

IFAA RAT Document 1: The following detailed explanation is to support the proposal that Regular Anatomical Terms be used in the IFAA Terminologies.

Complied by the Chair of FIPAT

REGULAR ANATOMY TERM RULES

The rules for a standard form for anatomical terms (Regular Anatomy Terms) are best described in three published papers: (2017a, *Clin Anat* 30:300-302), (2017b, *Clin Anat* 30:700-702) and (2020, *Clin Anat* 33:327-331).

Regular Anatomy Term Rules

That each name shall consist only of nouns and adjectives.

That each name shall have only one noun in nominative case.

That the standard word order shall have nouns following the noun they modify, and adjectives immediately following the noun they modify.

That nouns in genitive case are generally preferable to adjectives when the modifier means “of” an entity, rather than “pertaining to” an entity.

Alphanumeric determiners and names of Greek letters should follow the noun they limit or specify.

Roman numerals and Latin letters are generally preferred in Latin terms.

Background:

Regular Anatomy (RA) Term rules were created in partial fulfillment of the desire for FIPAT to develop software tools to assist the IFAA Member Societies translate the IFAA Terminologiae into vernacular languages. Because Latin is an inflected language, word order is relatively unimportant from the perspective of clear communication, but the paucity of word order rules in Latin means that ambiguity of meaning of sentences is not uncommon. Similar problems are found in Latin anatomical terms. Translators, human or machine, may have difficulty because the original rules of anatomical nomenclature did not specify word order rules, which could have greatly reduced ambiguity in the literal or figurative meaning of some terms. Therefore, in 2013, a preliminary set of RA term rules were published online along with a corrected version of *Terminologia Anatomica* (www.unifr.ch/ifaa). In 2018, the Latin subcommittee **recommended that the official term or a synonym should be RA term rule-compliant.**

Responses to criticisms of RA term rules:

(1) “Some authors prefer the terms in TA (1998) to some of the new terms in TA2.”

Response: Authors who wish to use Latin terms **have the option of using any of the Latin synonyms if they dislike the official Latin term.** In almost all cases in TA2, if the TA (1998) term was replaced by a comparable, proper Latin term that was compliant with RA term rules, the TA preferred term was placed in the Latin synonym column. The exceptions would be when the TA term contained spelling or grammar errors that were corrected.

Furthermore, use of word orders different from those that appear in the Latin terms in TA2 is permissible, as Latin terms *per se* or as Latin terms used in lists of equivalent terms in vernacular languages. A standard form was used in the lists because consistency makes terms easier to learn, use, and translate. RA term rules were designed to simplify Latin anatomical terms. Terms in TA (1998) do not show a consistent pattern, requiring students and anatomists to memorize word orders as well as the words in a term.

(2) “TA2 replaced traditional terms with RA terms.”

Response: One could argue against changing traditional terms to make their form compliant with RA term rules, but there have been so many changes to anatomical terms in the century between BNA (1895), and TA (1998), that one cannot argue that there has been a long-lasting set of traditional terms. In fact, the quality of the Latin spelling and grammar have gradually declined during that century.

(3) “TA2 replaced proper Latin with RA terms.”

Response: **RA terms are proper Latin terms.** In fact, most Latin terms in TA (1998) are compliant with RA term rules. **The new RA terms are more consistently orthographically and grammatically correct Latin terms than the Latin terms in TA (1998).** Of course, application of the RA term rules does not affect these aspects of spelling or grammar, but this was part of a larger effort to improve the quality of the Latin in *Terminologia Anatomica*.

(4) “RA terms disrupt the traditional ordering of adjectives from most important (or general) to least important (or specific).”

Response: A term rules only specify that adjectives should follow the noun they modify. These rules do not contradict the traditional ordering of adjectives based on importance or specification.

(5) “Banning appositions, e.g., *Musculus flexor and Musculus extensor*, should be reconsidered.”

Response: Appositions can easily be handled in English and related languages as compound words. But that is not the case in many other languages, including Latin. In the examples, the word *Musculus* is unnecessary in the Latin terms. Removing the extra word shortens the term, one of the ideals of the 1895 nomenclature rules, and makes the term more readily machine-interpretable and translatable into vernacular languages. **Authors who prefer to continue using terms that contain appositions may do so, as they have generally been kept as Latin synonyms.** Alternatively, IFAA Member Societies may decide to list the longer term as the equivalent term in a vernacular language.

Additionally, the word "Musculus" is not often seen in muscle names before BNA (1895). Quite a few muscle names had a substantive (i.e., adjective used as noun) as the first word in the term (e.g., "Scalenus anterior"). When the word Musculus was

inserted before the usual name of the muscle, it was done in an inconsistent manner. Note masseter, platysma and diaphragm did not have the word "Musculus" added to the terms.

(6) The RA terms should be presented in a second column, as an equivalent of the official Latin term.

Response: This proposal violates the first rule of anatomical nomenclature: Each named structure should have one and only one name. The Latin subcommittee recommended that if the official term was not compliant with RA term rules, or modified to become compliant, that at least one of the synonyms should be an RA term.