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T E R A M O

WOAH Reference Laboratory
for Contagious Bovine
Pleuropneumonia

Reference Centre



World Organisation
for Animal Health
Founded as OIE

WOAH Reference Laboratory for CBPP, Teramo, Italy: Opportunities beyond duties

ERFAN Working group for CBPP
CVRI, Lusaka, 26–28 July 2022

Flavio Sacchini & Massimo Scacchia

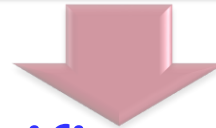
WOAH Twinning Projects

Strengthening the WOAH network

Reference Centres

Laboratory Twinning

Specific laboratory
support projects



Support veterinary scientific communities in developing countries
by facilitating their involvement
and their ability to create networks



Disease control
worldwide



Continuously update the
international standards
of the EAHO and the
Codex Alimentarius

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WOAH Twinning Projects on CBPP carried out by IZS Teramo

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- CENSA Cuba : 2008– 2011
 - NVL Botswana: 2008–2010
 - PVC I Turkey: 2015–2017
 - AHI Ethiopia: 2019– ongoing

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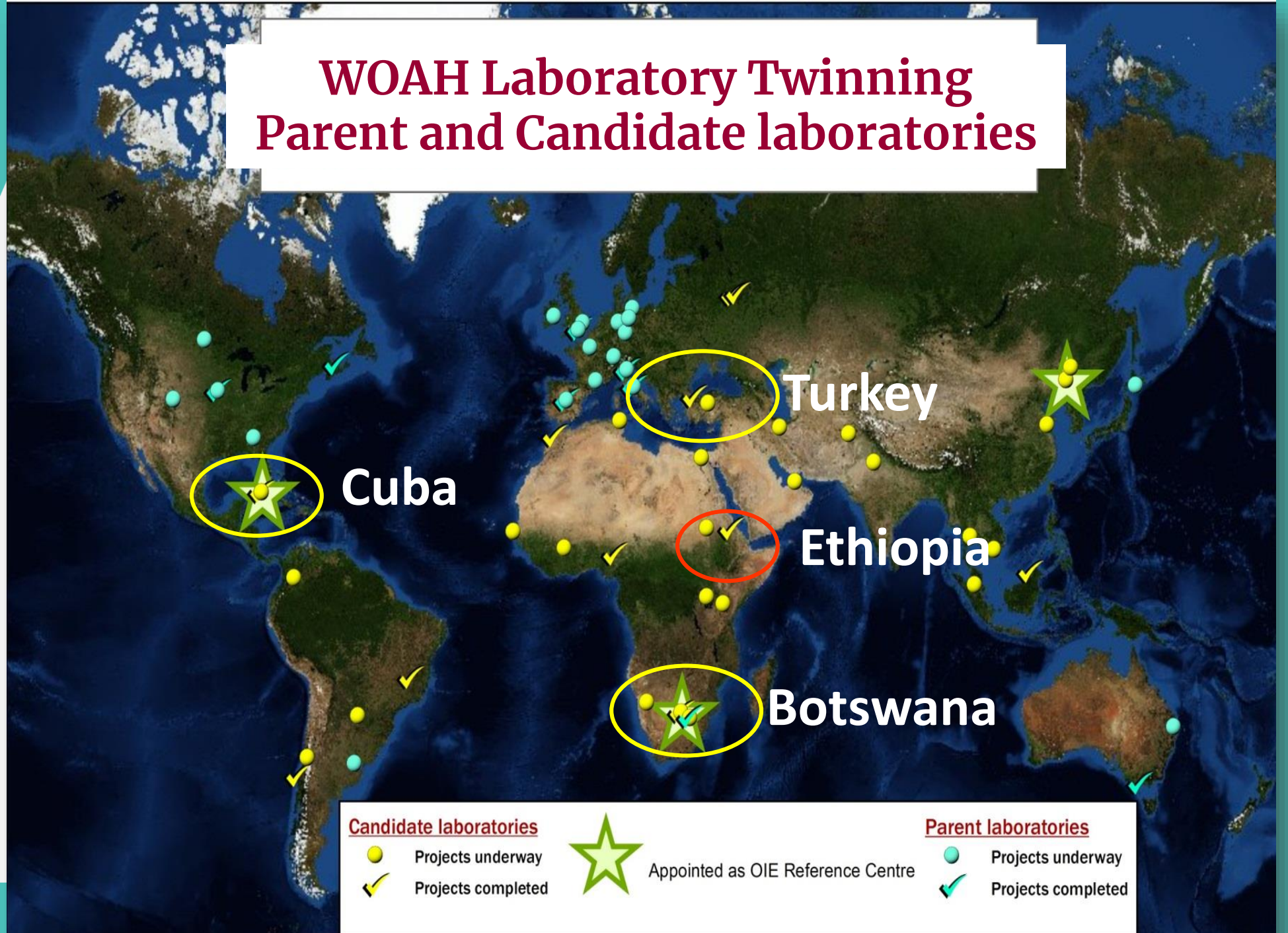
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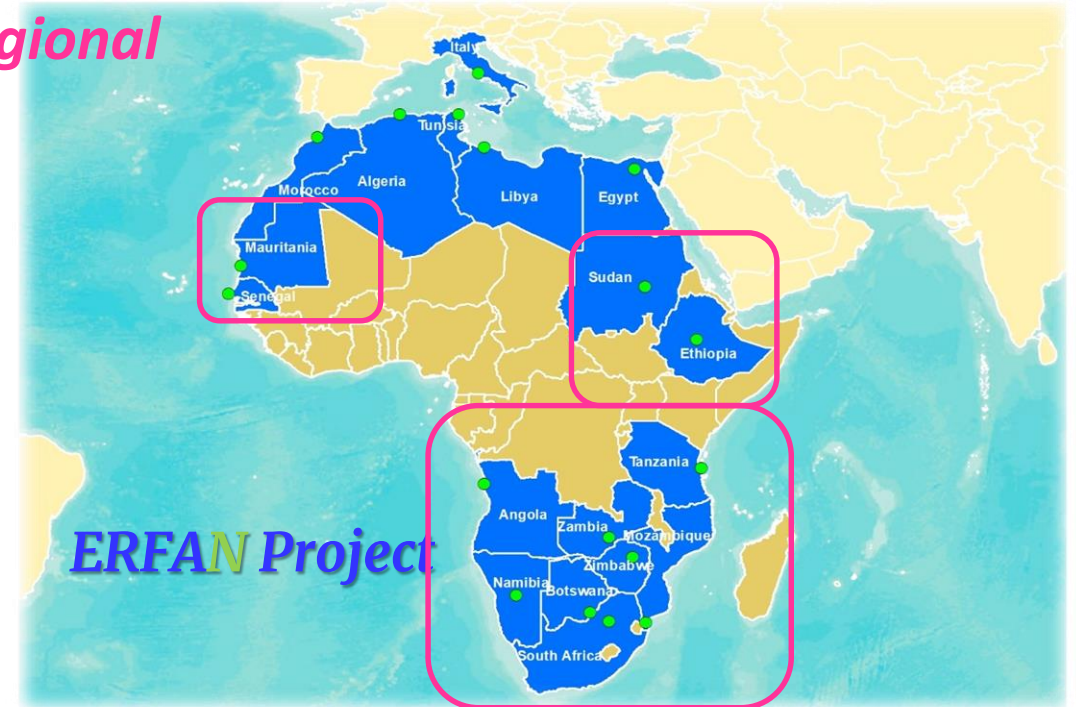
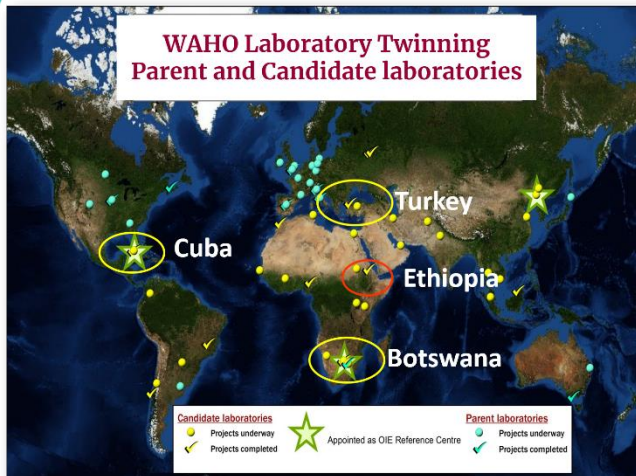
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WOAH Laboratory Twinning Parent and Candidate laboratories



Role of WHAO Ref Lab in networking and guidance

*Moving from WOAH Ref Lab restricted approach to a **widespread Lab, regional cooperation and guidance***



The network include experts member of the WOAH CBPP *ad hoc* group for the recognition of CBPP status of member countries

Time to think WOAH satellite supportive Labs ?

Veterinary Laboratories of CBPP infected countries may play a role to support WOAH Ref Labs in:

- Provision of reference and diagnostic material (sera/antigens)
- Training (field experience on disease recognition and management)
- Research (sample collection and animal trials)
- Sharing experiences on disease control challenges

CBPP

- Pathogenesis
- Pathogen characterization
- Effective control measures (networking and exchange of experiences)

Diagnosis

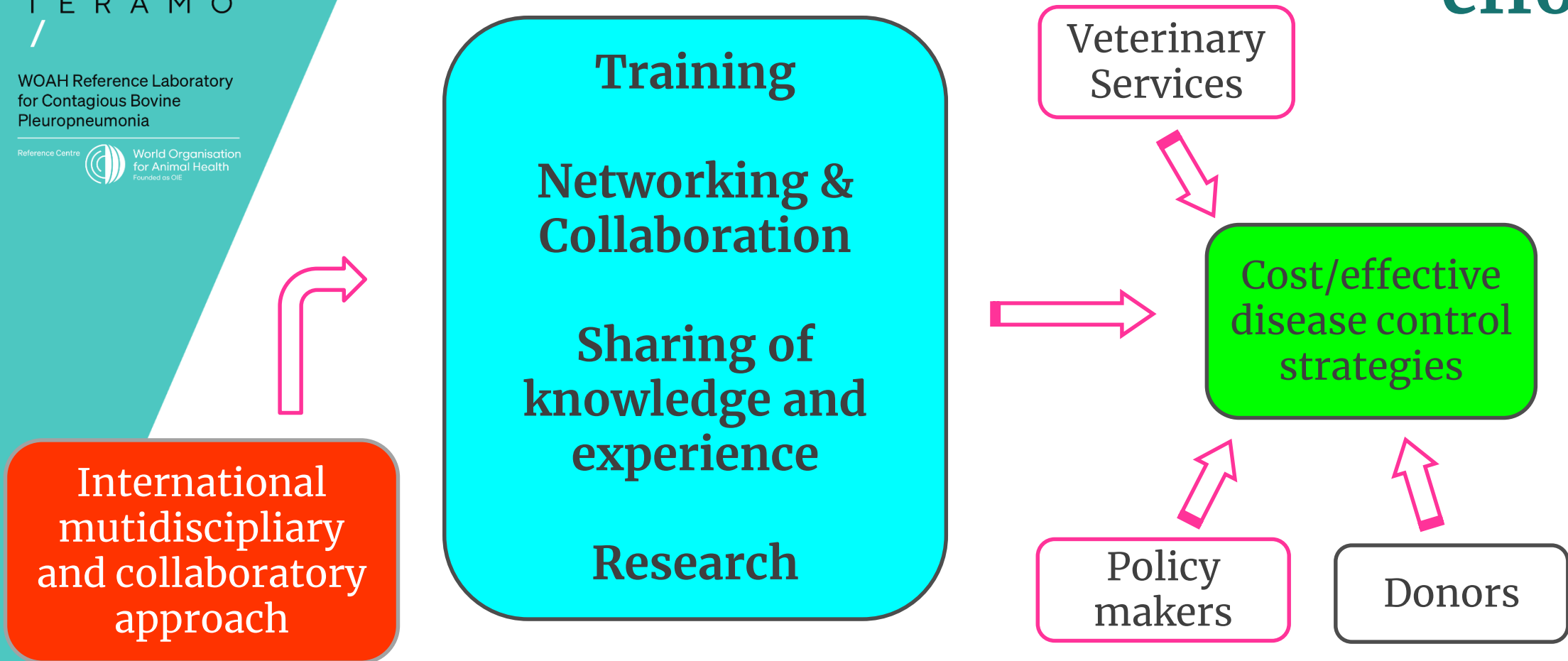
Vaccine improvement

AMR

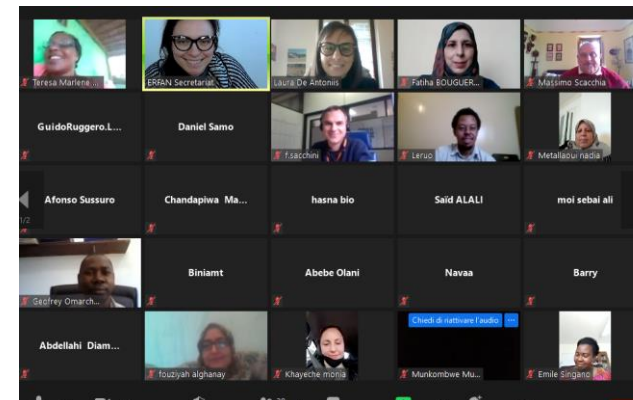
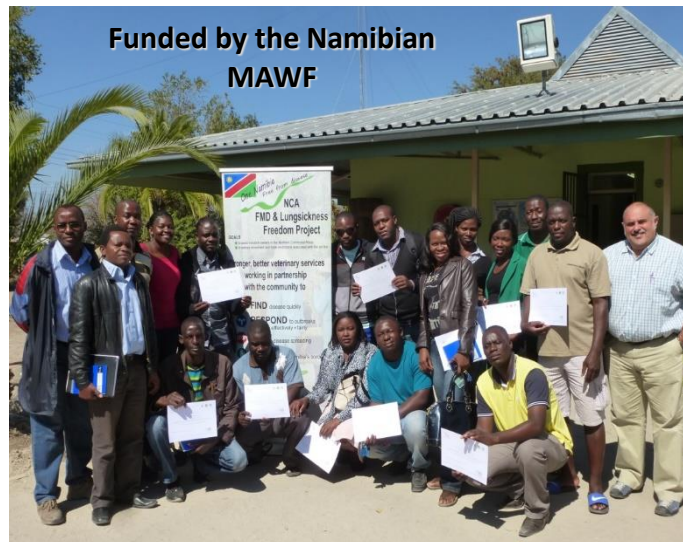
Epidemiology (molecular) and disease distribution

CBPP: common challenge joint efforts

CBPP: common challenge joint efforts



Training : in-person and online



ERFAN CBPP
training
56 participants
14 Countries

Importance of Training

Training
activities on
CBPP

To strengthen field and
abattoir CBPP
surveillance and control
of Countries

Mandatory for WOAH to
recognise CBPP free
Countries or to endorse
CBPP control programs

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One of the largest
collections of photos
of macroscopic lesions
of the disease,
including differential
diagnosis, to be used
for educational
purposes

Training



Training

Italian Veterinary Services
three online events
over 400 participating vets

- Clinical signs (video)
- Sample collection
- Pathological lesions
- Differential diagnosis

Training required by the WOAH for
recognition of Italy as CBPP free country

Next CBPP Training

In the future
Angolan Veterinary Services
Training on Clinical, Pathology
and sampling collection for
SADC Region Veterinary
Services and National
Veterinary Laboratories

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Networking



*SADC Region CBPP Working Group
organised by BNVL and IZSAM*

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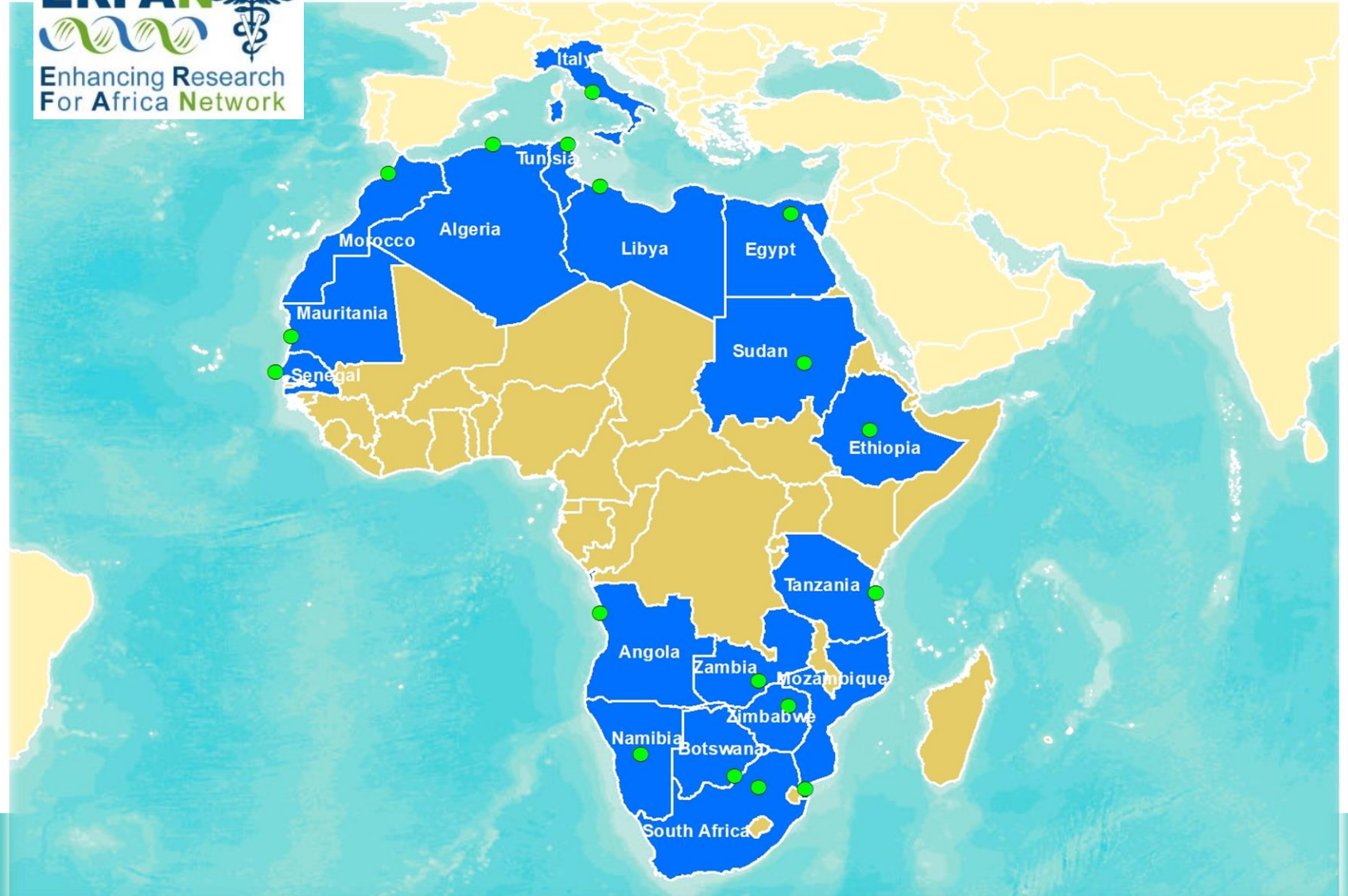


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**Network of
34
Veterinary
Institutions
28 Africans
6 Italians**

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ERFAN Project



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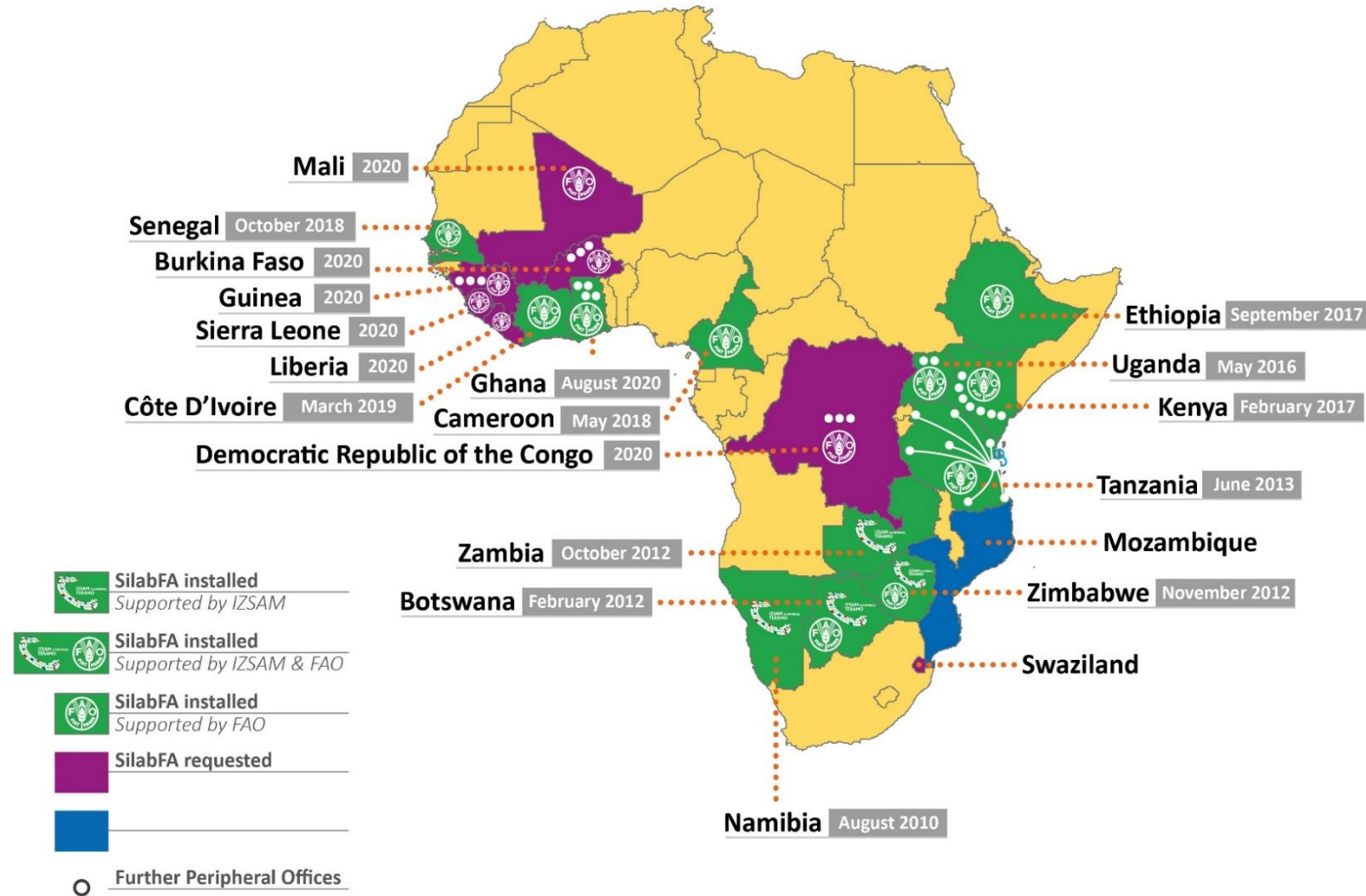
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SILABFA
is operating
currently
in 13 African
countries and
40 African
laboratories

SILAB for Africa



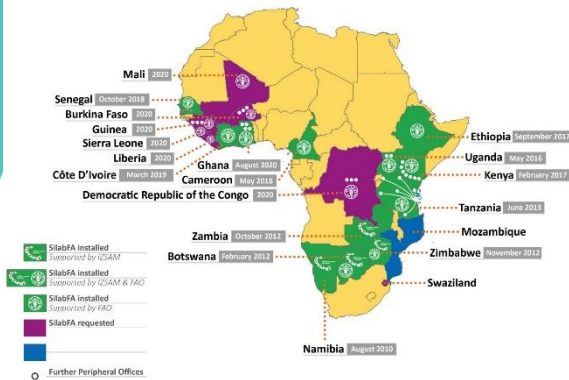
SILAB for Africa

SILAB Laboratory
information
system

Objective evidence (recording) of
diagnostic activities carried out
(WOAH)

Simplified data analysis for
disease reporting (supportive for
decision making of Veterinary
Services)

Integration with G.I.S.
information allows mapping of
disease distribution favouring
cost/effective control strategies



Research

Collaboration with CVL- Namibia

Animal trials

Vaccine efficacy
studies



CBPP diagnostic
test and reagents

Development of
in vitro infection
models



Research

Collaboration with BNVL - Botswana

CBPP trials for
pathogenic
studies

Research

Collaboration with ILRI-Kenya



Improvement of CBPP diagnostic capacity



Research

Collaboration with CNERV - Mauritania

CBPP vaccine trial
efficacy



Research

Collaboration with CVRI-Zambia and GALVmed



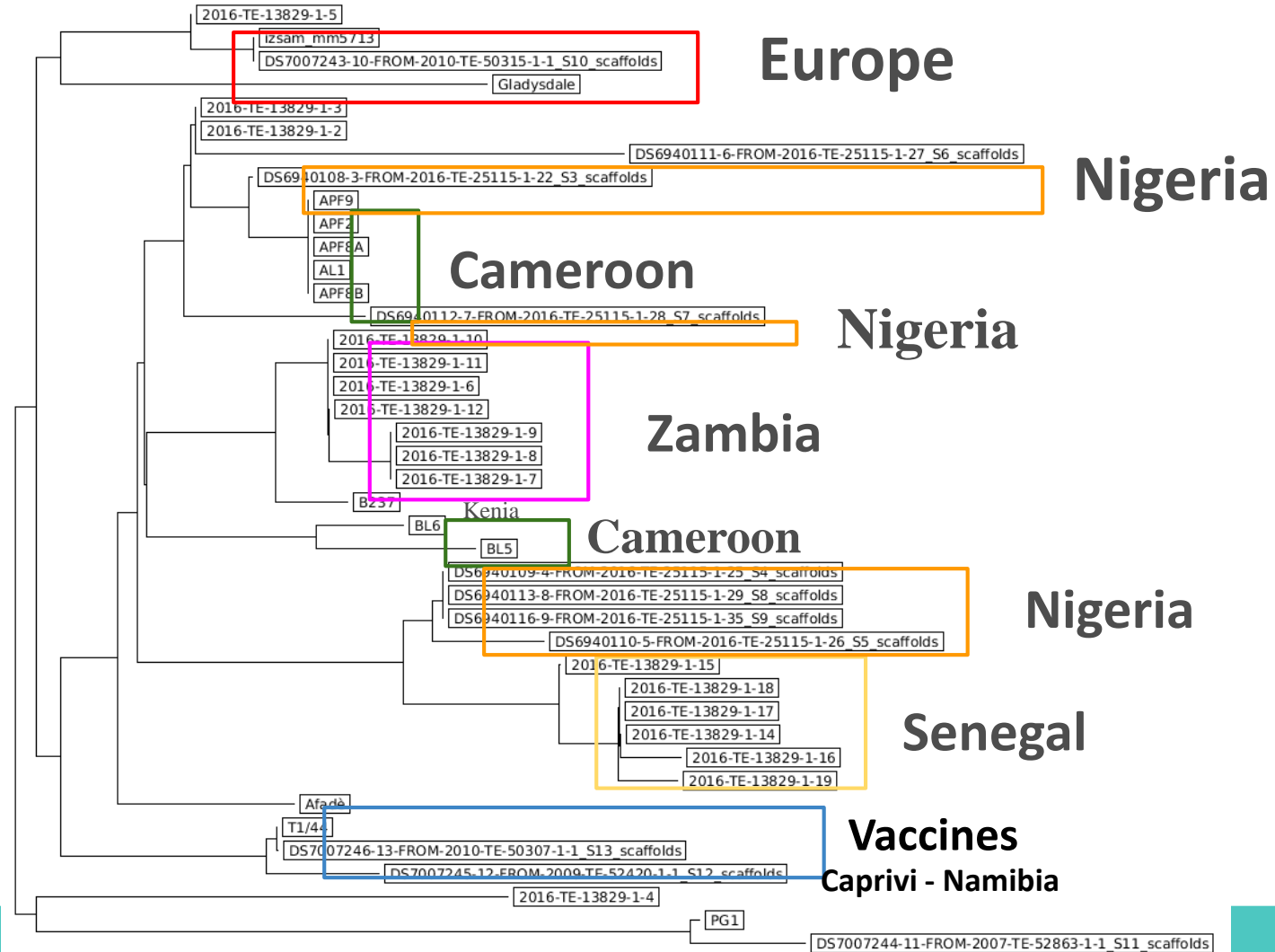
Research Line

Sequencing and *Mmm* characterization

Aim

**Bio-molecular epidemiology; study
the phylogenetics of *Mmm* and
correlations with livestock
movements in Africa**

Mycoplasma mycoides mycoides tree



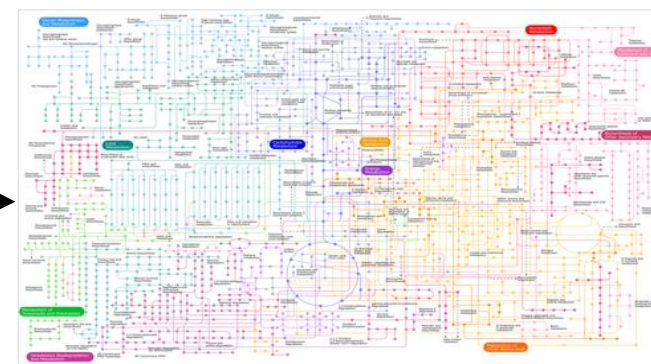
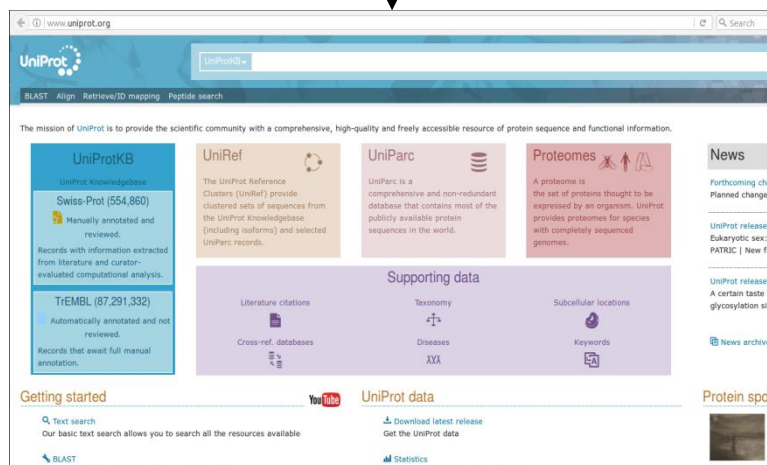
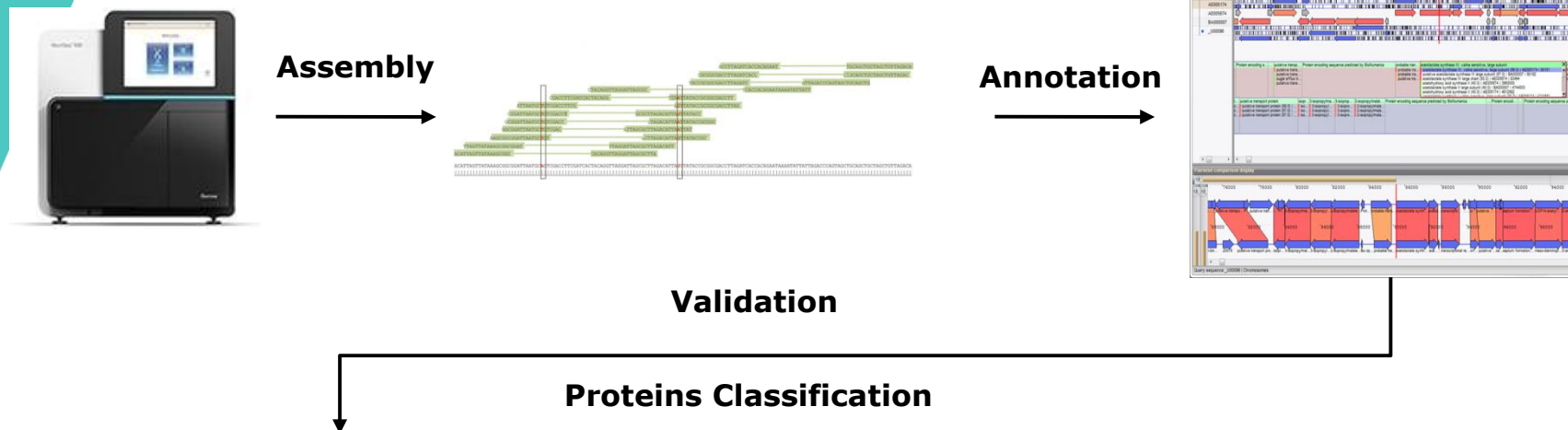
Research Line

Mycoplasma genome analysis

Aim

Membrane proteins that are predicted to be partially or totally located in the outer side of the membrane are deeply characterized by a bioinformatics point of view to identify potential diagnostic/vaccine markers or molecules involved in disease pathogenesis

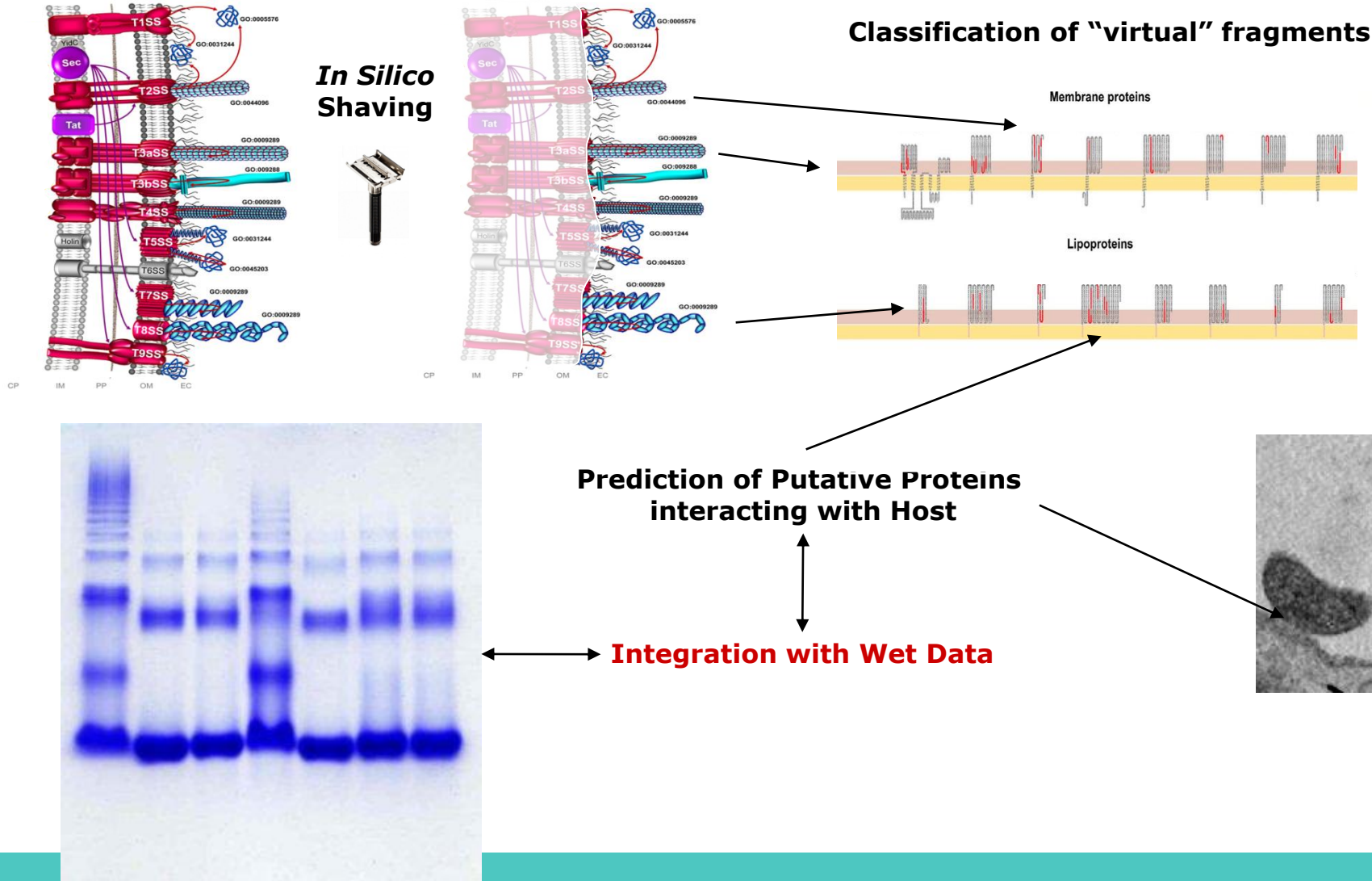
Mycoplasma Proteome Annotation



KEGG PATHWAY Database

Wiring diagrams of molecular interactions, reaction

Surfaceome characterization



Research Line

AMR in *Mmm* strains

In collaboration with TVLA and BNVL

Aim

To study AMR in *Mmm* strains isolated in Tanzania and others African countries

The power of the network

- Widespread Lab (e.g. CFT antigen capability)
- Not necessary have duplicated Labs, equipments and costs but focused competences, peculiarities and technology capacities in single labs shared and made available among the network.
- Use the network to reach common goals

Support in project design, fund raising and grant application

- Research projects and (money) keep the network active and strengthen collaborations
- IZSAM ERFAN team has yearly experience in grant application and fund raising
- CBPP research projects presented by African partners have higher chance to get funded by international donors
- Bring your proposal and we will guide you

Thank you for your attention and....

.....when there is lots of pushing back and
forward, doesn't matter where, just push!!!!