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VDN Virology Division News

The potyvirus sequence database

A project of the Potyvirus Working Group of the Plant Virus Subcommittee of ICTV

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The potyvirus sequence database (PSD) is an attempt to provide workers in the field with a comprehensive collection of existing potyvirus nucleotide and amino acid sequences. In this way it is hoped that researchers will be able to obtain information easily and effectively. The database will be updated, hopefully, as new sequences become available.

How to access and use the database

The database is located on the University of Idaho Gopher server and a mirror image maintained at the University of Capetown. Anyone with access to the internet can access the PSD. Either of two methods open can be used: Use PC Gopher for IBM compatible computers or TurboGopher for Macintosh computers and navigate to the PSD via Univ. of Idaho Information Services and then College of Agriculture. An even simpler method is to access the PSD via the World Wide Web. The appropriate WWW addresses are:

ftp://ftp.uidaho.edu/pub/data/potyvirus/
ftp://ftp.uct.ac.za/pub/data/potyvirus/

In either case, one can examine or download individual files.

Other associated files: A text document is also in the database, called "Citations." It is in Word format (Mac Word and MS-DOS) as well as text. It documents the source of many individual sequence files. It also tries to make some sense (or further confuses the issue) on naming of strains or isolates. In most cases, authors define the source and strain of virus that was used to generate the sequence data. Occasionally, however, this is not the case and we have given the isolate a name if we felt it necessary to do so. We have tried to retain the original designation wherever possible to avoid confusion. Note that the citations document has not been updated for quite some time.

What is in the database

The main portion of the PSD is, as expected, sequence data files. The vast majority of information is 3′-end sequence encompassing the coat protein cistron and 3′-end nontranslated region. In most cases you will find files of any given virus as in the following example: TAMMVCP.SEQ, TAMMV3P.SEQ, TAMMVCP.PEP, TAMMV.GEN3.

The ".SEQ" extension is for nucleotide sequence while the ".PEP" extension is for amino acid sequence. Thus, TamMVCP.SEQ is the coat protein cistron nucleotide sequence from tamarillo mosaic virus, TamMV3p.SEQ is the 3´-end nontranslated sequence (the CP stop codon will always be with the CP sequences and not 3´-end nontranslated sequences), and TamMVCP.pep is coat protein amino acid sequence. If a strain designation is required, it will be just prior to the extension. If datafile includes additional data upstream of the CP cistron, there may be a "+" in the name, such as "TAMMVCP+.SEQ." Complete nucleotide sequences will be listed as: PVYNCOMPL.SEQ. An extension ".GEN3" would indicate that this is the GenBank accession; it has not been altered in any way. However, since we have tried to include GenBank or EMBL accessions, there is some redundancy in the PSD. More recently, we have only included the GenBank or EMBL sequence and have not subdivided entries into components. All sequences are in GCG format. This means that comments are preceded by a colon (:) and the last comment before data will have a colon followed by two periods (:..). If, for some reason, you desire data in a format other than GCG and cannot easily reformat it, contact us and we can probably accomplish this for you. In many cases, the file in the database is identical to that submitted to GenBank or EMBL, so the accession number will be evident. These would also, in many cases, provide another source of amino acid sequence as well as amino acid sequence not included in the .pep file (e.g., partial NIb sequence). In other cases, where data were obtained from a publication (and not in GenBank or EMBL databases), we have tried to annotate at least to the point that one can find the original source of data. In the near future, we may also include multiple sequence alignments of the entire dataset. These will be in GCG .msf format. If you have access to GCG then it is possible to download the .msf file(s) and extract what is of interest to you, using the relevant GCG REFORMAT commands.

Miscellaneaus

At the present time, data contained within the PSD is correct and accurate to the best of our knowledge. There is no guarantee that this is so, however. We urge researchers generating sequence data to submit it to the major databases (e.g., GenBank) and also to the PSD. Note that any information in the PSD is in the public domain. Any users who find errors or discrepancies should contact Phil Berger or Ed Rybicki.

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In the future we are considering including information on potyvirus taxonomy, phylogenetic trees or other data that may be of use to researchers in the field. Your comments and suggestions are welcome.

International Biological Standards

On behalf of the World Health Organization, The National Institute for Biological Standards and Control (NIBSC) develops, evaluates and distributes a wide range of International Biological Standards and other reference preparations. International Standards are the basis for calibrating the biological activity of existing or potential biological medicines. Standards are established by the WHO Expert Committee of Biological Standardization following extensive international collaborative studies and are defined in terms of International Units of biological activity. They are used in biomedical research and development and for the quality control and standardization of manufactured biological products in the following fields:

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International Association of Biological Standardization Task Force on Vaccines Modulation of the Immune Response to Vaccine Antigens

An International Symposium to be held from June 18th to 21st 1996 at the University of Bergen, Norway

Scientific progress towards the development of new and improved vaccines against viral, bacterial and parasite infections continues to gather momentum and important international initiatives for the control and, in some cases eradication, of infectious diseases by immunization are underway. However, there are many scientific challenges ahead in the field of vaccination and immunization. One topic which deserves special consideration is that of development and evaluation of new adjuvants and the modulation of the immune response. Despite much research and development work, progress towards new and acceptable adjuvants for use in man has been slow. There are, however, encouraging signs of a renewed interest in this field and there have been several interesting developments. The Symposium will provide a timely opportunity for a review of progress and will include contributions on adjuvants and immune modulation in respect of vacccines for man and animals.

Topics will include:

- Immunological mechanisms of adjuvant effects.
- Progress in the design and evaluation of immunological adjuvants – including biodegradables, microencapsulated products and controlled slow release formulations, for vaccines for human or veterinary use.
- New modes of presentation of vaccine antigens (including sub-unit and rDNA derived products) for enhancement of the immune response.
- Mucosal immunization.
- Cytokines as immunomodulators.
- Studies of T-cell and B-cell responses (including Th_1, Th_2, CTL, and memory) – effects of adjuvants and mode and route of presentation.
- Pre-clinical evaluation and laboratory correlates of immunity.
- Standardization and control issues for adjuvants and new vaccine formulations for human and veterinary vaccines.

To receive the Preliminary Registration Form and further information, contact:
Pamela Lane, NIBSC, Blanche Lane, South Mimms, Potters Bar, Herts EN6 3QG, U.K.
Tel: 01707 654753, Fax: 01707 646854.

Options for the Control of Influenza III

4–9 May, 1996, Cairns, North Queensland, Australia

We are delighted to announce that the Third International Conference in the series "Options for the Control of Influenza" will be held in Cairns in May 1996. Australia and Australians have been prominent in influenza research since the pioneering studies of Burnet and we now look forward to hosting this important meeting.

The conference will build on the highly successful multidisciplinary format established at the meetings conducted in 1985 and 1992 at Keystone, USA, and Courchevel, France, and will bring together workers involved in all aspects of influenza from basic research through development and licensing of new vaccines and therapeutics, to epidemiology and control programs.

Chairman of the Local Organising Committee and Congress Secretary: Alan W. Hampson (WHO Collaborating Centre for Influenza), Located at CSL Limited, 45 Poplar Road, Parkville, VIC, 3052, Australia, Tel: 61 3 389 13450, Fax: 61 3 388 2063

Further information can be obtained from: Influenza'96 Conference Secretariat, GPO Box 128, Sydney, NSW, 2001, Australia, Tel: 61 2 262 2277, Fax: 61 2 262 2323, e-mail: TourHosts@TourHosts.COM.AU

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