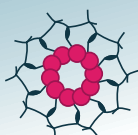
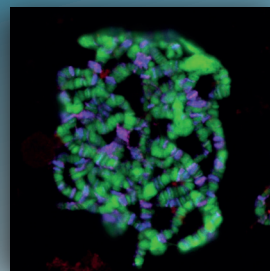
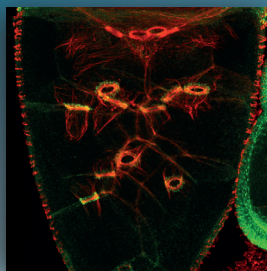
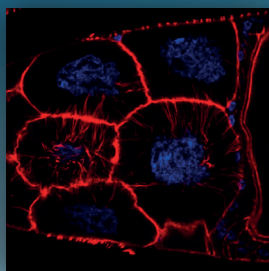
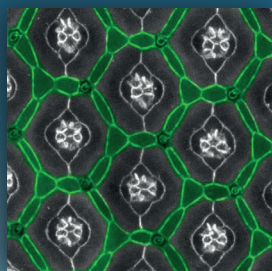
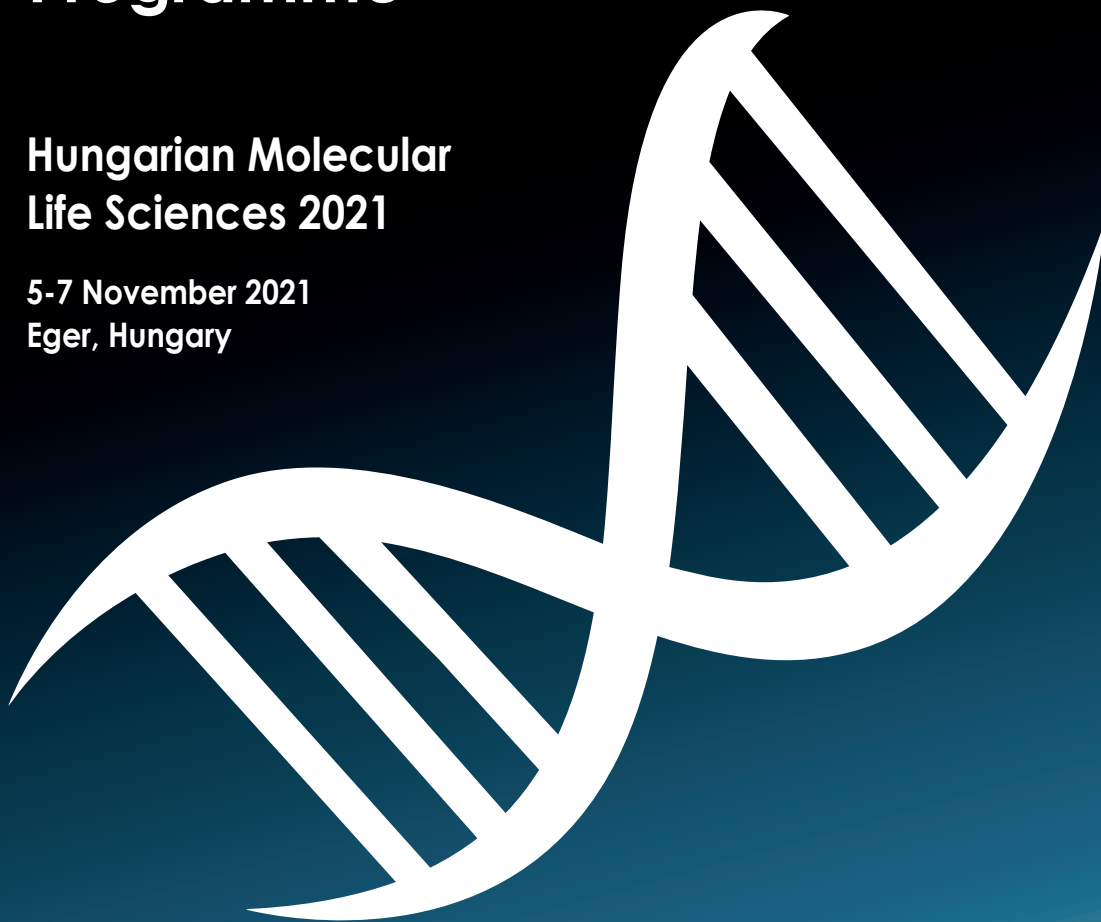


# Programme

## Hungarian Molecular Life Sciences 2021

5-7 November 2021  
Eger, Hungary



Hungarian  
Biochemical  
Society



**MAGE**  
Hungarian Genetics Society

# Our sponsors

## Platina sponsor



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# Our exhibitors



Genomics





## GENERAL INFORMATION

### CONFERENCE ORGANISERS

Magyar Biokémiai Egyesület (Hungarian Biochemical Society)

Magyar Genetikusok Egyesülete (Hungarian Genetics Society)

### ORGANISING COMMITTEE

**László Buday, Miklós Erdélyi, Beáta Lontay, József Mihály, Rita Sinka,  
László Virág**

Institute of Enzymology, Research Centre for Natural Sciences of the Hungarian Academy of Sciences

Magyar tudósok körútja 2., Budapest H-1117

<http://www.ttk.hu/ei/en/>

Institute of Genetics, Biological Research Centre

Temesvári krt. 62., Szeged H-6726

<http://u-szeged.hu/>

Department of Medical Chemistry, University of Debrecen

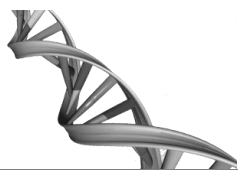
Egyetem tér 1., Debrecen H-4032

<https://chemistry.med.unideb.hu/en>

Department of Genetics, University of Szeged

Középfasor 52, Szeged H- 6726

<https://u-szeged.hu/>



### **TECHNICAL ORGANISERS**

Diamond Congress Ltd.  
1255 Budapest, P.O. Box 48.  
Tel: +36-1-225-0209  
elesetele@diamond-congress.com  
<https://www.diamond-congress.hu/>

### **WEBSITE OF THE CONFERENCE**

<https://www.hunlifesci.hu>

### **WEBSITE OF THE HUNGARIAN BIOCHEMICAL SOCIETY**

<http://www.mbkegy.hu>

### **WEBSITE OF THE HUNGARIAN GENETICS SOCIETY**

<http://www.magenegy.hu/hu/>

### **VENUE**

Hotel Eger-Park  
3300 Eger  
Szálloda utca 1-3.  
Tel.: +36-36/522-200

### **OPENING HOURS OF THE REGISTRATION**

Friday, 5 November, 2021 -	12.00 – 18.00
Saturday, 6 November, 2021	08.30 – 18.00
Sunday, 7 November, 2021	08.30 – 13.30

### **ONSITE CONTACT NUMBERS**

Éles-Etele Nóra / Varga Attila  
+36/70-9438-543, +36/20-936-2969  
Diamond Congress Ltd.

### **OFFICIAL LANGUAGE**

Official language of the Conference is English (no translation is available).



Registration fee (incl. VAT)	Payment till 15 September	Payment after 15 September
Registration fee for industrial participants	80.000 Ft	85.000 Ft
Registration fee for senior researchers*	75.000 Ft	80.000 Ft
Registration fee for junior researchers**	56.000 Ft	64.000 Ft
Registration fee for exhibitors	51.000 Ft	51.000 Ft
Registration fee for accompanying persons	40.000 Ft	40.000 Ft

\*Only for participants with academic background

\*\*Junior researcher: Ph.D. and university student, or researcher under 30;

Registration fees include admission to the scientific sessions, conference materials, admission to the exhibition, welcome reception, banquet dinner, coffee breaks, lunches.

Accompanying persons' registration fee and exhibitor's registration fee is not valid for admission to the scientific part of the Conference, and these fees do not include conference materials, only meals and social events.

## ORAL PRESENTATIONS (PL-1 – PL-4, O-01 – O-64)

The schedule of the oral presentations can be seen in the detailed programme of this booklet. Speakers and session chairs are kindly requested to keep the time of the presentations. Make sure to bring your presentation file written on a USB flash drive. Presenters are kindly requested to give their presentation file to the technicians in the lecture rooms preferably half day before beginning of the corresponding session.

**Oral presentations:** Congress Hall, Session Room Liget I.

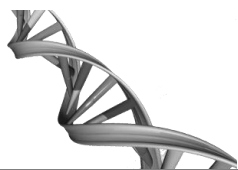
## POSTER PRESENTATIONS (P-001 – P-191)

Poster presenters of **ODD poster numbers** are kindly requested to mount their posters **before** the opening of the conference (or latest during the coffee break in the afternoon) and remove them on Saturday /6 November/ till 11:00 the latest (during the coffee break), to enable the authors of the next poster session to mount their posters in time.

Poster presenters of **EVEN poster numbers** are kindly requested to mount their posters on Saturday /6 November/ from 13:30 **before** the afternoon session starts and remove them latest at lunch time on Sunday /7 November/.

Posters will be identified by poster numbers, which are indicated in the program booklet and in the conference application.

For mounting and removing the posters, please take it into consideration, that there will be oral presentations in the room! Please use the breaks for these actions. Also please use the poster sessions and breaks for discussions.



Poster sessions: Room Liget I. and Liget corridor

Pins are to be provided to fix the posters by the technical organisers.

Authors of ODD number posters will present their work between 20:15-22:00 on Friday, 5 November. Authors of EVEN number posters will present their work between 16:45-19:00 on Saturday, 6 November.

### EXHIBITION

In accordance with the conventions of the conference, parallel to the scientific sessions a professional exhibition is to be organised. Please have a look at the exhibition floor plan of the booklet.

### ACCOMMODATION

Hotel rooms are booked under the name of the participants. Conference participants may occupy the rooms from 14:00 on the day of arrival and should arrange the check out until 10:00. The hotel ensures a luggage room. The guarded parking lot of the hotel is available for our participants free of charge. Guests are kindly requested to settle their extra room bills (such as phone calls, drinks and minibar) prior to departure.

The room prices include buffet breakfast, VAT, city tax and the usage of wellness facilities (pools, jacuzzi, sauna park and steam bath).

### SOCIAL PROGRAMMES *(incl. in the registration fees)*

Friday, 5 November, 2021	Welcome dinner (Restaurant of Hotel Park)
Saturday, 6 November, 2021	Banquet (Congress Hall of Hotel Eger)
Saturday & Sunday, 6-7 November, 2021	Lunches (Restaurant of Hotel Park)
Friday - Sunday, 5-7 November, 2021 (indicated in the programme)	Coffee breaks (Conference level of Hotel Eger)

All participants and accompanying persons will receive a personal badge upon registration. You are kindly requested to wear your name badge when attending the meetings or social events.

Extra consumption, which is not included in the menus are kindly requested to settle prior to departure.



## **CANCELLATION POLICY**

Cancellations on registration and hotel reservation can be made only in writing. The refund for cancellations made prior to 5 October, 2021 is 85%. After this date the conference secretariat has to pay the advanced payments to the hotel, and there is no way to refund in case of latter cancellation.

## **PAYMENT, INVOICES**

The price of the ordered services will be indicated on the final invoice according to the Hungarian official financial rules. Official final invoices and receipts for fees paid by the participants are sent by e-mail right after the payment arrives to our bank account. Please forward them to the financial department of your institution.

## **LIABILITY AND INSURANCE**

The organisers cannot accept liability for any personal accidents, loss of belongings or damage to private property of participants and accompanying persons that may occur during the conference.

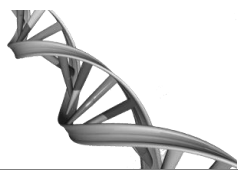
## **EVENT APPLICATION AND QR CODE HUNTING**

The conference is supported by SmartEvents© mobile application. Using the application is free and voluntary for all registered delegates and the content used therein is accessible only for 'Hungarian Molecular Life Science Conference 2021' participants. The application helps the delegates to find all information regarding the event, manage the daily agenda, download materials, communicate with all the other participants on the event and more.

We offer the conference delegates a fantastic QR CODE HUNTING game. After downloading the event application participants can visit the exhibitors and scan the individual exhibitor's QR code with their mobile device. Everybody who has visited at least 12 exhibitors, will automatically be entered to win a PRIZE! Valuable prizes will be drawn during the Gala dinner /6 November/, so make sure to scan the codes till the dinner.

## **PROTEOMICS CLINIQUE**

Do you have questions related to proteomics? Are you unsure which method to choose or how to submit a sample? If you would you like to get first-hand information from specialists, come and visit the Proteomics Clinique. At our booth, we would like to give researchers and students a possibility to ask questions about the complete proteomics analysis workflow starting from experimental design, method selection, sample preparation, sample submission to data analysis and data interpretation during Poster sessions in Room Liget I. Experienced researchers working at the proteomics core facilities in Szeged and Debrecen will answer the questions and will give tips on how you can get out more from your proteomics analyses.



### Day 1 – Friday, 5 November 2021

**14:00**                      **Opening**

#### **Plenary session / Congress Hall**

*Chair: József Mihály*

**14:10      PL-1      Development of a recombinant ACE2-Fc fusion protein as a potential drug against SARS-CoV-2**

Imre Kacs Kovics

**14:45      PL-2      Unexpected functions of the actin cytoskeleton in meiotic divisions of oocytes**

Evelin Major, Ferenc Győry, Dániel Horváth, Ilka Keller, István Tamás, Karen Uray, Péter Fülöp, Beáta Lontay

#### **Bioscience awards talk / Congress Hall**

**15:20      BA      Correlation of homologous recombination deficiency induced mutational signatures with sensitivity to PARP inhibitors and cytotoxic agents**

Ádám Póti

#### **Company talks / Congress Hall**

**15:45                      Overview of recent advances in optical sectioning microscopy at Carl Zeiss**

Zeiss

Chris Power (Carl Zeiss, Cambridge, United Kingdom)

**16:00                      How to build a streamlined, easy scalable and multi-functional DNA & RNA NGS Library prep pipeline**

Kvalitex

Kristin Schnettler (NEW ENGLAND BIOLABS)

**16:15                      *Coffee break***



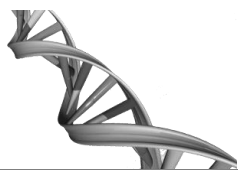


**Day 1 – Friday, 5 November 2021**

**Molecular mechanism of diseases I./ Congress Hall**

*Chair: Zsuzsa Szondy*

<b>17:00</b>	<b>O-01</b>	<b>PiggyBac Transposable Element-derived 1, unique to mammals, controls Neuronal Progenitor Identity, Stress Sensing and mammal-specific paraspeckles</b> Tamás Raskó, Amit Pande, Kathrin Radscheit, Annika Zink, Manvendra Singh, Christian Sommer, Gerda Wachtl, Orsolya Kolacsek, Gizem Inak, Attila Szvetnik, Spyros Petrakis, Mario Bunse, Vikas Bansal, Matthias Selbach, Tamás I. Orbán, Alessandro Prigione, Laurence D. Hurst, <u>Zsuzsanna Izsvák</u>
<b>17:20</b>	<b>O-02</b>	<b>Defective binding of SPINK1 variants is an uncommon mechanism for impaired trypsin inhibition in chronic pancreatitis</b> <u>András Szabó</u> , Vanda Toldi, Livia Diána Gazda, Alexandra Demcsák, Nataly Morales Granda, József Tózsér, Miklós Sahin-Tóth
<b>17:35</b>	<b>O-03</b>	<b>The pathogenic p.R391G ABCC6 displays incomplete penetrance implying the necessity of an interacting partner for the development of pseudoxanthoma elasticum</b> Flora Szeri, Agnes Miko, Nastassia Navasiolava, Ambrus Kaposi, Shana Verschuere, Qiaoli Li, Sharon F. Terry, Federica Boraldi, Jouni Uitto, Koen van de Wetering, Ludovic Martin, Daniela Quaglino, Olivier M. Vanakker, Kalman Tory, <u>Tamas Aranyi</u>
<b>17:50</b>	<b>O-04</b>	<b>IFITM1 expression determines extracellular vesicle uptake in colorectal cancer</b> <u>Andrea Kelemen</u> , Carmi Idan, Zoltán Wiener
<b>18:05</b>	<b>O-05</b>	<b>Epistasis, aneuploidy, and functional mutations underlie the evolution of resistance to induced microtubule depolymerization</b> Mattia Pavani, Paolo Bonaiuti, Elena Chiroli, Fridolin Gross, Adam Poti, Sebastiano Pasqualato, Zoltan Farkas, Giulia Rancati, David Szuts, <u>Andrea Ciliberto</u>
<b>18:20</b>	<b>O-06</b>	<b>WNT activity and cell proliferation are coupled to extracellular vesicle release in lung cancer organoid models</b> Gyöngyvér Orsolya Sándor, András Áron Soós, Judit Moldvay, <u>Zoltán Wiener</u>
<b>18:45</b>		<b><i>Welcome dinner</i></b>
<b>20:15</b>		<b><i>Poster discussion with drinks – ODD number posters</i></b> <b><i>Proteomics Clinique</i></b>



## Hungarian Molecular Life Sciences 2021

### Day 1 – Friday, 5 November 2021

#### Protein structure & function / Room Liget I.

Chair: László Nyitrai

17:00	O-07	<b>Novel perspectives of target-binding by the evolutionarily conserved PP4 Phosphatase</b> Zsuzsánna Réthi-Nagy, Edit Ábrahám, Rita Sinka and <u>Zoltán Lipinszki</u>
17:20	O-08	<b>Investigation of protein and peptide type inhibitors of the human dUTPase</b> <u>Kinga Nyíri</u> , Enikő Gál, Máté Laczkovich, Beáta Vértessy
17:35	O-09	<b>Dynamic ensembles highlight unique features of the PDZ domains of PSD-95</b> <u>Zoltán Gáspári</u> , Bertalan Kovács, Anett Hinsenkamp, Dániel Dudola
17:50	O-10	<b>Effect of A22 and nucleotides on MreB polymerisation</b> <u>Beáta Longauer</u> , Szilvia Barkó, Dávid Szatmári, Miklós Nyitrai
18:05	O-11	<b>Transmembrane protein structure prediction by AlphaFold2</b> <u>Tamás Hegedűs</u> , Markus Geisler, Gergely L. Lukács, Bianka Farkas
18:20	O-12	<b>RNA binding of SETD1A and SETD1B</b> Beáta Szabó, Harem Sabr, Éva Schád, <u>Ágnes Tantos</u>
18:45		<b>Welcome dinner</b>
20:15		<b>Poster discussion with drinks – ODD number posters</b> <b>Proteomics Clinique</b>

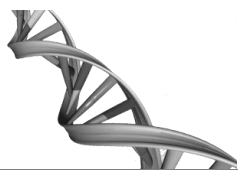


## Day 2 – Saturday, 6 November 2021

### Molecular mechanism of diseases II. / Congress Hall

Chair: Gábor Szabó

- |       |      |   |
|-------|------|---|
| 09:00 | O-13 | <b>Machine-learning based method to predict endometroid grade and relapse risk from global gene expression datasets</b><br>Péter Gargya, <u>Bálint László Bálint</u>  |
| 09:20 | O-14 | <b>Amino acids and biogenic amines as indicators of altered metabolic fluxes in obesity and diabetes</b><br><u>Éva Csősz</u> , Andrea Guba, Erdenetsetseg Nokhoijav, Balázs Kunkli, Ajneesh Kumar, Gergő Kalló, József Tózsér |
| 09:35 | O-15 | <b>The diverse functions of the proteasome activator PA00 to maintain cellular quality control.</b><br><u>Krisztina Tar</u> , Azzam Aladdin, Abdenmour Douida, Frank Batista, Agnieszka Robaszkiewicz, Róbert Király          |
| 09:50 | O-16 | <b>Irisin stimulates the release of CXCL from human subcutaneous and deep-neck derived adipocytes</b><br><u>Endre Kristóf</u> , Abhirup Shaw, Beáta B Tóth, Róbert Király, László Fésüs                                       |
| 10:05 | O-17 | <b>Dissecting drug interactions utilizing rexinoid and G-protein-coupled receptors for cancer prevention</b><br><u>Iván Uray</u> , Sham Jdeed, Máté Lengyel, Ádám Molnár, Guang Peng, Powel H. Brown                          |
| 10:20 |      | <b>Coffee break</b>   |



### Day 2 – Saturday, 6 November 2021

#### Developmental Genetics / Room Liget I.

Chair: Rita Sinka

- |              |             |   |
|--------------|-------------|---|
| <b>09:00</b> | <b>O-18</b> | <b>Immune cell redirection reveals the underlying mechanisms of hematopoietic tissue formation in <i>Drosophila</i></b><br><u>Gábor Csordás</u> , Ferdinand Grawe, Steffen Erkelenz, Mirka Uhlirova, Gábor Juhász               |
| <b>09:20</b> | <b>O-19</b> | <b>The biological significance of nuclear actin</b><br><u>Péter Borkúti</u> , Kristó Ildikó, Anikó Szabó, Zoltán Kovács, Csaba Bajusz, Péter Vilmos   |
| <b>09:35</b> | <b>O-20</b> | <b>Role of formin proteins in the cytoskeleton coordination during axonal growth</b><br><u>István Földi</u> , Krisztina Tóth, Ioannis Zygouras, Péter Gaszler, Beáta Bugyi, József Mihály                                       |
| <b>09:50</b> | <b>O-21</b> | <b>Microtubule organizing centers contain testis-specific <math>\gamma</math>-TuRC proteins in spermatids of <i>Drosophila</i></b><br><u>Elham Alzyoud</u> , Viktor Vedelek, Zsuzsanna Réthi-Nagy, Zoltán Lipinszki, Rita Sinka |
| <b>10:05</b> | <b>O-22</b> | <b>LC3-associated phagocytosis promotes glial degradation of axon debris after injury</b><br><u>Áron Szabó</u> , Virág Vincze, Sarolta Bognár, Poulami Banik, Katalin Eszter Varga, András Jipa, Gábor Juhász                   |
| <b>10:20</b> |             | <b>Coffee break</b>   |

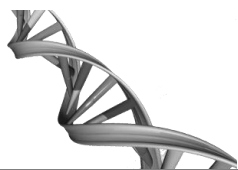


**Day 2 – Saturday, 6 November 2021**

**Genome manipulation & archeogenetics / Congress Hall**

*Chair: Zoltán Ivics*

- |              |             |   |
|--------------|-------------|---|
| <b>11:05</b> | <b>O-23</b> | <p><b>Engineered <i>Sleeping Beauty</i> transposase redirects transposon integration away from genes</b></p> <p><u>Zoltán Ivics</u>, Csaba Miskey, Lisa Kesselring, Irma Querques, György Abrusán, Orsolya Barabás</p>  |
| <b>11:25</b> | <b>O-24</b> | <p><b>BEAR reveals that increased fidelity variants can successfully reduce the mismatch-tolerance of adenine but not cytosine base editors</b></p> <p><u>András Tálas</u>, Dorottya A. Simon, Péter I. Kulcsár, Éva Varga, Sarah L. Krausz, Ervin Welker</p>                               |
| <b>11:40</b> | <b>O-25</b> | <p><b>How to choose the most suitable increased fidelity SpCas9 nuclease for high specificity genome editing</b></p> <p><u>Péter István Kulcsár</u>, András Tálas, Sarah L. Krausz, Zoltán Ligeti, Eszter Tóth, Zsófia Rakvács, Krisztina Huszár, Ervin Welker</p>                          |
| <b>11:55</b> | <b>O-26</b> | <p><b>Genetic history and life of Bronze Age communities in Western Hungary</b></p> <p><u>Dániel Gerber</u>, Bea Szeifert, Balázs Egyed, Ágnes Kustár, Szilvia Fábián, Balázs Gusztáv Mende, Eszter Ari, Viktória Kiss, Anna Szécsényi-Nagy</p>   |
| <b>12:10</b> | <b>O-27</b> | <p><b>Chapters from Carpathian Basin's Early Medieval genetic history</b></p> <p><u>Bea Szeifert</u>, Balázs Gyuris, Dániel Gerber, Veronika Csáky, Attila Türk, Béla Miklós Szőke, Sándor Évinger, Balázs Egyed, Balázs Gusztáv Mende, Anna Szécsényi-Nagy</p>                             |
| <b>12:25</b> | <b>O-28</b> | <p><b>Population genomic characterization of migration period populations in the Carpathian Basin</b></p> <p><u>Tibor Török</u>, Zoltán Maróti, Oszkár Schütz, Endre Neparácski, Bence Kovács, István Gergely Varga, Kitti Maár, Balázs Tihanyi, Emil Nyerki, István Nagy, István Raskó</p> |
| <b>12:40</b> |             | <b>Lunch</b>  |



### Day 2 – Saturday, 6 November 2021

#### Cell differentiation and signaling / Room Liget I

Chair: László Buday

- |       |      |  |
|-------|------|--|
| 11:05 | O-29 | <b>Impaired skeletal muscle development and regeneration in transglutaminase 2 knockout mice</b><br>Zsófia Budai, Nour Al-Zaeed, Peter Szentesi, Hajnalka Halász, Laszlo Csernoch, Zsuzsa Szondy, <u>Zsolt Sarang</u>  |
| 11:25 | O-30 | <b>Elucidating the regulation of hemocyte transdifferentiation with a complex deep learning based technology in <i>Drosophila melanogaster</i></b><br><u>Erika Gábor</u> , Aliz Géczi, Ede Migh, Attila Beleon, Péter Horváth, Bence Széplaki, Márton Enyedi, Lajos Pintér, Lajos Haracska, Pierre Cattenoz, Angela Giangrande, Viktor Honti |
| 11:40 | O-31 | <b>The sirtuin ortholog SIR-2.1 regulates lipolysis via the heat shock factor HSF-1 in <i>C. elegans</i></b><br><u>Milán Somogyvári</u> , Csaba Sőti   |
| 11:55 | O-32 | <b>Identification of oncogene-specific TKS4-binding protein complexes as biomarker panels for various cancers</b><br><u>Anita Kurilla</u> , László Buday, Loretta László, Tamás Takács, Virág Vas  |
| 12:10 | O-33 | <b>Involvement of mitochondrial mechanisms in the cytostatic effect of desethylamiodarone in B16F10 melanoma cells</b><br><u>Fadi H.J. Ramadan</u> , Rita Bognár, Aliz Szabo, Ferenc Gallyas Jr., Zita Bognár  |
| 12:25 | O-34 | <b>Role of transglutaminase 2 (TG2) in the differentiation and apoptotic processes of all-trans retinoic acid (ATRA) and arsenic trioxide (ATO) treated NB4 leukaemia cell lines</b><br><u>Károly Jambrovics</u> , Zoltán Balajthy, László Fésüs   |
| 12:40 |      | <b>Lunch</b>   |



**Day 2 – Saturday, 6 November 2021**

**Plenary session / Congress Hall**

*Chair: Mihály Kovács*

- |              |             |   |
|--------------|-------------|---|
| <b>14:10</b> | <b>PL-3</b> | <b>Evolution repeats itself in fungal morphogenetic transitions - in search of mechanisms of convergent evolution</b><br>László G. Nagy   |
| <b>14:45</b> | <b>PL-4</b> | <b>CRISPR genome editing based isogenic induced pluripotent stem cell system for modeling ZMYND11 de novo mutation in schizophrenia</b><br><u>János Réthelyi</u> , Edit Hathy, Csongor Tordai, Katalin Vincze, Hella Gyergyák, Tamás Arányi, Dávid Szüts, Ágota Apáti |

**Company talks / Congress Hall**

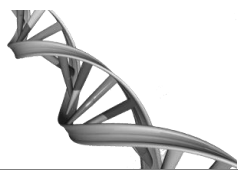
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| <b>15:20</b> | <b>Library in three hours - NGS kits from BioVendor</b><br>BioVendor<br>dr. Klára Lakatoš (BioVendor – MDX a.s.) |
|--------------|--|

**15:35      *Technical break***

**Drug development / Congress Hall**

*Chair: László Virág*

- |              |             |  |
|--------------|-------------|--|
| <b>15:40</b> | <b>O-35</b> | <b>High-content screening for drug discovery</b><br><u>László Virág</u> , Csaba Hegedűs, Eliza Guti, Zsolt Regdon, Alexa Kiss, Katalin Kovács, Endre Kókai   |
| <b>16:00</b> | <b>O-36</b> | <b>Fluorescent probes of Organic Anion Transporting Polypeptides (OATPs), transporters involved in drug ADME-Tox</b><br><u>Csilla Laczka</u> , Orsolya Ungvári, Réka Laczkó-Rigó, Virág Székely, Erzsébet Mernyák, Éva Bakos |
| <b>16:15</b> | <b>O-37</b> | <b>Targeting serotonergic signaling as a potential growth control pathway in breast cells</b><br><u>Máté Lengyel</u> , Iván Uray   |
| <b>16:30</b> | <b>O-38</b> | <b>Switching off drug resistance in cancer</b><br><u>András Füredi</u> , Kornélia Szebényi, Szilárd Tóth, Gergely Szakács  |
| <b>16:45</b> |             | <i>Poster discussion with coffee break – EVEN number posters</i><br><i>Proteomics Clinique</i>   |
| <b>20:00</b> |             | <b>Gala Dinner – Congress Hall</b>   |



### Day 2 – Saturday, 6 November 2021

#### Stem cell / Room Liget I.

Chair: Andras Nagy

15:40	O-39	<b>Combining gene and cell therapy offers “universal” cells to treat disease</b> Andras Nagy
16:00	O-40	<b>Human ALS/FTD brain organoid slice cultures display distinct early astrocyte and targetable neuronal pathology</b> <u>Kornélia Szebényi</u> , Lea M. D. Wenger, Yu Sun, Alexander W. E. Dunn, Colleen A. Limegrover, George M. Gibbons, Elena Conci, Ole Paulsen, Susanna B. Mierau, Gabriel Balmus, Andras Lakatos
16:15	O-41	<b>Ionizing radiation differentially affects the uptake of extracellular vesicles by bone marrow cell subpopulations</b> <u>Tünde Szatmári</u> , Dávid Kis, Géza Sáfrány, Katalin Lumniczky
16:30	O-42	<b>Zbtb46 dependent altered developmental program in embryonic stem cell derived blood cell progenitors: improved erythropoiesis and diminished myelopoiesis</b> <u>István Szatmári</u> , Pál Botó, Tímea Gerzsenyi, Adél Lengyel
16:45		<i>Poster discussion with coffee break – EVEN number posters</i> <i>Proteomics Clinique</i>
20:00		<b>Gala Dinner</b>



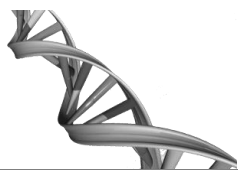


## Day 3 – Sunday, 7 November 2021

### DNA repair and carcinogenesis / Congress Hall

Chair: Dávid Szüts

- |              |             |  |
|--------------|-------------|--|
| <b>09:30</b> | <b>O-43</b> | <b>Liquid-liquid phase separation driven by ssDNA binding protein enables rapid and efficient genome repair</b><br>Gábor M. Harami, Zoltán J. Kovács, Rita Pancsa, János Pálinkás, Veronika Baráth, Krisztián Tárnok, András Málnási-Csizmadia, <u>Mihály Kovács</u> |
| <b>09:50</b> | <b>O-44</b> | <b>The role of human WRNIP1 protein in genome maintenance</b><br>Szilvia Juhász, Ágnes Tóth, Gábor M. Harami, János Pálinkás, Lili Hegedűs, Enikő Sajben-Nagy, Szabolcs Bene, Lajos Pintér, Lajos Haracska, Mihály Kovács, <u>Péter Burkovics</u>                    |
| <b>10:05</b> | <b>O-45</b> | <b>Chromatin architectural changes set the stage for meiotic DNA break formation</b><br>Lóránt Székvölgyi  |
| <b>10:20</b> | <b>O-46</b> | <b>Functional significance of the Rad18 Zn-finger mediated interaction with Rad5</b><br>Orsolya Frittmann, Vamsi K. Gali, Miklós Halmai, Róbert Tóth, Zsuzsanna Györfy, <u>Éva Bálint</u> , Ildikó Unk   |
| <b>10:35</b> | <b>O-47</b> | <b>Regulation of nucleosome stability: the roles of histone PTMs, histone variant composition and superhelicity</b><br>László Imre, Péter Nánái, Roswevalentine Bosire, Erfaneh Firouzi Niaki, <u>Gábor Szabó</u>  |
| <b>10:50</b> | <b>O-48</b> | <b>PARP inhibitors and the molecular mechanisms underlying their PARP1 trapping activity</b><br><u>Gyula Timinszky</u> , Sébastien Huet  |
| <b>11:05</b> |             | <b>Coffee break</b>  |



### Day 3 – Sunday, 7 November 2021

#### Session epigenetics & regulation of gene expression / Room Liget I.

Chair: Tamás Arányi

- 09:30 O-49 Transcriptional changes in response to DNA damage**  
Barbara N. Borsos, Vasiliki Pantazi, Zoltan G. Pahi, Zsuzsanna Ujfaludi, Hajnalka Majoros, Ivett Berzsenyi, Nora Ördög, Haico van Atticum, John Rouse, Evi Soutoglou, Tibor Pankotai
- 09:50 O-50 Fundamental role of the H2A.Z C-terminal tail in the formation of constitutive heterochromatin**  
László Imre, Péter Nánási, Rosevalentine Bosire, Ágota Csóti, Kata Nóra Enyedi, Éva Hegedüs, Erfaneh Firouzi Niaki, Gábor Mező, Zsolt Bacsó, Masayuki Kusakabe, Peter Cheung, David Tremethick, Juan Ausio, Masahiko Harata, Gábor Szabó
- 10:05 O-51 Moesin is involved in mRNA export as a new member of the Mediator complex**  
Idikó Kristó, Zoltán Kovács, Péter Borkúti, Anikó Szabó, Zoltán Lipinszki, Aladár Pettkó-Szandtner, Péter Vilmos
- 10:20 O-52 Combined RNA-seq and WGS analysis of a rabbit family reveals clear genotype supported intermediate inheritance of gene expression levels at many genes**  
Maher Alnajjar, Levente Kontra, Zsófia Fekete, Tibor Nagy, Mátyás Schiller, Nóra Ninausz, Viktor Stéger, Zoltán Német, Endre Barta
- 10:35 O-53 Initiation of PIWI mediated heterochromatin formation in *Drosophila melanogaster***  
Melinda Bence, Ákos Gyetvai, Ferenc Jankovics, Beáta G. Vértessy, Miklós Erdélyi
- 10:50 O-54 Polycomb protein RYBP associates with cardiac transcription factor NKX2-5 to regulate *Plagl1* during *in vitro* cardiac differentiation of mouse embryonic stem cells**  
Surya Henry, Melinda Katalin Pirtty
- 11:05 Coffee break**

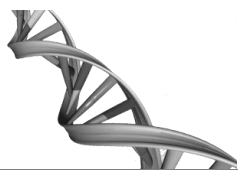


**Day 3 – Sunday, 7 November 2021**

**Plant Biology & Regulatory RNA / Congress Hall**

*Chair: László Szabados*

<b>11:40</b>	<b>O-55</b>	<b>Proline metabolism acts as regulatory hub in higher plants</b> <u>László Szabados</u> , Hajnalka Kovács, László Kozma-Bognár, Dávid Alexa, Emese Bató, Abu Imran Baba, Maria E. Alvarez, Arnould Savouré
<b>11:55</b>	<b>O-56</b>	<b>The snoRNAome of zebrafish (<i>Danio rerio</i>)</b> <u>Renáta Hamar</u> , Máté Varga
<b>12:10</b>	<b>O-57</b>	<b>Molecular analysis of tomato shoestring symptom</b> <u>Anita Sós-Hegedűs</u> , Tamás Tóth, Katalin Nemes, Péter Gyula, Pál Salamon, Katalin Salánki, György Szittya
<b>12:25</b>	<b>O-58</b>	<b>Small RNA sequencing reveals specific microRNA signatures due to invasive aspergillosis in oncohematology patients</b> <u>Anna Anita Rácz</u> , Gábor Fidler, Péter Dávid, Emese Tolnai, László Rejtő, Róbert Szász, Szilárd Pólska, Sándor Biró, Melinda Paholcsek
<b>12:40</b>	<b>O-59</b>	<b>miRNA profiling of extracellular vesicles from pancreatic ductal adenocarcinoma patient-derived organoids and blood</b> <u>Anikó Zeöld</u> , András Áron Soós, Anna Kiss, Gyöngyvér Orsolya Sándor, Tamás Tölgyes, Ákos Szűcs, Zoltán Wiener
<b>13:00</b>		<b>Closing ceremony</b> <b>Congress Hall</b>
<b>13:15</b>		<b>Lunch</b>



### Day 3 – Sunday, 7 November 2021

#### Autophagy and i.c. trafficking / Room Liget I.

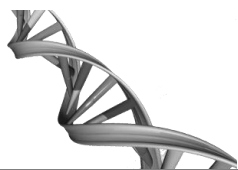
Chair: Tibor Vellai

- |       |      |  |
|-------|------|--|
| 11:40 | O-60 | <b>The role of ubiquitin in the secretory granule degradation in <i>Drosophila</i></b><br><u>Tamás Csizmadia</u> , Anna Dósa, Asha Kiran, Hajnalka Laczkó-Dobos, András Jipa, Levente Kovács, Péter Deák, Péter Lőw, Gábor Juhász                    |
| 11:55 | O-61 | <b>Cathepsin D interacts with the adenosine A<sub>2A</sub> receptors in mouse macrophages establishing a mutual molecular and functional regulation</b><br>Adrienn Skopál, Tamás Kéki, Péter Á. Tóth, György Haskó, László Virág, <u>Endre Kókai</u> |
| 12:10 | O-62 | <b>Plasmamembrane calcium pump PMCA4b is a new regulator of lumen formation and secretion</b><br><u>Sarolta Tóth</u> , Diána Patrícia Kaszás, János Sónyák, Rita Padányi, Réka Nagy, Anna Mária Tőkés, Tamás Csizmadia, Gábor Juhász, Ágnes Enyedi   |
| 12:25 | O-63 | <b>Lysosome-related organelles are required for toxic stress-induced cytoprotective and immune responses in <i>C. elegans</i></b><br><u>Gábor Hajdú</u> , Csaba Sóti   |
| 12:40 | O-64 | <b>Theratype-based classification of medically important mutations in the ABCG2 multidrug transporter</b><br>Bartos Zsuzsa and <u>László Homolya</u>   |
| 13:00 |      | <b>Closing ceremony</b><br><b>Congress Hall</b>  |
| 13:15 |      | <b>Lunch</b>   |



## List of posters - 5-6 November 2021

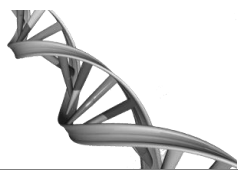
- P-001 **Marianna Holczer**  
The systems biological analysis of PP2A-ULK1-mTORC1 regulatory triangle
- P-002 **Zoltán Kovács**  
Nuclear import dynamics of the *Drosophila* moesin protein
- P-003 **Tibor Kovács**  
Autophagy is required for spermatogonial differentiation in the *Drosophila* testis
- P-004 **Hussein Abuammar**  
Role of lysosomal Trpml/mucolipin-1 calcium channel in starvation-induced autophagy
- P-005 **Asha Kiran Maddali, Hajnalka Laczkó-Dobos**  
Lipid profiles of autophagic structures isolated from wild type and Atg2 mutant *Drosophila*
- P-006 **Dávid Hargitai**  
Characterization of the endolysosomal SNARE proteins in *Drosophila melanogaster*
- P-007 **Anna Dósa**  
The role of E3 ubiquitin ligases in the regulation of crinophagy
- P-008 **Adél Ürmösi**  
Analyzing the importance the loss of ubiquitinated protein autophagy due to a mutation in Ref(2)P/p62 in *Drosophila*
- P-009 **Tamás Maruzs**  
Exploring Sorting nexin functions in *Drosophila*
- P-010 **Szinyákovics Janka**  
A conserved MTMR lipid phosphatase increasingly suppresses autophagy in brain neurons during aging
- P-011 **Enikő Lakatos**  
Investigation of the function of Snx21 in *Drosophila melanogaster*
- P-012 **Ádám Kitti**  
LRO-dependent stress and immune defenses require the pgp-2 ABC transporter in *C. elegans*
- P-013 **Dániel Kovács**  
Age dependent hormetic response to HSF-1 depletion suggests a compensatory mechanism of cellular stress signaling in *Caenorhabditis elegans*
- P-014 **Ármin Sőth**  
Identifying new protein interacting partners of EHD1 in the endosomal system
- P-015 **Zsófia Simon-Vecsei**  
Investigation of the balance between human endolysosomal tethering complexes
- P-016 **Lina Fadel**  
Agonist binding directs dynamic competition among nuclear receptors for heterodimerization with Retinoid X Receptor
- P-017 **Márk Kovács**  
Comparative transcriptome analysis of *Saccharomonospora azurea* strains in terms of primycin producing ability
- P-018 **Walliyulahi Ajibola**  
Seeking novel antimicrobials derived from environmental bacteria



- P-019 Erik Seitz**  
Development of a new, intercellular network model of the epithelial-mesenchymal transition (EMT)
- P-020 Máté Metzsig**  
Study of the 3D structures of mixed *Saccharomyces cerevisiae* colonies
- P-021 János Juhász**  
Fitting *in-silico* yeast colony growth model to experimental data
- P-022 Bálint Biró**  
Mitochondrial insertions in the rabbit nuclear genome
- P-023 János Barna**  
Prediction of gene function based on *Caenorhabditis elegans* operons
- P-024 Nóra Görög**  
Investigation of cell-cell interactions between industrial wine yeasts
- P-025 Tünde Gaizer**  
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- P-026 Veronika Törökné Ács**  
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- P-027 Áron Bartha**  
Discriminating malignant and healthy kidney tissues using proteomic and transcriptomic data
- P-028 Dávid Keresztes**  
Potential role of ISG15 and androgen receptor contact in enzalutamide resistance of prostate cancer
- P-029 Patrik Kovács**  
Global analysis of expression of transporters in chondrogenesis
- P-030 Csaba Pongor**  
Development of High Throughput Methods to Study Yeast Colony Growth
- P-031 Dalma Müller**  
Analysis of DNA methylation associated with altered gene expression in colorectal cancer
- P-032 Borbála Kovács**  
Network Topological Reorganization of Signaling Networks In the Oncogenesis of Colon Cancer
- P-033 Ádám Nagy**  
Transcriptomic effect of APC mutations in colon adenocarcinoma
- P-034 Péter Fauszt**  
Investigating the dietary habits- and lifestyle-induced changes in gut microbiota composition and functionality by the application of shotgun next-generation sequencing
- P-035 Bernadette Hotzi**  
HSF1Base: A Comprehensive Database of HSF1 (Heat Shock Factor 1) Target Genes
- P-036 Gábor Fidler**  
Effect of geographical provenance on the antimicrobial resistance load of the human gastrointestinal tract
- P-037 Bence Keömley-Horváth**  
Predicting drug side-effects using whole-cell level protein complex simulations
- P-038 Péter Dávid**  
Investigation the influence of agronomic management on the vineyard soil, trunk-bark and grape berry microbiome of *Vitis vinifera* from Tokaj-Wine region and Pallag-Botanical and Exhibitional garden

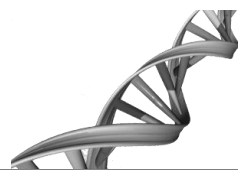


- P-039 Márk Kerestély**  
Boolean modelling of protein translocations reveals compartment-specific perturbations altering the fate of epithelial-mesenchymal transition
- P-040 János Tibor Fekete**  
Random forest model to identify predictive genes in colorectal cancer samples
- P-041 Otília Menyhart**  
Potential druggable targets in VHL-mutant clear-cell renal cell carcinomas (ccRCC)
- P-042 Szonja Kovács**  
Predictive role of MLH1 (MutL Homolog 1) in malignant cancers treated with immunotherapy
- P-043 András Szabó**  
Charged residue repeats and their effects on liquid-liquid phase separation
- P-044 Margita Ágnes Márton**  
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- P-045 Viktor Dombradi**  
Membrane-functions of the fungus specific protein phosphatase z1
- P-046 Renáta Gáspár**  
Kynurenic acid exerts antiapoptotic effects against simulated ischemia/reperfusion injury on H9c2 cells
- P-047 Zsuzsa Szondy**  
TAM kinase signaling is indispensable for proper skeletal muscle regeneration in mice
- P-048 Csaba Matta**  
Synchronising the circadian clock with mechanical stimuli during *in vitro* Chondrogenesis
- P-049 Enikő Jávör-Hocsák**  
Regulation of the ATF4-MKP-1-MAPK-mitochondrial damage-cell death pathway by PARP-1 in oxidative stress
- P-050 Nour Al Zaeed**  
Impaired Skeletal Muscle Development and Regeneration in Transglutaminase 2 Knockout Mice
- P-051 Enikő Sutus**  
Novel blood cell culturing method underlines leukocyte plasticity in *Drosophila melanogaster*
- P-052 Dóra Halmi**  
The role of mitoprotection in the cytoprotective effect of kynurenic acid against simulated ischemia/reoxygenation-induced cardiac cell damage
- P-053 Aliz Géczi**  
A machine learning based approach to identify blood cell fates in *Drosophila melanogaster*
- P-054 Eliza Guti**  
The receptor tyrosine kinase inhibitor sunitinib confers resistance to breast carcinoma cells from natural killer cell-mediated ADCC
- P-055 Isotta Sturniolo**  
A tumor spheroid model to investigate the interaction between macrophages and cancer cells
- P-056 Marvi Ghani**  
Effect of depletion of Drp1 and PA200 on neuronal differentiation and mutant huntingtin (mHtt) aggregate formation
- P-057 Nastaran Tarban**  
Role of retinol saturase enzyme in skeletal muscle regeneration

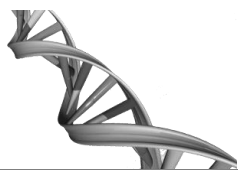


- P-058 Kinga Fedor-Lénárt**  
Tissue transglutaminase knock-out preadipocytes and beige cells of epididymal fat origin possess decreased mitochondrial functions required for thermogenesis
- P-059 Mevan Jacksi**  
The role of Ezh2 and Tks4 in EMT-related processes
- P-060 Julianna Lilienberg**  
Pharmacological modulation of neurite outgrowth in human neural progenitor cells by inhibiting non-muscle myosin II
- P-061 János Sónyák**  
The role of PMCA4b in mammosphere formation and secretion in 3D cell cultures of MCF7 cells
- P-062 Alexandra Brigitta Szarka-Kovács**  
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- P-063 Abhirup Shaw**  
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- P-064 Ákos Bordás**  
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- P-065 László Sós**  
Palmitate inhibits efferocytosis by activating the mTORc1/RhoA/Rho kinase pathway
- P-066 Éva Péntek-Garabuczi**  
NURR77 inhibits phagocytosis of apoptotic cells by downregulating PPAR $\gamma$
- P-067 Éva Vincze-Fige**  
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- P-068 Viktória Zsiros**  
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- P-069 Virginia Varga**  
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- P-070 Péter Tóth**  
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- P-071 Bianka Csaholczi**  
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- P-074 Bayan Kharrat**  
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- P-075 Dávid Farkas**  
SALS as a novel regulatory factor of sarcomeric growth
- P-076 Krisztina Tóth**  
The role of formins during *Drosophila* embryonic dorsal closure
- P-077 Rita Gombos**  
*Drosophila* Frl and Enabled work together to form actin cables for positioning nuclei during oogenesis

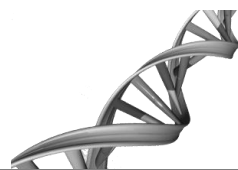




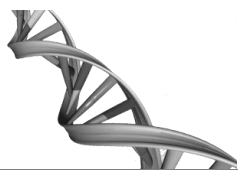
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- P-079 László Henn**  
How does the alternative linker histone ensure the earliest developmental steps in *Drosophila*?
- P-080 Lili Adorján**  
Emerging new role of RYBP and lncRNA Paupar in regulating Pax6 during neural differentiation
- P-081 Zsanett Takács**  
Analysis of a novel heterochromatin regulator in *Drosophila melanogaster*
- P-082 Lilla Kókity**  
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- P-083 Latifa Kazzazy**  
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- P-084 Eszter Németh**  
Prospectively-defined patterns of APOBEC3A mutagenesis are prevalent in human cancers
- P-085 Vasiliki Pantazi**  
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- P-086 Hasan Mamar**  
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- P-087 János Pálinkás**  
Pathways of D-loop processing by human Bloom's syndrome helicase are markedly influenced by the Topoisomerase III $\alpha$ -RMI1-RMI2 complex
- P-088 Gábor Papp**  
Correlation between uracilation and transcriptional changes in drug treated HCT116 colon cancer cells.
- P-089 Eszter Holub**  
Induced C to T transition mutations in anticancer drug treated HCT116 cells
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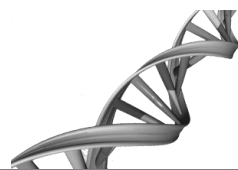
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- P-099 Thu Hien Vu**  
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- P-100 Rosevalentine Bosire**  
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The RBR-polyQ Region Of KMT2D Enzyme: Unique Sequence-Specific Function
- P-102 Ranti Dev Shukla**  
inPOSE: an IS3 element-mediated and CRISPR/Cas9-assisted robust synthetic biology tool for transgene integration and amplification in bacterial genomes
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- P-108 Ákos Avramucz**  
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- P-109 Noémi Borbély**  
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- P-110 Erzsébet Fóthi**  
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- P-111 Dorottya Simon**  
PEAR: a flexible fluorescent reporter for the identification and enrichment of successfully prime edited cells
- P-112 Tímea Pintér**  
Investigation of dysregulation of gaba-glutamate system in dip2c knockout mouse model
- P-113 Henriett Halász**  
Studying the role of the microtubules in the formation and function of the membrane nanotubes of B-lymphocytes
- P-114 Éva Katona**  
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- P-115 Ádám Diós**  
Optimization of biosensor utilization for celiac disease related antibody quantification in BLtz system
- P-116 András Áron Soós**  
Wnt secretion is uncoupled from cell proliferation and extracellular vesicle release in human pancreatic ductal adenocarcinoma organoids
- P-117 Loretta László**  
Significance of Tks4 scaffold protein in embryonic stem cell differentiation: First steps in establishment of a new Tks4-KO HUES9 cells



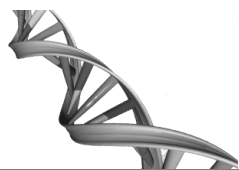
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Investigating a female-limited progressive myopia disease in a Hungarian family
- P-119 Edit Szabó**  
Potential diagnostic role of red blood cell membrane proteins in type 2 diabetes
- P-120 Anna Kulin**  
Investigation of factors behind the expression pattern of the GLUT1 membrane protein – potential relevance in diabetes
- P-121 Ádám Ungvári**  
Progesterone-dependent transcriptional programming provides smoothelin-like 1 reversal of insulin resistance in myotubes and mice
- P-122 Zsófia Ruppert**  
Sex-dependent effects of high-fat diet and HSPB1 overexpression in a mouse model of hyperlipidemia
- P-123 Melinda Tóth**  
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- P-125 Mihály Székely**  
Protein arginine methyltransferase 5 in the pathomechanism of human lung cancer
- P-126 Zsófia Nagy**  
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- P-127 Brigitta Dukay**  
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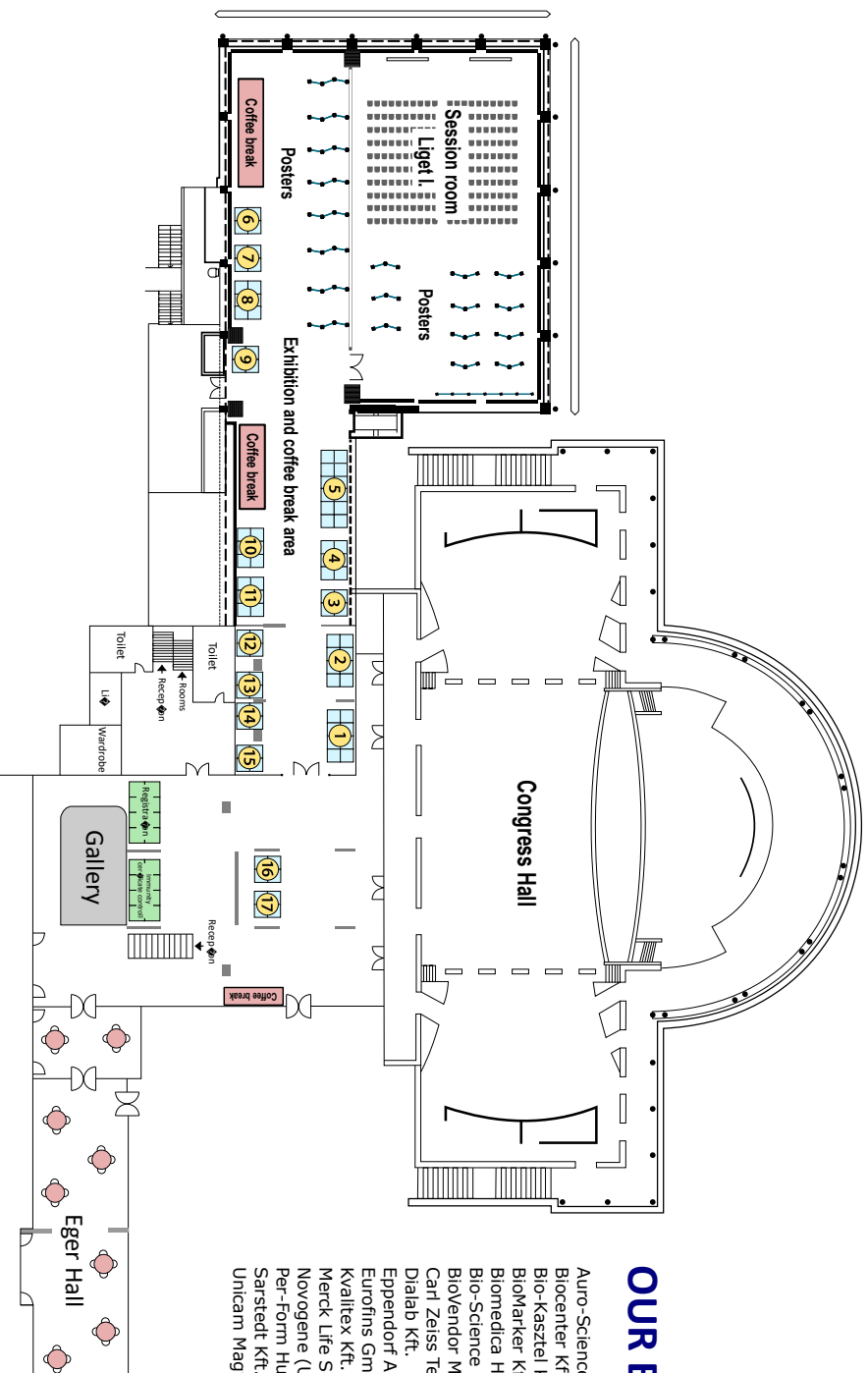
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# Hungarian Molecular Life Sciences 2021

5-7 November 2021, Hotel Eger&Park

## Map and exhibition floor plan



## OUR EXHIBITORS

- |                               |           |
|-------------------------------|-----------|
| Auro-Science Consulting Kft.  | 5. stand  |
| Biocenter Kft.                | 12. stand |
| Bio-Kasztel Kft.              | 16. stand |
| BioMarker Kft.                | 7. stand  |
| Biomedica Hungária Kft.       | 3. stand  |
| Bio-Science Kft.              | 17. stand |
| BioVendor MDX a.s.            | 11. stand |
| Carl Zeiss Technika Kft.      | 2. stand  |
| Dialab Kft.                   | 13. stand |
| Eppendorf Austria GmbH        | 15. stand |
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| Kvalitex Kft.                 | 4. stand  |
| Merck Life Science Kft.       | 14. stand |
| Novogene (UK) Company Limited | 1. stand  |
| Per-Form Hungária Kft.        | 6. stand  |
| Sarstedt Kft.                 | 9. stand  |
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