

NSFT

Norsk Selskap for Farmakologi og Toksikologi

Annual Report 2022 – Toxicology section NSFT

This is the Toxicology board's report for our activities during February 2022 through January 2023. This report is submitted for approval at the toxicology section's annual meeting held at the Radisson BLU Resort Beitostølen from 9.00-9:30 on January 28th 2023.

The composition of the board

The board members for the toxicology section in 2022 were as follows:

Leder – Jason Matthews (2019-2023) – UiO, Oslo
Vibeke Ansteinsson, (2019-2023)- TKØ & UiO, Oslo
Christiane Kruse Fæste, (2021-2023)- VI, Ås
Odd Andre Karlsen (2022-2024) – UiB, Bergen
Dag Markus Eide (2019-2023) – FHI, Oslo
Marianne van der Hagen (2022-2024) – Miljødirektoratet, Oslo
Johanna Samulin Erdem (2022-2024) – Stami, Oslo

Jason Matthews has been the representative of the section on NSFT's main board

Nomination Committee for 2022: Shan Narui and Hubert Dirven

The work of the board

The board had four digital meetings and several email communications during the year.

- The meeting scheduled for January 2022 in Beitostølen was cancelled. Therefore, the Toxicology board along with the Pharmacology and the Main NSFT board organized the 2022 NSFT “winter meeting” at the Hurdalsjøen Hotel on May 6-8th.
 - Toxicology relevant sessions included:
 - Current trends in Nanotoxicity
 - Using fish as models for identifying toxic drivers and mechanisms of toxicity; results from 3 interconnected projects
 - Nordic symposium - The aryl hydrocarbon receptor – from toxicity to a novel therapeutic target for human diseases
 - 8 abstracts were presented as oral presentations
 - Winner of the best oral presentation was Karoline Alvik from the University of Oslo for her presentation titled “The DNA binding domain of the Aryl hydrocarbon receptor is vital for protection against chemically induced colitis in mice”.
- No spring meeting because of the Hurdalsjøen meeting

- Supported the “Plastic and plastic additives - impacts on human and environmental health” symposium as the Toxicology sections fall meeting. The meeting was mainly organized by The Plastics Network at the University of Bergen.
 - Hybrid one day meeting (online/in person) was held on November 11th 2022.
 - Very well organized.
 - Very good attendance both in person and online
- It was discovered that many members were not receiving e-mails from NSFT. Stein Bergen (Sekretær NSFT) was notified and corrected the problem.

Nominasjon av NSFT's publikasjonspris innen toksikologi for 2022

Since 2014, NSFT has awarded a prize for the year's best publication from Norway based Researchers within pharmacology and toxicology (accepted for publication in the period 1 November the year before to 31 October this year).

The deadline for submission/nomination of an article was mid-December.

We received 4 excellent submissions for the best article in toxicology for 2022, making it challenging for the evaluation committee to select a winner. The committee included Jason Matthews (UiO), Vibeke Ansteinsson (Dental Health Service-TKØ and UiO) and Christiane Fæste (Norwegian Veterinary Institute).

The winning publication was by Eleni Papadopoulou, Alina Nicolescu, Line S. Haug, Trine Husøy, Calin Deleanu, Hubert Dirven, Birgitte Lindeman with the title “Lipoprotein profiles associated with exposure to poly- and perfluoroalkyl substances (PFASs) in the EuroMix human biomonitoring study” which was published in Environmental Pollution in June 2022.

This study evaluated if per- and polyfluoroalkyl substances (PFAS) affect the risk of cardiovascular disease (CVD) through alterations in blood cholesterol levels. The authors determined the PFAS levels, and the concentrations and lipid composition of the major subclasses of lipoproteins in plasma samples from 127 adult participants by nuclear magnetic resonance (NMR). Serum concentrations of 17 PFAS showed a detection frequency between 30 and 100% and these were further analysed.

They found positive associations between several PFASs and cholesterol concentrations in large to medium sized HDL and medium sized LDL particles that was more prevalent in women. The data revealed that background PFAS exposure influences size and lipid composition of plasma lipoprotein subclasses, and that these effects may be more prominent in women. However, whether PFAS exposure represents and increased risk factor for CVD could not be concluded from the data.

This is a comprehensive and well-designed study that used human population data to further investigate that human health effects of exposure to PFAS. This is an important and timely study that is highly relevant in the field of toxicology.

Membership

NSFT members =262

Toxicology section only members = 137 (Pharm only 63)

Members of both toxicology and pharmacology = 26

Total members that associate with toxicology = 163

*Members that wrote "no" or left the section "blank" = 36