

Editorial**TOWARDS A NEW EDITION OF MORPHOLOGICAL NOMENCLATURE****David Kachlik**

Department of Anatomy, Second Faculty of Medicine, Charles University, Prague, Czech Republic, European Union



Human morphological terminology is daily used by many groups of people: scientists, physicians, dentists, nurses, paramedical specialists, teachers and students of medicine but also by teachers and students of basic and secondary schools, translators, and in justice. It facilitates communication between such people from different countries of the world. It is both descriptive and functional and covers gross anatomy, histology, cytology and embryology. It is arranged according to the body structure and its systematisation or according to the time line in embryology.

Its history goes back to the ancient times, but the first anatomical nomenclature was created in 1895 as the Basiliensia Nomina Anatomica (BNA). Nowadays, the recent valid editions of the morphological nomenclatures are three: Terminologia Anatomica (TA) from 1998, Terminologia Histologica (TH) from 2009 and Terminologia Embryologica (TE) from 2013. They are available in Latin (codified terms), completed with a unique Identification number and the most

common English equivalent. They have been issued as books but since 2010 they are also available online - see <http://www.unifr.ch/ifaa>.

BNA was a result of tremendous work of a commission of the German Anatomical Society (Anatomische Gesellschaft). The International Federation of Associations of Anatomists (IFAA) was founded in 1903, and started to work on a revision of the BNA from 1905. But the work slowed down and the Anatomical Society of Great Britain and Ireland published its own nomenclature called Birmingham Revision (BR) in 1933. The German Anatomical Society produced its own revision, called *lenaiensia Nomina Anatomica* (INA) in 1935, which tended to the veterinary anatomy, preferring the horizontal-position-of-the-trunk description. IFAA established the International Anatomical Nomenclature Committee (IANC) in 1936 to revise the BR and INA, but due to the World War II it started its work in 1952. The first worldwide accepted anatomical nomenclature was published as *Parisiensia Nomina Anatomica* (PNA) in 1955. It was later re-named 1st edition of *Nomina Anatomica* (NA) and followed successively by 4 reviewed versions (NA1 to NA5). In 1977, the 4th edition of NA was combined with the first Latin histological and embryological nomenclatures (called *Nomina Anatomica*, *Nomina Histologica*, *Nomina Embryologica*). As the situation between the elected IFAA and the co-opted IANC became untenable, the IFAA appointed a new commission. The Federative Committee on Anatomical Terminology (FCAT), which worked from 1989 to 1997 presented an extended and revised version of the last edition of NA, issued in 1998 as TA (*Terminologia Anatomica*). TH was also revised and published by this group,

although under a slightly different name the Federative International Committee on Anatomical Terminology (FICAT). TE was approved by IFAA (in 2009 but could only be published as a book in 2013.) At the same time, the General Assembly of IFAA accepted to re-structure IFAA's organisation in several Federative International Programmes (FIPs) in order to increase its efficiency.

The new Federative International Programme for Anatomical Terminology (FIPAT) is a group of experts who review, analyse and discuss the names of the morphological structures of the human body. They are committed to speeding up both update and dissemination of the newly accepted terms by using electronic means of communication. It is composed of 6 Working groups (Gross Anatomy, Histology, Embryology, Neuroanatomy, Odontology/Anthropology and Orobology) and two Subcommittees (Latin and Informatics), each chaired by a coordinator and comprising several advisors and experts. The chairman of the FIPAT is John Fraher from Ireland, and the coordinators and advisors are from fifteen different countries. Worldwide participation is of major importance for FIPAT. Two main meetings of FIPAT were held: in August 2014 in Beijing and in September 2015 in Istanbul; the third is scheduled for September 2016 in Göttingen.

The FIPAT mission is "to continually adapt its anatomical terminologies to developments in the morphological sciences and to the needs of medicine, the biomedical sciences and other health professions, and to promote the correct use of terminology among these groups, as well as members of the general public, including writers and journalists". Although the nomenclature is destined primarily for human morphology, it also extends to clinical fields and other health sciences. That is why incorporation of relevant clinically-related terms, after a thorough and constructive discussion concluded by a consensus, is a fundamental task.

The current effort is aimed at revising the TA, TH and TE and extending the portfolio of nomenclatures to until-now insufficiently covered areas, i.e. anthropology and odontology. The final complex should comprise: Terminologia

Anatomica (TA), Terminologia Histologica (TH), Terminologia Embryologica (TE), Terminologia Anthropologica (TAnth), Terminologia Odontologica (TO), and Terminologia Neuroanatomica (TNA). The proposal of working groups for TA, TE and TNA has been sent to the member societies of IFAA for review process at the end of 2015. After editing and processing the proposal and changes, the final drafts will be presented to the IFAA Board in Göttingen in September 2016 and after approval, there viewed sections will become available online, a new website being developed at <fipat.library.dal.ca> for that purpose.

The considerable work of the FIPAT Working groups and other people involved should result in a revised, ameliorated, extended Latin nomenclature, completed with Latin synonyms, English equivalents and eponyms, which should serve for specialists, physicians but also for publishers and editors as a gold standard of morphology terminology in Latin and English. Latin is central, which means that the Latin term is the formal, official version. It enables translation into any vernacular and provides an exact point of intersection for communication across disciplines, languages, countries, regions and associations. Moreover, it is expected that the anatomical databases of the terminologies will become directly accessible and machine-readable on the Internet and so provide a common source of information to all persons or groups concerned by the intrinsic components of the human body.

Although another step will be achieved, there still remain plenty of structures either not yet incorporated or not denominated (or not even recognized). Every morphologist is welcome to contribute or comment, either via website Discussion Forums (see <http://www.ifaa.net/index.php/fipat/change-fipat/fipat-discussion-forum> and/or the Canadian website named above) or personally to any member of FIPAT. By means of cooperation and communication, this terminology tool can excellently serve a wide range of people and will be further extended and refined.

Finally, the author would like to acknowledge the support and help of John Fraher and Pierre Sprumont.