Terminology and Nomenclature

NOTATION FOR HUMAN IMMUNOGLOBULIN SUBCLASSES *

After consultation between immunologists from a number of countries a nomenclature for human immunoglobulins was proposed in 1964 and was published in the Bulletin of the World Health Organization.[1] *However, that proposed scheme of notation, which has already gained wide acceptance, left several specialized areas of nomenclature still to be resolved; one of these was the subclasses of immunoglobulins. Some of the research workers most closely concerned with the problem have now agreed upon a unified scheme for the notation of the human immunoglobulin subclasses, and, in particular, of the immunoglobulin G subclass, for which two different nomenclatorial schemes have been followed in recent years. Their proposals are given below.*

Human immunoglobulin molecules can be divided into at least four major groups or classes, referred to either as IgG, IgA, IgM and IgD, or as γG, γA, γM and γD, as suggested in 1964.[1]

Recent studies in many laboratories have shown that several of these classes can be further divided into subclasses, and consequently, several temporary subclass designations have come into use.

Considerable information has been obtained concerning immunoglobulin G and A subclasses, and it now seems appropriate (1) to put forward a uniform notation for the immunoglobulin G subclasses, and (2) to propose a general scheme for the notation of additional immunoglobulin subclasses as they are described.

The general proposal is as follows:

(1) Subclasses should be indicated by an arabic numeral following the letter denoting the class. Arabic rather than Roman numerals are suggested because of their greater simplicity. Confusion with the genetic factors can be avoided by listing genetic factors in parentheses, preferably preceded by the locus.

(2) Subclasses should be numbered on the basis of relative concentration in normal serum or on the basis of relative frequency of occurrence as myeloma proteins.

(3) When potential new subclasses are first identified, the investigator should employ a temporary designation in accordance with the nomenclature proposed in 1964[1] (initial, city, etc.), but this designation should not resemble the numerical terminology herein proposed.

(4) Final numerical subclass notations should be used only when several laboratories have exchanged reagents and agreed on the categorization.

The specific proposal for IgG (γG) is shown below:

Current	*Occurrence as myeloma proteins (%)*	*Proposed*	*Polypeptide heavy chain (γ-chain)*
We or γ2b or C	70-80	IgG1 or γG1	γ1
Ne or γ2a	13-18	IgG2 or γG2	γ2
Vi or γ2c or Z	6-8	IgG3 or γG3	γ3
Ge or γ2d	3	IgG4 or γG4	γ4

Thus a type K myeloma protein currently classed as Vi, Z-type or γ2c would be called IgG3-K or γG3-K; and the heavy chain would be designated γ3.

It is hoped that the proposed scheme will prove a useful aid in communicating current information about human immunoglobulin subclasses while retaining flexibility for designating new subclasses in the future.

* A French version will be published in a later issue.

[1] *Bull. Wld Hlth Org.*, 1964, **30**, 447-450.

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