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Conference Report

SCE Young Scientist Event 2024: Bridging the Gap Between Academia and Industry

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The Young Scientist Event 2024 of the Section Chemistry and the Environment (SCE) was held on May 28th at Givaudan Schweiz AG in the new Zurich Innovation Center in Kemptthal. The event was designed to introduce young environmental scientists to career opportunities in the chemical and related industries. With a comprehensive program including keynote speeches, panel discussions, site tours, and roundtable discussions, the experience provided a multifaceted view of the industry landscape and the skills necessary to thrive within it.

Welcome and Keynote Address

The event kicked off with a warm welcome from Dr. *Agnes Bombrun* of Givaudan, who provided an insightful introduction to Givaudan and the fragrance industry. Dr. Bombrun highlighted the company's commitment to the 'Safe for human and environment' principle, emphasizing its importance in the discovery of new molecules and the optimization of existing pathways. She outlined Givaudan's five main pillars: *Discover*, *Develop*, *Safe by Design*, *Characterize*, and *Perfumery*. These pillars underscore the company's comprehensive approach to ensuring safety and efficacy in its products. Dr. Bombrun also elaborated on the innovative 'FiveCarbon Path™,' a sustainability strategy focused on: *increasing the use of renewable carbon, enhancing carbon efficiency in synthesis processes, maximizing biodegradable carbon, increasing the odor per carbon ratio with high impact materials, and using upcycled carbon from side streams*.

Participants were given the opportunity to experience a variety of base perfume molecules, including Ambrofix, Pomelol, and Nympheal, providing a tangible connection to the concepts discussed.

Toxicology Overview and PBT Screening

Dr. *Heike Laue* from Givaudan presented a comprehensive overview of environmental toxicology, focusing on PBT Screening (Persistence, Bioaccumulation, Aquatic Toxicity). She also discussed the 3R principles (Replacement, Reduction, Refinement) in animal testing, highlighting the challenges of applying these principles without compromising environmental safety. Dr. Laue's presentation underscored the critical balance between innovative, alternative animals testing methods, and rigorous environmental standards.

Panel Discussion: Skills for a Successful Industrial Career

The panel discussion, moderated by Dr. Kathrin Fenner (Eawag/UZH), featured industry experts Dr. Michael Lüscher (Novartis), Dr. Agnes Bombrun (Givaudan), and Dr. Claudio Screpanti (Syngenta). The panelists shared invaluable insights on the skills young scientists need to succeed in the industry. Key take away messages included the importance of:

- Clear and Strong Communication: essential for bridging the gap between scientists and decision-makers.
- Intellectual Property: understanding and managing IP is crucial in a competitive industry.
- Artificial Intelligence: leveraging AI for optimization in various processes.
- Interdisciplinary Thinking: integrating knowledge from different fields to drive innovation.
- Scientific Acumen: the ability to understand, analyze, and defend scientific data is fundamental.

Fig. 1. Industry experts share valuable insights on navigating a career in environmental science during the panel discussion.

Site Tour

Participants toured the Givaudan Innovation Centre, guided by experts who showcased various cutting-edge research areas: *in vitro molecular screening/safe by design*, *process research/5*

Fig. 2. A guided tour at the Givaudan Innovation Centre offers participants an in-depth look at advanced research processes.

carbon path, *plant attitude/alternative to animal proteins*, and *analytical chemistry*. These tours provided an in-depth look at the applications of the concepts discussed, and the innovative work being conducted at Givaudan.

Roundtable Discussions: Diverse Industry Insights

Following a networking lunch, the afternoon sessions featured roundtable discussions, allowing participants to further engage directly with industry leaders from Roche, Syngenta, Innovative Environmental Services (IES) Ltd., aQuaTox-Solutions GmbH, and Givaudan. The attendees discussed various topics from pharmaceuticals and agritech, to life cycle assessment and ecotoxicology. These discussions provided a platform for young scientists to explore specific industry challenges and career opportunities at those companies.

Participants Feedback

The event received overwhelmingly positive feedback from participants, highlighting its value in bridging the gap between academia and industry. Participants appreciated the practical insights and networking opportunities, with many expressing satisfaction with the panel discussions, site tours, and roundtable sessions. Common suggestions included extending the open discussion phases and providing more detailed information on hiring processes.

Overall, the SCE Young Scientist Event 2024 successfully connected young scientists with industry leaders, provided valuable career insights, and fostered a collaborative environment for discussing the future of environmental sciences in the chemical industry. The participants expressed their sincere gratitude towards Kathrin Fenner, Heike Laue and Claudio Screpanti of the organizing committee, as well as Dr. Markus Gautschi and Sandra Rybold from Givaudan, who also played crucial roles in the event's organization. At the end of the day, participants left with a deeper understanding of industry expectations and the skills necessary to succeed, paving the way for a new generation of scientists ready to tackle the challenges of tomorrow. See you at the next event!

Acknowledgement

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