarks*
13:10 – 14:00	**doc. RNDr. Eduard Kejnovský, CSc.** *The origin of life, the dynamic genome and the web of life*
14:00 – 14:40	**prof. RNDr. Zdeněk Opatrný, CSc.** *Space microgravity with a Czech footprint*
14:40 – 14:50	**Coffee break**
14:50 - 15:30	**Mgr. Ivan Kulich, Ph.D.** *Gravity and root growth*
15:30 – 16:00	**Dr. Chris Dardick** *Biotech Crops Engineered for Extraterrestrial Food Systems*
16:00 – 17:00	**Refreshments and informal final discussion**

Speakers biographies

doc. RNDr. Eduard Kejnovský, CSc.

Doc. RNDr. Eduard Kejnovský, CSc. studied genetics at the Faculty of Science of Masaryk University in Brno. At the Institute of Biophysics of the Academy of Sciences of the Czech Republic, in Brno, he studies the evolution of sex chromosomes and the dynamics of genomes. He also completed a long-term internship at the University of North Carolina in the USA. He lectures on evolutionary genomics at the Faculty of Science of Masaryk University. Since 2000, he has been dedicated to the popularization of science, especially in the magazine Vesmír (Universe), but also in the form of lectures for students and the public. He is the author of the books "Mountain contemplation - essays on the search for the meaning of life" (Cesta 2013, see Vesmír 92, 585, 2013/10), "The secret of genes - from the origin of life to the human genome" (Academia 2015), "In the wind - essays on landscape, Love and silence" (Cesta 2017) and the book "The magic of the landscape and the wisdom of words" (Cesta 2016). In 2019, he was elected a member of the Learned Society of the Czech Republic. Since 2022, he has been active as a Youtuber, popularizing genetics and evolution.



prof. RNDr. Zdeněk Opatrný, CSc.

Prof. Zdeněk Opatrný is considered one of the pioneers in the field of plant biotechnology. In 1972, he graduated from the Faculty of Natural Sciences of the Charles University, majoring in biology-chemistry with a specialization in plant physiology. As a scholarship holder of the Institute of Experimental Botany, he was given the task of deriving "suspension cultures" of several model plants. As one of the few enthusiasts, he was both lucky and unlucky to experience the beginnings of a newly emerging field. In Tolkien style, he completed the journey "there and back again", from a plant to a separately grown plant cell, from which it is possible to obtain different types of organisms - cloned, mutated, haploid, somatically hybrid or transgenic. His laboratory became a recognized methodical center for many years. Among other things, basic research led in 1968 to the creation of what is probably the world's first line of tobacco "HeLa-like" cells, which is still an internationally used model in cytology and molecular biology. In 1988, he was a co-founder of the VÚRV Biotechnology Center, whose goal was breeding applications of new techniques. In 1996, he returned to basic research and teaching at the Faculty of Science, UK. As part of the "Plant cell and stress"

project, an extensive study of the structure and function of the cytoskeleton in the context of the mechanisms of effects of phytohormones, which today have a considerable international reputation, was also started. He continues to be an emeritus professor at the UK, participates in teaching, and has not left his passion for popularizing modern science for the professional and lay public.

Mgr. Ivan Kulich, Ph.D.

Mgr. Ivan Kulich, Ph.D. graduated from the Faculty of Natural Sciences of the Charles University in Prague in the field of Biology with a focus on plant molecular biology. During his subsequent doctoral studies focused on plant molecular and cellular biology, he participated in the solution of a number of research projects and completed several foreign internships to the USA (Oregon State University) and Israel (Tel Aviv University). He defended his doctoral thesis on the topic Conventional and new functions of the plant exocyst complex in 2013. He was awarded a three-year post-junior grant by the Grant Agency of the Czech Republic (GAČR) dealing with trichome polarity. In a follow-up project supported by GAČR, he investigated the development of plant cell polarity under mechanical stimuli and attack by pathogens. In 2018, he was awarded an Alexander von Humboldt scholarship and worked as a postdoctoral fellow at the University of Regensburg in 2018-2021. From 2021, he is a postdoctoral fellow at the Institute of Science and Technology Austria.

Dr. Chris Dardick

Dr. Chris Dardick is the Lead Scientist and a Plant Molecular Biologist at the U.S. Department of Agriculture/ Agricultural Research Service's Appalachian Fruit Research Station in West Virginia. As head of the Genetic Improvement of Fruit Crops Unit his work provides genetic solutions to major problems affecting temperate tree fruit agriculture, including orchard productivity, high labor costs, bloom-time related cold injury, consumer demand for superior fruit quality, and the need for new genetic engineering technologies to address emerging threats. Current projects include the topics of tree shape, deep rooting, and the sugar content of fruit. Dr. Dardick has worked for USDA since 2005. Prior to joining USDA he completed a post-doctoral fellowship at the University of California Davis where he investigated mechanisms of plant immunity to bacterial blight diseases in rice. He holds a B.S. in Biology from Salisbury University and a PhD in Molecular and Cell Biology from the University of Maryland.