

Seminární newsfeed

Jana Štěrbová

World's first human mini-brain with a fully functional blood-brain barrier developed

100/100

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Reviewed

[Cincinnati Children's Hospital Medical Center](#)

May 20 2024

In a pioneering achievement, a research team led by experts at Cincinnati Children's have developed the world's first human mini-brain that incorporates a fully functional blood-brain barrier (BBB).

This major advance, published May 15, 2024, in *Cell Stem Cell*, promises to accelerate the understanding and improved treatment of a wide range of brain disorders, including stroke, cerebral vascular disorders, brain cancer, Alzheimer's disease, Huntington disease, Parkinson's disease, and other neurodegenerative conditions.



Innovative 'mini-brains' could revolutionize Alzheimer's diagnosis and treatment

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Reviewed

[University of Saskatchewan](#)

May 14 2024

Using an innovative new method, a University of Saskatchewan (USask) researcher is building tiny pseudo-organs from stem cells to help diagnose and treat Alzheimer's.

When Dr. Tyler Wenzel (PhD) first came up with the idea of building a miniature brain from stem cells, he never could have predicted how well his creations would work.

Now, Wenzel's "mini-brain" could revolutionize the way Alzheimer's and other brain-related diseases are diagnosed and treated.

“Never in our wildest dreams did we think that our crazy idea would work. These could be used as a diagnostic tool, built from blood.”

Dr. Tyler Wenzel, PhD

Debata s vědci na festivalu AFO o prolínání biologie, genetiky a lékařství s umělou inteligencí

- Odkaz: <https://www.youtube.com/watch?v=qbO2Jg1D8eA>



LECTURE

SEMINAR SERIES

PI Seminar: Involvement of Novel Ribosome Associated Factor in Translation Regulation

About event

More information

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About event

If you would like to participate online, please contact us at events@ceitec.muni.cz. Online participation is not possible on a one-time basis. It is intended for students whose health and other conditions prevent them from attending on-site during the semester.

Date



10. 5. 2024, 13:00 - 14:00

[Add to my calendar](#)

Speaker

Gabriel Demo

CEITEC

Venue



CEITEC MUNI, University Campus, Building B11, Room 205



STARMUS EARTH


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THE FUTURE OF OUR HOME PLANET

STARMUS VII : BRATISLAVA, SLOVAKIA

12 - 17 MAY 2024

SPONSORED BY:  **VÚB BANKA**
Intesa Sanpaolo Group

STARMUS festival – Speakers in Brno: Microplastic in the Environment Analysis, Risk and Suitable Solutions

15. května 2024

12:00

PřF MU, Kotlářská 2. pavilon 11, místnost G2

Přednáší: Prof. Damien Barcelo
(Catalan Institute for Water
Research, Girona, Spain)

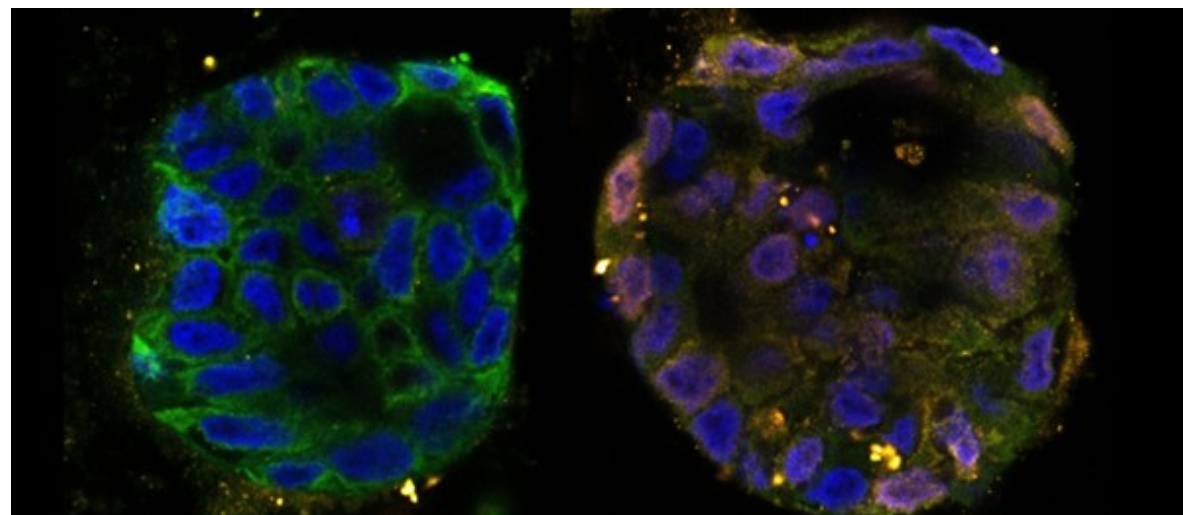
STARMUS
EARTH



Researchers discover new pathway to cancer cell suicide

The way cancer cells die from chemotherapy appears to be different than previously understood

Chemotherapy kills cancer cells. But the way these cells die appears to be different than previously understood. Researchers have now uncovered a completely new way in which cancer cells die: due to the Schlafen11 gene. 'This is a very unexpected finding. Cancer patients have been treated with chemotherapy for almost a century, but this route to cell death has never been observed before. Where and when this occurs in patients will need to be further investigated. This discovery could ultimately have implications for the treatment of cancer patients.'

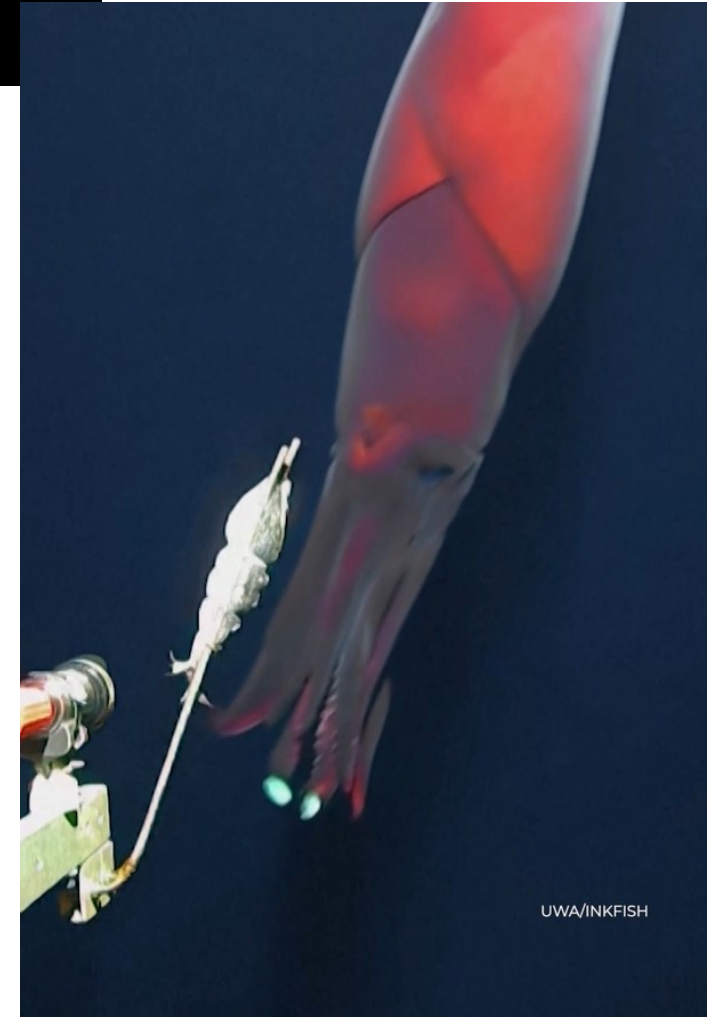
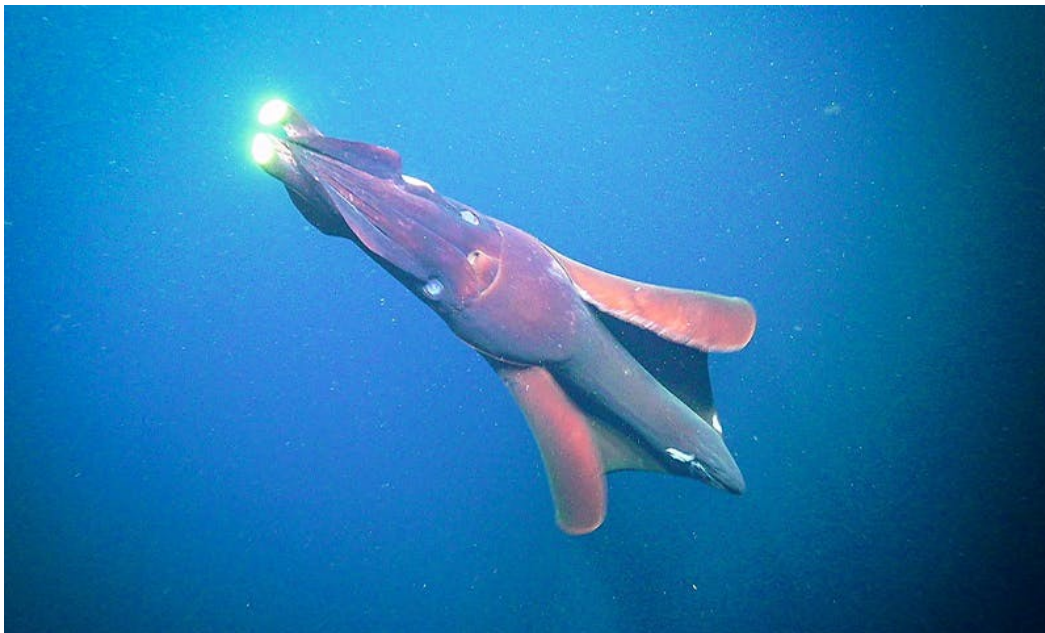


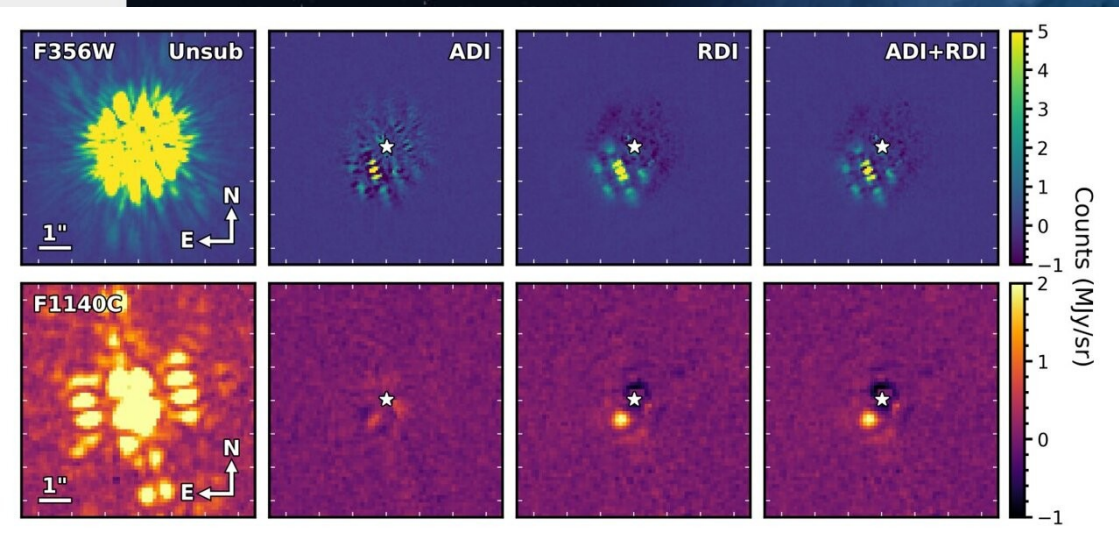
Rare deep-sea squid filmed by scientists

A rare deep-sea squid with 'headlights' was filmed by scientists at a depth of more than one kilometre in the Pacific Ocean near Samoa. It's believed to be one of the largest deep-water squids and can produce light in the tips of two of its arms.

Odkaz:

<https://www.aljazeera.com/program/newsfeed/2024/5/17/rare-deep-sea-squid-filmed-by-scientists>





EXOPLANETS

WEBB TELESCOPE OFFERS FIRST GLIMPSE OF AN EXOPLANET'S INTERIOR

Methane found in WASP-107 b reveals core mass, turbulent skies, and other key insights in the search for habitable worlds beyond our solar system

Transcription of the genome: molecular mechanism and cellular regulation

by Patrick Cramer

(Max Planck Institute for Multidisciplinary Sciences, Germany)



🕒 16 May 2024 17:00

📍 Mendel Lectures take place in Mendel's refectory in the Mendel Museum Brno



The Making of MicroRNA

by Narry Kim

(Institute for Basic Science and Seoul
National University, Korea)



🕒 23 May 2024 17:00

📍 Mendel Lectures take place in Mendel's refectory in the Mendel Museum Brno



A gut bacteria could hold the key to universal blood, revolutionizing transfusion medicine 👍100/100

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By Tarun Sai Lomte

Reviewed by Susha Cheriyaedath, M.Sc.

May 1 2024

A recent study published in the journal *Nature Microbiology* showed that exoglycosidases from *Akkermansia muciniphila*, a gut symbiont, can target (extended) blood group antigens to produce ABO-universal blood.

Matching blood groups of donors and recipients based on red blood cell (RBC) antigens and plasma antibodies is critical to prevent fatal hemolytic reactions. A universal O-blood group inventory could reduce the outdateding of blood units, address blood shortages, and eliminate ABO-dependent adverse events.

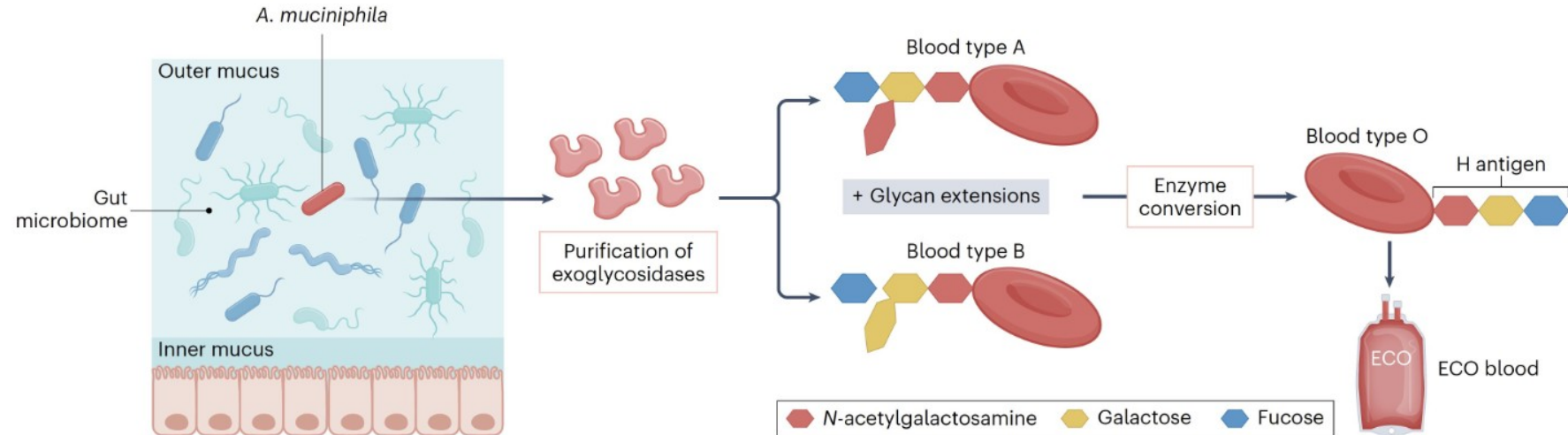
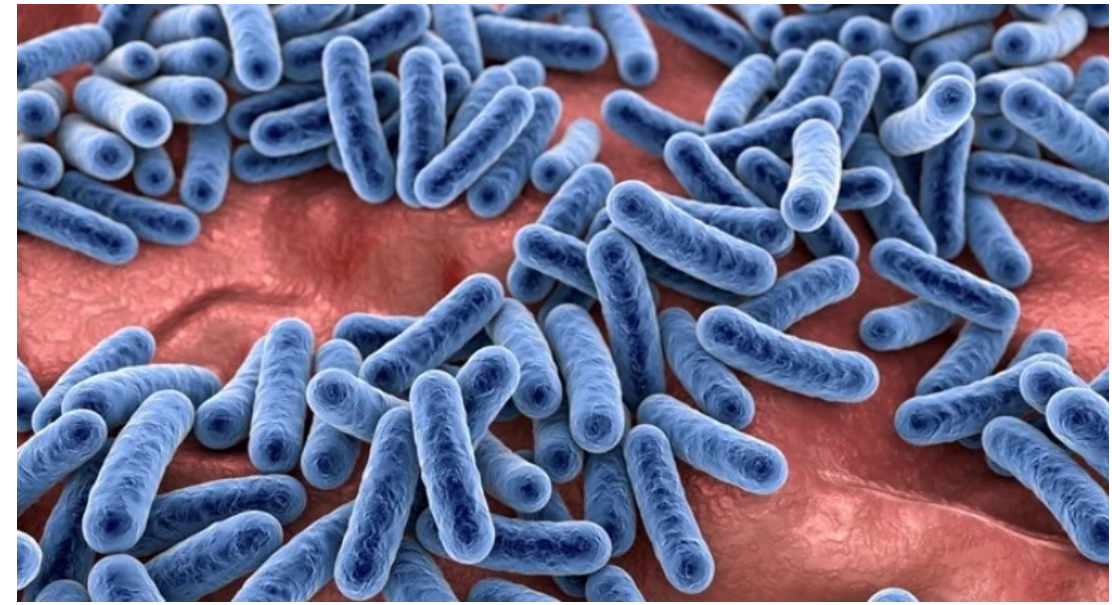


Fig. 1 | Exoglycosidases were isolated from the intestinal mucolytic bacteria *A. muciniphila*. These exoglycosidases remove specific sugars from blood group A and B antigens, converting them to H antigen on RBCs to produce a more universal RBC phenotype known as enzymatically converted group O or ECO-RBCs.

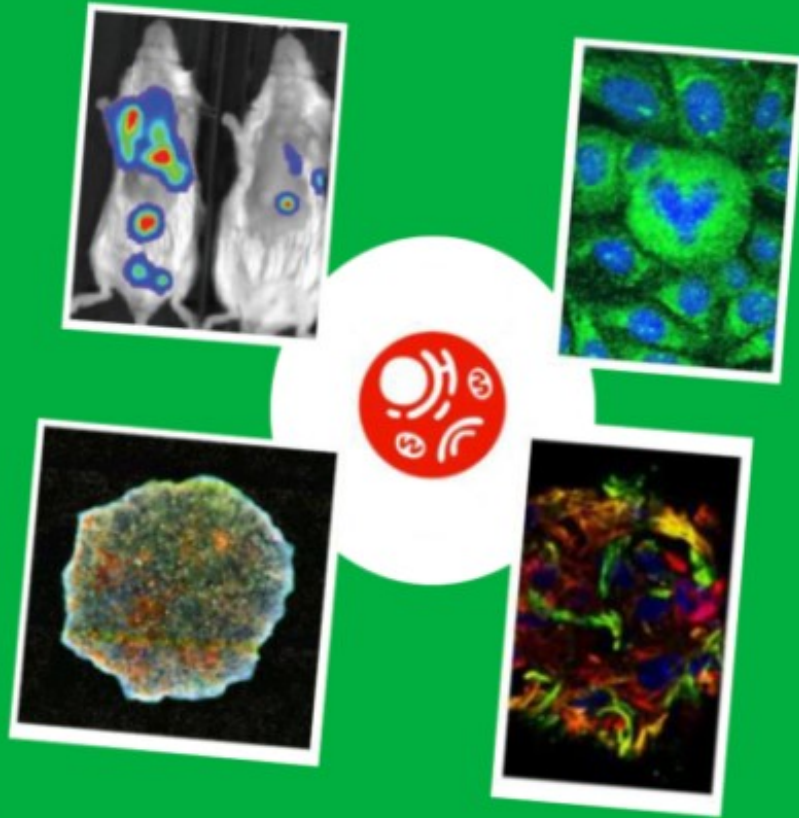
MUNI
SCI

PUBLIC LECTURE

Cancer cell plasticity as a therapeutic target

Mgr. Karel Souček, Ph.D.

University Campus Bohunice B11/205 31.5.2024 11:00



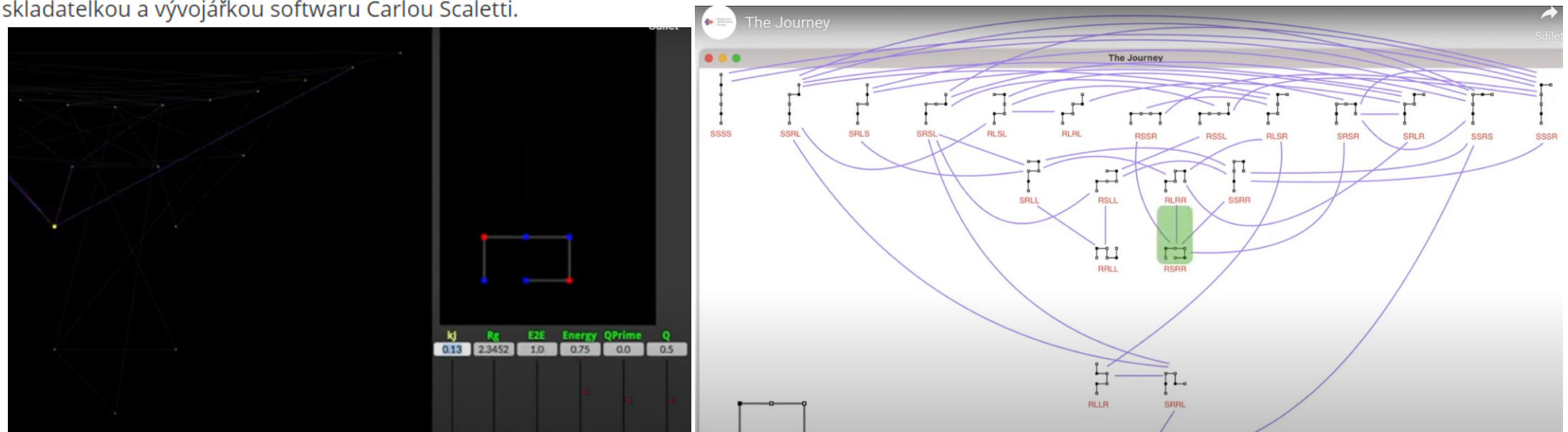
Vědci odhalují tajemství skládání proteinů prostřednictvím zvuku 100/100

Převedením svých dat na zvuky vědci zjistili, jak vodíkové můstky přispívají k bleskově rychlým kolísáním, které přeměňují řetězec aminokyselin na funkční, složený protein. Jejich zpráva v časopise *Proceedings of the National Academy of Sciences* nabízí bezprecedentní pohled na sekvenci vodíkových vazeb, ke kterým dochází, když protein přechází z nesloženého do složeného stavu.

"Protein se musí správně skládat, aby se z něj stal enzym nebo signální molekula nebo jakákoliv jeho funkce - to je vše, co proteiny v našem těle dělají," řekl profesor chemie z University of Illinois Urbana-Champaign Martin Gruebele, který vedl nový výzkum. se skladatelkou a vývojářkou softwaru Carlou Scaletti.

Odkaz:

<https://www.youtube.com/watch?v=WsE1Gt1j-8&t=52s>



WORKSHOP

REGISTRATION

Multimodal Microscopy Workshop: Probing the Triad of Structure, Mechanics, and Chemistry in Biological Systems

About event

Programme

Registration

More information

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About event

Use of Atomic Force Microscopy, Raman microscopy, and Fluorescence Microscopy, while emphasizing the investigation of structure, mechanical properties, and chemical composition in biological samples.

Please register via the registration form. Don't forget to pay the workshop fee at the Shopping Center MUNI. Links are below.

<https://www.ceitec.eu>

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MULTIMODAL MICROSCOPY WORKSHOP

Probing the Triad of Structure, Mechanics,
and Chemistry in Biological Systems

10-12 JUNE 2024

E35 / ATRIUM

Use of Atomic Force Microscopy, Raman microscopy,
and Fluorescence Microscopy, while emphasizing the investigation
of structure, mechanical properties, and chemical composition
in biological samples.

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