Nomenclature and classification of the proteins homologous with the cysteine-proteinase inhibitor chicken cystatin

The subject of nomenclature and classification of the proteins homologous with chicken cystatin, most if not all of which are inhibitors of cysteine proteinases, was discussed at the First International Symposium on Cysteine Proteinases and their Inhibitors (Portoroz, Yugoslavia: September 15–18, 1985). The great majority of scientists who have published work on these proteins anywhere in the world were present. Several points were discussed, and agreement was reached as follows:

1. It was agreed that the proteins that can be shown statistically to have an evolutionary relationship to chicken cystatin form a distinct superfamily [as defined by Dayhoff, M. O., Barker, W. C. & Hunt, L. T. (1983) *Methods Enzymol.* **90**, 524–545]. This should be called the *cystatin superfamily*.

2. The known proteins of the cystatin superfamily can be seen to comprise three protein families (also as defined by Dayhoff *et al.* above).

3. *Family 1*, which may also be called the *stefin family*, contains the proteins that are distinguished within the superfamily by the lack of disulphide bonds and by close sequence relationships to each other. Known proteins of this family have been named 'human stefin', 'human cystatin A', 'rat cystatin α ', 'human cystatin B' and 'rat cystatin β '.

4. *Family 2*, which may also be called the *cystatin family*, so long as confusion with the name of the superfamily is avoided, contains proteins that have two disulphide bonds. These include proteins that have been named 'chicken cystatin', 'human cystatin', 'human cystatin C', 'human cystatin S' and 'beef colostrum cystatin'.

5. *Family 3* comprises the plasma kininogens and may therefore also be called the *kininogen family*. Known members of this family, which contain nine disulphide bonds, have been named 'human α_1 -thiol proteinase

inhibitor', 'human α_2 -thiol proteinase inhibitor', 'human α -cysteine proteinase inhibitor', 'low molecular weight kininogen' (various species), 'high molecular weight kininogen' (various species) and 'rat T-kininogen'.

6. It was agreed that if further members of the cystatin superfamily are discovered such as to necessitate the creation of new families, these should be numbered 4, 5, etc.

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