



Deliverable 2.6: Active participation at international and national clinically oriented conference update

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Basic information

Project title	Strategies to strengthen scientific excellence and innovation capacity for early diagnosis of gastrointestinal cancers
Project acronym	VISION
Call	H2020-WIDESPREAD-2018-2020
Topic	WIDESPREAD-03-2018
Project type	Coordination and Supporting Action (CSA)
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Nature	R (Document, report - excluding the periodic and final reports)
Dissemination level	PU (Public, fully open, e.g. web)



Executive summary

All consortium partners participating in international and national meetings and conferences promoted the VISION project during oral and poster presentations. The VISION logo was used in any presented work and/or the project was referenced in the acknowledgments. The abstracts from these scientific events are published on the project website - <http://vision.sav.sk/presentations.html>.

1 International conferences

Members of the VISION consortium took part in various scientific events organized either online, in-person or in a hybrid form. The scientists and early-stage researchers gave oral presentations or presented posters at conferences/meetings.

1.1 Oral presentations

International Conference Analytical Cytometry (CSAC), October 2–5, 2021 (Ostrava, Czech Republic)

- *Flow cytometric analyses of TNF α influence on the biology of melanoma and colorectal carcinoma cells.* Silvia Tyciakova et al. (BMC SAV)
- *The role of aldehyde dehydrogenase in colorectal cancer chemoresistance and metastasis.* Martina Poturnajova et al. (BMC SAV)

Croatian Congress of Toxicology (CROTOX), October 3-6, 2021 (Rabac, Croatia)

- *Genotoxicity testing strategies for nanomaterials in food and feed and test guidelines.* Maria Dusinska (NILU)

International Conference on Nanomaterials - Research & Application (NANOCON), October 20-21, 2021 (Brno, Czech Republic)

- *Iron Oxide Nanoparticles Cause Inflammatory Response in Murine Renal Podocytes Depending on the Type of Coating.* Michal Selc et al. (BMC SAV)

AESPANC annual congress, February 17-18, 2022 (Seville, Spain)

- *Germline and somatic mutation profiling in familial pancreatic cancer cases identifies clinically actionable variants.* Emma Barreto et al. (SERMAS/IRYCIS)
- *Combination of novel biomarkers using liquid biopsy and imaging techniques as a more accurate tool for early detection of exocrine pancreatic cancer in high-risk populations.* Julie Earl et al. (SERMAS/IRYCIS)

Genetic Toxicology and Cancer Prevention (Geneticka toxikologie a prevence rakoviny), May 2–5, 2022 (Telc, Czech Republic)

- *Differences in the surface chemistry of iron oxide nanoparticles resulted in the dissimilar route of internalization.* Barbora Svitkova et al. (BMC SAV)
- *Genome-wide DNA methylome and transcriptome changes induced by inorganic nanoparticles in vitro after chronic exposure.* Andrea Soltysova et al. (BMC SAV)
- *Comparison between silibinin-conjugated gold nanospheres and nanobipyramids impacts on the treatment of liver fibrosis in vivo.* Michal Selc et al. (BMC SAV)



- *Mouse body response to coated gold nanospheres and their biodistribution in 4 months period.* Kristina Jakic et al. (BMC SAV)
- *Účinnok novosyntetizovaných derivátov tymolu na in vitro modeli čreva.* Michaela Blazickova and Katarina Kozics (BMC SAV)

International Comet Assay Workshop (ICAW), May 23-26, 2022 (Maastricht, The Netherlands)

- *Use of advanced in vitro systems for risk assessment of xenobiotics.* Eva Celkova et al. (BMC SAV)

International Conference on Tumor Microenvironment and Cellular Stress: Signaling, Metabolism, Imaging and Therapeutic Targets, September 26 – October 1, 2022 (Rhodes, Greece)

- *Shrinkage of CD14+ monocytes/macrophages lineage cells in tumor microenvironment contributes to the expansion of CD90+ cells.* Alexandros-Georgios Tzingounis et al. (NKUA)

Workshop of CIBERONC Work Modules, May 25-26, 2023 (Seville, Spain)

- *Pancreatic ductal adenocarcinoma: Advances in the liquid biopsy and opportunities for targeted and immunotherapy.* Julie Earl (SERMAS/IRYCIS)

Genetic Toxicology and Cancer Prevention, June 12 – 15, 2023 (Smolenice, Slovakia)

- *Effect of thymol and its derivatives on colorectal cell lines in in vitro system.* Katarina Kozics and Michaela Blazickova (BMC SAV)
- *The chorioallantoic membrane (CAM) assay as a relevant in vivo model to study the effect of thymol on colorectal tumor progression.* Eva Sedlackova et al. (BMC SAV)
- *Risk assessment of innovative nanohydrogels developed for skin regeneration applications.* Monika Sramkova et al. (BMC SAV)
- *3D skin in vitro model development for human skin wound healing testing.* Lucia Balintova and Monika Sramkova (BMC SAV)
- *Toxicity assessment of xenobiotics: A comparison of 2D and 3D in vitro models.* Monika Mesarosova et al. (BMC SAV)
- *The antifibrotic effect of silibinin-coated gold nanoparticles against fibrosis in mouse.* Michal Selc et al. (BMC SAV)
- *Residual metal nanoparticles accumulated in the body induce late toxic effects and alterations in transcriptional and miRNA landscape.* Andrea Soltysova et al. (BMC SAV)
- *Plate reader spectroscopy as a possible substituent for atomic absorption spectroscopy in the quantification of the cellular uptake of the nanoparticles.* Barbora Svitkova et al. (BMC SAV)
- *Distribution, accumulation and biological effects of gold nanoparticles in vivo.* Kristina Jakic et al. (BMC SAV)
- *Periostin – a new candidate for a biomarker in CKD progression.* Radka Macova et al. (BMC SAV)



1.2 Poster presentations

Annual Congress Liquid Biopsy (ISLB), October 30-31, 2020 (virtual meeting)

- *Analysis of circulating free tumor DNA identifies potentially druggable somatic mutations in familial pancreatic cancer cases.* Julie Earl et al. (SERMAS/IRYCIS)

European Pancreatic Club (EPC), June 9-11, 2021 (virtual meeting)

- *VISION Project: Strategies to strengthen scientific excellence and innovative capacity for early diagnosis of gastrointestinal cancers.* Bozena Smolkova et al. (BMC SAV, FhG, SERMAS/IRYCIS, NKUA, NILU)
- *KRAS negativity and a longer overall survival in hereditary and familial pancreatic cancer cases.* Julie Earl et al. (SERMAS/IRYCIS)

Goodbye Flat Biology Conference, October 5-6, 2021 (virtual meeting)

- *NExT project: Establishing in vitro and in vivo tumor models of pancreatic neuroendocrine tumors for translational research.* Jesús Frutos Díaz-Alejo et al. (SERMAS/IRYCIS, FhG, BMC SAV, NKUA)

Current Trends in Precision Medicine in Cancer (ASPIC), October 14-15, 2021 (virtual meeting)

- *Establishing primary cultures for translational research in pancreatic cancer and glioblastoma.* (SERMAS/IRYCIS)
- *Exome sequencing of familial pancreatic cancer cases identifies pathogenic and potentially pathogenic germline variants.* Emma Barreto et al. (SERMAS/IRYCIS)

International Conference on Nanomaterials - Research & Application (NANOCON), October 20-21, 2021 (Brno, Czech Republic)

- *In Vivo Biodistribution of Gold Nanospheres in Long-Term Scale.* Kristina Kopecka et al. (BMC SAV)
- *Inflammatory Response of Murine Renal Mesangial Cells Depends on Magnetite Nanoparticle Coating.* Andrea Babelova et al. (BMC SAV)

ASEICA Educational Symposium, November 23-25, 2021 (virtual meeting)

- *Advances in the genetics and phenotype of familial pancreatic cancer.* Emma Barreto et al. (SERMAS/IRYCIS)
- *The effects of Low Intensity Ultrasounds (LIUS) on tumor models as a novel strategy in the treatment of cancer.* (SERMAS/IRYCIS)

International Comet Assay Workshop (ICAW), May 23-26, 2022 (Maastricht, The Netherlands)

- *In vivo pharmacokinetics and biodistribution of gold nanoparticles.* Katarina Kozics et al. (BMC SAV)

CIBERONC V Young Researchers meeting, November 14-15, 2022 (Santiago de Compostela, Spain)

- *Molecular characterization of familial pancreatic cancer through NGS and liquid biopsy.* Emma Barreto et al. (SERMAS/IRYCIS)



EEMGS & SEMA 2023, May 15-18, 2023 (Malaga, Spain)

- *Genotoxicity of selected hydrogels loaded with iron oxide nanoparticles for potential application in regenerative medicine.* Lucia Balintova et al. (BMC SAV)
- *Determination of proliferation and genotoxic effect of thymol and acetyl thymol on in vitro intestinal model.* Michaela Blazickova and Katarina Kozics (BMC SAV)
- *In vitro cell responses and cell-cell interactions upon xenobiotic exposure of renal and hepatic cells.* Monika Sramkova et al. (BMC SAV)

Current Understanding of Colorectal and Pancreatic Cancers (CUCAP), May 29-30, 2023 (Prague, Czech Republic)

- *Exploring Caveolin-1 expression profile in neuroendocrine tumours of the gastrointestinal tract and pancreas.* Agapi Kataki et al. (NKUA)
- *Deregulation of EMT genes induced by hypoxia and inflammation independent of DNA methylation changes in human PDAC cell lines.* Maria Urbanova et al. (BMC SAV)

Genetic Toxicology and Cancer Prevention, June 12 – 15, 2023 (KC Smolenice, Slovakia)

- *Genotoxic effect of selected hydrogels loaded with superparamagnetic iron oxide nanoparticles potentially applied in regenerative medicine.* Lucia Balintova et al. (BMC SAV)
- *Cytotoxic and genotoxic effect of thymol derivatives on colorectal carcinoma spheroids.* Michaela Blazickova and Katarina Kozics (BMC SAV)
- *Biological safety assessment of 10 nm gold nanoparticles with BSA coating in a mouse model in vitro and in vivo.* Radka Macova et al. (BMC SAV)

European Pancreatic Club (EPC), June 28 - July 1, 2023 (Alpbach, Tyrol)

- *Decitabine Reactivates Gene Expression of Silenced Genes in PDAC Preclinical Models.* Maria Urbanova et al. (BMC SAV)

2 National conferences

The VISION consortium members gave oral presentations at the following national conferences.

2.1 Oral presentations

Interaktívna Konferencia Mladých Vedcov (PREVEDA), March 2 – June 26, 2020 (virtual meeting)

- *CA IX and Inflammatory Cytokines in Pancreatic Cancer – a functional cross-talk.* Sabina Strapcova (BMC SAV)

Biologická liečba v teórii a praxi, December 15-16, 2022 (Bratislava, Slovakia)

- *Účinnosť kombinovanej protinádorovej terapie nasmerovanej pomocou polyamidoamínových dendrimérov.* Miroslava Matuskova et al. (BMC SAV)



3 JISC&INYSC VISION CONFERENCE

The Joint International Scientific Conference VISION and International Network of Young Scientists Conference (JISC&INYSC) was held in the Slovak Academy of Sciences Congress Center from Monday, April 24, 2023, until Thursday, April 27, 2023. There were 42 scientific lectures, 15 from Ph.D. students on a range of topics, including pancreatic and colon cancer, tumor environment, cancer epigenetics, relevant in vitro 3D models, liquid biopsy, chemoresistance, cell signaling and editing, clinical trials, the biosafety of nanomaterials for medical use, the microfluidic system and potential cancer biomarkers. Invited speakers comprised of VISION SAB members, Profs. Nuria Malats, Stefano Bonassi, Andrew Collins, and Prof. Silvia Pastorekova, DSc., the general director of the Biomedical Research Center, SAS.

The program is available on the website (<http://vision.sav.sk/conference/program.html>). The Book of Abstracts and presentations are available on the VISION website - http://vision.sav.sk/jisc_inysc_vision_conference.html. More information can be found in the deliverable D4.6 JISC & INYSC VISION Conference.

4 Young Oncologist Award

More information can be found in deliverable D4.5 Young Oncologist Workshop.

The Young Oncologists Award March 9-10th, 2020

Ph.D. students from VISION partners also signed up for this competition. However, this event had to be canceled due to travel restrictions due to the COVID-19 pandemic. The schedule of oral presentations is available at: <https://www.nvr.sk/wp-content/uploads/2020/02/Program-SMO2020.pdf>. The Ph.D. students from SERMAS/IRYCIS prepared videos of their lectures. Videos are available at the VISION website in the Education activities section, where also other education materials are available - https://drive.google.com/drive/folders/14ckdimGA3AAZY_ZYNV7NT430e4cHvpoO

- The effects of Low Intensity Ultrasounds (LIUS) on tumor and fibroblast cells in vitro as a novel strategy in the treatment of pancreatic cancer. Jesús Frutos Díaz-Alejo et al. (SERMAS/IRYCIS)
- The somatic mutation profile in familial pancreatic cancer cases and KRAS negative sporadic cases includes potentially druggable genes. Emma Barreto et al. (SERMAS/IRYCIS)
- Mir-326 is an important mediator in colorectal cancer progression. Silvia Serrano-Huertas et al. (SERMAS/IRYCIS)

The Young Oncologists Award March 7-8th, 2022

This event occurred online to avoid any problems, as the situation was unclear regarding travel restrictions. The Book of Abstracts of the Young Oncologist Award 2022 is available at <https://www.nvr.sk/akcie/2022-young-oncologist-award-results/>



5 Attendance at the conferences in near future

Partners of the consortium will continue in the dissemination of the VISION project achievements also in the future. At the moment, the participation in the following conferences is planned.

35th European Pathology Congress of Pathology, September 9-13, 2023 (Dublin, Ireland)

- *Exploring Syndecan-1 expression profile in neuroendocrine tumors of the gastrointestinal tract and pancreas.* E Koniaris, I Angelioudaki, A Kataki, A Mitrousias, AG Tzingounis, G Kafiri, G Zografos, M Konstadoulakis (NKUA)

Advances in Circulating Tumor Cells (ACTC), September 20-23, 2023 (Skiathos, Greece)

- *Development of a microfluidic device for the early diagnosis and follow-up of patients with pancreatic neuroendocrine tumours.* Bozena Smolkova (BMC SAV)

33rd Panhellenic Congress of Surgery and International Surgical Forum, November 11-15, 2023 (Greece)

- *Increased CD9 expression predicts the expansion of CD14+ populations in pancreatic adenocarcinoma.* AG Tzingounis, I Angelioudaki, L Rentifis, N Memos, L Chardalias, D Politis, P Antonakis, A Kataki, G Zografos, M Konstadoulakis (NKUA)
- *Preoperative analysis of cfDNA in patients with pancreatic lesions.* I Angelioudaki, AG Tzingounis, A Kataki, A Mitrousias, L Chardalias, L Rentifis, E Koniaris, G Zografos, M Konstadoulakis (NKUA)
- *Increased levels of exosomes accompany the increase of cfDNA in the peripheral blood of patients with pancreatic cancer.* I Angelioudaki, AG Tzingounis, L Rentifis, L Chardalias, D Politis, N Memos, P Antonakis, A Kataki, G Zografos, M Konstadoulakis (NKUA)

6 Deviation from the workplan

The work plan has not changed substantially, although many conferences in 2020 and 2021 were canceled or converted to a virtual form due to the COVID-19 crisis.

7 Conclusion

The pandemic affected the possibilities of promoting the VISION project from the beginning of its implementation at the national and international levels. Despite this obstacle, more than 106 abstracts have been published in international and national proceedings of scientific events acknowledging the VISION project. In addition, senior scientists and early-stage researchers will further disseminate the results of the collaboration of the VISION consortium at scientific events.