MEMORANDUM ON THE NOMENCLATURE OF
THE PNEUMOCOCCUS GROUP

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Today we have 2 different systems of nomenclature for the designation of serological types or serotypes of pneumococci: The first nomenclature which was published in 1940 by Kauffmann, Mørch and Schmith, followed Cooper's nomenclature which was retained, but expanded. New types serologically related to one of Cooper's types were gathered into one group; for example Group 7 consists of Types 7, 7A, 7B, and 7C which have one or more antigens in common. This grouping of related types was undertaken for practical reasons in order to simplify diagnosis and therapy.

In 1941 Walter and co-workers in New York described several new types and accepted the classification of Kauffmann, Mørch and Schmith.

The second nomenclature was published in 1944 by Eddy. She rejected the classification of Kauffmann, Mørch, and Schmith and gave the various types consecutive numbers, regardless of the antigenic structure.

Against the proposal of Eddy the following facts may be advanced:

1) According to the International rules of nomenclature, it is not permissible arbitrarily to alter already published names of bacterial types, for example to call Kauffmann, Mørch, and Schmith's Type 7C Type "50". For reasons of priority (1940 against 1944), the first name, "7C", must be retained.

2) Apart from these formal but binding reasons, from a scientific point of view it is preferable when dealing with a type closely related to Cooper's Type 7 to name it "Type 7C", rather than give it a new number.

3) In the preparation of diagnostic and therapeutic immune sera it is advisable to gather the related types into group sera. Then, according to circumstances, it will be possible to make a group diagnosis or an exact type diagnosis.

The fact that there is a practical demand for such a grouping is also clear from the fact that Eddy herself puts several types into groups. That being so, why not undertake this

Diagnostic Antigenic Schema of the Pneumococcus Group
(Kauffmann - Mørch - Schmith Schema)

Type	Antigens	Type	Antigens
1	1a	20	20a, 20b, 7g
2	2a	21	21a
3	3a	22	22a, 22b
4	4a	22A	22a, 22c
5	5a	23	23a, 23b, 18b
6A	6a, 6b	23A	23a, 23c, 15a
6B	6a, 6c	23B	23a, 23b, 23d
7	7a, 7b	24	24a, 24b, 24d, 7h
7A	7a, 7b, 7c	24A	24a, 24c, 24d
7B	7a, 7d, 7e, 7h	24B	24a, 24b, 24e, 7h
7C	7a, 7d, 7f, 7g, 7h	25	25a, 25b
8	8a	27	27a, 27b
9A	9a, 9c, 9d	28	28a, 28b, 16b, 23d
9L	9a, 9b, 9c, 9f	28A	28a, 28c, 16b, 23d
9N	9a, 9b, 9e	29	29a, 29b, 13b
9V	9a, 9c, 9d, 9g	31	31a, 20b
10	10a, 10b	32	32a, 27b
10A	10a, 10c, 10d	32A	32a, 32b, 27b
11	11a, 11b, 11e	33	33a, 33b, 33d
11A	11a, 11c, 11d, 11e	33A	33a, 33b, 33d, 20b
11B	11a, 11b, 11f	33B	33a, 33c, 33d, 33f
12	12a, 12b	33C	33a, 33c, 33e
13	13a, 13b	34	34a, 34b
14	14a	35	35a, 35b, 34b
15	15a, 15b, 15c, 15f	35A	35a, 35c, 20b
15A	15a, 15c, 15d, 15g	35B	35a, 35c, 29b
15B	15a, 15b, 15d, 15e, 15h	35C	35a, 35c, 20b, 42a
15C	15a, 15d, 15e	36	36a, 9e
16	16a, 16b, 11d	37	37a
17	17a, 17b	38	38a, 25b
17A	17a, 17c	39	39a, 10d
18	18a, 18b, 18c, 18f	40	40a, 7g, 7h
18A	18a, 18b, 18d	41	41a
18B	18a, 18b, 18e, 18g	42	42a, 20b, 35c
18C	18a, 18b, 18c, 18e	43	43a
19	19a, 19b, 19d	44	44a, 44b, 12b
19A	19a, 19c, 19d	45	45a
19B	19a, 19c, 19e, 7h	46	46a, 44b
19C	19a, 19c, 19f, 7h		

The table contains 44 types or groups.

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grouping according to Kauffmann, Mørch, and Schmith's antigenic schema, which shows the natural relationships of the various types?

4) Experience extending over several years proved the suitability of the Danish nomenclature. The division into groups is not artificial but corresponds to the natural conditions. Whereas some types like 1 and 2, show a pronounced serological specificity, others, such as the types in Group 7, have strongly developed common capsular antigens and thus form a natural group.

Another argument in support of subdividing the pneumococci into groups of serologically related types is to be found in the fact that there are antigens common to certain groups of pneumococci and other kinds of bacteria.

For example, Kauffmann and Langvad-Nielsen demonstrated antigens common to one type of Salmonella (S. kirkee) and all the types in pneumococcus Group 35. Similarly, Mørch found antigens common to two strains of non-haemolytic streptococci and the pneumococcus Groups 19 and 24. Furthermore, Mørch and Knipschildt demonstrated antigens common to a coli strain and pneumococcus Group 9.

5) The State Serum Institute, Copenhagen, is today the only institute manufacturing and distributing all diagnostic pneumococcus sera. Since January 1, 1942, the Danish sera have been supplied to institutes in most of the countries of Europe. These pneumococcus sera are designated by the Danish nomenclature, which is therefore followed in these countries and the results obtained with these sera are reported in the literature. Strains of all types of pneumococci are also supplied to many institutions.

It will therefore cause a great deal of confusion if this nomenclature, generally employed as it is in Europe, were now to be altered.

For these reasons we decline to alter the nomenclature we published in 1940, which maintains Cooper's nomenclature and which in principle has been accepted by Walter and co-workers.

We therefore suggest that Kauffmann, Mørch and Schmith's nomenclature should receive International recognition.

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