

AG Name: Global SETAC Advisory Group on Bioaccumulation Assessments (BSAG)

Submitted by: Jon Arnot

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Council/Board Liaison: Bruce Vignon

Executive Summary

Bioaccumulation science has been an active area of research over the last few decades. Recent regulations (e.g., Canadian Environmental Protection Act, 1999, and REACH legislation, 2007) have provided further motivation to improve bioaccumulation science for hazard and risk assessment. The Global SETAC Advisory Group on Bioaccumulation Assessments ("BSAG") was initiated in 2005. The primary objective of the BSAG is to advance the state of bioaccumulation science, and increase the use of sound science in decision-making through the use of field data, in vitro and in vivo experimental data, and in silico tools (i.e., mass balance and quantitative structure-activity relationship models) for site-specific and regional bioaccumulation, exposure and risk assessment. The BSAG provides a venue for the SETAC membership to meet and discuss various aspects of bioaccumulation science. The BSAG helps identify recent advancements in bioaccumulation science, including new bioaccumulation-related tests and assessment approaches, and communicate these developments with interested scientists and decision-makers in the regulatory community. The BSAG actively works with various entities involved in advancing bioaccumulation science to take advantage of the authoritative experts in SETAC, representing many environmental science disciplines and occupations encompassing tripartite representation from industry, government and academic scientists. For example, the BSAG and its members facilitate workshops, short courses, and conference sessions for scientists on emerging bioaccumulation issues to help disseminate new testing and tiered assessment methodologies to the community and into bioaccumulation assessment regulatory programs. For more information see <http://www.setac.org/group/AGBioaccumulation>.

Organization

The BSAG is currently comprised of 17 steering committee members, including two co-chairs:

- Jon Arnot (Co-Chair)
- Christian Schlechtriem (Co-Chair)

Activities Summary

Recent short-term and long-term involvement of BSAG in various forums/meetings include:

- SETAC North America (2014): Session entitled "Bioaccumulation: Science & Regulation" co-chaired by Frank Gobas, Mark Bonnell and Jon Arnot. 24 abstracts submitted, 8 platforms and 16 posters presented.
- SETAC Europe (2015): Session entitled "Recent scientific developments in bioaccumulation research and assessment" co-chaired by Jon Arnot, Mark Lampi, Ester Papa and Dolf van Wijk. 29 abstracts submitted, 6 platforms and 23 posters presented.
- SETAC North America (2015): Session entitled "Building a Weight of Evidence for Bioaccumulation Assessment" co-chaired by Michelle Embry and Jon Arnot. 13 abstracts submitted, 8 platforms and 5 posters presented.
- SETAC North America (2015): Session entitled "Difficult Substances – Methods and Approaches for Risk Assessment" co-chaired by Frank Gobas, Philip Leber, Paul DeLeo, Karen Eisenreich, Duane Huggett, and Anne Kim.
- A Bioaccumulation Workshop (September 2014) sponsored by CEFIC LRI and hosted in Helsinki by ECHA included presentations and discussions on recent developments in bioaccumulation science assessment. The workshop had 85 attendees from academia, industry and government discussing a broad-range of topics, including field data, laboratory data, mass balance and QSAR models, in vitro testing, in vitro-to-in vivo extrapolation. A report from the meeting is available on the CEFIC-LRI website (<http://cefic-lri.org/events/cefic-lri-workshop-on-recent-scientific-developments-in-bioaccumulation-research/>).
- A workshop on risk assessment of ionizable organic compounds (IOC) was held November 2014 in Vancouver and sponsored by Environment Canada, HESI, CEFIC-LRI, and SETAC. Bioaccumulation was a part of the workshop. Manuscripts are in preparation.

- A workshop on bioaccumulation was held at UBA Dessau summarizing all of the projects funded by UBA over the past few years.
- A workshop held at Utrecht University included presentations and discussions on carp dietary studies, estimations of kinetic BCFs (including uncertainty), and the aqueous approaches.

Future Plans

SETAC Europe (2016): Proposed session entitled "Recent Developments and Current Issues in Bioaccumulation Assessment" co-chaired by James Armitage, Caren Rauert and Katrine Borga

Business and Planning Meetings

Recent BSAG Meetings were held at Vancouver (2014) and Barcelona (2015) and another meeting is planned for Salt Lake City (2015). Key discussion points include:

- A draft guidance document in development under OECD on bioaccumulation for nanomaterials has been circulated. It is intended that this guidance document will be submitted to the OECD Working Group of the National Coordinators for the Test Guidelines (WNT) in October 2015. This document will have implications for the 305 TGD that is currently being drafted. There is a need to connect with the OECD 305 TGD group, as many of the issues have already been covered there.
- Need to look at methods and data for chemical substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials (UVCBs).

Membership Communications

Identification and communication with decision-makers and scientists to create and apply information on new bioaccumulation-related tests and assessment approaches:

- Organizing regular business meetings and technical sessions at SETAC meetings.
- Hosting workshops on emerging issues and offer short courses.
- BSAG communities webpage: Needs updating.
- The BSAG includes some outreach and coordination with Exposure Modelling AG and Animal Alternatives AG.

Issues/Problems

To our knowledge there are no recognized issues or problems the group is encountering which would require feedback or assistance from the council or board.

Current Steering Committee (2015)

Academia:

Beate Escher (UFZ, Germany)
 Frank Gobas (Simon Fraser University, Canada)
 Heather Leslie (VU University, The Netherlands)
 Dayanthi Nugegoda (RMIT University, Australia)
 Henriette Selck (Roskilde University)

Business:

Jon Arnot (Co-Chair, ARC Arnot Research and Consulting, Canada)
 Michelle Embry (ILSI-HESI, USA)
 Mark Lampi (Exxon Mobil, USA)
 Aurelia Lapczynski (RIFM, USA)
 Marc Leonard (L'Oreal, France)
 Dan Salvito (RIFM, USA)
 Christian Schlectriem (Co-Chair, Fraunhofer, Germany)

Government:

Mark Bonnell (Environment Canada)
 Larry Burkhard (USEPA)
 Marlies Halder (ECVAM, Italy)
 Derek Muir (Environment Canada)
 Theo Traas (RIVM, The Netherlands)

No. active members:

Total membership: 273 members listed in the group directory