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EVA: European Virus Archive

Since the days of Louis Pasteur, scientists have been isolating viruses to create vaccines and conduct research. Today there is an extremely large number of viruses that have been isolated and are used for diagnostic and research purposes and new viruses are frequently being discovered. As knowledge of pathogenic viruses grows, so does the need to store these viruses so that they can be used as reference reagents for diagnosis and help researchers understand the underlying basis of virus pathogenesis and disease control. The EU-funded EVA project will create and mobilise a European network of high-calibre centres with sufficient levels of expertise to collect, standardise, authenticate, distribute and track mammalian and other exotic viruses.

● COLLECTING VIRUSES

There are numerous laboratories across the globe which have accumulated sizeable collections of viruses, usually related to the speciality of that laboratory. For example, the American Type Culture Collection and the Center for Disease Control and Prevention have large collections of mammalian virus pathogens. In Europe considerable stores of viruses can be found in the UK at the National Collection of Pathogenic Viruses and at the Pasteur Institute in France, in addition to other centres in the Czech Republic, Slovakia, Germany and Scandinavia. Virus collections are also found in Russia, China, India and Southeast Asia, although Europe has limited access to these resources. Moreover, processes for virus standardisation, characterisation, preservation and distribution are often arbitrary and dependent on the speciality of each laboratory.

Though efforts have been made by independent laboratories, there is no centre in the world that coordinates all virus collections for the benefit of science. As such, there is no coordinated, quality-controlled laboratory facility that can supply authenticated viruses to laboratories and teaching centres.

However, it would be near impossible to establish a single laboratory to maintain supplies of all known mammalian viruses. Furthermore, with stricter controls after the events of 9/11, it is more complicated for the USA to send pathogenic viruses to Europe. This means that there is a need for Europe to develop its own virus archive to assist environmental and public health authorities in developing new technologies for disease control and providing material for teaching and training purposes.



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● SPREADING THE WORD ABOUT VIRUSES

This is where the EVA project comes into play. The network of EVA laboratories will represent an extensive range of virological disciplines, currently holding approximately 50% of the 500 recognised species within the EVA collection. Through local networks, facilities can access the virus collections held in smaller laboratories. The ultimate goal of EVA is to coordinate these collections to produce the largest library of authenticated, quality-controlled, available viruses in the world. EVA will provide wider and more efficient access to, and use of, these virus collections.

The nine laboratories working as a part of EVA will bring together their different collections to create a single web-based catalogue to advertise and distribute viruses. In addition, standardisation protocols will be implemented for virus production, assessment, storage and distribution to be used uniformly across the network.

The EVA database will at first focus on a select number of European laboratories which already have large virus collections. In the longer term, EVA will develop partnerships and complementary capabilities to offer improved access to researchers. As such, EVA will work with other network-based virus-associated programmes through an interface designed to facilitate exchanges and integration between external partners.

EVA researchers also hope to open doors to other fields of study. By sharing EVA resources, the project plans on developing cross-disciplinary collaboration and a more open approach to knowledge and technology sharing.



Project acronym: EVA

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EU project officer: Christos Profilis

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Partners:

Institut de Recherche pour le Développement (FR)
Veterinary Laboratories Agency (UK)
Bernhard-Nocht-Institut für Tropenmedizin (DE)
Universitätsklinikum Bonn (DE)
Health Protection Agency (UK)
Université de Genève (CH)
Univerza v Ljubljana (SL)
Institute of Virology, Slovak Academy of Sciences (SK)
Université de la Méditerranée (FR)

Coordinator: Professor Jean Louis Romette,
jean-louis.romette@univmed.fr

Project webpage: www.european-virus-archive.com