NEWSLETTER

Issue 63, October 2026

SNEV

Student Network on Extracellular Vesicles

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Dr. Yousef Fatahi

"Embrace multidisciplinary collaboration, and never hesitate to borrow tools and perspectives from neighbouring disciplines."





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Student Network on EVs- SNEV

Written by: Débora Ferreira, Drishya Mainali, Rucha Trivedi

Edited by: SNEV Committee

Stay Tuned for Upcoming Events!

OCT 26-29 2026

Bootcamp on Drug Delivery Based on EVs

Villa del Grumello, Italy
More info

NOV 19-21 2026

ISEV X TECH

California, USA
More info

OCT 28 2026

UKEV ECR Virtual Event

Virtual Event
More info

NOV 12-13 2026

Targeting Extracellular Vesicles 2026

Porto, Portugal
More info

NOV 24-27 2026

ANZSEV 2026 Scientific Meeting

Melbourne, Australia
More info

DEC 17-18 2026

ISEV Cardiovascular Research (ISEV-CVR)

Oxford, United Kingdom
More info

OCT 28 2026

SNEV: From bulk to single EV analysis

SNEV EVENT

Reproducibility within the EV field remains a challenge. This presentation will cover the biases introduced into studies depending on the EV isolation and characterization methods used, as well as some of the best practices to consider for reporting data. **Speaker: Joshua A. Welsh, Ph.D.**

October 28 at 7 am PDT / 12 pm CET / 10 pm AEDT • Zoom link
(Meeting ID: 851 1833 5216; Passcode: 683533)

Have an event to share?

Send the details and a verified link to the SNEV team for a future issue.

MORE INFORMATION
Visit more information ↗

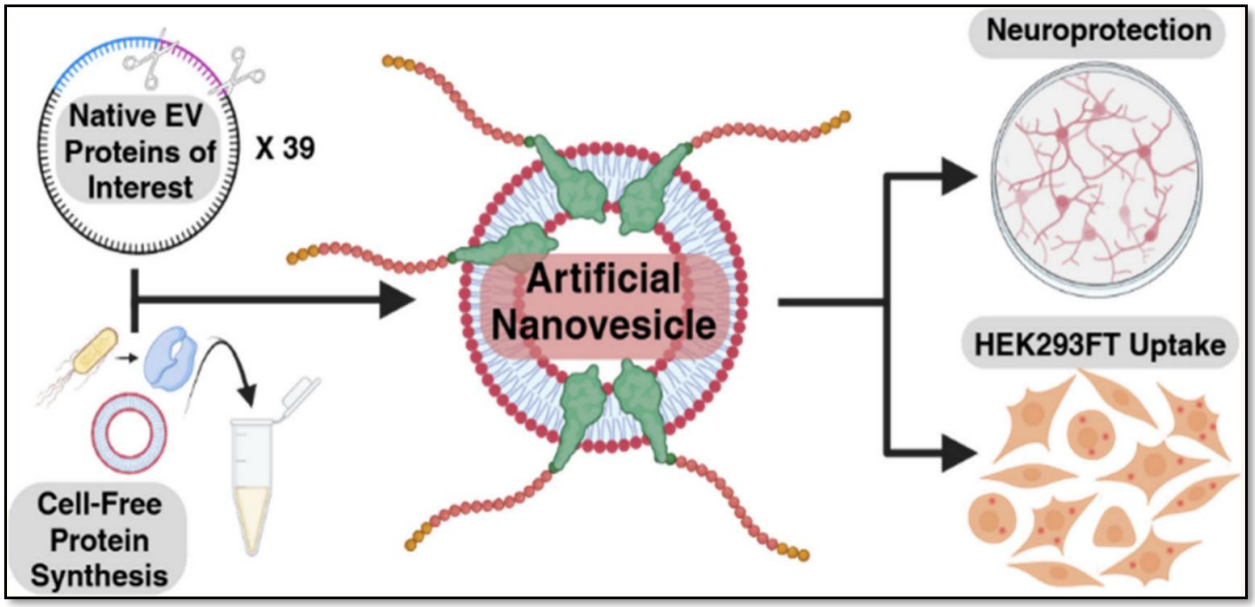
EV tool of the month

Vesicle Engineering Systems using Synthetic Expression and Loading (VESSEL)

WHAT IS IT?

VESSEL is a bottom-up, cell-free protein-synthesis platform to engineer artificial nanovesicles that display different EV surface protein domains. This technology was developed to help investigate how EV surface protein relates to their function.

FROM NATIVE EV PROTEINS TO TESTABLE NANOVESICLES



HOW DOES IT WORK?

Artificial nanovesicles (ANV) have a protein anchor based on the bacterial membrane protein Aquaporin-Z (green transmembrane protein in the image above). This anchor allows cell-free protein synthesis of EV surface protein domains. Because each nanovesicle carries only one type of protein, its effect can be tested on its own.

READ MORE ↗

Tanner Henson, Alessandra Arizzi, Conary Meyer, David Wang, Neona M. Lowe, Yongheng Wang, Keerthana Ananda, Randy P. Carney, Aijun Wang, Cheemeng Tan. ***Prototyping Minimal Extracellular Vesicle Mimetics Using Cell-Free Synthesis****. ACS Nano 10 March 2026; 20 (9): 7385–7400. https://doi.org/10.1021/acsnano.5c05047*

SNEV aims to highlight new scientific findings and emerging tools for EV research. The information shared is intended to inform and foster scientific discussion and should not be interpreted as an endorsement or recommendation of any particular tool, product, or approach

SNEV Spotlight



Dr. Yousef Fatahi

Institute of Chemical Research of Catalonia (ICIQ, Spain) •
Tehran University of Medical Sciences (Iran)

HYDROGEL MICRONEEDLES · EV DELIVERY · CLOSED-LOOP THERANOSTICS

01 What is the focus of your PhD/postdoc?

My research focuses on hydrogel microneedle platforms bridging continuous biosensing and targeted drug delivery. I develop minimally invasive electrochemical aptasensors to track therapeutics and biomarkers in dermal interstitial fluid in real time, alongside engineering microneedles to deliver biological therapeutics, particularly extracellular vesicles (EVs), toward autonomous closed-loop theranostics.

02 Tell us about your journey and why did you choose to do research on EVs!

Coming from pharmaceutical nanotechnology, I was drawn to EVs as nature's refined delivery vehicles. Unlike synthetic nanomaterials, they offer innate biocompatibility, low immunogenicity, and intrinsic targeting. What fascinates me most is integrating EV biology with transdermal technologies: dermal interstitial fluid represents an accessible molecular goldmine of EV biomarkers, and microneedles offer a gentle portal to sample and deliver them without compromising vesicle integrity.

03 Any message or advice to the SNEV community, especially for young researchers?

Embrace multidisciplinary collaboration. The EV field advances fastest where vesicle biology, materials science, and bioengineering converge. Connect actively through communities like SNEV, follow standardized reporting guidelines such as MISEV, and never hesitate to borrow tools and perspectives from neighbouring disciplines.

04 What do you hope to do after your postdoc?

I aim to establish an independent research group focused on smart closed-loop theranostics. My goal is to build wearable systems that pair real-time interstitial fluid biosensing with on-demand EV and therapeutic release, translating benchtop nanomedicine into practical, personalized clinical tools.

Connect with Dr. Yousef Fatahi
Explore his research and professional profiles

- **LinkedIn** — youseffatahi
- **Google Scholar** — Author profile
- **Personal website** — youseffatahi.github.io
- **Instagram** — @yousef_fatahi
- **X / Twitter** — @yousef_fatahi

Job opportunities

POSTDOC POSITION IN EV BIOLOGY

Roche Diagnostics GmbH • Research & Development (202609-123730)

Penzberg, Bavaria, Germany | Deadline: January 2027

Postdoctoral position in Discovery Sciences at Roche to study the diagnostic potential of EVs. Applicants must hold a PhD in Molecular Biology, Biochemistry, Cell Biology or a related field, with 3+ years of research experience and a strong publication record. Starting January 2027, for 2 years.

PHD POSITION – EVs RESEARCH IN BREAST CANCER

University of Liège • Exosome in Tumor Communication Lab (Principal Investigator: Ingrid Struman)

Belgium | Deadline: November 1, 2026

PhD project investigating the role of EV-associated ICPs in immune suppression during pre-metastatic and metastatic stages. Applicants must hold a Master's degree in Molecular Biology, Biochemistry or Biomedical Sciences. Four-year PhD fellowship, initially awarded for 1 year and renewable. Apply online by submitting a CV, contact details for two references and a motivation letter to Ingrid Struman (i.struman@uliege.be).

FACULTY POSITION IN CANCER RESEARCH

Virginia Tech

Virginia, United States | Deadline: Open until filled

Virginia Tech is recruiting a Professor or Associate Professor in cancer research with a strong record of independent funding and faculty mentorship. Research interests include bioengineering, biomaterials, exosome biology, focused ultrasound, radiation oncology, theranostics, tumour microenvironment and neuro-oncology. Location: Roanoke, Virginia, USA. For inquiries, contact Dr. Michael Friedlander (friedlan@vtc.edu) or Dr. Robert Gourdie (gourdier@vtc.edu).

Have a vacancy to share?

Send the role, deadline and verified application link to SNEV.

Research Article Highlights

LATEST EV RESEARCH ARTICLES

Longitudinally Monitoring Prostate Cancer Bone Metastasis and Treatment Response via Circulating Extracellular Vesicles. Emanuela Gentile, Paul G. Corn, Martha Zavridou, James P. Long, Jian H. Song, Anh Hoang, Andrew W. Hahn, Eleonora Dondossola, William Norton, Sue-Hwa Lin, Christopher J. Logothetis, Theocharis Panaretakis. Journal of Extracellular Vesicles 15, no. 10: e70364.

Heparin Can Augment Extracellular Vesicle Yield by Inhibiting Reuptake in Donor Cells During Cell Propagation. André Cronemberger Andrade, Rodolphe Poupardin, Martin Wolf, Liliia Paniushkina, Karim Selmi, Deepika Kundully Suresh, Nicole Maeding, Heide-Marie Binder, Janine Zwicklhuber, Sarah Hochmann, André Görgens, Samir El Andaloussi, Katharina Schallmoser, Dirk Strunk. Journal of Extracellular Vesicles 15, no. 10: e70382.

Proteomic Atlas of Notochordal Cell-Derived Extracellular Vesicles Highlights EV-Specific NF-κB Modulation and Functional Implications of the Protein Corona. Josette C. van Maanen, Chantal Voskamp, Frank M. Riemers, Harmjan R. Vos, Anouk Eversdijk, Marije Kleinjan, Menno Bergmeijer, Martijn J. C. van Herwijnen, Stuart C. Howes, Frances C. Bach, Tim J. M. Welting, Christine L. Le Maitre, Guus G. H. van den Akker, Marca H. M. Wauben, Mariana A. Tryfonidou. Journal of Extracellular Biology 5, no. 9: e70186.

FEATURED ARTICLE OF THE MONTH

Trophoblast Extracellular Vesicles Rewire Immunity: A Symptom-Relief Avenue for Recessive Dystrophic Epidermolysis Bullosa

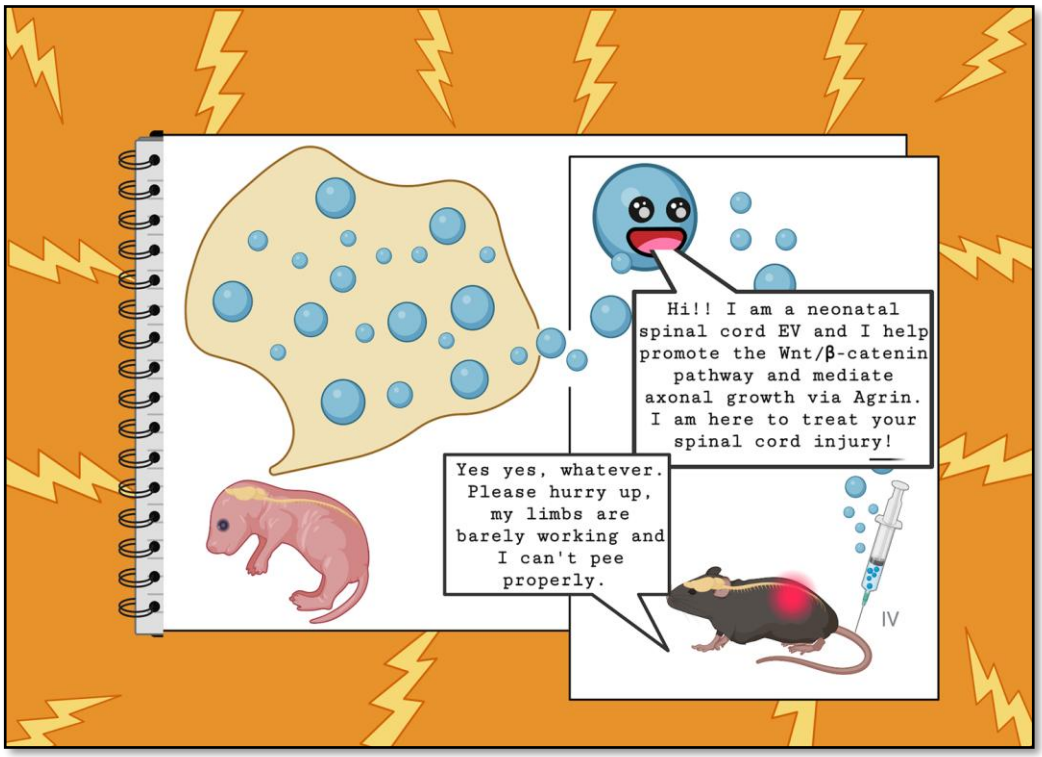
Nell Hirt, Enzo Manchon, Ming Wu, Helene Le Buanec, Pauline Bataille, Emmanuelle Bourrat, Jean-David Bouaziz, Nabila Jabrane-Ferrat, Reem Al-Daccak

In this recent **study**, Hirt et al. (2026) establish extravillous trophoblast-derived Evs (EVT-EVs) as a standardized, off-the-shelf therapeutic platform designed to resolve chronic inflammation. Using the HIPEC cell model to ensure scalable, donor-independent production, the authors demonstrate that EVT-EVs carry a distinct immunomodulatory cargo, including surface tolerance markers such as HLA-G and PD-L1 alongside a rich miRNA repertoire.

Upon rapid uptake by circulating CD14+ monocytes, EVT-EVs induce comprehensive proteomic and lipidomic remodelling, reprogramming monocytes toward an anti-inflammatory, pro-resolving phenotype. Functionally, these educated monocytes show heightened phagocytic activity, increased secretion of IL-10, diminished TNF and reactive oxygen species (ROS) production, and the capacity to expand CD4+ CD25+ Foxp3+ regulatory T cells (Tregs). Strikingly, **EVT-EV treatment successfully recalibrated pathogenic monocyte subsets from patients with Recessive Dystrophic Epidermolysis Bullosa (RDEB), restoring immune balance and highlighting EVT-EVs** as a promising bio-inspired approach for treating chronic inflammatory disorders.

EV Comics

Forever Young: Neonatal spinal cord EVs help repair adult spinal cord injury



This cartoon illustrates a recent publication by Zhang, Y., Q. Liu, B. Yu, et al. 2026. " Agrin-Enriched Neonatal Spinal Cord-Derived Extracellular Vesicles Bypass Age Barriers to Organize Spinal Cord Repair." Journal of Extracellular Vesicles 15, no. 10: e70371. https://doi.org/10.1002/jev2.70371.

Newborn mice heal spinal cord injury almost completely, but this ability fades with age. Using multi-omics across neonatal, adult and aged mice, the authors show that extracellular vesicles from neonatal spinal cord tissue carry a regenerative protein signature and are required for this repair. These vesicles promote neural stem cell proliferation through the Wnt/β-catenin pathway and drive axonal growth through Agrin. Delivered intravenously to adult injured mice, they improved motor function and bladder structure. To read more, click here.

COMIC CREDITS

Image created in **BioRender.** Cartoon animation and text by **Drishya Mainali**.

Thanks to all our readers and contributors.
Any feedback or question, please email us at ***snev.team@gmail.com***

SNEV-Podcast: Spotlight on EV-conversations

SNEV PODCAST / EPISODE SPOTLIGHT



FEATURED CONVERSATION

Exploring the World of Plant EVs

WITH GABRIELLA POCSFALVI

A conversation about plant-derived EVs, their biology, potential applications and research opportunities.

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THANK YOU FOR BEING PART OF THE EV COMMUNITY

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