


EVA-GLOBAL

Critical Support to the COVID19 Pandemic

What is EVA-GLOBAL?

- Network of virus collections supported by the European Commission

- EVA 2009: initial project under FP7 Infrastructure Programme funding; 9 European labs
- MERS CoV 2012 outbreak in Qatar / Saudi Arabia, a notable success story

- EVAg 2014: under H2020 FP as 26 partners plus 20 associates in Africa, Russia, China, Turkey, Germany and Italy from 21 EU / non EU countries
- Ebola 2014 involved EVA BSL4 labs providing field support
- Zika 2016 involved supply of eight ZKV reference products for diagnostics (500,000 clinical cases)
- Yellow Fever 2016 involved a vaccination campaign, need to distinguish between vaccine and wild-type YFV disease. Novel RT-PCR developed by EVA partners

- EVA-GLOBAL 2020: 38 partners plus many associated partners & non-governmental organisations
- Human, animal viruses plus also botanical and aquatic

- *The European Virus Archive goes global: A growing resource for research*: J.L.Romette et al. Antiviral Research; Vol 158, Oct 2018, pages 127 - 134

The EVA GLOBAL project has received funding from European Union's Horizon, 2020 Research and Innovation Programme under Grant Agreement No.871029


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Modus Operandi of EVA

- Opens up access to viruses & derived products for research & test development
- Partners retain ownership of viruses that are uploaded to a web-based catalogue
- Work Packages on cultivable / non-cultivable virus products utilising new cell lines, reverse genetics. High risk pathogens (BSL4), Regulatory affairs (Nagoya) and QMS
- Virus products categorised according to “quality grade”: identity, purity, efficacy and storage. Objective aimed at Gold Standard products to enable end-users to “hit the ground running”
- Quality is directed by project Quality Standard, based upon ISO9001 / OECD guidelines. Focus on virus acquisition and management
- QC checking - new uploaded products data verified by Quality Management team
- TNA (TransNational Access) supply to qualifying end-users, free except shipping costs
- Applications for TNAs are screened by EVA management, plus an external Selection Panel

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Activity Report for 23 March

- January 2020 - WHO asked EVA GLOBAL to mobilise its network to prepare and distribute PCR controls for public health labs worldwide
- Distribution hubs were set up in geographical areas, eg PAHO for South America, CSIRO in Australia
- EVA labs at Le Charité, Berlin; Institut Pasteur, Paris; Aix Marseille University; Erasmus, Rotterdam; INMI, Rome & FoHM, Stockholm have created a list of CoV products, including training in CoV diagnostics
- Products supplied to date include:
- Positive controls for PCR detection
- RNA specificity panel defining 5 strains of CoV
- Primers / probes, +ve controls (armoured RNA) designed for room temp shipment
- 3 x SARS Cov2 strains (live or inactivated) including German, French and Italian

- Total number distributed (30 March) worldwide = **1779**
- 686 TNA (free); 1093 non-TNA (440 to SMEs or Big Pharma)

- Significant increase of requests from African countries

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What do biobanks need to consider …?

- Ethics: Documented informed consent? Not for viruses, no human cellular content.
- Scientific / medical questions to be answered: What confers genetic susceptibility & resistance.
- Metadata / provenance: What are the key criteria to feed into research?
- Resources: Trained staff available to process and bank? Storage capacity within appropriate containment? Cell lines for virus culture
- Storage policy: Review collection and retain or dispose?
- Storage method: Stored virus efficacy can be reduced or destroyed by exposure to enzymes that destroy nucleic acids; detergents that solubilise lipid-containing envelopes and exposing nucleic acid, temps > 50C or chemicals that breakdown capsized proteins. Sealed glass vials. Lyophilisation.

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