Terminology for sialic acids

We write on behalf of the Nomenclature Committee of the International Union of Biochemistry to comment on the proposal by Scott *et al.* (1982) to change the name of neuraminic acid to amino-sialosonic acid as a consequence of allotting the name sialose to a hypothetical 3-deoxynonulose. They further propose symbolizing sialose as Sia, sialosonic acid as SiaA, and aminosialosonic acid as SiaNA.

We do not find enough advantages in this proposal to justify the considerable disruption it would cause to existing practice. Further, the commonest sialic acid, *N*-acetylneuraminic acid, now symbolized (IUPAC-IUB Joint Commission on Biochemical Nomenclature, 1980) as NeuAc, would become longer in both name (acetylamino-sialosonic acid) and symbol (SiaNAcA). The symbols proposed contain a misleading indicator, since A modifies the symbol before it to form a uronic acid (IUPAC-IUB Joint Commission on Biochemical Nomenclature, 1980) whereas Scott *et al.* (1982) use it to oxidize a different carbon atom, C-1 not C-9, to the carboxyl group. A minor point is that although Scott *et al.* (1982) correctly modify the name of a ketose with the ending 'osonic acid' to give the name of the corresponding 2-dehydroaldonic acid, the ending is not well enough known to convey structure to most biochemists.

Scott *et al.* (1982) stated that the terms neuraminic acid and sialic acid were names of a single compound; in fact Blix *et al.* (1957) defined sialic acid as a generic term for an acylated neuraminic acid, and their practice has been generally accepted, e.g. in Lip-3.10 and Lip-4 of 'The Nomenclature of Lipids' (IUPAC-IUB Commission on Biochemical

Nomenclature, 1976). We do not think that the existing names and symbols need changing; we realize that we have not taken enough account of them in naming the enzyme that hydrolyses terminal sialic residues in glycoproteins, and we are therefore changing the recommended name of this enzyme from 'neuraminidase' to 'sialidase' (both names used by Blix *et al.*, 1957) under entry 3.2.1.18 in *Enzyme Nomenclature*

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