

The International Committee on Taxonomy of Viruses

Taxonomy Proposal Form, 2025

**Part 1a: Details of taxonomy proposals**

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| **Title:** | Creation of ICTV Virus Bioinformatics Study Group and its remit |
| **Code assigned:** | 2025.G003.N.v1.Creation\_of\_ICTV\_Bioinformatics\_Study\_Group | |

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| **Author(s), affiliation and email address(es):** | | | | |
| **Given name (+middle initial(s))** | **Surname** | **Affiliation** | **Email address** | **Corr. author(s)** |
| Alejandro | Reyes | Department of Biological Sciences, Universidad de los Andes, Bogotá, Colombia | a.reyes@uniandes.edu.co | X |
| Evelien | Adriaenssens | Quadram Institute Bioscience, Norwich Research Park, Norwich, UK | Evelien.Adriaenssens@quadram.ac.uk |  |
| Elliot | Lefkowitz | Department of Microbiology, University of Alabama at Birmingham, Birmingham, AL, USA | elliotl@uab.edu |  |
| Simon | Roux | Joint Genome Institute, Lawrence Berkeley National Laboratory, Department of Energy, Berkeley, California, USA | sroux@lbl.gov |  |
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**Part 1b: Taxonomy Proposal Submission**

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| **ICTV Subcommittee:** | | | |
| Animal DNA Viruses and Retroviruses |  | Bacterial viruses |  |
| Animal minus-strand and dsRNA viruses |  | Fungal and protist viruses |  |
| Animal positive-strand RNA viruses |  | Plant viruses |  |
| Archaeal viruses |  | General - | **X** |

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| **List the ICTV Study Group(s) that have seen or have been involved in creating this proposal:** |
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| **Optional – complete only if formally voted on by an ICTV Study Group:** | | | |
| **Study Group** | **Number of members** | | |
| **Votes in support** | **Votes against** | **No vote** |
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| **Submission date:** |  |

**Part 1c: Feedback from ICTV Executive Committee (EC) meeting**

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| **Executive Committee Meeting Decision code:** | **X** |
| A – Accept |  |
| Ac – Accept subject to revision by relevant subcommittee chair. No further vote required |  |
| U – Accept without revision but with re-evaluation and email vote by the EC |  |
| Uc – Accept subject to revision and re-evaluation and email vote by the EC |  |
| Ud – Deferred to the next EC meeting, with an invitation to revise based on EC comments |  |
| J - Reject |  |
| W - Withdrawn |  |

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| **Comments from the Executive Committee:** |
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**Part 1d: Revised Taxonomy Proposal Submission**

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| **Response of proposer:** |
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| **Revision date:** |  |

**Part 2:** **GENERAL PROPOSAL**

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| **Abstract for General Proposal:** |
| *Brief description of current situation:*  The Virus Bioinformatics Expert Group was an unofficial group within the ICTV that discussed bioinformatics problems and was working towards streamlining and automating taxonomic processes. There never was an official remit or position within the ICTV.  *Proposed changes:*  We propose a new name and remit for the Virus Bioinformatics Study Group. This group will be placed as a Study Group with affiliation to all subcommittees and will consist of subcommittee chairs and invited virus bioinformatics experts.  *Justification:*  Having a Virus Bioinformatics Study Group will facilitate taxonomic endeavors and coordination across Study Groups, in support of the long-term goal of automated and scalable virus taxonomic processes. |

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| **Text of General Proposal:** |
| ICTV Virus Bioinformatics Study Group  Remit  **Core Tenet: Taxonomy should reflect the evolutionary history of viruses.**  **Objectives:**   1. Engage and Understand:    * Actively engage with each ICTV Subcommittee (SC) to understand their specific bioinformatics needs, processes, and challenges. 2. Integrate Taxonomic Expertise:    * Learn from virologists about the demarcation criteria that define taxa within each SC and realm, recognizing the distinctiveness of evolutionary trajectories across the virosphere.    * Create and maintain a demarcation criteria database that stores the current and future criteria used by each SG to determine the taxonomic placement of the viruses and taxonomic ranks under their remit. 3. Translate Criteria into Computational Methods:    * Convert virologist-defined demarcation criteria into quantifiable, machine-readable formats.    * Develop and iteratively refine computational methods, thresholds, and tools to accurately reflect these demarcation criteria, aiming at the maximum alignment with current taxonomy. 4. Consensus Building:    * Compare and contrast the approaches built for the different SC and realms to find commonalities and differences.    * Establish consistent bioinformatical approaches (methods) with SC and realm specific thresholds and parameters. 5. Advise and Support:    * Provide bioinformatics guidance, informed by computational expertise and experiences gained across various SCs and realms, to advise SCs when appropriate. 6. Automation and Sustainability (Long-term goal):    * Facilitate the progressive automation of taxonomic processes through a continuous feedback and refinement loop, enabling sustainable and scalable virus classification practices.   **Position within the organisation**  We propose that the VBSG functions as a study group assigned to all subcommittees in parallel. Members will be considered similar to other study group members and will not have voting rights based on their membership of the VBSG.  **Membership**  We propose that the group is chaired by a member of the Executive Committee, appointed by the EC. Membership shall consist of the Subcommittee Chairs and complemented with computational virologists and bioinformaticians with expertise spanning the virosphere. The total number of members should be an odd number for voting purposes. |

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| **References:** |
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| **Accompanying files:** | |
| **Filename** | **Description of contents** |
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