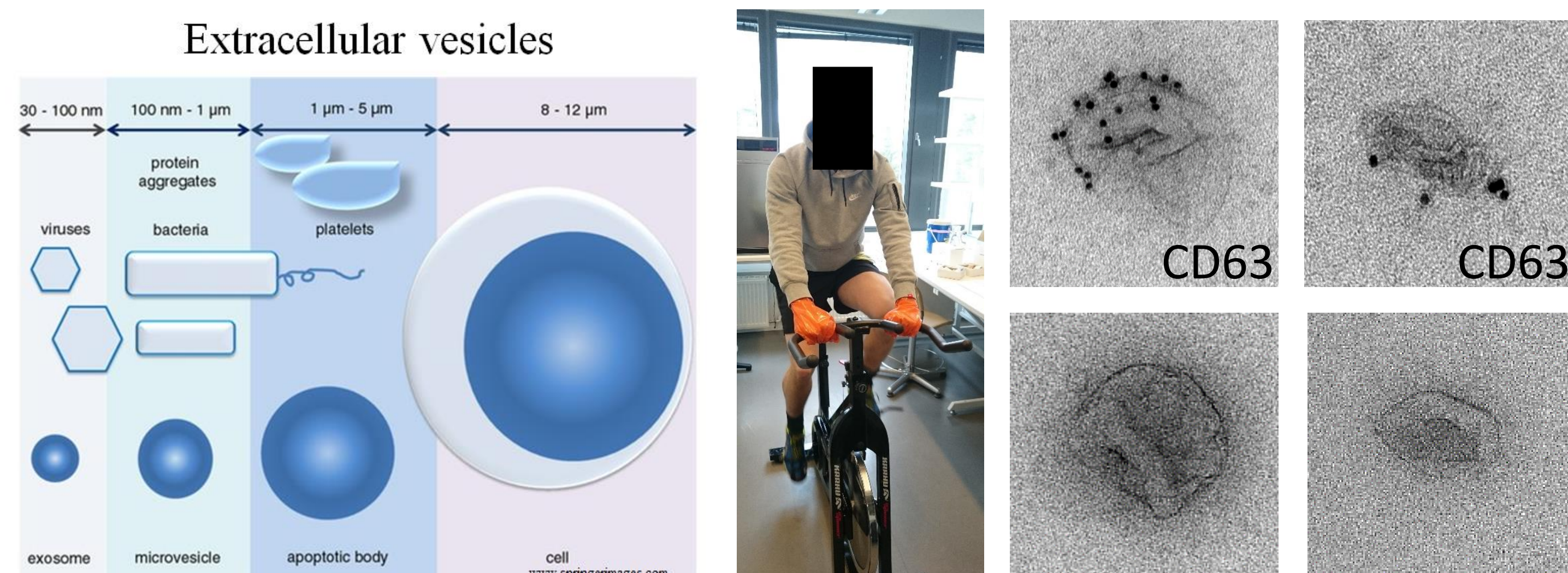


Nano BioMass - "Natural Secreted Nano Vesicles as a Source of Novel Biomass Products for Circular Economy"

Seppo Vainio, Henrikki Liimatainen, Tuukka Petäjä, Raija Tahvonen, Jonne Ukkola, Prateek Singh, Sirja Viitala, Juha Kangasluoma, Lauri Ahonen, Anatoliy Samoylenko, Daniel Fischer, Sari Mäkinen, Genevieve Bart & Simon Schallhart

Nanovesicles in Biology

Isolation and characterization of nano-extracellular vesicles in biofluids



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Bovine milk exosomes (EXs)

Characterization and development of milk derived exosomes for medical use

- Milk as cost-effective source of EXs
- Potential for monitoring the wellbeing of production animals on farm



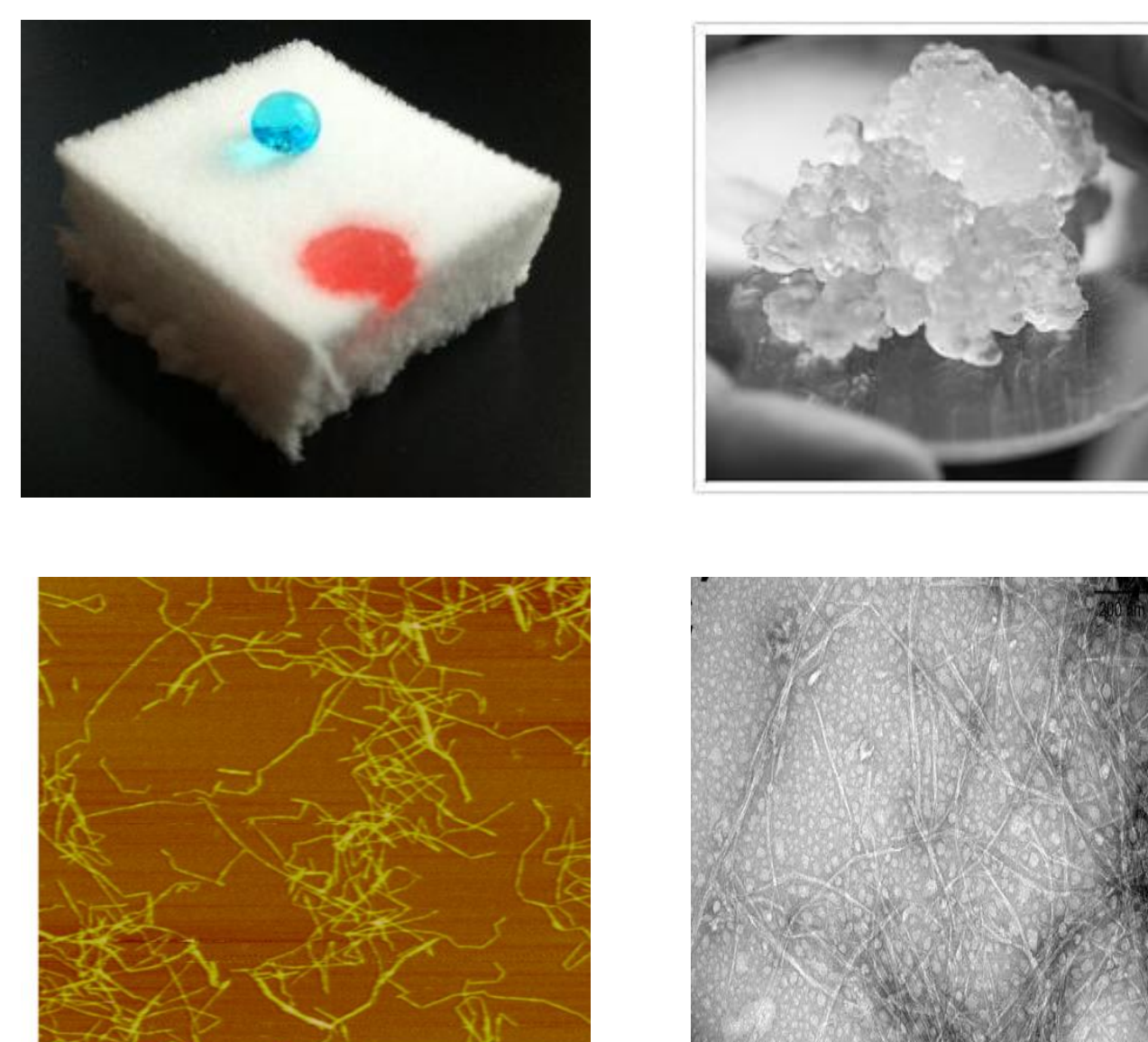
Raija Tahvonen
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Functionalized Nanocellulose

Exosome separation by nanocellulose

- Nanocellulose functionalization
- Interactions between functionalized nanocellulose and EVs
- Fabrication of membranes for EVs separation from liquids
- Fabrication of aerogels for EVs separation from air

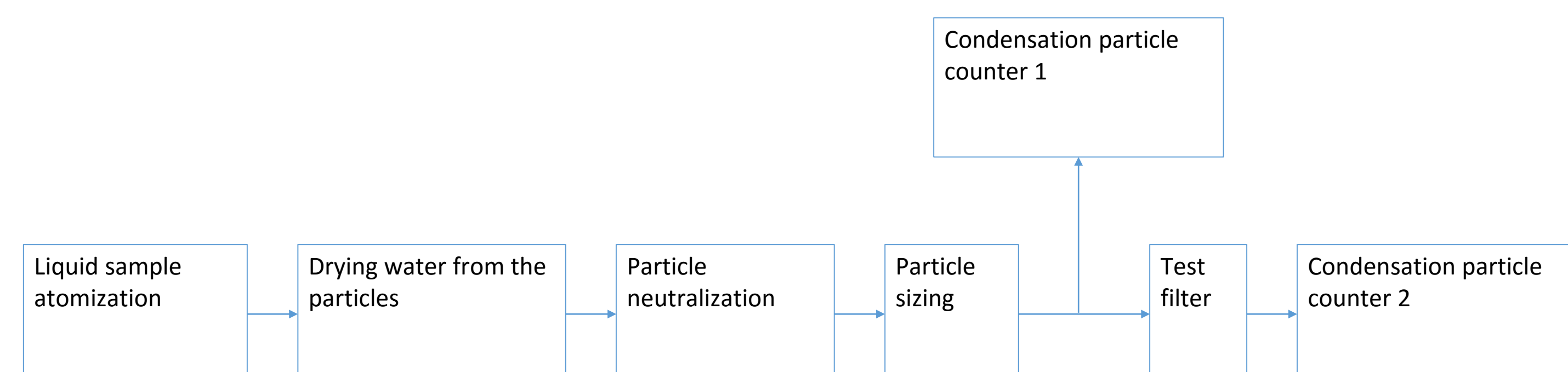
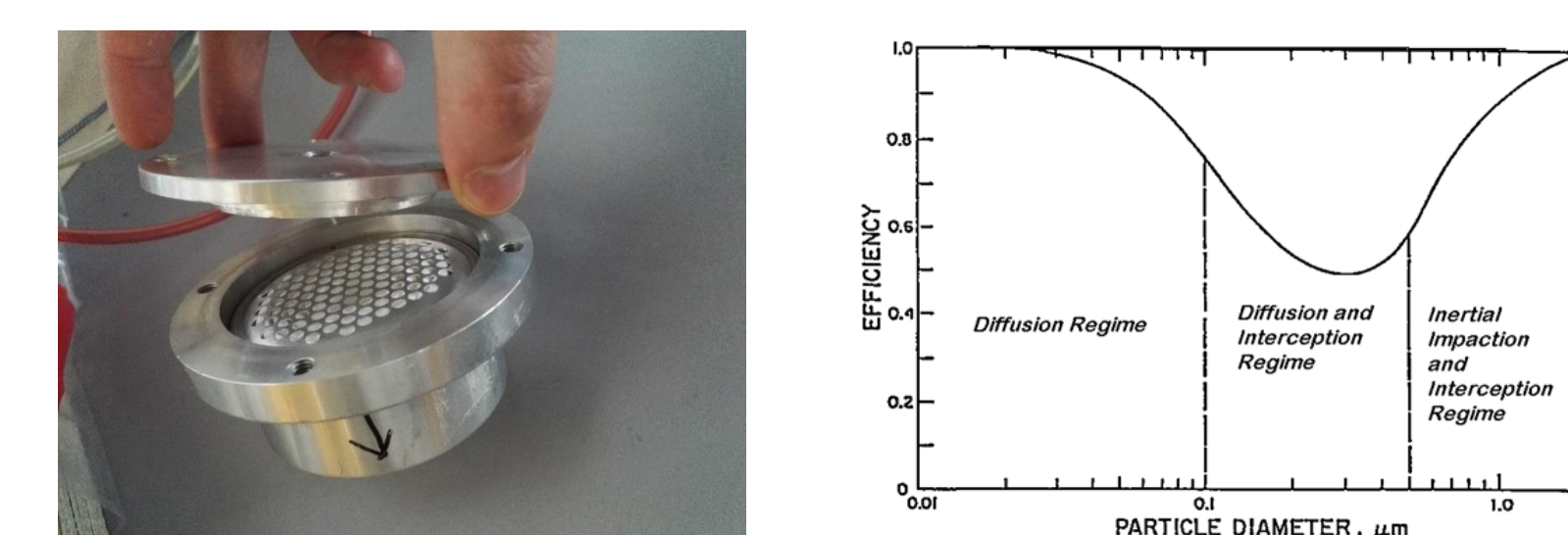


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Aerosol collection

Filter collection efficiency characterization



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