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
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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.