

Report

From April 17 to 19, 2023, the BTS annual conference was held at the Park Regis Hotel in Birmingham.

Day 1 of the conference started with the speech of the BTS president Prof. Brian Lake who welcomed everyone to the conference and gave the opening speech. He also invited everyone to stay for the next three days of talks. Dr. Todd Gouin of TG Environmental Research gave the keynote speech at the conference. He talked about the toxicological aspects of nano- and micro-plastic particles. During the Annual General Meeting (AGM), volunteers, organizers, and people all gave enthusiastic contributions. After that, two symposiums were held at the same time. One of them was called "Dose-Response Relationship in chemical risk assessment: is there a new paradigm shift?" chaired by Dr. Susy Brescia and Ms. Georgia Reynolds, and "Increasing Predictive Power: exploiting current knowledge to advance preclinical testing". After that, there was a short coffee break where all the professors and business people got together and talked about their ideas. Prof. Matthew Wright from the University of Newcastle gave the Malcolm Blackwell Award and NEST Lecture. He talked about "A cheap, unlimited supply of donor-free functional hepatocytes for toxicology, a NAM hiding in plain sight. The day ends with a networking event hosted by NEST and a pub quiz that a lot of young participants take part in.

On Day 2, there were two separate conferences. In Symposium 3 there was a workshop on Clinical Toxicology which was hosted by the Clinical & Human Toxicology Speciality Section and the British Pharmacology Society and chaired by Dr. James Coulson whereas the theme of Symposium 4 was "Application of *in vitro* methods for mechanistic understanding and decision making" which was supported by NC3Rs and UK ATT and the session was chaired by Dr. Fiona Sewell and Prof. Martin Clift. During the tea break session, people went to the poster session. During the exhibition, I met a lot of people who stopped by my poster and asked questions or made suggestions that I could use in my research. All of the talks by scientists and professors were very informative, but the short oral communication by Ph.D. students was the most inspiring and gave me ideas for how to present my work in the future. Mr. David O'Loughlin, a Ph.D. student at the University of Cambridge's MRC Toxicology Unit, gave a very interesting talk on "Physicochemical characterization and potential health effects of tyre wear particles". The most important parts of the presentation were about how car tyres can pollute the environment and cause health problems for people. This was the most interesting lecture we've ever heard because we'd never thought that even car tyres could be a problem. Dr. Liza Emirali from the MRC Toxicology Unit at Cambridge University gave the Frank Sullivan Award and Early-Career Prize Lecture on "Characterisation of

morphological and molecular changes in macrophages following exposure to brake wear particles." This was another very interesting lecture that I enjoyed the most. Dr. Liza explained how brake wear particles can affect our immune system by damaging macrophages. Prof. Ian Copple from the University of Liverpool and Laura Booth led the meeting (NEST). The Barnes Prize lecture was delivered by Prof. S M Cohen from the University of Nebraska Medical Centre on "Carcinogenesis: DNA Reactivity, Cell Proliferation, and Human Relevance". At the end of the day, delegates talk to each other at a congress dinner reception, where the BTS President gives a thank-you speech and announces prizes for the best posters and oral presentations.

Day 3: The last day of the conference began with two symposiums going on at the same time: Symposium 5: "Current OECD regulatory development for nanomaterials. The session was led by Dr. Rachel Smith and Dr. Miriam Jacobs. Dr. Richard Currie (Syngenta) and Mr. Nium Johal led Symposium 6: "Innovation approaches supporting the toxicological evaluation of agrochemicals" (NEST). Prof. Perdita Barran from the University of Manchester then talked about Sebomics and how it could be used in toxicology. After that, the next two parallel symposiums focused on "Confident physiological based kinetics (PBK) modelling in Next Generation Risk Assessment (NGRA) chaired by Dr. Hequn Li and Dr. Ovnair Sepai and "Increasing the use of cross-species extrapolation to support decision making" chaired by Dr. Natalie Burden and Mr. Nium Johal. The talks were mostly about how to use NGRA to combine new approaches and methods in the fields of agrochemical safety and cosmetics and to cut down on data from animal tests. At the end of the conference, Prof. Lake, thanked everyone for coming.

This was the first time I went to an international conference in person. With the help of the BTS travel bursary, I was able to join a great group of people at the BTS Annual Congress 2022, which was very helpful for my research career. I was able to talk to academics and business partners who work in the same field as my research. I learned a lot that will help me with my work in the future. I'm glad that the British Toxicology Society has given me this opportunity.

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