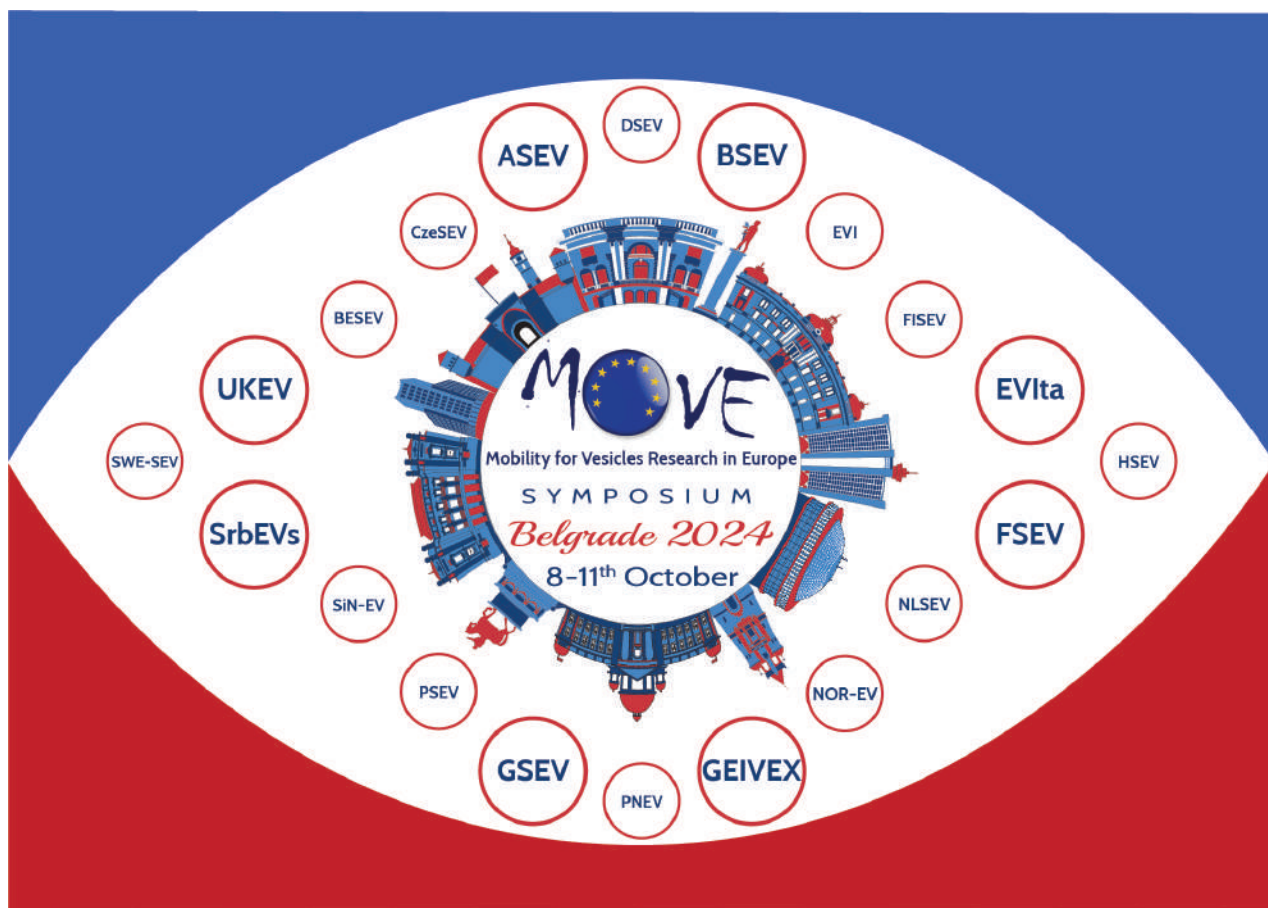


# 2<sup>nd</sup> MOVE Symposium



*presented by*

European National Societies for Extracellular vesicles



# Abstract book



# 2<sup>nd</sup> MOVE Symposium

8-11 October 2024, Belgrade, Serbia

## Organizing Societies

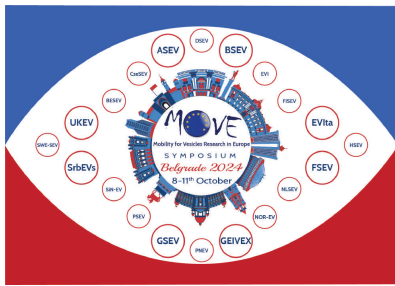


Serbian Society for Extracellular Vesicles, SrbEVs  
Austrian Society for Extracellular Vesicles, ASEV  
Baltic Society for Extracellular Vesicles, BSEV  
Italian Society for Extracellular Vesicles, EVIta  
French Society for Extracellular Vesicles, FSEV  
Spanish Society for Extracellular Vesicles, GEIVEX  
German Society for Extracellular Vesicles, GSEV  
United Kingdom Society for Extracellular Vesicles, UKEV

## Supported by Societies



Belgian Society for Extracellular Vesicles, BESEV  
Czech Society for Extracellular Vesicles, CzeSEV  
Danish Society for Extracellular Vesicles, DSEV  
Extracellular Vesicles Network of Ireland, EVI  
Finnish Society for Extracellular Vesicles, FISEV  
Hungarian Section for Extracellular Vesicles, HSEV  
Israeli Society for Extracellular Vesicles, ISREV  
Netherlands Society for Extracellular Vesicles, NLSEV  
Norwegian Society for Extracellular Vesicles, Nor-EV  
Portuguese Network on Extracellular Vesicles, PNEV  
Polish Society for Extracellular Vesicles, PSEV  
Slovenian Network for Extracellular Vesicles, SiN-EV  
Swedish EV Network, Sw-SEV



# *2<sup>nd</sup> MOVE Symposium*

8-11 October 2024, Belgrade, Serbia

## International Organizing Committee

---

**Maja Kosanovic, SrbEVs**

**Beate Riner, ASEV**

**Alireza Fazeli, BSEVs**

**Annalisa Radeghieri, EVIta**

**Christian Neri, FSEV**

**Pilar Martin-Duque, GEIVEX**

**Bernd Giebel, GSEV**

**Charlotte Lawson, UKEV**



# 2<sup>nd</sup> MOVE Symposium

8-11 October 2024, Belgrade, Serbia

## Scientific Committee

---

### **Antonio Marcilla**

Dep. for Pharmacy and Pharmaceutical Technology and Parasitology, Faculty of Pharmacy, University of Valencia, Valencia, Spain

### **Alicia Llorente**

Oslo University Hospital, Oslo, Norway

### **Bernd Giebel**

Institute for Transfusion Medicine, University Hospital Essen, Essen, Germany

### **Berta Puig**

University Medical Center Hamburg-Eppendorf, Hamburg, Germany

### **Bojana Milutinović**

Department of Neurosurgery MD Anderson Cancer Center, Houston, USA

### **Dhanu Gupta**

Department of Paediatrics, University of Oxford, United Kingdom

### **Frederik Verweij**

Div. of Cell Biology, Neurobiology & Biophysics, Department of Biology Faculty of Science, Utrecht University, Utrecht, The Netherlands

### **Gema Chiva-Blanch**

Health Sciences Studies, Universitat Oberta de Catalunya (UOC) Barcelona, Spain

### **Getnet Midekessa**

Institute of Veterinary Medicine and Animal Sciences, Estonian University of Life Sciences and Institute of Biomedicine and Translational Medicine, University of Tartu, Estonia

### **Jason Webber**

Institute of Life Science, Swansea University Medical School, Swansea University, Swansea, UK and Tissue Microenvironment Group, School of Medicine, Cardiff University, Cardiff, UK

### **Jessica Gobbo**

Centre Georges-François Leclerc, Dijon, France

### **Lydia Alvarez-Erviti**

Molecular Neurodegeneration Group, Center for Biomedical Research of La Rioja (CIBIR), La Rioja, Spain

### **Michele Guescini**

Biochemistry Department of Biomolecular Sciences, University of Urbino Carlo Bo, Urbino, Italy

### **Michiel Pegtel**

Amsterdam UMC/Cancer Center Amsterdam, Amsterdam, The Netherlands

### **Milica Popović**

Department of Biochemistry, Faculty of Chemistry, University of Belgrade, Belgrade, Serbia

### **Rossella Crescitelli**

Sahlgrenska Center for Cancer Research, University of Gothenburg, Göteborg, Sweden

### **Tanja Jasmin Kutzner**

Institute for Transfusion Medicine, University Hospital Essen, University of Duisburg-Essen, Essen, Germany

### **Tobias Tertel**

Institute for Transfusion Medicine, University Hospital Essen, University of Duisburg-Essen, Essen, Germany

### **Wolf Holthöner**

Ludwig-Boltzmann-Institute for Traumatology, Vienna, Austria



# 2<sup>nd</sup> MOVE Symposium

8-11 October 2024, Belgrade, Serbia

## Local Organizing Committee

---

Milica Popović, Faculty of Chemistry, University of Belgrade  
Maja Kosanović, Institute INEP, University of Belgrade  
Zorana Dobrijević, Institute INEP, University of Belgrade  
Ivan Jovanović, Institute Vinča, University of Belgrade  
Milica Jovanović, Institute INEP, University of Belgrade  
Lidija Filipović, Faculty of Chemistry, University of Belgrade  
Mirjana Nacka-Aleksić, Institute INEP, University of Belgrade  
Jelena Samardžić, Institute IMGGE, University of Belgrade  
Vesna Spasovski, Institute IMGGE, University of Belgrade  
Marija Tursunović, Faculty of Chemistry, University of Belgrade  
Jovana Terzić, Faculty of Chemistry, University of Belgrade

## Technical Committee

---

Aleksa Despotović

Ana Mandić

Anastazia Dimitrić

Bojana Karadžić

Dina Tumšić

Elena Vukašinović

Galja Varga

Gligorije Gligorić

Helena Majstorović

Ilija Sparavalo

Isidora Nešić

Jovana Stevanović

Katarina Kotlaja

Katarina Prodić

Ljiljana Sabljic

Marija Đurić

Marija Milivojević

Marko Prokić

Marko Stojanović

Milan Stefanović

Milana Kaličanin

Miodrag Vuković

Nađa Pavlović

Nataša Listeš

Nikolina Skrbin

Radoš Knežević

Sara Milivojević

Sofija Glamočija

Teodora Pljakić

Una Rankov

Valentina Ćurić

Vanja Krešić

Vesna Janković





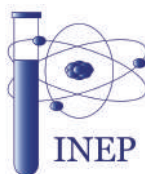
# 2<sup>nd</sup> MOVE Symposium

8-11 October 2024, Belgrade, Serbia

## Silver sponsors

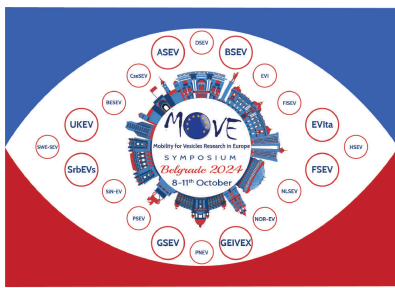


## Bronze sponsors



## Media supporters





# 2<sup>nd</sup> MOVE Symposium

8-11 October 2024, Belgrade, Serbia



Dear participants, colleagues and friends,

It's a true pleasure and honor to welcome you to the 2nd MOVE Symposium and its accompanying Abstract Book, on behalf of the International Organizing Committee.

Over the past 15 years, the field of extracellular vesicles (EVs) research has seen remarkable growth, driven by discoveries of their fundamental roles in physiological processes and their potential as biomarkers and therapeutic tools. This progress has highlighted the need for platforms to connect scientists and facilitate knowledge exchange, leading to the establishment of international and national EV societies.

To take the advantage of geographical proximity and expertise, MOVE was formed as an informal consortium of European National EV Societies (NEVS) with the main task to foster MOBility for Vesicles research in Europe and encourage communication between the societies aiming to advance and promote EV research and understanding across Europe.

With the same overreaching aim in mind, MOVE expanded its activities to organize 1st MOVE Symposium in Malaga, Spain, in 2023. Four of NEVSs (EV Societies of Spain (GEIVEX), Italy, (EVIta), Germany (GSEV) and United Kingdom (UKEV)), took a lead in organizing this milestone meeting. With more than 350 participants from all over the Europe and topics all across the field of EV research, it was a great success and set the stage for our continued efforts.

This year 8 NEVSs (EV Societies of Serbia (SrbEVs), Austria (ASEV), Baltic countries (BSEV), Italy (EVIta), France (FSEV), Spain (GEIVEX), Germany (GSEV) and United Kingdom (UKEV)), gathered to organize the 2nd MOVE Symposium, in Belgrade, Serbia.

2nd MOVE Symposium featuring 8 keynote lectures from world renown EV scientists, 49 oral presentations and 130 poster presentations across different biological and biomedical disciplines, 10 oral and 17 total presentations of tools for EV research, and over 325 participants from all across the Europe and the world, provides the opportunity to obtain an overview of EV research in Europe and beyond, discover trends and perspectives in EV field and discuss its undiscovered areas and needed research directions.

We hope that 2nd MOVE Symposium will result in formation of fruitful connections between EV enthusiasts and especially provide young scientists with an opportunity to engage with experts and forge lasting relationships that may lead to exciting future projects. As we share a passion for the research of these nano-messengers, fascinating in their complexity, heterogeneity and myriad of roles, we hope this meeting will promote the collaborations and advancements that will help shaping the future of EV research.



# 2<sup>nd</sup> MOVE Symposium

8-11 October 2024, Belgrade, Serbia

In the name of the International Organizing Committee, I'd like to thank all our participants for their contributions to this Program and the Abstract Book, and to all keynote speakers for accepting our invitation to share their expertise.

This event could not have been realized without the collective efforts of our 8 sister societies and I extend my deepest gratitude to the presidents of ASEV, BSEV, EVIta, FSEV, GSEV, GEIVEX, and UKEV as well as their dedicated members on the International Organizing Committee and Scientific Committee.

We are also deeply grateful for the financial support provided by the Sponsors and Supporters of this meeting. We acknowledge that we as scientists cannot do our work without appropriate tools, so we consider industry's contributions and collaborations as invaluable for the development of the field.

We thank Ministry of science, technological development and innovations of the Republic of Serbia for their support. Also, we thank Biological faculty of the University of Belgrade for allowing us to use Indico registration website and we are grateful to the Institute for the application of the nuclear energy, INEP and Chemical faculty of the University of Belgrade for their kind support in organizing this meeting.

Special thank you are due to the Local Organizing Committee, whose hard work has made this symposium in Belgrade a memorable event. Despite being a relatively young society, SrBEVs has taken the lead with exceptional dedication, providing us with a wonderful setting for this gathering. Also, we are very grateful to all volunteers within the Technical Committee for their valuable help.

Finally, I hope you will enjoy your time in Belgrade and its municipality of Zemun, and will be inspired to visit again to immerse yourself in its rich culture, history and vibrant city life.

In the name of the International Organizing Committee I wish you all the inspiring and memorable meeting,

Belgrade, October 2024.

---

Maja Kosanović

President of Serbian Society for Extracellular Vesicles, SrBEVs

## Tuesday, 8.10.2024. - Poster session

|       |                              |
|-------|------------------------------|
| 17:30 | <b>Poster session 1 (2h)</b> |
|-------|------------------------------|

| <b>P-B</b> | <b>Basic EV research: Biogenesis/release of EVs and their function in signal transmission</b><br>Chairs: Krizia Sagini, Ishai Luz                        |                       |
|------------|--|-----------------------|
| P-B-1      | Extracellular Vesicles and MBsomes Intercellular Communication in Skin Wound Healing   | Mariane Shouky        |
| P-B-2      | Proteomic and lipidomic profiling of extracellular vesicles from tetraspanin-deficient cell lines  | Stanislava Sladeček   |
| P-B-3      | Extracellular vesicles act faster than you think; Rapid increase in MFGE8 secretion from endometrial cells is an indicator of embryo maternal cross-talk | Subhashini Muhandiram |
| P-B-4      | Physiological vs. Traditional EV Administration: Improved Distribution and Reduced Toxicity with Slow-Release Pumps                                      | Doaa Massad           |
| P-B-5      | Role of the different intracellular pathways in the study of the biogenesis of exosomes  | Deborah Polignano     |

| <b>P-HD</b> | <b>EVs in health and disease</b><br>Chairs: Marit Inngjerdigen, Dan Lambert   |                           |
|-------------|---|---------------------------|
| P-HD-1      | Proteomic composition of extracellular vesicles derived from the interaction of Trypanosoma cruzi with myoblasts and intestinal cells | Marcel Ivan Ramirez Araya |
| P-HD-2      | Endothelial progenitor cells-derived extracellular vesicles mitigate the inflammation in septic model                                 | Luigi Menna               |
| P-HD-3      | Caveolin-1-overexpression affects extracellular vesicle loading and modulates tumour microenvironment in a rhabdomyosarcoma model     | Rachele Agostini          |
| P-HD-4      | Assessing T Cell-Mediated Immunity to SARS-CoV2 infection in extracellular vesicles through affinity capture.                         | Teresa Valero             |
| P-HD-5      | Vesicle-like particles extracted from ginger antagonize staurosporine-induced apoptosis   | Delaram Khamari           |
| P-HD-6      | The Effect of Extracellular Vesicles Originated from Mesenchymal Cells of Peritoneal Dialysate on the Mechanism of Fibrosis           | Péter Bokrossy            |



## Caveolin-1-overexpression affects extracellular vesicle loading and modulates tumour microenvironment in a rhabdomyosarcoma model

Rachele Agostini<sup>1</sup>, Emanuela Polidori<sup>1</sup>, Paola Ceccaroli<sup>1</sup>, Laura Graciotti<sup>2</sup>, Stephanie Fondi<sup>1</sup>, Michela Battistelli<sup>1</sup>, Francesca Luchetti<sup>1</sup>, Silvia Codenotti<sup>3</sup>, Gabriella Pocsfalvi<sup>4</sup>, Massimiliano Bonafè<sup>5</sup>, Alessandro Fanzani<sup>3</sup>, Vilberto Stocchi<sup>1</sup>, Michele Guescini<sup>1</sup>

<sup>1</sup> Department of Biomolecular Sciences (DISB), Università degli Studi di Urbino Carlo Bo, Urbino, Italy; <sup>2</sup> Department of Clinical and Molecular Sciences, Università Politecnica delle Marche, Ancona, Italy; <sup>3</sup> Department of Molecular and Translational Medicine (DMMT), Università degli Studi di Brescia, Brescia, Italy; <sup>4</sup> National Research Council (CNR), Napoli, Italy; <sup>5</sup> Department of Experimental, Diagnostic and Specialty Medicine (DIMES), Università di Bologna, Bologna, Italy.

**Introduction:** Extracellular vesicles (EVs) are lipid-bound vesicles secreted by cells into the extracellular space and have a pivotal role in cancer disease. Caveolin-1 (CAV1) is a 22 kDa protein located in strategic areas of the plasma membrane, such as caveolae and cholesterol-enriched lipid rafts. In the context of rhabdomyosarcoma (RD) CAV1-overexpression promotes tumour growth and metastatic diffusion, acting as a tumour enhancer. The present work aims to investigate if EV machinery is affected by CAV1-overexpression and if the EVs released by RD cells overexpressing CAV1 (RD-CAV1) can contribute to their increased aggressiveness.

**Methods:** EVs were isolated from RD-ctrl and RD-CAV1 conditioned media by sequential ultracentrifugation and characterized by Nanoparticle Tracking Analysis (NTA), Western Blot Analysis (WB) and Flow Cytometry Analysis (FC). Proteomic Analysis has been performed on EV subpopulations. Migration and proliferation assays were conducted on HUVEC cells.

**Results:** The obtained data showed that RD-CAV1 cells release more EVs with an entirely different protein profile compared to RD-Ctrl ones. WB and FC analysis revealed that RD-CAV1 small extracellular vesicles (sEVs) do not exhibit the typical exosomal markers CD63, CD81, and CD9. Proteomic analysis extended this alteration to many other proteins showing an overall reduction in protein loading and expression in these sEVs compared to the control. These findings are combined with an impairment in the RD-CAV1 intracellular vesicular trafficking, suggesting that CAV1-overexpression induces an alteration of EV biogenesis and secretion. Moreover, the treatment of HUVECs with RD-CAV1 EVs showed a significant increase in cell proliferation and migration compared to the control.

**Conclusion:** Taken together, these data demonstrate that CAV1-overexpression critically affects RD-intracellular trafficking and EV cargo-release, leading to an increase in their aggressiveness. Future studies will focus on the characterization of RD-EV lipid- and miRNA-loading and on the evaluation of RD-EV effects in other cell types, typical of tumour niche.

**Funding information:** European Union – NextGenerationEU under the Italian Ministry of University and Research (MUR) National Innovation Ecosystem grant ECS00000041 - VITALITY - CUP H33C22000430006