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DESIGNATION OF TYPES OF VIRUS TAXA

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Upon the recommendation of the Subcommittee on Nomenclature of the Viruses made to the fifth and sixth International Congresses of Microbiology it was agreed that no action relative to the formal approval of schemata for the nomenclature or classification of the viruses should be taken until the meeting of the seventh International Congress. However, there was no implication that free discussion of proposals for future names and classifications and certainly no suggestion that the type concept should be curtailed, nor that the type concept common to all of biology should be disregarded in virology.

Since the publication of Holmes' virus classification several classifications of viruses have appeared without the designation of nomenclatural types.

This communication is for the purpose of designating types for some of the genera and subgenera and proposing types for some suprageneric names where the names are not derived from the name of a genus. Since the Linnaean system of binomial nomenclature as now used is based on the types of the various taxa, the subsequent designation of types becomes necessary where not originally designated.

The legitimacy or appropriateness of these names is in no way implied by their inclusion here. In several cases their correctness can only be determined after designation of types.

In some cases these names were proposed in publications of very different classifications of viruses. Irrespective of the question of acceptance of these classifications, it would seem desirable for the convenience of all, that types be designated for these published names so that they can be brought into proper perspective with those of previously published taxa. It is important to differentiate between legitimacy of published names and acceptability in taxonomy, since nomenclature and taxonomy must be evaluated separately.

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Some type designations have already been made for some of these classifications by C.B. Philip. (Comments on the classification of the order Rickettsiales. Can. J. Microb. 2:261-270). The present communication deals with the following series of publications:

- V.M. Zhdanov. Opred. Virusov. Chelov. i Zhivot, (Acad. Med. Sci. Moscow). 348 pp. 1953. (See also: Internatl. Bull. Bact. Nom. and Tax. 4:191-211. 1954.)
L.A. Zilber. Uchenie o Virusakh. 316 pp. 1956.
K.A. Sukhov. Virusy. 370 pp. 1956.
V.L. Ryzhkov. (in Kravchenko). Vopr. medits. Virus. pp. 9-19. 1950.
V.L. Ryzhkov. Mikrobiologiya 21:458-476. 1952.
V.M. Zhdanov and R.S. Korenblit (Korenblut). Zhurnal Microb. Epid. i Immuno-biol. 2:40-44. 1950.

The classification of Zhdanov and Korenblit, presented at a scientific conference in 1949, was set into page proof for the September 1950 issue of the Journal, but that issue seems never to have appeared and the "reprints" of it seem to consist merely of page proof. Since an effective publication is generally regarded to be a publication which has become available to the general public, the effective date for many of the names listed by Zhdanov and Korenblit coincides with the effective date of the Zhdanov 1953 publication in which the names are cited. Thus the family names based on Microvirus, Hepatophilus, Neurophilus, and Microvirus were not effectively published since they were not included in the September 1953 publication. The genera Pestigenes, Maculigenes, Hepatophilus, Viscerophilus, Neurophilus, and Microvirus were published by Zhdanov in 1953 in synonymy, and are therefore of questionable availability from the viewpoint of effective publication. Types are designated for these genera by the present writer so that they may be evaluated with more precision, inasmuch as they are in the virological literature. This seems particularly desirable in this case since very often names which have been presented in scientific conferences are treated in Russia as though they had been published, so that these names may well be expected to appear in printed Russian literature.

The author tried in vain for many months to obtain a copy of the Zhdanov and Korenblit publication. The writer

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is, therefore, particularly grateful to Dr. Francis O. Holmes for permission to consult his "reprint" of this classification and for a photostatic copy of it.

Six genera published in 1953 by Zhdanov (Vyschelleskyella, Myelophilus, Myophilus, Dermaphilus, Apioles, and Plasmophila) were monotypic, as were six published in 1950 by Ryzhkov (Kappa, Meningophilus, Flageliophorus, Botkinia, Neurotropus, and Löffleria). In one case the diagnosis of the genus Glandulophilus as used in the 1950 Zhdanov and Korenblit article is quite different from that indicated for it in the 1953 Zhdanov publication.

The names with which the current communication is concerned are presented in two lists. The first list is that of suprageneric taxa and their types. This list, in most cases, merely brings together the suprageneric names from the various publications and gives their obvious types; however, for thirteen of the suprageneric taxa (indicated by the underlined word "type" following each) the nomenclatural type is not clearly derived from that of an included taxon and no types had been designated. Inasmuch as nomenclatural types are clearly desirable for these thirteen taxa, suggested nomenclatural types are listed. The second list includes the names of genera and subgenera with proposed type species.

DESIGNATION OF TYPES FOR CERTAIN SUPRAGENERIC
TAXA OF VIRUSES

Acarophilaceae Zhdanov, 1953 pp. 119, 274. Type genus:
Encephalophilus Zhdanov and Korenblit ex Zhdanov

Aphidophilaceae Ryzhkov, 1952 p. 466. Type genus:
Aphidophilus Ryzhkov (Aphidaephilaceae Sukhov, p. 264.)

Arthropodophilae Ryzhkov, 1950 pp. 14,15,16. Type order:
Pantropiales Ryzhkov

Arthropodophiliales Zhdanov, 1953 pp. 115, 273. Type family:
Insectophilaceae Zhdanov

Bacteriophagaceae Ryzhkov, 1952 p. 466. Type genus:
Bacteriophagus Ryzhkov

Beijerenckiales Ryzhkov, 1952 p. 465. (Beijerinckiales?)

Type family: Crystallococcaceae Ryzhkov

Borrelinales Ryzhkov, 1950 pp. 15,16. Type family:

Borrelinaceae Steinhaus

Borreliotales Ryzhkov, 1950 pp. 15,17. Type family:

Borreliotaceae Holmes

Botkiniaceae Ryzhkov, 1950 p. 19. Type genus:

Botkinia Ryzhkov

Chlamydozoa Ryzhkov, 1950 pp. 14,15,17. Type order:

Chlamydozoales Ryzhkov

Chlamydozoaceae Chen ex Ryzhkov, 1950 p. 17. Type genus:

Chlamydozon Ryzhkov

Chlamydozoales Ryzhkov, 1950 pp. 15,17. Type family:

Chlamydozoaceae Chen ex Ryzhkov

Cicadinaephilaceae Sukhov, 1956 p. 264. Type genus:

Liburniafilus Sukhov

Crystallobiotae Ryzhkov, 1950 pp. 14,15,16. Type order:

Borrelinales Ryzhkov

Crystallococcaceae Ryzhkov, 1952 p. 465. Type genus:

Crystallococcus Ryzhkov

Cycadinaefilaceae Sukhov, 1956 p. 264. Type genus:

Liburniafilus Sukhov

Dermaphilaceae Zhdanov, 1953 pp. 134,314. Type genus:

Dermaphilus Zhdanov

Enterophilaceae Ryzhkov, 1950 p. 19. Type genus:

Enterophilus Ryzhkov

Eucrystallinae Ryzhkov, 1952 p. 465. Type order:

Beijerenckiales Ryzhkov

Flageliophoraceae Ryzhkov, 1950 p. 19. Type genus:

Flageliophorus Ryzhkov

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Gamaleiaceae Zhdanov, 1953 pp. 107,253. Type genus:

Gamaleia Zhdanov

Gamaleiales Zhdanov, 1953. pp. 107,253. Type family:

Gamaleiaceae Zhdanov

Gamaleyae Ryzhkov, 1950 p. 16. Type order:

Gamaleyales Ryzhkov

Gamaleyales Ryzhkov, 1952 p. 466. Type family:

Bacteriophagaceae Ryzhkov

Glandulophaceae Ryzhkov, 1950 p. 19. Type genus:

Glandulophus Ryzhkov

Haematophilaceae Ryzhkov, 1950 p. 19. Type genus:

Haematophilus Ryzhkov

Heterophagi Sukhov, 1956 p. 264. Type family:

Acarophilaceae Zhdanov

Insectophilaceae Zhdanov, 1953 pp. 125,285. Type genus:

Insectophilus Zhdanov

Latentiaceae Ryzhkov, 1950 p. 18. Type genus:

Latens Ryzhkov

Leptomotropales Ryzhkov, 1952 p. 466. Type family:

Leptomotropaceae Ryzhkov

Leptomotropaceae Ryzhkov, 1952 p. 466. Type genus:

Leptomotropus Ryzhkov

Löffleriaceae Ryzhkov, 1950 p.16. Type genus:

Löffleria Ryzhkov

Löffleriales Ryzhkov, 1950 pp. 15,16. Type family:

Löffleriaceae Ryzhkov

Lysogenaceae Ryzhkov, 1952 p. 466. Type genus:

Lysogenus Ryzhkov

Meningophilaceae Ryzhkov, 1950 p. 19. Type genus:

Meningophilus Ryzhkov

Myelophagaceae Ryzhkov, 1950 p. 19. Type genus:

Myelophagus Ryzhkov

Neuroryctaceae Moschovskiy, 1945 ex Zhdanov, 1953 pp. 80,218.

Type genus: Neuroryctes Calkins

Neurotropaceae Ryzhkov, 1950 p. 17. Type genus:

Neurotropus Ryzhkov

Neurotropales Ryzhkov, 1950 pp. 15,17. Type family:

Neurotropaceae Ryzhkov

Pantropiaceae Ryzhkov, 1950 p. 16. (Pantropaceae?)

Type genus: Pantropus Ryzhkov

Pantropiales Ryzhkov, 1950 pp. 15,16. (Pantropales?)

Type family: Pantropiaceae Ryzhkov

Phagococcaceae Ryzhkov, 1952 p. 466. Type genus:

Phagococcus Ryzhkov

Piesmaphilaceae Ryzhkov, 1952 p. 465. Type genus:

Piesmaphilus Ryzhkov

Pneumophilaceae Zhdanov and Korenblit (1950 p. 43) ex

Zhdanov, 1953 pp. 94,241. Type genus: Pneumophilus

Zhdanov and Korenblit ex Zhdanov

Pneumotropiaceae Ryzhkov, 1950 p. 18. (Pneumotropaceae?)

Type genus: Pneumotropus Ryzhkov

Pneumotropiales Ryzhkov, 1950 pp. 15,18. (Pneumotropales?)

Type family: Pneumotropiaceae Ryzhkov

Polyedraceae Zhdanov, 1953 pp. 137,316. Type genus:

Polyedra Zhdanov

Polyedrales Zhdanov, 1953 pp. 137,316. Type family:

Polyedraceae Zhdanov

Polyvectaceae Zhdanov, 1953 pp. 127,299. Type genus:

Polyvectus Zhdanov

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- Pseudocrystallinae Ryzhkov, 1952 p. 465. Type order:
Borrelinales Ryzhkov
- Quanjeriaceae Ryzhkov, 1952 p. 465. Type genus:
Quanjeria Ryzhkov
- Ribonucleoproteinales Sukhov, 1956 pp. 262,264. Type order:
Virothricales Ryzhkov (Virotrichales?)
- Rubeoloferaceae Ryzhkov, 1950 p. 19. Type genus:
Rubeoloferus Ryzhkov
- Sanguiphilaceae Zhdanov, 1953 pp. 134,312. Type genus:
Sanguiphilus Zhdanov and Korenblit ex Zhdanov
- Strongyloplasmaceae Zhdanov and Korenblit, 1950 p. 43, ex
Zhdanov, 1953 p. 195. (Strongyloplasmataceae?)
Type genus: Strongyloplasma Lipschütz
- Strongyloplasmales Zhdanov, 1953 p. 194. (Strongyloplasma-
tales?) Type family: Strongyloplasmaceae Zhdanov and
Korenblit ex Zhdanov
- Thripsophilaceae Ryzhkov, 1952 p. 466. (Thripophilaceae?)
Type genus: Thripsophilus Ryzhkov
- Thymonucleoproteinales Sukhov, 1956 pp. 263,264. Type order:
Borrelinales Ryzhkov
- Thysanopteraphilaceae Sukhov, 1956 p. 264. No type.
- Tumefaciaceae Zhdanov, 1953 pp. 89,226. (Tumefacientaceae?)
Type genus: Tumefaciens Zhdanov and Korenblit ex Zhdanov
- Tumoriferaceae Ryzhkov, 1950 p. 18. Type genus:
Tumoriferus Ryzhkov
- Virococcaceae Ryzhkov, 1952 p. 465. Type genus:
Virococcus Ryzhkov
- Virothricaceae Ryzhkov, 1950 p. 16. (Virotrichaceae?)
Type genus: Virothrix Ryzhkov
- Virothricales Ryzhkov, 1950 pp. 15,16. (Virotrichales?)
Type family: Virothricaceae Ryzhkov

DESIGNATIONS OF TYPE SPECIES FOR CERTAIN
GENERA AND SUBGENERA OF THE VIRUSES

Agalliaphilus Ryzhkov, 1952 p. 466. Type species:
Agalliaphilus tuberosi Ryzhkov

Aphidophilus Ryzhkov, 1952 p. 466. Type species:
Aphidophilus cucumeris Ryzhkov

Apioles Zhdanov, 1953 p. 322. Type Species, monotype:
Apioles apis Zhdanov

Bacteriophagus Ryzhkov, 1952 p. 466. Type species:
Bacteriophagus escherichia Ryzhkov

Botkinia Ryzhkov, 1950 p. 19. Type species, monotype:
Botkinia hepatica Ryzhkov

Capsulatus Zhdanov, 1953, p. 320. Type species:
Capsulatus cacociae Zhdanov

Cardiophilus Zhdanov, 1953 pp. 133,309. Type species:
Cardiophilus mengo Zhdanov

Cerebrophilus Zhdanov, 1953 pp. 133,307. Type species:
Cerebrophilus muris Zhdanov

Chlamydozoon Ryzhkov, 1950 p. 17 (non Halberstaedter and von
Prowazek 1907). Type species: Chlamydozoon psittaci
Ryzhkov

Crystallococcus Ryzhkov, 1952 p. 465. Type species:
Crystallococcus tabaci Ryzhkov

Demyelinisator Zhdanov and Korenblit (1950 p. 43) ex Zhdanov,
1953 pp. 81,221. Type species: Demyelinisator vulpis
Zhdanov and Korenblit ex Zhdanov

Dermaphilus Zhdanov, 1953 pp. 134,314. Type species,
monotype: Dermaphilus pecoris Zhdanov

Encephalophilus Zhdanov and Korenblit, 1950 p. 44 ex Zhdanov,
1953 pp. 119,274. Type species: Encephalophilus
scotticus Zhdanov and Korenblit ex Zhdanov

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Encephalotropus Ryzhkov, 1950 p. 19. Type species:

Encephalotropus ovis Ryzhkov

Enterophilus Ryzhkov, 1950 p. 19. Type species:

Enterophilus porci Ryzhkov

Febrigenes Zhdanov, 1953 pp. 126,293. Type species:

Febrigenes pappatasi Zhdanov

Flageliophorus Ryzhkov, 1950 p. 19. Type species, monotype:

Flageliophorus pseudopestis Ryzhkov

Gamaleia Zhdanov, 1953 pp. 107,253. Type species:

Gamaleia suis Zhdanov

Glandulophilus Zhdanov and Korenblit, 1950 p. 44 ex Zhdanov, 1953 p. 245. Type species, monotype: Glandulophilus parotidis Zhdanov and Korenblit ex Zhdanov in syn.

Glandulophilus Zhdanov, 1953 pp. 109,267. (non Zhdanov and Korenblit ex Zhdanov 1953, in syn.) Type species:

Glandulophilus caviae Zhdanov

Glandulophus Ryzhkov, 1950 p. 19. Type species:

Glandulophus hominis Ryzhkov

Graminevorus Ryzhkov, 1952, p. 465. Type species:

Graminevorus tritici Ryzhkov

Haematophilus Ryzhkov, 1950 p. 19. Type species:

Haematophilus anemiae Ryzhkov

Haemorrhagogenes Zhdanov and Korenblit, 1950 p. 44 ex

Zhdanov, 1953 pp. 119,282. Type species:

Haemorrhagogenes suis Zhdanov and Korenblit ex Zhdanov

Hepatophilus Zhdanov and Korenblit, 1950 p. 44 ex Zhdanov,

1953 p. 265, in syn. Type species: Hepatophilus

hominis Zhdanov and Korenblit ex Zhdanov in syn.

Hyalesthesophilus Sukhov, 1956 p. 264. Type species:

Hyalesthesophilus soleneai Sukhov

Insectophilus Zhdanov, 1953 pp. 125,286. Type species:
Insectophilus japonicus Zhdanov

Insectophilus subg. Neurophilus Zhdanov, 1953 pp. 125,286.
Type species: Insectophilus (Neurophilus) japonicus
Zhdanov

Insectophilus subg. Viscerophilus Zhdanov, 1953 pp. 126,291.
Type species: Insectophilus (Viscerophilus) dengue
Zhdanov

Kappa Ryzhkov, 1950 p. 18. Type species, monotype: Kappa
paramaecii Ryzhkov

Kreizbergia Ryzhkov, 1952 p. 466. Type species: Kreizbergia
pistaciae Ryzhkov

Latens Zhdanov and Korenblit, 1950 p. 43 ex Zhdanov, 1953
pp. 75,206. Type species: Latens herpetis Zhdanov and
Korenblit ex Zhdanov

Latens subg. Latens Zhdanov and Korenblit, 1950 p. 43 ex
Zhdanov, 1953 pp. 75,206. Type species: Latens (Latens)
herpetis Zhdanov and Korenblit ex Zhdanov

Latens subg. Ulcerozeuges Zhdanov and Korenblit, 1950 p. 43
ex Zhdanov, 1953 pp. 75,211. Type species: Latens
(Ulcerozeuges) ovium Zhdanov and Korenblit ex Zhdanov

Latentia Ryzhkov, 1950 p. 18. Type species: Latentia herpes
Ryzhkov

Leptomotropus Ryzhkov, 1952 p. 466. Type species:
Leptomotropus vaccinii Ryzhkov

Leucosoferus Zilber, 1956 p. 313. Type species:
Leucosoferus avium Zilber

Liburniafilus Sukhov, 1956, p. 264. Type species:
Liburniafilus graminei Sukhov

Löffleria Ryzhkov, 1950 p. 16. Type species, monotype:
Löffleria equi Ryzhkov

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Lysogenus Ryzhkov, 1952 p. 466. Type species:

Lysogenus typhi Ryzhkov

Maculigenes Zhdanov and Korenblit, 1950 p. 44 ex Zhdanov,
1953 p. 257, in syn. Type species: Maculigenes
morbilorum Zhdanov and Korenblit ex Zhdanov in syn.

Meningophilus Ryzhkov, 1950 p. 19. Type species, monotype:

Meningophilus murinus Ryzhkov

Microvirus Zhdanov and Korenblit, 1950 p. 44 ex Zhdanov,
1953 p. 314, in syn. Type species, monotype: Microvirus
pecoris Zhdanov and Korenblit ex Zhdanov in syn.

Myelinophagus Ryzhkov, 1950 p. 19. Type species:

Myelinophagus avium Ryzhkov

Myelophilus Zhdanov, 1953 pp. 132,304. Type species,
monotype: Myelophilus hominis Zhdanov

Myelovirus Ryzhkov, 1952 p. 465. Type species:

Myelovirus mengo Ryzhkov

Myophilus Zhdanov, 1953 pp. 133,310. Type species, monotype:

Myophilus hominis Zhdanov

Neurophilus Zhdanov and Korenblit, 1950 p. 44 ex Zhdanov,
1953 p. 279, in syn. (non Insectophilus subg. Neuro-
philus Zhdanov). Type species: Neurophilus chorio-
meningitidis Zhdanov and Korenblit ex Zhdanov in syn.

Neurotropus Ryzhkov, 1950 p. 16. Type species, monotype:

Neurotropus hominis Ryzhkov

Pantropus Ryzhkov, 1950 p. 16. Type species: Pantropus

dengue Ryzhkov

Papillomiferus Ryzhkov, 1950 p. 18. Type species:

Papillomiferus leporis Ryzhkov

Paschenia Ryzhkov, 1950 p. 18. Type species: Paschenia

hominis Ryzhkov

Pestigenes Zhdanov and Korenblit, 1950 p. 44 ex Zhdanov, 1953 pp. 246,253. in syn. Type species: Pestigenes newcastlei Zhdanov and Korenblit ex Zhdanov in syn.

Phagococcus Ryzhkov, 1952 p. 466. Type: Phagococcus escherichiae Ryzhkov

Piesmaphila Ryzhkov, 1952 p. 465. Type species: Piesmaphila europeus Ryzhkov

Plasmophila Zhdanov, 1953 p. 322. Type species, monotype: Plasmophila pieries Zhdanov

Pneumophilus Zhdanov and Korenblit, 1950 p. 43 ex Zhdanov, 1953 p. 242. Type species: Pneumophilus gripposus Zhdanov and Korenblit ex Zhdanov

Pneumotropus Ryzhkov, 1950 p. 18. Type species: Pneumotropus grippae Ryzhkov

Polyedra Zhdanov, 1953 p. 316. Type species: Polyedra bombycis Zhdanov

Polynosa Zhdanov, 1953 pp. 107,257. Type species: Polynosa morbillorum Zhdanov

Polyectus Zhdanov, 1953. pp. 127,299. Type species: Polyectus occidentalis Zhdanov

Quanjeria Ryzhkov, 1952 p. 465. Type species: Quanjeria tuberosi Ryzhkov

Rubeoloferus Ryzhkov, 1950 p. 19. Type species: Rubeoloferus morbillorum Ryzhkov

Sanguiphilus Zhdanov and Korenblit, 1950 p. 44 ex Zhdanov, 1953 pp. 134,312. Type species: Sanguiphilus equinus Zhdanov and Korenblit ex Zhdanov

Solanophilus Ryzhkov, 1952 p. 465. Type species: Solanophilus tuberosi Ryzhkov

Strongyloplasma subg. Borreliota Zhdanov and Korenblit, 1950 p. 43 ex Zhdanov, 1953 pp. 75,201. Type species:

Strongyloplasma (Borreliota) avium Zhdanov and Korenblit
ex Zhdanov

Strongyloplasma subg. Strongyloplasma Zhdanov and Korenblit,
1950 p. 43 ex Zhdanov, 1953 pp. 75,196. Type species:
Strongyloplasma (Strongyloplasma) variola Zhdanov and
Korenblit ex Zhdanov

Strongyloplasma subg. Varicella Zhdanov and Korenblit, 1950
p. 43 ex Zhdanov, 1953 pp. 75,204. Type species:
Strongyloplasma (Varicella) varicellae Zhdanov and
Korenblit ex Zhdanov

Strongyloplasma subg. Zoovariola Zhdanov and Korenblit, 1950
p. 43 ex Zhdanov, 1953 pp. 75,204. Type species:
Strongyloplasma (Zoovariola) ovis Zhdanov and Korenblit
ex Zhdanov

Thripsophilus Ryzhkov, 1952 p. 466. (Thripophilus?) Type:
Thripsophilus lycopersici Ryzhkov

Tumefaciens Zhdanov and Korenblit, 1950 p. 43 ex Zhdanov,
1953 pp. 89,227. Type species: Tumefaciens ranae
Zhdanov and Korenblit ex Zhdanov

Tumoriferus Ryzhkov, 1950 p. 18. Type species:
Tumoriferus avium Ryzhkov

Tumoroides Zilber, 1956 p. 313. Type species:
Tumoroides myxomae Zilber

Virococcus Ryzhkov, 1952 p. 465. Type species:
Virococcus cucurbitae Ryzhkov

Virothrix Ryzhkov, 1950 p. 16. Type species:
Virothrix hominis Ryzhkov

Viscerophilus Zhdanov and Korenblit, 1950 p. 44 ex Zhdanov,
1953 p. 293, in syn. (non Insectophilus subg.
Viscerophilus Zhdanov). Type species: Viscerophilus
pappatasii Zhdanov and Korenblit ex Zhdanov in syn.

Vyschelesskyella Zhdanov and Korenblit, 1950 p. 43 ex
Zhdanov, 1953 pp. 81,224. Type species, monotype:
Vyschelesskyella equina Zhdanov and Korenblit ex
Zhdanov