BioCity Turku wants to thank all its people and invite everyone to have a lunch this Thursday, right after FoS seminar!

There is place for 150 first registrants: https://link.webropolsurveys.com/S/144863EE5E84519D
More information from here, click!

BioCity Turku Announcement 50/2024

This week

* Field of View Guest Seminar, 9th December at 13:00, Kuligowski
* RSC-FLS Symposium 2024, 10th December
* Frontiers of Science **AND LUNCH**, December 12th at 12:00, Heick Jensen
* TREMENDO Seminar, 12th December at 14:00, Hakkola
* IPP Seminar, 13th December at 12:00, Saunavaara and Kaslin

Next week

* CellCom Seminar, 20th December at 10:00, Rilla

Courses

* SPARK Health Technology and Life Science Business
* Johdatus bioturvallisuuteen

Open positions

* Postdoctoral researchers
* Doctoral Researcher or Postdoctoral Researcher

Links to recruitment pages

Turku BioNet Seminar Calendar
Kiinamyllyn viikkokalenteri
PGE Course Calendar

Field of View Guest Seminar

9th December at 13:00-14:00
Onsite event
in Biologi Auditorium, BioCity 2nd floor

Pulla, coffee, and tea will be served at 12:45.

Dr. Michael Kuligowski, Sydney Microscopy & Microanalysis imaging facility, The University of Sydney, Sydney, Australia
Imaging at the University of Sydney

BIOCITY TURKU
BIOCITY TURKU
BIOCITY TURKU
ACADEMIC EXCELLENCE IN LIFE SCIENCE AND MEDICINE

biocityturku@bioscience.fi

Join us for an engaging seminar with Dr. Michael Kuligowski, Senior Technical Officer and Light Microscopy Specialist at Sydney Microscopy & Microanalysis imaging facility at the University of Sydney. https://www.sydney.edu.au/research/facilities/sydney-microscopy-and-microanalysis/our-staff.html

Dr. Kuligowski will tell about the Microscopy Australia infrastructure, focusing on his Sydney Microscopy & Microanalysis facility, its services and the systems that they provide. Dr. Kuligowski will also tell about a case study where he assisted a researcher with testing a new drug and the positive experimental results allowed the lab to gain new funding to continue their research. Dr. Kuligowski is giving this seminar as a part of his Job Shadowing visit to Finnish Advanced Microscopy Node of Euro-BioImaging sponsored by Global BioImaging.

Dr. Kuligowski completed his PhD in Medicine at the Monash University, Australia, where he investigated intravital imaging of mouse kidneys, discovering a novel pathway for neutrophils to bind to the endothelium, without the requirement for classic tethering and rolling. Dr. Kuligowski then completed a Post-Doc at Harvard University, USA, investigating how vaccine antigens are processed in lymph nodes, using multiphoton intravital microscopy, which resulted in several publications. On returning to Australia, he worked at the Centenary Institute, visualizing the immune system role in acute tissue rejection in real time, before joining Sydney Microscopy & Microanalysis facility in 2015. Dr. Kuligowski has a central role in the imaging facility enabling top quality research in multiple life science fields.

RSC-FLS Symposium 2024

10th December at 10:00-17:00
Hybrid event
in University of Helsinki Main Building, Fabianinkatu 33
Flyer

RSC-FLS Symposium 2024: Developments in Bio and Bio-based Materials

The hybrid event features presentations and discussions focused on innovations in biomaterials and sustainable technologies, with contributions from Finnish universities and companies. With representation from the University of Turku, Åbo Akademi, Aalto, University of Helsinki, the University of Oulu and Edinburgh University, the topics include: Composite Biomaterials from teeth to bone, Nanofibrillated Cellulose in biopharmaceutical applications, Functional Bioinks using wood biopolymers and nanomaterials for 3D bioprinting, Synthetic Biomaterials for supporting biobased drugs and bioinks, Nanocelluloses for future sustainable electronics, Fungal Enzymes in lignin modification, Textile Fiber from paper-grade pulp, Regulatory Challenges and Mechanical metamaterials

More details about the event and final programme from the Flyer above and from https://www.rsc.org/events/detail/80502/developments-in-bio-and-bio-based-materials

BIOCITY TURKU
BIOCITY TURKU
BIOCITY TURKU
ACADEMIC EXCELLENCE IN LIFE SCIENCE AND MEDICINE

biocityturku@bioscience.fi

Participation is free, please register by December 6:
https://link.webropolsurveys.com/S/72F8A5C4C5F56DED
The symposium is arranged as hybrid event. Zoom link for virtual participation will be provided after registration.

Frontiers of Science

December 12th at 12:00
Onsite event
in Presidentti auditorium, BioCity
Autumn 2024 program

Prof. Torben Heick Jensen, Aarhus Universitet, Denmark
Nuclear sorting of RNA
Host: Matti Turtola (matti.turtola@utu.fi)

No coffees nor sandwiches, but free lunch after the seminar in BioCity lobby! There are seats for 150 first ones, so sign up now!
https://link.webropolsurveys.com/S/144863EE5E84519D

Six PhD researchers and early-career postdocs are welcome to **have a lunch and discuss with Prof. Jensen** after the seminar. This is a great possibility to learn hosting skills in a friendly environment and create connections for future. Everyone is welcome to join, BioCity Turku will offer the lunch.

If you got interested, please send an email to biocityturku@bioscience.fi

Jensen laboratory studies the regulation and fidelity of gene expression which is of paramount importance for the maintenance and differentiation of all living organisms. The revelation that most of the human genome is transcriptionally active raises a new question how cells deal with all these transcripts, and the Jensen lab research is directed for understanding the fundamental transcriptome control mechanisms. These studies touch many areas of RNA metabolism like RNA decay, long non-coding RNAs, snoRNAs, RNA modifications, transposable elements, molecular recognition and RNA-binding proteins. Jensen laboratory also employs and develops methodologies to capture the transcriptome dynamics that goes technically far beyond the standard RNA-Seq analyses.

Selected publications

Rouvière JO, Salerno-Kochan A, Lykke-Andersen S, Garland W, Dou Y, Rathore O, Molska EŠ, Wu G, Schmid M, Bugai A, Jakobsen L, Žumer K, Cramer P, Andersen JS, Conti E, Jensen TH. (2023) ARS2

BIOCITY TURKU
BIOCITY TURKU
BIOCITY TURKU
ACADEMIC EXCELLENCE IN LIFE SCIENCE AND MEDICINE

biocityturku@bioscience.fi

instructs early transcription termination-coupled RNA decay by recruiting ZC3H4 to nascent transcripts. Mol Cell. 83, 2240-2257.e6.

Garland W, Müller I, Wu M, Schmid M, Imamura K, Rib L, Sandelin A, Helin K, Jensen TH. (2022) Chromatin modifier HUSH co-operates with RNA decay factor NEXT to restrict transposable element expression. Mol Cell. 82, 1691-1707.e8.

Lykke-Andersen S, Žumer K, Molska EŠ, Rouvière JO, Wu G, Demel C, Schwalb B, Schmid M, Cramer P, Jensen TH. (2021) Integrator is a genome-wide attenuator of non-productive transcription. Mol Cell. 81,514-529.e6.

Schmid M, Jensen TH. (2018) Controlling nuclear RNA levels. Nat Rev Genet. 19, 518-529.

General information

- You can download and save all the autumn 2024 FoS-seminars to your calendar from here: https://seafile.utu.fi/d/44a70f80ac1e46a9ad0a/
- Registration is not needed, participation list is circulated in the audience
- If you are a student and later wish to get a certificate of attendance from the Frontier of Science seminars, print out the seminar diary and after the seminar ask the BioCity coordinator to sign it https://seafile.utu.fi/d/44a70f80ac1e46a9ad0a/
- Please note that any audio or video recording of the seminars is strictly forbidden.
- Autumn 2024 image credits to Mia Åstrand: Details of the Bacteroides fragilis VgrG protein (PDB ID: 8GRA). Image created in the PyMOL Molecular Graphics System, Version 2.5 Schrödinger, LLC.

TREMENDO Seminar

12th December at 14:00
Onsite event
in Medisiina D 8066

Professor Jukka Hakkola, University of Oulu
Role of nuclear receptor PXR in metabolic diseases

Chair: Petteri Rinne

Jukka Hakkola is a Professor of Pharmacology since 2009 and the Head of the Research Unit of Biomedicine since 2014. Hakkola has over 25 years of experience in the pharmacology and toxicology and hepatic cell and molecular biology. His research interests have focused on nuclear receptors and cytochrome P450 enzymes, during the recent years especially on hepatic energy metabolism with the aim to understand how hepatocytes sense nutritional and environmental exposure and adjust metabolic functions in response. Currently, his main research target is a

xenobiotic-sensing nuclear receptor PXR. His team investigates the role PXR in regulation of glucose and lipid metabolism and in development of metabolic diseases such diabetes, non-alcoholic liver disease and the metabolic syndrome. He has also publications and ongoing work on the energy sensing factors, sirtuins and the coactivator PGC-1α, and on vitamin D metabolism. He is also a partner in an EU project, EDCMET, aiming to develop novel methods and models to assess the metabolic effects of endocrine disruptors and to identify relevant molecular initiating events linked to the adverse outcomes.

IPP Seminar

13th December at 12:00
Onsite event
Aistikattila, Flavoria, Medisiina C124
Autumn 2024 program

Jani Saunavaara
Medical Physics Research at the Turku University Hospital

Jan Kaslin
Inflammatory Signals Drive Neural Repair

Chair and concluding remarks: Noora Kotaja

IPP seminar series covers the diversity of biomedical/medical research performed in Integrative Physiology and Pharmacology research unit in Institute of Biomedicine, University of Turku plus interesting talks by visitors from national and international research collaboration networks.IPP seminar series covers the diversity of biomedical/medical research performed in Integrative Physiology and Pharmacology research unit in Institute of Biomedicine, University of Turku plus interesting talks by visitors from national and international research collaboration networks.

CellCom Seminar

20th December at 10:00
Onsite event
in Auditorium Biology (room 2097), BioCity 2nd floor

Docent Kirsi Rilla, Institute of Biomedicine, School of Medicine, Faculty of Health Sciences, University of Eastern Finland.
Multiple Roles of Hyaluronan in Extracellular Vesicle Biology.

Host: Eva Henriksson (eva.henriksson@abo.fi)

Dr. Kirsi Rilla is a senior researcher at the Institute of Biomedicine, School of Medicine, Faculty of Health Sciences at the University of Eastern Finland. Her research focuses on the biology of

extracellular vesicles (EVs), with an emphasis on their surface properties and interactions. Her team aims to uncover how EVs engage with the extracellular matrix and target cells, with special interest in hyaluronic acid and its primary receptor, CD44.

Selected publications

Matilainen J, Berg V, Vaittinen M, Impola U, Mustonen AM, Männistö V, Malinen M, Luukkonen V, Rosso N, Turunen T, Käkelä P, Palmisano S, Arasu UT, Sihvo SP, Aaltonen N, Härkönen K, Caddeo A, Kaminska D, Pajukanta P, Kaikkonen MU, Tiribelli C, Käkelä R, Laitinen S, Pihlajamäki J, Nieminen P, Rilla K. Increased secretion of adipocyte-derived extracellular vesicles is associated with adipose tissue inflammation and the mobilization of excess lipid in human obesity. J Transl Med (2024) Jul 4;22(1):623. doi: 10.1186/s12967-024-05249-w.

Aaltonen N, Kyykallio H, Tollis S, Capra J, Hartikainen JM, Matilainen J, Oikari S, Rilla K. MCF10CA Breast Cancer Cells Utilize Hyaluronan-Coated EV-Rich Trails for Coordinated Migration. Front Oncol (2022) Apr 27;12:869417. doi: 10.3389/fonc.2022.869417.

Capra J, Härkönen K, Kyykallio H, Vihinen H, Jokitalo E, Rilla K. Microscopic characterization reveals the diversity of EVs secreted by GFP-HAS3 expressing MCF7 cells. Eur J Cell Biol (2022) Jun-Aug;101(3):151235. doi: 10.1016/j.ejcb.2022.151235.

Rilla K. Diverse plasma membrane protrusions act as platforms for extracellular vesicle shedding. J Extracell Vesicles. 2021 Sep;10(11):e12148. doi: 10.1002/jev2.12148.

SPARK Health Technology and Life Science Business

14.1.–15.4.2025, Tuesdays at 12-15
Hybrid course
5 ECTS
Flyer

We are thrilled to announce the Health Technology and Life Science Business course (5 ECTS), offered in collaboration with SPARK Finland and Tampere University during spring 2025. This unique course provides students with a hands-on opportunity to perform business analysis on real SPARK Finland projects in development and commercialization. Through video lectures, team assignments, and interactive sessions, participants will gain valuable insights into:

- Market analysis, financing, legal aspects, and go-to-market strategies.
- Team building and entrepreneurial mindsets for biomedical business.
- Practical skills in presenting business solutions.

Key details

- When: 14.1.–15.4.2025 (Tuesdays 12-15, hybrid/online).

- Who can apply: Master's, licentiate, and doctoral students from SPARK Finland associated HEIs.
- Enrolment period: 27.11.–16.12.2024.

The course is limited to 30 students outside of Tampere University, with guaranteed spots for participants of the SPARK Finland Health Innovation Challenge. Learn more and find enrolment details in the attached document. Don’t miss this opportunity to work on real-world healthtech projects!

More information from Janina Stauffer (jejsta@utu.fi)

Johdatus bioturvallisuuteen

17.1.-28.2.2025
2 ECTS
etäopetuksena
Kurssimainos

Opintojakso (2 op) on tarjolla maksutta tutkinto-opiskelijoille (myös jooopintona) ja Turun yliopiston henkilökunnalle. Muut (esim. muiden yliopistojen henkilökunta) voivat osallistua kurssille avoimen yliopiston Sote-akatemian kautta.

Opetus perustuu eri organisaatioiden yhteistyöhön ja luennoitsijoina toimivat maamme parhaat asiantuntijat. Opiskelijat voivat esittää kysymyksiä perjantain etäluennon jälkeen, mutta kurssin voi myös suorittaa täysin tallenteiden ja Moodlen verkkotehtävien kautta.

Katso lisätietoja kurssimainoksesta. Opetus on suomenkielellä.

Postdoctoral researchers

Systemic approaches to improve cardiometabolic and brain health during lifespan (SYS-LIFE) is a pioneering Marie Skłodowska-Curie (MSCA) COFUND Fellowship Programme of the University of Turku 2024-2028. Its goals are breakthrough advances in human cardiometabolic and brain health, scientific renewal and boost for talented researchers´ versatile career development.

SYS-LIFE invites applications for up to eleven (11) fixed-term three-year SYS-LIFE postdoctoral researcher positions (job title Senior Researcher) starting from September 2025. SYS-LIFE Fellows are recruited internationally through a transparent selection process based on external peer-review. SYS-LIFE welcomes applications from projects based in any discipline within its three constituent faculties (Medicine, Science, and Technology) and independent units (Turku Bioscience Centre, Turku PET Centre). Successful applications will be selected on the basis of academic excellence.

SYS-LIFE researchers are given the freedom and support to develop a bespoke package of research and training to address their individual needs. This support includes a range of free mentoring and

training options at University of Turku, as well as dedicated funds and a range of secondment options to enable postdocs to undertake research and training, including translational activities, at external academic and non-academic organisations.

For more information on the SYS-LIFE programme please see SYS-LIFE website.

Apply at latest 3 January 2025 here.

Doctoral Researcher or Postdoctoral Researcher

We are looking for a highly motivated Doctoral Researcher or Postdoctoral Researcher to join a project that explores the pathogenic mechanisms of familial dilated cardiomyopathy. The project is led by Professor Pekka Taimen at the Institute of Biomedicine, University of Turku. The position is fixed-term for one year, starting on 1 January 2025 (or as agreed, 1 March 2025 at the latest), but it is possible that it will be extended.

Taimen lab is working in the field of translational pathology. In the proposed project, we aim to identify the pathogenic mechanisms of familial dilated cardiomyopathy caused by mutations in the LMNA gene. We employ transgenic mouse models and cell culture systems, along with imaging, RNA sequencing, biochemistry, histology, and immunohistochemistry techniques. For more details about our research see: www.taimenlab.fi.

More details on https://ats.talentadore.com/apply/doctoral-researcher-or-postdoctoral-researcher-translational-pathology/ZjKgRn?UTUID=20608

Apply at latest 16 December 2024 at 16:00

Links to recruitment pages

University of Turku in Finnish and in English
Ådo Akademi University in Swedish and in English
FinBioNet

If you have events you would like to add to BioCity Announcement please contact biocityturku@bioscience.fi

Follow us in X @BioCityTurku

BIOCITY TURKU
BIOCITY TURKU
BIOCITY TURKU
ACADEMIC EXCELLENCE IN LIFE SCIENCE AND MEDICINE

biocityturku@bioscience.fi