# NICR inSCider





#### **SCi**Topic

# Internationalisation in science: Everything is connected with everything!

The NICR is, in its very concept, based on international scientific collaboration and its measurable parameters. One of the qualification criteria for research group leaders is extensive prior international experience and sustainability of the NICR project as such requires, among other things, international partnerships. Lenka Bešše, head of the Tumour Immunotherapy group in the Brno node, adds: 'Based on my own experience I highly value the opportunity to work for some time abroad. If one finds, while abroad, some subject of one's own, the possibility of continuing to work on it with foreign colleagues after returning to Czechia is certainly great! NICR helps us present our work abroad and in that we acquire international collaboration without which many projects would not be possible at all.'

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#### **SCi**Generation



# **Antónia Mikulová:** Science is especially about (international) collaboration

'One of the crucial things I have learned so far is that science is mainly about collaboration. Therefore, I believe that collaboration with foreign research teams and sharing the know-how, meaning the biological or technical knowledge, could help Czech science to reach the world-class level. Moreover, I believe that well established international collaborations could help to attract



# **Meri Alberich Jordà:** NICR helps attract scientists from abroad

'Three equally important measures should be introduced in order to attract scientists to Czechia. To secure access to top-notch facilities and state-of-the-art equipment, to support and boost excellence in research, and to offer competitive salaries and research financing. I believe that the existence of NICR significantly contributes to all these areas but in order to

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attract scientists from abroad, one would need more than just one initiative.'

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# Do you want to know who, where, with whom, and why?

For unique overview of **NICR** research groups, click here.

#### **SCI**Papers

Global Interactome Mapping Reveals Pro-tumorigenic Interactions of NF-KB in Breast Cancer

Petr Lapcik, R. Greg Stacey, David Potesil et al.

Mol Cell Proteomics 2024 April

DOI: 10.1016/j.mcpro.2024.100744 PMID: 38417630 ERIC recommendations for TP53 mutation analysis in chronic lymphocytic leukemia— 2024 update

Jitka Malcikova, Sarka Pavlova, Panagiotis Baliakas et al.

Leukemia 2024 May

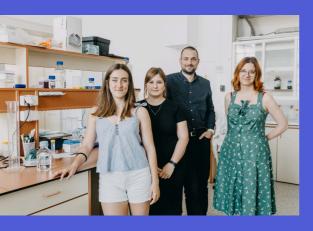
DOI: 10.1038/s41375-024-02267-x PMID: 38755420 Stromal cells engineered to express T cell factors induce robust CLL cell proliferation in vitro and in PDX cotransplantations allowing the identification of RAF inhibitors as anti-proliferative drugs

Eva Hoferkova, Vaclav Seda, Sona Kadakova et al.

Leukemia 2024 June

DOI: 10.1038/s41375-024-02284-w PMID: 38877102

#### **SCi**Community



To understand cancer, we must understand cellular architecture

Successful research often depends on a wellfunctioning team. Martin Sztacho, who leads in the Prague node of NICR a newly founded and purely internationally staffed Laboratory of Cancer Cell Architecture at the Institute of Biochemistry and Experimental Oncology of the First Faculty of Medicine of the Charles University, is well aware of it. He believes that a well-constructed research group should be like a work of architecture: each member should have their own place and feel that their work has meaning. International experiences enabled Martin Sztacho to create a group that brings together not only research excellence but also different cultural perspectives. And although his research focuses on the complexity of living organisms and understanding of cellular architecture, he personally is fascinated rather by the austerity and rawness of brutalist architecture.

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#### **SCi**Tidbits

# Can you tell who this is?



#### Take a look tomorrow at



#### Share with us untraditional pictures from your lab!

## **SCi**Programme

# **RP5 for translational research in oncology**

The three pillars of a NICR research programme focused on translational oncology presented by Pavel Klener jointly with the programme's main leader, Ludmila Boublíková, are: First, research of primary tumour cells, which – if we know the clinical parameters – can help us discover the genetic changes responsible for therapy resistance or cancer relapse. Second, testing of experimental drugs in proof-of-concept preclinical studies using cell lines or mouse models. And finally, a validation of biomarkers indicating the effectiveness or resistance to the tested treatment in the early stages of clinical studies involving patients.

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## **SCi**Indicators

# Indicators are not only publications...

One of the indicators we had committed ourselves to in the NICR is the number of newly incoming international researchers. At this point, our teams have already been joined by 47 scientists from abroad: 26 came into the Prague node, 15 into the Brno node, and 6 into the Olomouc node. Most numerous group among them are our colleagues from Slovakia (11), other European countries or the United States, but we also have researchers from India, United Arab Emirates, Jordan, Peru, or Brazil. Further information about international cooperation can be found also in our new overview of NICR research groups.

Learn more

#### **SCi**Media

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## Czech scientists develop new culture model for studying and testing drugs in chronic lymphocytic leukemia

The model, which originated in Marek Mraz's research group, mimics the

microenvironment of CLL under laboratory conditions, allows to achieve high proliferation rates, to study the driving molecular pathways and to test new drugs.

#### Selection from recent publications of NICR groups

Klinická onkologie 4/2024, 15 August 2024 The official journal of the Czech Society for Oncology of the Czech Medical Association of J. E. Purkyně now dedicates a new regular column to the results of teams gathered in the NICR.



# In-amongst the cells: A podcast on science against cancer

Listen to new summer episodes featuring scientists of the NICR. All parts of the podcast series In-Amongst the Cells can also be found on Spotify and Apple Podcasts!

#### Al opens new avenues of fighting cancer, says Bednář

CNN Prima News, 14 July 2024 David Bednář introduces PredictONCO, a unique bioinformatic tool developed in cooperation between various research groups in Brno.

## A scientific half-hour with Daniel Rösl about the reeducation of tumours

Český rozhlas Plus, Věda Plus, 29 July 2024 Could one teach cancer better manners? Czech scientists are trying to reeducate treatment-resistant cancer cells. What change can one expect?

# **SCi**Calendar

#### **Researchers' Night**

27 September 2024

#### Prague

In cooperation with mainly our colleagues from the Institute of Molecular Genetics of the CAS but also from the Institute of Experimental Medicine of the CAS and the First Faculty of Medicine of the Charles University, the NICR joins this popularization event during which hundreds of laboratories and research institutions are opened to the general public for just one evening in a year!

# Introduction to NMR in Drug Design and Discovery: Become an NMR

Expert in One Day

23 October 2024

#### Institute of Organic Chemistry and Biochemistry of the CAS, Prague

Do you want to learn more about the role of NMR spectroscopy in the design and discovery of new drugs? Do you want to learn about how you could apply this technique to your research? Register for an intensive course organised by the IOCB of the CAS under the auspices of the NICR and become an NMR expert in a day!

# Introduction to Structural Biology with Focus on X-ray Crystallography: Become a Crystallographer in One Day

24 October 2024

#### Institute of Organic Chemistry and Biochemistry of the CAS, Prague

What hides behind the impressively coloured models of protein structures? What information can you get from them? How could you use them in your research? You will learn all this during a one-day course organized by the IOCB of the CAS under the auspices of the NICR!



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