

CROSS-INDUSTRY ORGANIZATIONS

A 2020 update from the Association of Inhalation Toxicologists (AIT)

Joanne Kilgour, PhD, on behalf of the AIT

In 2017, the Association of Inhalation Toxicologists (AIT) published an introductory article in *Inhalation*, with the aim of raising the profile of the organization and its work. This article provides an update on the activities of the group during the last three years, along with plans for the future as we begin to emerge from lockdown due to the COVID-19 global pandemic.

Aims of the AIT

The Association of Inhalation Toxicologists (AIT) will celebrate its 39th year in 2020. The AIT aims to promote open discussion, exchange of ideas and presentation of high-quality scientific research in the field of inhalation toxicology at its annual conferences. Attendees come from a variety of backgrounds, including respiratory medicine, contract research organizations, the pharmaceutical, agrochemical and chemicals industries, regulatory authorities, academia, manufacturing and technology companies. This reflects the diversity of people with a shared interest in the many specialized aspects of the practice and interpretation of inhalation toxicology studies.

The AIT is now a premier international association for practicing inhalation toxicologists and those with interest in inhaled toxicology and drug development. It is also seen as an excellent training ground for individuals beginning a career in this field.

A brief history

The AIT was founded in the 1970s by a group of like-minded individuals who recognized the need for a forum to discuss inhalation toxicology and the associated technological challenges. The AIT has grown in stature and reputation over the years, evolving from its UK roots into a truly international organization, with an organizing committee that includes representatives from the United Kingdom, mainland Europe and the United States.

In recent years, the AIT has formed strong links with other learned societies that have common interests. It has held two joint conferences: one with ISAM (The International Society for Aerosols in Medicine) in 2015 in Princeton, New Jersey, US and another with the BSTP (The British Society of Toxicological Pathology) in Alderley Park, UK in 2016.

Conference subjects are many and varied, reflecting the hot topics of the day. They have included inhaled nano-toxicology, lung pathology with inhaled medicines (including biologics), clinical development, translational models, *in vitro* inhalation toxicology, e-cigarettes and updates on relevant regulatory guidelines.

Principal activities

Annual conferences and networking. These are the main focus of AIT committee, which devotes extensive thought and planning to each annual event. The conference location cycles between the UK, US and Europe to

facilitate ease of travel for members. In 2017, our annual conference was held in Copenhagen, Denmark, and included a tour of the Ellegaard minpig facility. In 2018, we visited Research Triangle Park, North Carolina, US, allowing interactions with many groups that have an interest in inhalation toxicology in that location. They included the US Environmental Protection Agency (EPA), US National Institutes of Health (NIH), National Institute of Environmental Health Sciences (NIEHS) and the North Carolina Society of Toxicology (NC-SOT). In 2019, we returned to the UK and met in the seaside town of Brighton.

Presenting webinars for 2020.

These conferences provide an invaluable opportunity for academics, regulators, industry experts and suppliers of specialized equipment to meet in a convivial atmosphere. However, like many learned societies, the AIT has cancelled its 2020 conference due to COVID-19. The event was scheduled to take place in October.

Still, we felt the need to deliver content to the membership to replace the event. So we are planning a series of webinars. Topics to be covered include COVID-19, inhaled developmental and reproductive toxicology (DART) studies and anti-fibrotics for idiopathic pulmonary fibrosis (IPF). Details about the webinars and registration will be posted on our website at www.aitoxicology.org.

Publications. The AIT has published a number of papers, which can be seen on the AIT website.

The most influential can also be found in reference lists of most regulatory inhalation toxicology studies conducted today; for example, “Alexander DJ, et al, 2008: Association of Inhalation Toxicologists (AIT) working party recommendation for standard delivered dose calculation and expression in non-clinical aerosol inhalation toxicology studies with pharmaceuticals.” Currently, we are co-authoring and reviewing a paper that will be published this year in a special edition of *Toxicologic Pathology*. The paper is the culmination of an industry-wide survey (which was, in part, instigated by the AIT) on the “Technical, toxicological and PKPD considerations for conducting inhalation toxicity studies on biological pharmaceuticals.” This paper will be accompanied by a sister paper on the pathological aspects of these studies, coordinated by the BSTP.

Website. The AIT website (www.aitoxicology.org) has been upgraded since 2017 and provides content about our history and constitution, a members’ area, details on past and upcoming events and links to relevant publications, vendors and service providers. It also has a job postings board, which has proven to be a useful service, enabling employers and recruiters to gain direct access to a pool of specialists.

Future meetings. The 2021 AIT conference will be held on October 19-21, in Gothenburg, Sweden. Please see the website for details. Also, to express your interest in presenting, displaying a poster, exhibiting or attending, please contact the AIT at aitoxicology@gmail.com.

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