This sub-committee has functions to providing systematic names for proteins that bind IgE antibodies in allergic subjects and are assumed to cause allergic reactions in those people.

The guiding principles for nomenclature were established in the 1980’s. In the past 11 years our guidelines have become a bit more stringent, and we continue to revise them. It is intended to provide names before major publication, though often it is after some preliminary publications about the protein. A recent publication explains the process of scientists submitting candidate new allergens is explained in a paper in Allergy, 2019, DOI: 10.1111/all.13693 and is available as a PDF on our website. Many of our older publications are also on the website under Publications.

Information about the committee including members and contacts are on the database, www.allergen.org. The database was housed on the webserver of the European Academy of Allergy and Clinical Immunology. The name (allergen.org) is “owned” by the committee. The structure of the committee has three officers, Chairman (RE Goodman), Secretary (A Pomes) and Treasurer (G Gadermaier). TAE Platts-Mills is the remaining original member on the committee (from ~ 1986). There are 18 other active members from various countries, and 6 non-voting members at large.

We have some funding from the International Union of Immunological Society (IUIS) at $4,000 per year, the European Academy of Allergy and Clinical Immunology (EAACI) had provided 10,000 € per year but reduced that to 1,000 € in 2021 due to COVID-19 and the American Academy of Allergy, Asthma and Immunology (was $10,000 per year, will be reduced). These contributions have only been available for a few years. The Food Allergy Research and Resource Program (FARRP) at the University of Nebraska in Lincoln (UNL) paid for and developed the WHO/IUIS Allergen Nomenclature database from other research funds, and the AllergenOnline.org database website developer built the current system for the WHO/IUIS database. Now, the money is used to help fund costs for maintaining the database and a major cost will be developing a formal and efficient candidate review process of the Sub-Committee including maintaining data. Some funds are used to hold our annual in-person meeting with EAACI’s Congress that has only been virtual Zoom meetings for the last two years. funds for technical work on the database by experts at the University of Nebraska and some funds for review and revision of the database, website costs and some costs for a representative to meetings of a few of us at the AAAAI meeting and the IUIS international meetings.

We present posters and talks at the Allergy and IUIS meetings. Unfortunately, none of the money can be used to pay for the professional time needed to perform the functions of evaluating and keeping records, entering data on the website or defending our decisions, although we have paid some for reviewing and updating data in the database. Our efforts are voluntary and most fall on the Chair and a bit less on the Secretary. (I spend two to 10 hours per week on the database, mostly on reviews).

The database currently has 1048 proteins identified with allergen names. That includes proteins from pollen, fungal spores, fruits and vegetables, grain, nuts and seeds and animals from insects, crustaceans, venomous insects and salivary proteins from mosquitoes and other sources.
• Submissions must include information of the source organism including the tissue or stage of presence. While most are from mature adult forms, some can be from embryos.
• Protein amino acid sequence and if available mRNA or DNA sequence. These are expected to be deposited in the NCBI protein or nucleotide database or UniProt. Submitters should report how that was determined and their actual sequence (not just a genomic sequence from someone else).
• Selection of serum donors, clinical history, how were they diagnosed, symptoms....often submitters provide ambiguous data regarding some important aspects of the species identity, the protein sequence or predicted protein sequence from DNA or RNA data, IgE binding methods.
• Proteins require characterization used for testing for IgE binding.
• Methods used of IgE binding tests include western blot, ELISA, RAST, EAST and other solid phased assays
• It is usually helpful to use inhibition tests to verify that IgE binding is not simply to cross-reactive carbohydrate determinants or due to low affinity matches.
• Publication information for sequence identities or allergy reports should including PMID number.

We have reviewed several older entries to try and verify the identification of allergens. As procedures improve in genome, transcriptome and proteome identification there are opportunities to improve identification. However, there are many isoforms of proteins representing different genetic mutations from populations. And there are issues of abundance in the material (pollen, food, spore or hyphae) that are not characterized and may have substantial impact on the relevance of allergy for a given protein.

We have contacts with some key journals and try to get them to demand a WHO/IUIS name before publishing a paper on a given allergen.

Regards,

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