

EVA-G network activities in the African region

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- ▶ What is EVA-G (in short) ?

- ▶ Key actions for cooperation beyond Europe :
 - Why ?

 - Compliance with the Nagoya Protocol

 - Promoting cooperation through Training

 - Bringing continents closer : the logistical key issue

- ▶ Take Home message

- ▶ EVA concept (2008-2013) :
 - Based on a statement : No international Virus Collection
 - Funded by EU (2009-2014) : 9 EU partners

Name of participating organisation	Country
Institut de Recherche pour le Développement (IRD)	France
Animal Health and Veterinary Laboratories Agency (AHVLA)	UK
Bernhard-Nocht-Institut für Tropenmedizin (BNI)	Germany
Universitaetsklinikum Bonn (UKB)	Germany
Health Protection Agency (HPA)	UK
Université de Genève (UNIGE)	Switzerland
Univerza v Ljubljani (UL)	Slovenia
Institute of Virology, Slovak Academy of Sciences (IVSAS)	Slovakia
Université de la Méditerranée (UNIVMED)	France

- ▶ EVAg : EVA goes global
 - Funded by EU, Network beyond EU

- ▶ EVA-GLOBAL : Program funded by EU's Horizon 2020 programme under grant agreement No 871029
- ▶ 49 partners
 - From 28 EU and 10 non-EU full Partners
 - 11 (Operating) Associate Partners



- ▶ To collect, amplify, characterize, standardize and authenticate viruses to develop and maintain the **largest active globally accessible virus archive**
- ▶ To facilitate **easy access to viruses and critical derived products and services** for the benefit of science, medicine, industry and public health
- ▶ **Preparedness and Response to viral emergence**

- ▶ Defined and established set of **best practice quality guidelines** adopted by the consortium partner collections...
- ▶ ... To guarantee the supply of **authenticated and quality controlled** resources to users
- ▶ **Harmonised** service levels across the consortium

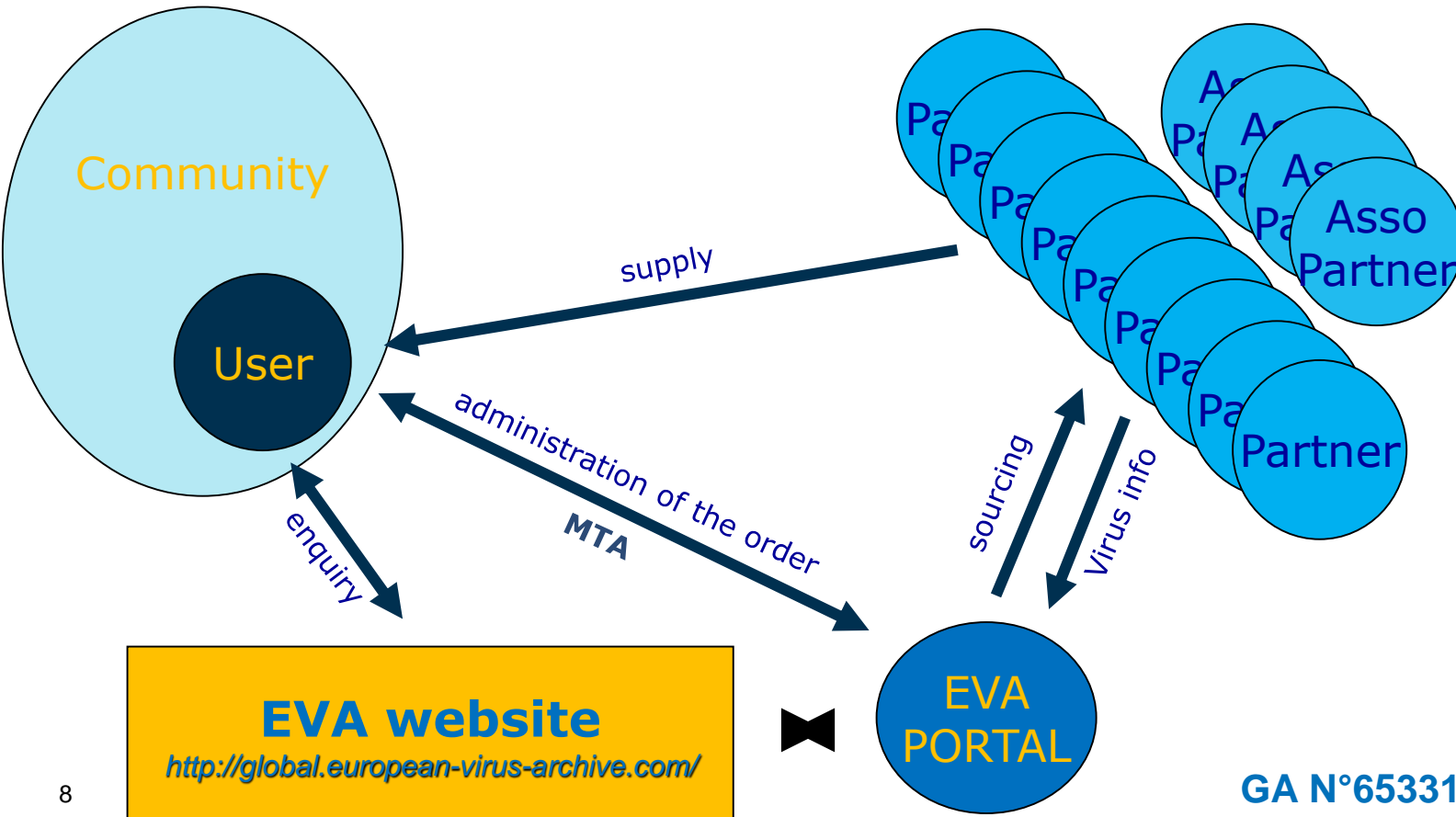
- ▶ A centralized website (> 200 visits per day in « peace time »)
- ▶ A web-based catalogue including more than 2 000 products
- ▶ Distribution of > 500 products each year.

<http://global.european-virus-archive.com>

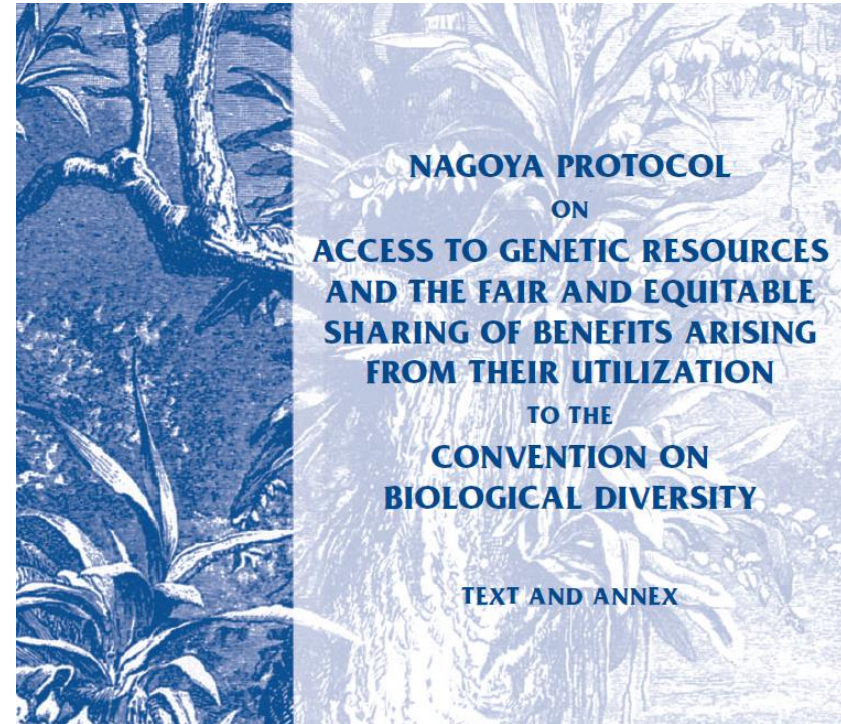


EVAg is a non profit organisation that mobilises a global network with expertise in virology to **track** viruses and derived products.

- ▶ Material can be provided provided for free (EU compensation)
 - In EU
 - Beyond EU
 - Upon project evaluation by external expert



- Supplement to the UN Convention on Biological Diversity to provide mechanisms on **how to comply with Access and Benefit Sharing (ABS)**
- Entered into force on 12 October 2014
- Implemented in the EU via Regulation 511/2014
- Scope:
 - Plants, animals, fungi, bacteria, viruses, proteins, metabolites, DNA/RNA (non-human)
 - Commercial **and non-commercial**

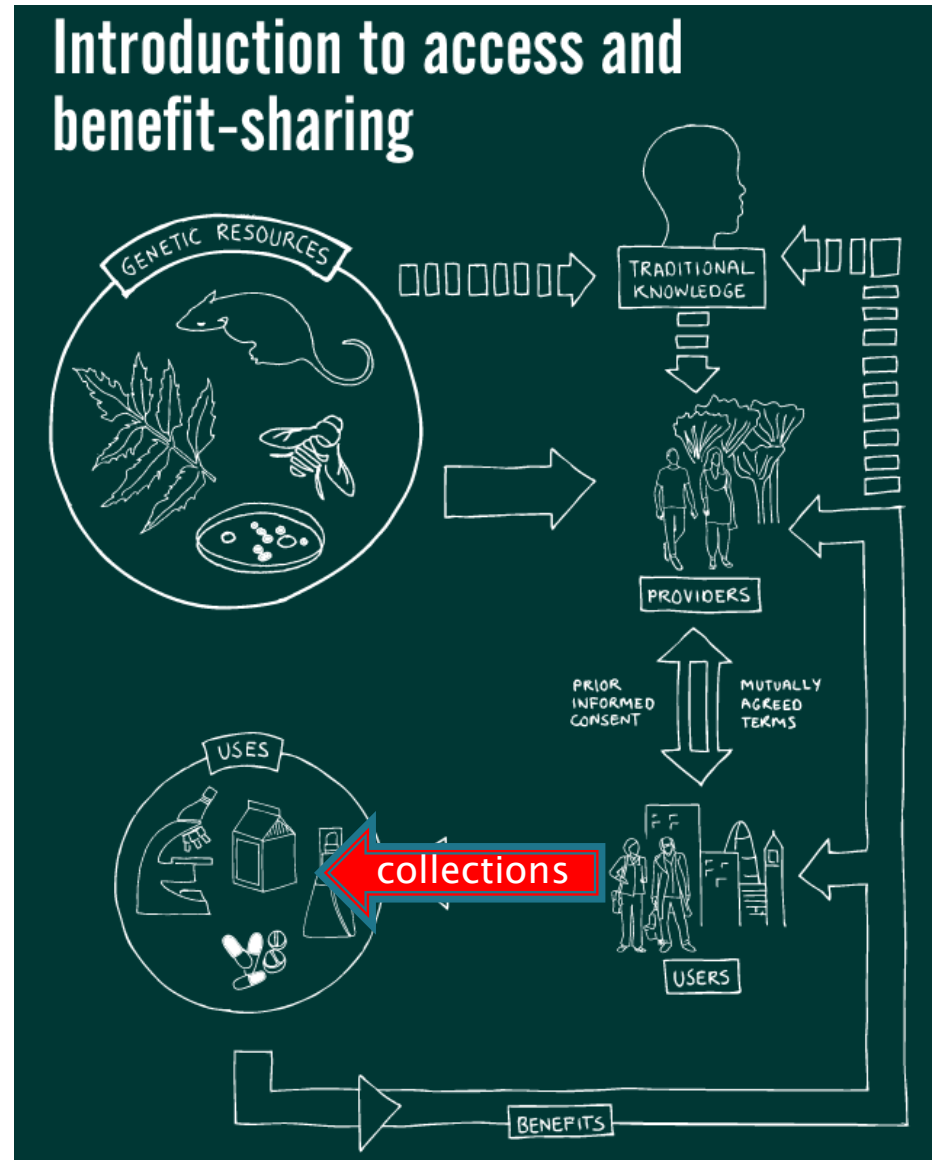


▶ Access:

- Each country can decide IF and HOW they regulate their resources

▶ Compliance:

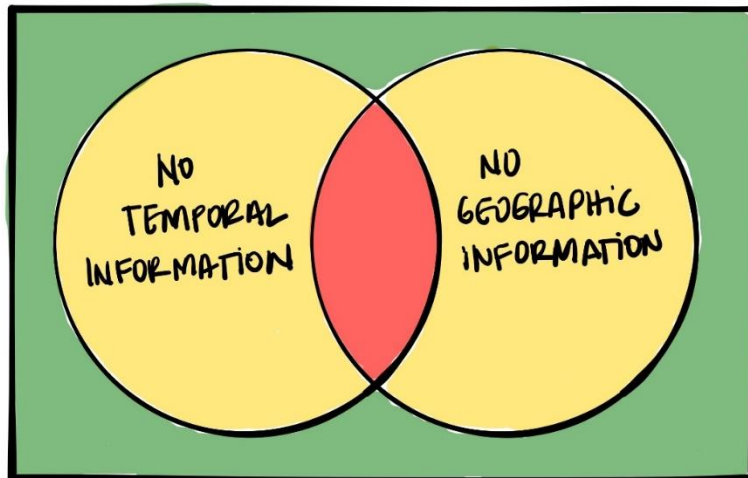
- ALL EU MS must check user compliance EU Reg. 511/2014
- Researchers must file a due diligence report in EU DECLARE system if receiving public funding
- > Bipartite agreement between lab/countries



2020 :

20 institutes with Nagoya non-compliant material

- 1,605 "risk" items in catalogue



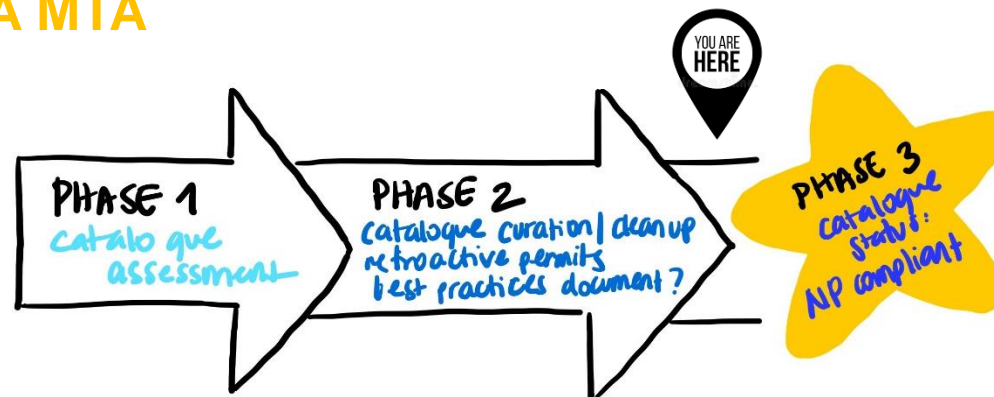
37%.
1062 items
↳ 961 derivatives
↳ 102 virus

19%.
543 items
↳ 384 no geo info
↳ 159 no temporal

44%.
1268 items*
↳ 352
> 12.10.2014
~ 50:50
NP : non NP

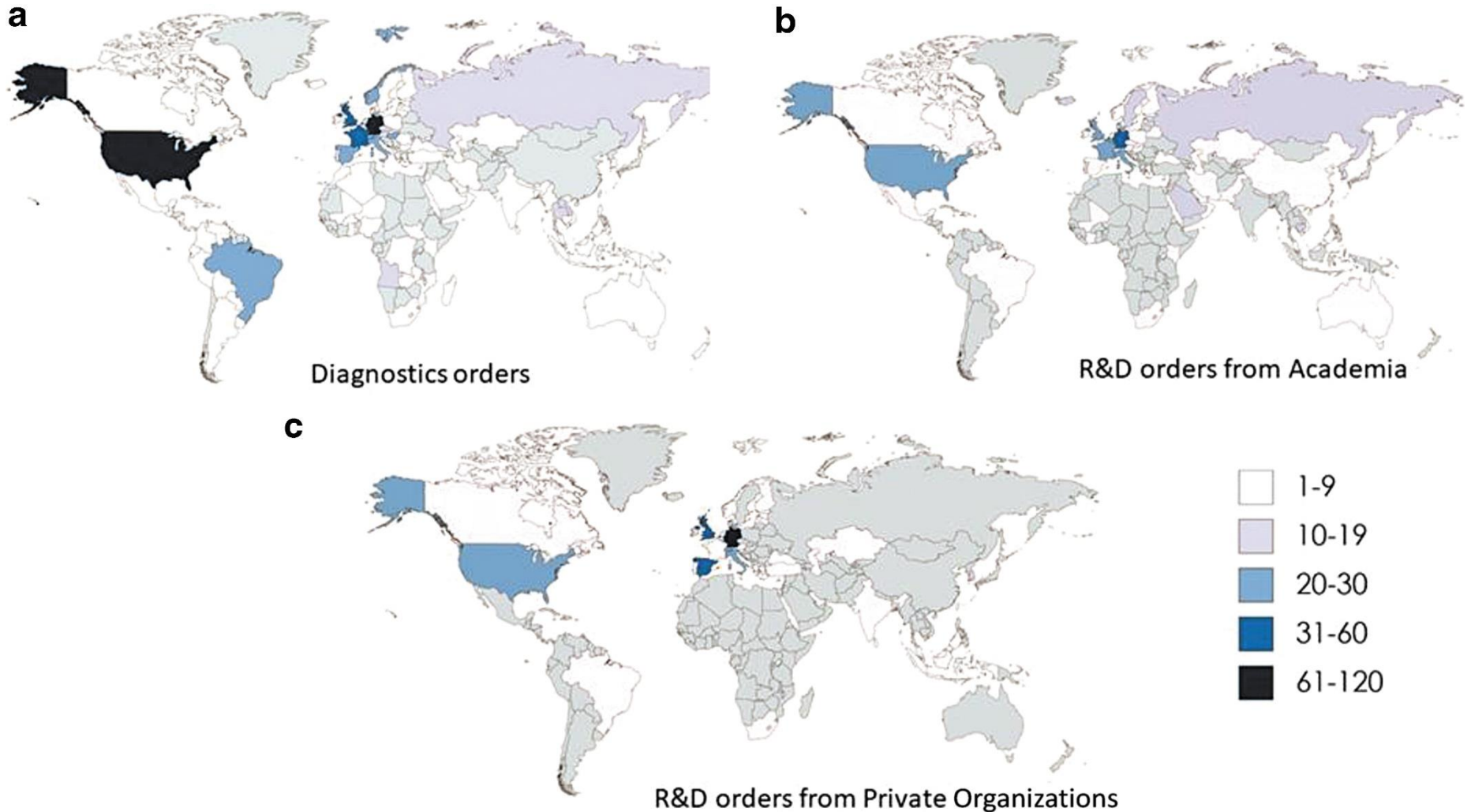
Promoting cooperation : Nagoya protocol.

1. Improving the catalogue information:
 - 2874 items have been curated!
 - 1606 had missing information (non and semi compliant)
 - 22 institutes completed catalogue curation; 4 still in progress
2. Improving the catalogue database infrastructure:
 - Country of collection (geographical) and date of collection (temporal) now MANDATORY FIELDS
3. Two "Nagoya for Beginners" workshops hosted and recorded (EVA internal website and Youtube)
4. NEW:
 - ABS awareness and information banner on main EVA website
 - **revised EVA MTA**



1. EVA-G played a critical role in the global response to the COVID-19 pandemic by:
 - distributing EU subsidized (free of charge) viral resources to users worldwide,
 - providing non-monetary benefit sharing, implementing ABS compliance, and raising ABS awareness amongst members and users.
 - Did not discriminate on the geographical origin for the distribution of free-of-charge material
2. EVA-G Bilateral briefings (Guatemala, Colombia, Chile, Brazil, Kenya)

Distribution of SARS-CoV-2 material in 2020



The Importance of Biobanking for Response to Pandemics Caused by Emerging Viruses: The European Virus Archive As an Observatory of the Global Response to the Zika Virus and COVID-19 Crisis

Coutard et al., 2020

-Accompanying collaborators through formation actions :

After identification of the needs, 7 modules have been proposed

Module #1: Standard methods of cell culture – Initiation level (34h)

Module #2: Standard methods of cell culture – Advanced level (34h)

Module #3: Working in a BSL3 environment (20h)

Module #4: Production, conservation and titration of clinical isolates (30h)

Module #5: Cell-culture isolation of respiratory viruses (36h)

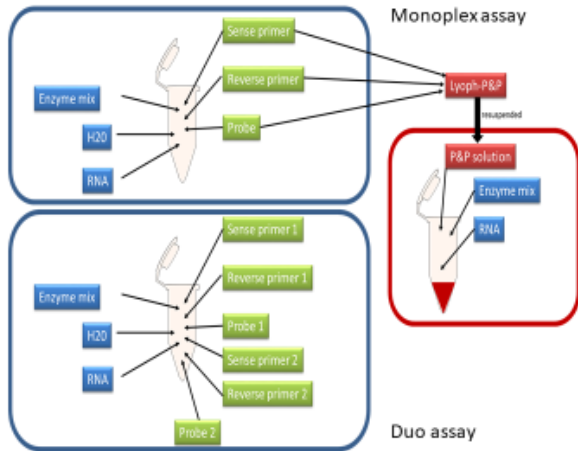
Module #6: Cell-culture isolation of arboviruses (36h)

Module #7: Cell-culture isolation of herpes viruses, enteroviruses and adenoviruses (52 h)

Users should demonstrate they have the facilities to reproduce the work on site

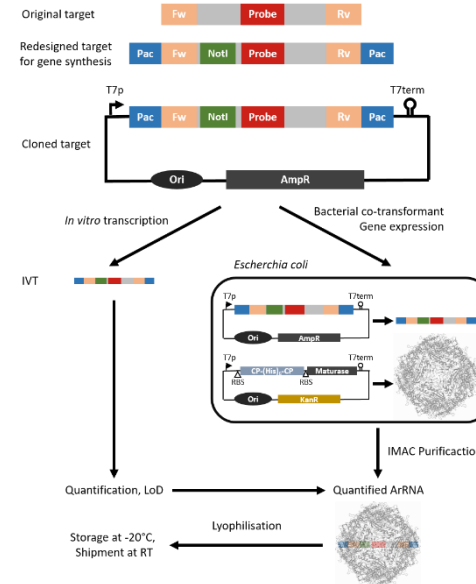
12 collaborators from Southern countries accessed to the training program with 1 to 3 modules.

Molecular diagnostics : Primer&Probes



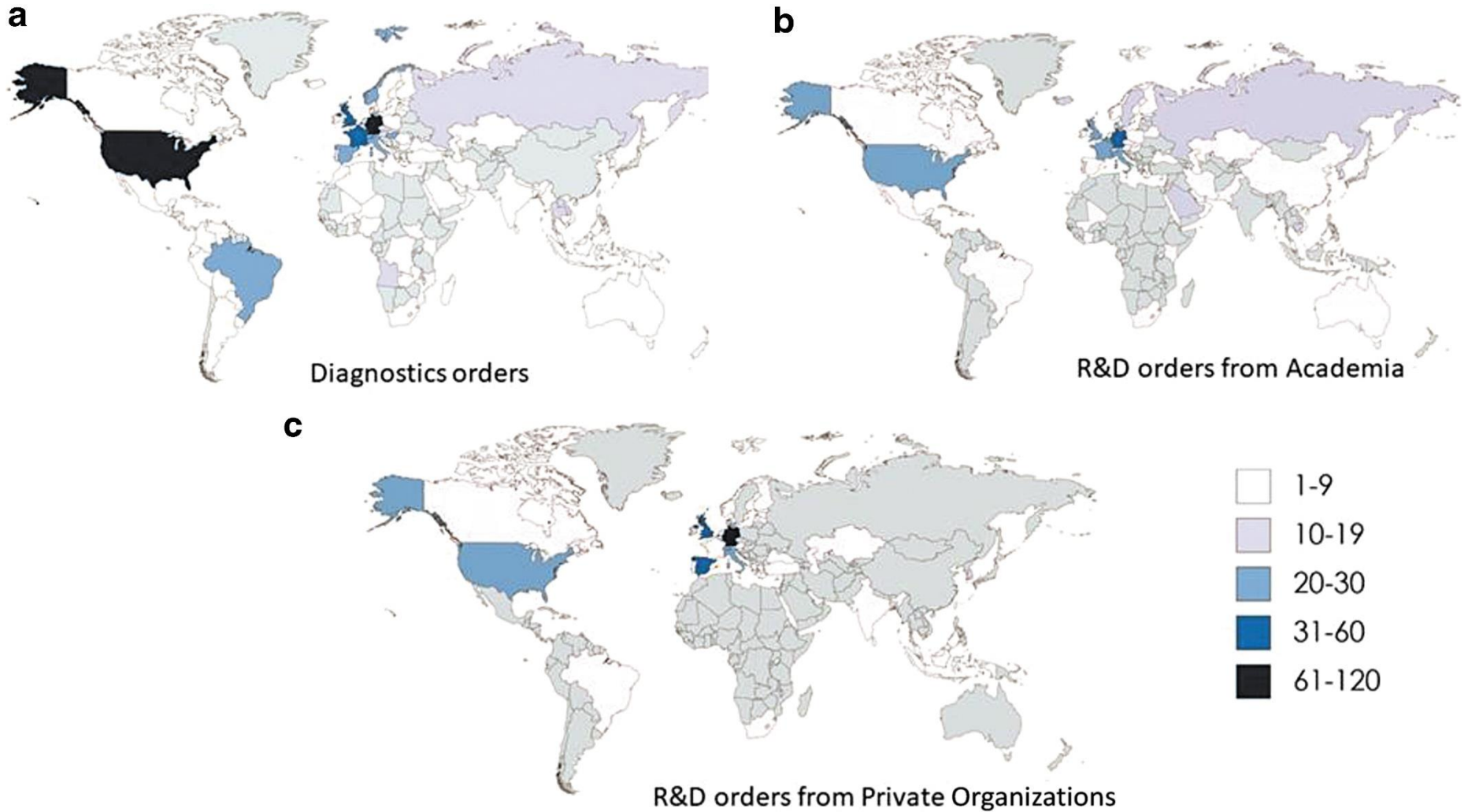
The less steps, the less mistakes : lyophilised ready to use

Thirion et al., 2019



- Producing pre-mixed, lyophilised Primers and probes (P&P) :
- Developing lyophilized ArRNA (Armored RNA) : non infectious positive RNA controls.
- Worldwide distribution at RT of material for molecular testing
 - Diagnostics (originally RUO)
 - Virus Discovery
- More than 200 000 tests sent mainly in African countries during the SARS CoV-2 Crisis

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- ▶ EVA-G is a collection of viruses
- ▶ Activities are not only scientific and technical activities
- ▶ International cooperation for collection activities requires :
 - bilateral agreements
 - Compliance with NP and Access and Benefit Sharing
 - A strong logistical chain