



Department of Human Genetics
Faculty of Medicine
University of Debrecen



FINAL PROGRAM

**5th Central-Eastern European Congress
on Cell-Free Nucleic Acids
Debrecen, 21-22 June 2018**

**5th Central-Eastern European Congress
on Cell-Free Nucleic Acids**

21st-22nd June, 2018

Organized by the

Department of Human Genetics

Faculty of Medicine

University of Debrecen, Debrecen, Hungary

Organizer

Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen

Invited Speakers

Asselbergs, W. Folkert (University Medical Center, Utrecht)
Cuckle, S. Howard (University of Tel Aviv, Tel Aviv)
Sensen, Christoph (Graz University, Graz)
Singh, Ripudaman (ARCEDI Biotech ApS, Vejle, Denmark)
Sistermans, A. Erik (VU University Medical Center, Amsterdam)

International Scientific Committee

Celec, Peter (Comenius University, Bratislava)
Hromadnikova, Ilona (Charles University, Prague)
Lasabova, Zora (Comenius University, Martin)
Szemes, Tomas (Comenius University, Bratislava)
Wagner, Jasenka (J.J. Strossmayer University, Osijek)

Local Organizing Committee

Nagy, Bálint (chairman, University of Debrecen, Debrecen)
Csanádi, Zoltán (vice-chairman, University of Debrecen, Debrecen)
Méhes, Gábor (vice-chairman, University of Debrecen, Debrecen)
Póka, Róbert (vice-chairman, University of Debrecen, Debrecen)
Balogh, István (University of Debrecen)
Igaz, Péter (Semmelweis University, Budapest)
Molnár, Mária Judit (Semmelweis University, Budapest)
Nagy, Sándor (Petz A. County Hospital, Győr)
Soltész, Beáta (University of Debrecen, Debrecen)
Török, Olga (University of Debrecen, Debrecen)

WELCOME

Dear Colleagues,

On behalf of the Department of Human Genetics of the Faculty of Medicine, University of Debrecen it is my pleasure to welcome you to the 5th Central-Eastern European Congress on Cell-Free Nucleic Acids in Debrecen.

Recent advances in cell-free nucleic acid research have opened up new prospects for their introduction into the clinical practice. Application of cell-freeDNA in the prenatal detection of genetic diseases has already become a routine procedure in non-invasive prenatal testing (NIPT). Now there is a growing interest in using cell-free nucleic acids (cfNA) obtained from liquid biopsy in the field of oncology, and also in the diagnosis/treatment of cardiovascular diseases. The role of microvesicle encapsulation of the cfNAs has also arisen as an exciting new area of research, where the biological role these particles play in the preservation of homeostasis and in the development of diseases is still unknown. Furthermore, there is also the possibility of horizontal gene transfer (genometastasis), which has also piqued the curiosity of scientists.

The first Central-Eastern European Congress on Cell Free Nucleic Acids was held in Budapest in 2010, and has since been held biennially: in Olomouc (2012), Martin (2014), and in Split (2016).

The previous conferences' topics have mainly been on the research and application of cfNAs in the prenatal diagnosis, however, this year we wish to extend it to their application in oncological and cardiovascular diseases. We have invited several world famous scientists in these fields as speakers to share their knowledge with Central European researchers and clinicians.

We look forward to giving you the unforgettable memory of an enlightening congress, and to giving you the warm welcome of the people and city of Debrecen.

Prof. Bálint Nagy
Chairman of the Organizing Committee

GENERAL INFORMATION

CONGRESS DATE

21st-22nd June, 2018.

CONGRESS VENUE

University of Debrecen, Life Sciences Building 1st floor, 4032 Debrecen, Egyetem tér ÉTK

CONGRESS WEBSITE

www.fna2018.com

TECHNICAL ORGANISATOR

EKHO' 94 Ltd.

H-4200 Debrecen, Babits Mihály str. 8.

e-mail: ekho94@ekho94.hu

web: <http://www.ekho94.hu>

Contact about accommodation and registration issues.



OFFICIAL CONGRESS LANGUAGE

The official language of the congress is English. Interpretation will not be provided.

SPEAKERS TECHNICAL INFORMATION

Please bring your presentation on USB memory stick/card. All PowerPoint presentations must be submitted to the congress staff in the lecture room before the section. Double slide, overhead projection and personal laptops cannot be used.

POSTER INFORMATION

Poster size: 90 cm wide, 120 cm high

Poster set-up: from 10:00, 21st of June

Poster removal: 16:00, 22nd of June

PROGRAMME CHANGES

The organizer cannot assume liability for any change in the program due to external or unforeseen circumstances.

BADGES

The congress identification badges are provided along with other congress items upon registration. Please wear them at all times during the congress. Please note that your congress badge assures your entrance to conference premises, those without badges may be refused. The identification badges are also helpful when contacting helpdesk.

MEALS

Coffee breaks, lunches and Gala dinner are included in the registration fee. Please inform the technical organizer in the case special dietary requirement (food allergy, etc.).

MOBILE PHONES

Please respect the speakers and presenters by ensuring your mobile phone is switched off at all the time during the scientific sessions.

OPENING HOURS OF THE REGISTRATION DESK

Thursday, 21 st of June	8:00 - 18:00
Friday, 22 nd of June	8:00 - 16:00

REGISTRATION FEES

Full registration before 15th of April	200 EUR
Full registration from 16th of April	300 EUR
Ph.D. student registration before 15th of April	150 EUR
Ph.D. student registration from 16th of April	200 EUR
Accompanying person fee	100 EUR
Onsite registration	400 EUR
Daily tickets	150 EUR

The registration fee includes

- Congress programme booklet
- Congress abstract, Supplement of Biomedical Papers
- Participate on lectures
- Visit exhibition
- Lunches at the University Restaurant, Nagyerdő, 20 ms to lecture halls
- Gala dinner
- Coffee breaks

Daily ticket includes

- Congress programme booklet
- Congress abstract, Supplement of Biomedical Papers
- Participate on lectures, one day
- Visit exhibition
- Lunch at the University Restaurant, Nagyerdő
- Coffee break

The fee for accompanying person includes

- Gala dinner
- Lunches

ACCOMMODATION

Aquaticum Debrecen Termál and Wellness Hotel****

Address: H-4032 Debrecen, Nagyerdei park 1.

Hotel Divinus*****

Address: H-4032 Debrecen, Nagyerdei krt. 1.

Centrum Hotel* Superior**

Address: H-4026 Debrecen, Kálvin tér 4.

Hotel Nagyerdő***

Address: H-4032 Debrecen, Pallagi utca 5.

Auguszta Hotel and Student Hostel

Address: H-4032 Debrecen, Móricz Zs. krt. 22.

SOCIAL PROGRAMMES

Gala dinner

Place: University of Debrecen Main Building, Aula; time: 18:30-21:30 on 21st of June

Tour to the Tokaj wine district (cost: 50E)

The existence of Tokaj wines is an irreproducible miracle. You can visit Tokaj district, taste the famous wine and have a dinner there.

USEFUL INFORMATION

CLIMATE

The climate of Debrecen is continental. In June usually nice warm weather can be expected with max. temperature of 25-30 C°. Nevertheless some rainy days can be expected.

INSURANCE

The registration fee does not include provision for the insurance of participants against personal accidents, illness, cancellation, theft, property loss or damage. Participants advised to take adequate personal travel insurance.

CURRENCY

The Forint (Ft), the official national currency, is convertible. The exchange rates applied in Hungarian banks, official exchange offices and hotels may vary. All major credit cards are accepted in Hungary in places displaying emblem at the entrance. Exchange rate: 1 Euro= 310 Ft (May 22, 2018.)

ELECTRICITY

The voltage in Hungary is 220 V, 50Hz AC.

TIME ZONE

Central European Summer Time (CEST): UTC+2:00

PROGRAMME OVERVIEW

Thursday, 21st of June

10:00-10:20 Opening Ceremony

10:20-12:00 Lectures on Non-Invasive Prenatal Testing I.

12:00-13:30 LUNCH BREAK

13:30-15:50 Lectures on Non-Invasive Prenatal Testing II.

15:50-16:10 COFFEE BREAK

16:10-17:10 Non-invasive detection of heart- and cardiovascular diseases

18:30-21:30 GALA DINNER

Friday, 22nd of June

09:00-11:10 Non-invasive detection of cancer I.

11:10-11:30 COFFEE BREAK

11:30-12:30 Non-invasive detection of cancer II.

12:50-14:00 LUNCH BREAK

14:00-15:40 Detection of infectious diseases and others topics

15:40-15:50 Closing ceremony

16:00-20:00 TOUR to the Tokaj wine district

SCIENTIFIC PROGRAM

June 21st

10:00-10:20 | Opening ceremony

Non-Invasive Prenatal Testing

Chairs: Howard Cuckle, Darija Strah, Olga Török

10:20-10:50

Howard Cuckle:

Comparing different commercial cfDNA tests for aneuploidy

Department of Obstetrics and Gynecology, Tel Aviv University, Tel Aviv, Israel; Department of Obstetrics and Gynecology, Columbia University Medical Center, New York, NY, USA; Reproductive Epidemiology, University of Leeds, Leeds, UK

10:50-11:20

Erik Sistermans:

Introducing NIPT analysis in the Netherlands part II, from TRIDENT-1 to TRIDENT-2

VU University Medical Center Amsterdam, the Netherlands

11:20-11:40

Marian Grendár¹, Dušan Loderer^{2,3}, Iveta Švecová², Zuzana Laučeková², Michaela Hrtáňková², Andrea Hornáková³, Bálint Nagy⁴, Zora Lasabová⁵, Ján Danko²:

Decreasing the no call rate of Non-Invasive Prenatal Testing

¹. *Bioinformatic unit, Biomedical Center Martin, Jessenius Faculty of Medicine, Comenius University, Martin, Slovakia*, ².*Department of Obstetrics and Gynecology, Jessenius Faculty of Medicine, Comenius University, Martin, Slovakia*, ³.*Division of Molecular Biology, Biomedical Center Martin, Jessenius Faculty of Medicine, Comenius University, Martin, Slovakia*, ⁴.*Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen, Hungary*, ⁵.*Division of Oncology, Biomedical Center Martin, Jessenius Faculty of Medicine, Comenius University, Martin, Slovakia*

11:40-12:00

DISCUSSION

12:00-13:30

LUNCH BREAK

Chairs: Ilona Hromadnikova, Ripudaman Singh, Erik Sistermans, Judit M. Molnár

13:30-14:00

Howard Cuckle:

Invasive and non-invasive prenatal detection of micro-deletions

Department of Obstetrics and Gynecology, Tel Aviv University, Tel Aviv, Israel; Department of Obstetrics and Gynecology, Columbia University Medical Center, New York, NY, USA; Reproductive Epidemiology, University of Leeds, Leeds, UK

14:00-14:30

Ripudaman Singh^{1,2}, Lotte Hatt¹, Inga Baasch Christesen¹, Katarina Ravn¹, Olav Bjørn Petersen^{3,5}, Niels Uldbjerg³, Rikke Christensen⁴, Ida Vogel^{4,5}, Palle Schelde¹

Fetal Cells in Maternal Blood for Prenatal Diagnosis – The story so far

¹ARCEDI Biotech ApS, Vejle, Denmark. ²Aarhus University, Aarhus, Denmark.

³Department of Obstetrics and Gynecology, Aarhus University Hospital, Aarhus, Denmark., ⁴Department of Clinical Genetics, Aarhus University Hospital, Aarhus, Denmark. ⁵Centre for Prenatal Diagnostics, Aarhus University Hospital, Aarhus, Denmark.

14:30-14:40

Bálint Tobiás¹, Lili Készné Fodor¹, Sarolta Szőke¹, Gábor Molnár¹, Valéria Klujber Bernadett Balla¹, Kövesdi Andrea¹, Péter Lakatos^{1,2}, János P. Kósa^{1,2}:
PANORAMA® the SNP sequencing-based NIPT - Hungarian results in the light of American data

¹PentaCore Laboratory, Budapest, Hungary, ² Semmelweis University, I. Dept. of Internal Medicine Budapest, Hungary

14:40-14:50

Darija Strah¹, Nina Ružić Gorenjec²:

First trimester screening for Down's syndrome by combined nuchal translucency and prenatal cf-DNA testing

¹Strah Diagnostic Centre, Domžale, Slovenia, ²Institute for Biostatistics and Medical Informatics, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

14:50-15:00

Olga Török:

Cff-DNA based NIPTs in Hungary

Institute of Obstetrics and Gynecology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary

15:00-15:10

Ilona Hromadnikova^{1,2}, Katerina Kotlabova^{1,2}, Katarina Ivankova², Ladislav Krofta²:

First trimester screening of circulating C19MC microRNAs and the evaluation of their potential to predict the onset of preeclampsia and FGR

¹ Department of Molecular Biology and Cell Pathology, Third Faculty of Medicine, Charles University, Ruska 87, 100 00 Prague, Czech Republic, ² Institute for the Care of the Mother and Child, Third Faculty of Medicine, Charles University, Podolskenabrezi 157/36, 147 00 Prague, Czech Republic

15:10-15:20	<p>Ilona Hromadnikova^{1,2}, Katerina Kotlabova^{1,2}, Ladislav Krofta², Filip Hron²: Follow-up of gestational trophoblastic disease/neoplasia via quantification of circulating nucleic acids of placental origin using C19MC microRNAs, hypermethylated RASSF1A and SRY sequences</p> <p>¹<i>Department of Molecular Biology and Cell Pathology, Third Faculty of Medicine, Charles University, Ruska 87, 100 00 Prague, Czech Republic,</i></p> <p>²<i>Institute for the Care of the Mother and Child, Third Faculty of Medicine, Charles University, Podolskenabrezi 157/36, 147 00 Prague, Czech Republic</i></p>
15:20-15:40	<p>Company Presentation</p> <p>Zhou Yafeng: Introduction NIFTY test (NIPT) and comparison of the q-PCR technology with NGS technology <i>BGI International Dx Unit</i></p> <p>Zhou Yafeng: Introduction our Sentis (cancer panel) with our own sequencer of NGS technology <i>BGI International Dx Unit</i></p>
15:40-15:50	DISCUSSION
15:50-16:10	COFFEE BREAK

Non-invasive detection of heart- and cardiovascular diseases

Chairs: Folkert Asselbergs, Zoltán Csanádi, Marian Grendár

16:10-16:30	<p>Folkert Asselbergs: Cardiomyopathies: a genetic and phenotypic heterogeneous group of diseases <i>Department of Cardiology, Division Heart & Lungs University Medical Center Utrecht, the Netherlands</i></p>
16:30-16:40	<p>Zoltán Csanádi: Electrical storm in the brain and in the heart: Epilepsy and Brugada syndrome <i>Institute of Cardiology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary</i></p>

16:40-16:50	Orsolya Biró¹, Bálint Nagy²: Non-invasive prenatal testing for congenital heart disease – cell-free nucleic acid and protein biomarkers in maternal blood ¹ <i>First Department of Obstetrics and Gynaecology, Semmelweis University, Budapest, Hungary</i> , ² <i>Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen, Hungary</i>
16:50-17:00	Orsolya Biró¹, János Rigó Jr.¹, Bálint Nagy²: Maternal methylenetetrahydrofolate reductase (MTHFR) polymorphisms: risk factors for congenital heart disease? ¹ <i>First Department of Obstetrics and Gynaecology, Semmelweis University, Budapest, Hungary</i> ² <i>Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen, Hungary</i>
17:00-17:10	DISCUSSION
18:30-21:30	GALA DINNER Place: University of Debrecen, Central Building, Aula

June 22nd

Non-invasive detection of cancer

Chairs: Péter Igaz, Nagy Dóra, Róbert Póka

09:00-09:20	Róbert Póka: Free nucleic acids in ovarian cancer <i>Institute of Obstetrics and Gynecology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary</i>
09:20-09:40	Gergő Papp¹, Ilona Kovalszky¹, Csaba Bödör^{1,2}: The role of circulating cell-free DNA as a cancer biomarker <i>1st Department of Pathology and Experimental Cancer Research, Semmelweis University, Budapest, Hungary, MTA-SE Lendület Molecular Oncohematology Research Group, Budapest, Hungary, 1st Department of Pathology and Experimental Cancer Research, Semmelweis University, Budapest, Hungary</i>
09:40-10:00	Ilona Kovalszky, Lászlóné Oláh, Krisztina Császár, Krisztina Egedi, Csaba Bödör: Our first experiences with testing EGFR T790M resistance mutation in liquid biopsy

Semmelweis University 1st Department of Pathology & Experimental Cancer Research, Budapest, Hungary

10:00-10:10

Gábor Méhes, Judit Bedekovics, Attila Mokánszki:

Analysis of oncogenic mutations from liquid biopsy samples: potentials and limitations in oncology

Department of Pathology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary

10:10-10:30

Péter Igaz:

Circulating microRNAs and tumors

2nd Department of Medicine, Semmelweis University, Budapest, Hungary

10:30-10:40

Pál Perge¹, Henriett Butz², Raffaele Pezzati³, Irina Bancos⁴, Zoltán Nagy¹, Ábel Decmann¹, Michaela Luconi⁵, Massimo Mannelli⁵, Edit I. Buzás⁶, Miklós Tóth¹, Marco Boscaro³, Attila Patócs^{2,7}, Péter Igaz^{1,6}:

Evaluation of circulating exosomal microRNAs in benign and malignant adrenocortical tumors

¹*2nd Department of Medicine, Semmelweis University, 1088 Budapest, Szentkirályi str. 46, Hungary*, ²*Molecular Medicine Research Group, Hungarian Academy of Sciences and Semmelweis University, 1088 Budapest, Szentkirályi str. 46, Hungary*, ³*Endocrinology Unit, Department of Medicine, University of Padua, Via Ospedale, 105, 35128 Padova, Italy*, ⁴*Division of Endocrinology, Diabetes, Metabolism and Nutrition, Department of Internal Medicine, Mayo Clinic, 200 First Street SW, Rochester, MN 55905 USA*, ⁵*Department of Experimental and Clinical Biomedical Sciences, Endocrinology Unit, University of Florence, Viale Pieraccini 6, 50139 Florence, Italy*, ⁶*Department of Genetics, Cell- and Immunobiology, Semmelweis University, 1089 Budapest, Nagyvárad tér 4., Hungary*, ⁷*“Lendület-2013” Research Group, Hungarian Academy of Sciences and Semmelweis University, 1088 Budapest, Szentkirályi str. 46, Hungary*

10:40-10:50

Vilmos Adleff¹, Jillian Phallen¹, Alessandro Leal¹, Brian Woodward², Patrick M. Forde¹, Kristen A. Marrone¹, Julie R. Brahmer¹, Jacob Fiksel¹, Stephen Cristiano¹, Daniel C. Brum¹, Elizabeth Weihe², Valsamo Anagnostou¹, Robert B. Scharpf¹, Hatim Husain², Victor E. Velculescu¹:

Liquid Biopsies in the Early Detection and Management of Cancer

¹ *The Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine, Baltimore, MD 21287, USA*, ² *Division of Hematology and Oncology, Moores Cancer Center, University of California, San Diego, La Jolla, CA 92093, USA*

10:50-11:10

DISCUSSION

11:10-11:30

COFFEE BREAK

Chairs: Gábor Méhes, Ilona Kovácszky, Hakan Savli

11:30-11:40

Zora Lasabová^{1*}, Tatiana Burjaníková², Bibiana Malicherová^{1,3}, Marián Grendár⁴, Barbora Váňová, ^{1,2}, Lukáš Plank^{1,3}:

Non-invasive detection of biomarkers in plasma of cancer patients using droplet digital PCR – overview, first experiences and perspectives

¹Division Oncology, Biomedical Center Martin, Comenius University in Bratislava, Slovakia, Jessenius Faculty of Medicine in Martin, Slovakia, ²Department of Molecular Biology, Comenius University in Bratislava, Jessenius Faculty of Medicine in Martin, Slovakia, ³Department of Pathological Anatomy, Comenius University in Bratislava, Slovakia, Jessenius Faculty of Medicine and University Hospital in Martin, Slovakia, ⁴Department of Bioinformatics, Biomedical Center Martin, Comenius University in Bratislava, Slovakia, Jessenius Faculty of Medicine in Martin, Slovakia

11:40-11:50

Judit Keserű¹, Beáta Soltész¹, János Lukács², Róbert Póka², Bálint Nagy¹:
Correlation of plasma mitochondrialDNA copy number and status of ovarian cancer patients

¹Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen, Hungary, ²Institute of Obstetrics and Gynaecology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary

11:50-12:00

Melinda Szilágyi-Bónizs¹, Éva Márton¹, János Lukács², Beáta Soltész¹, Eszter Janka³, András Penyige¹, Róbert Póka², Bálint Nagy¹:
MiR200a, miR200b and miR200c are promising candidate biomarkers in epithelial ovarian cancer

¹Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen, Hungary, ²Department of Obstetrics and Gynecology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary, ³Department of Dermatology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary

12:00-12:10

Beáta Soltész¹, János Lukács², Edina Szilágyi¹, Róbert Póka², Bálint Nagy¹:
Cell-free, long non-coding RNA in the diagnosis of ovarian cancer

¹Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen, Hungary, ²Institute of Obstetrics and Gynecology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary

12:10-12:20

Naci Cine¹, Nilufer Sertdemir¹, Duygu Yavuz¹, Merve Gokbayrak¹, Eda Guzdolu¹, Gulhan Demir¹, Devrim Cabuk², Ulas Isik², Ercan Ozden², Kazim Uygun², Gorkem Aksu³, Hakan Savli¹:

NGS based ctDNA-liquide biopsy analysis in Turkish cancer patients

¹ Kocaeli University Faculty of Medicine, Department of Medical Genetic, Izmit, Turkey, ² Kocaeli University Faculty of Medicine, Department of Medical

	<p><i>Oncology, Izmit, Turkey,³ Kocaeli University Faculty of Medicine, Department of Radiation Oncology, Izmit, Turkey</i></p>
12:20-12:30	<p><i>Ozkan Ozden, İlhami Gok:</i> Deacetylation of JAK1 and Its Association with IL-6-Induced Inflammatory Response in Cancer <i>Kafkas University, Faculty of Engineering and Architecture, Department of Bioengineering Central Campus, 36100, Kars, TURKEY</i></p>
12:30-12:40	<p><i>Beáta Soltész¹, Orsolya Biró², János Lukács³, András Penyige¹, Róbert Póka³, Bálint Nagy¹:</i> Cell-free miRNAs as potential biomarkers in the diagnosis of ovarian cancer ¹<i>Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen, Hungary</i> ²<i>Department of Obstetrics and Gynecology, Semmelweis University, Budapest, Hungary</i>, ³<i>Institute of Obstetrics and Gynecology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary</i></p>
12:40-12:50	DISCUSSION
12:50-14:00	LUNCH BREAK

Detection of infectious diseases and others topics

Chairs: Christoph Sensen, Peter Celec, Tomas Szemes, Jasenka Wagner

14:00-14:20	<p><i>Christoph Sensen:</i> Circulating nucleic acids as early markers for infectious and chronic diseases <i>Institute of Computational Biotechnology, Graz University of Technology, Graz, Austria</i></p>
14:20-14:30	<p><i>Tomáš Szemes^{1,3,5}, Andrej Baláž^{2,3,5}, Michal Kajšík^{1,2}, Iveta Gazdaricová², Orsolya Biró⁴, Bálint Nagy⁴, Ján Turňa^{1,2}, Jaroslav Budíš^{2,3,5}:</i> Are phages part of our immunity? ¹<i>Faculty of Natural Sciences, Comenius University, Bratislava, Slovakia</i>, ²<i>University Science Park; Comenius University, Bratislava, Slovakia</i>, ³<i>Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava, Slovakia</i>, ⁴<i>Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen, Hungary</i>, ⁵<i>Geneton Ltd; Bratislava, Slovakia</i></p>

14:30-14:40	<p>Aleksandar Vojta, Goran Josipović, Vanja Tadić, Vlatka Zoldoš: Editing the epigenome using a comprehensive CRISPR/Cas9-based molecular toolbox <i>Department of Biology, Faculty of Science, University of Zagreb, Zagreb, Croatia</i></p>
14:40-14:50	<p>Peter Celec, Barbora Vlková: Causes and consequences of the variability of extracellular DNA <i>Institute of Molecular Biomedicine, Faculty of Medicine, Comenius University, Bratislava, Slovakia</i></p>
14:50-15:00	<p>Emese Domonkos, Lubica Janovičová, Manuel Steinhardt, Tim Höpfner, Thomas Stehle, Peter Celec: Sex differences in plasma deoxyribonuclease activity in rats <i>Institute of Molecular Biomedicine, Faculty of Medicine, Comenius University, Sasinkova 4, Bratislava, Slovakia</i></p>
15:00-15:10	<p>Lubica Janovičová, Barbora Konečná, Jozef Čonka, Lucia Lauková, Peter Celec: Variability in deoxyribonuclease activity and extracellular DNA in mice <i>Institute of Molecular Biomedicine, Faculty of Medicine, Comenius University, Bratislava, Slovakia</i></p>
15:10-15:20	<p>Gergely Buglyó¹, Zsófia Magyar², Éva Romicsné Görbe², Rita Bánusz³, Monika Csóka³, Tamás Micsik⁴, Zsanett Berki¹, Péter Varga², Zoltán Sápi⁴, Bálint Nagy¹: Novel miRNA downregulations in blastemal Wilms' tumor: an FFPE-based study ¹<i>Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen, Hungary</i>, ²<i>1st Department of Obstetrics and Gynaecology, Semmelweis University, Budapest, Hungary</i>, ³<i>2nd Department of Paediatrics, Semmelweis University, Budapest, Hungary</i>, ⁴<i>1st Department of Pathology and Experimental Cancer Research, Semmelweis University, Budapest, Hungary</i></p>
15:20-15:30	<p>Lucia Lauková¹, Jozef Čonka¹, Estera Maria Jana Bertolo², Magdaléna Zelinková¹, Veronika Borbélyová¹, Alexandra Gaál-Kovalčíková¹, Emese Domonkos¹, Barbora Vlková¹, Peter Celec¹: Dynamics of extracellular DNA in a mouse model of sepsis ¹<i>Institute of Molecular Biomedicine, Faculty of Medicine, Comenius University, Bratislava, Slovakia</i>, ²<i>Deanery of Biomedical Sciences, University of Edinburgh, Edinburgh, UK</i></p>
15:30-15:40	DISCUSSION
15:40-15:50	CLOSING CEREMONY
16:00-20:00	Tour to the Tokaj wine region

Posters (presented in the hall of the Life Sciences Building)

Hrindová B., Matějčková I., Zembol F., Bittóová M., Koudová M., Stejskal D.:

Automation of Cell-Free DNA Testing on Ion Proton System

Centre of Medical Genetics and Reproductive Medicine, Gennet, Ltd., Kostelní 9, Prague 7, Czech Republic

Éva Márton¹, János Lukács², Réka Szabó¹, Beáta Soltész¹, Eszter Janka³, Róbert Póka², Bálint Nagy¹, Melinda Szilágyi-Bónizs¹

Study the role of miR141 and miR429 in the diagnosis of epithelial ovarian cancer

¹ *Department of Human Genetics, Faculty of Medicine, University of Debrecen, Debrecen, Hungary*, ²*Department of Obstetrics and Gynecology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary*, ³*Department of Dermatology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary*

Sayli A, Akdeniz E, Araz I, Kahveci N, Kokturk G, Ture N, Bektas M, Serim G, Bilgin Z, Ozdemir D.:

Determination of Common Chromosomal Abnormalities with NIFTY Test (Non-invasive Fetal Trisomy Test) in Turkey

GENOKS Genetic Diagnostic Center, Ankara, Turkey

Krisztina Szirák¹, Beáta Soltész¹, Orsolya Hajas², Réka Urbancsek², Edina Nagy-Baló², András Penyige¹, Zoltán Csanádi², Bálint Nagy¹:

Determination of PITX2 and NEURL1 single nucleotide polymorphisms in atrial fibrillation

¹*University of Debrecen, Faculty of Medicine, Department of Human Genetics, Debrecen, Hungary*; ²*University of Debrecen, Faculty of Medicine, Institute of Cardiology, Debrecen, Hungary*

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Comparative analysis of the somatic mutation profiles in monitored 26 genes in circulating tumor DNA from breast cancer patients before, after surgery and after adjuvant chemotherapy – the pilot study

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Location map



1. Conference Venue

University of Debrecen, Life Sciences Building 1st floor,
4032 Debrecen, Egyetem tér ÉTK

2. Gala Dinner Venue

University of Debrecen Main Building, Aula

3. Aquaticum Debrecen Thermal and Wellness Hotel

H-4032 Debrecen, Nagyerdei park 1.

4. Hotel Nagyerdő

H-4032 Debrecen, Pallagi str. 5.

5. Hotel Divinus

H-4032 Debrecen, Nagyerdei krt. 1.



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- Centromere Probes
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- Translocation Probes



Microarrays & Scanner

- CGH+SNP
- Gene Expression
- Methylation
- Associated Reagents



Next-Generation Sequencing

- SureSelect
- HaloPlex



PCR & qPCR Solutions

- Mx qPCR System
- SureCycler 8800
- Brilliant III



Software & Data Analysis

- CytoGenomics
- GeneSpring
- Workbench



Sample QC

- 2100 Bioanalyzer System
- 2200 TapeStation System



Automation Solutions

- Bravo
- BenchBot
- BenchCell



Molecular Analysis Biology Reagents

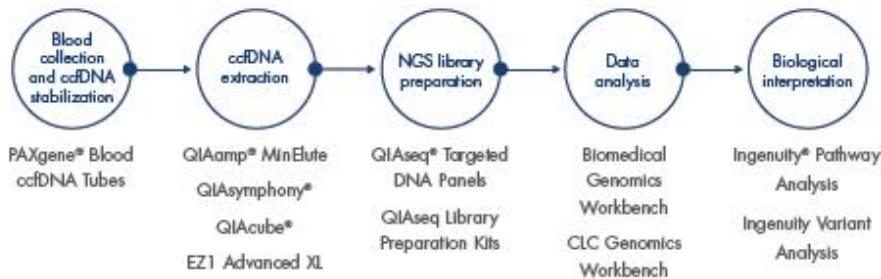
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- Mutagenesis
- Cloning





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