PASTEUR NETWORK

The role of the COS-PN

- FAILLOUX Anna-Bella

November 29 2022

The missions of the COS-PN

- The **COS-Pasteur Network** is the scientific steering committee of the Pasteur Network.

It does not replace the scientific council of each institute of the PN.

The COS-PN missions are to:

- Conduct a prospective reflection at global and regional levels based on recommendations of the scientific councils of IP;
- Develop proposals for better visibility of the PN and stronger networking between PN members and the international scientific community;
- Participate in programming scientific meetings of PN.

A meeting every 3 months

Four priority axes

Axis 1: Implementing a "One Health" approach to explore endemic or emerging zoonoses
Rabies, AMR initiatives, VBD

Axis 2: Investigating VBD to improve methods of vector control
malaria, arboviruses, ticks, others (sandflies, fleas..)

Axis 3: Studying the mother-child health issues and other health challenges in the younger child
vaccination strategies, genetic factors, microbiota…

Axis 4: Exploring the impact of aging/longevity on health
cancer, genetic diseases, neurodegenerative diseases

COS-PN members

Daniel Agyei BOAKYE
- Parasitology
- Noguchi Memorial Institute for Medical Research (NMIMR)

Hein Min TUN
- Microbiota, AMR
- University of Hong Kong

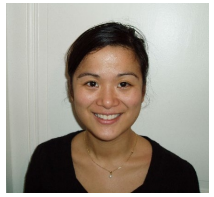
Benoit DEPREZ
- Drug discovery
- IP Lille

Dominique ROUSSET (Rapporteure)
- Virology
- IP French Guyana

Anna-Bella FAILLOUX (Chairwomen)
- Medical entomology
- IP Paris

Peter William HORBY
- Infectious diseases and global health
- Oxford University

Mohamed-Ridha BARBOUCHE
- Immunology
- IP Tunis



Bich-Tram HUYNH
- Medical epidemiology
- IP Paris

Patricia BELTRAO-BRAGA
- Neurobiology
- Scientific Platform Pasteur-USP (SPPU), University of São Paulo

Lawrence AYONG
- Malaria
- Centre Pasteur du Cameroun

New COS-PN with 12 members

Soa Fy ANDRIAMANDIMBY
- Virology
- IP Madagascar

Lawrence AYONG
- Malaria
- Centre Pasteur du Cameroun

Mohamed-Ridha BARBOUCHE
- Immunology
- Immunology and Infectious Disease Arabian Gulf University Manama, Bahrain

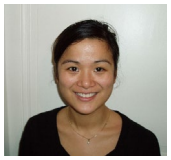
Patricia BELTRAO-BRAGA
- Neurobiology
- Scientific Platform Pasteur-USP (SPPU), University of São Paulo

Claude FLAMAND
- Epidemiology
- IP Cambodia

Moise DIAGNE MOUSSA
- Epidemiology
- IP Dakar

Anna-Bella FAILLOUX (Chairwomen)
- Medical entomology
- IP Paris

Hein Min TUN
- Microbiota, AMR
- University of Hong Kong



Bich-Tram HUYNH
- Medical epidemiology
- IP Paris

Anne LAVERGNE
- Wild life
- IP French Guyana

Rebecca MATSAS
- Neurobiology
- Hellenic Pasteur Institute

Hugues ASCHARD
- Human genetics
- IP Paris

Management team: Koussay DELLAGI, Fatma HAIDARA

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COS-PN activities

- Involves in selection of 72 Covid projects with 33 funded for the PN
- Selection of PIU

- **WG** Child Health (B.T. Huynh) → completion
- **WG** AMR Microbiota (Hein-Min Tun)

- **WG** Emergence (R. Barbouche)
- **WG** VBD (A.B. Failloux) → completion

4 meetings a year

Duration: 1h30 - 2h

Format: updates on WG, scientific presentation, brain-storming

Feb 15	May 17	Sept 6	Dec 6
• Talent award 2021 Gregorio Iraola (IP Montevideo)	• Reinforcing Social Science in the Pasteur Network – the Repair Project (C. Mattern and T. Giles-Vernick)	• Talent award 2021 Nathalie Vandevelde (Sciensano)	• Quick feedback on the 54th Directors meeting
	• Technology platforms in the PN (S. Shorte)	• The role of CESRI (A. Phalipon)	• New WG (bats, neurodegenerative diseases)

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WG Vector-borne diseases

(Dec. 2020 – Sept. 2022)

C: Institut Pasteur in Italy – Cenci Bolognetti Foundation

WG Vector-borne diseases

- **Arboviruses vectors**: Mawlouth DIALLO (IPD)
- **Malaria vectors**: Catherine BOURGOUIN (IPP)
- **Ticks**: Youmna M'GHIRBI (IPT)

Mawlouth DIALLO

- head of the unit of medical entomology
- Institut Pasteur de Dakar

Catherine BOURGOUIN

- Head of a team on vectors of malaria
- Institut Pasteur Paris

Youmna M'GHIRBI

- develops for more than 10 years a research on ticks
- Institut Pasteur de Tunis

The same workflow:

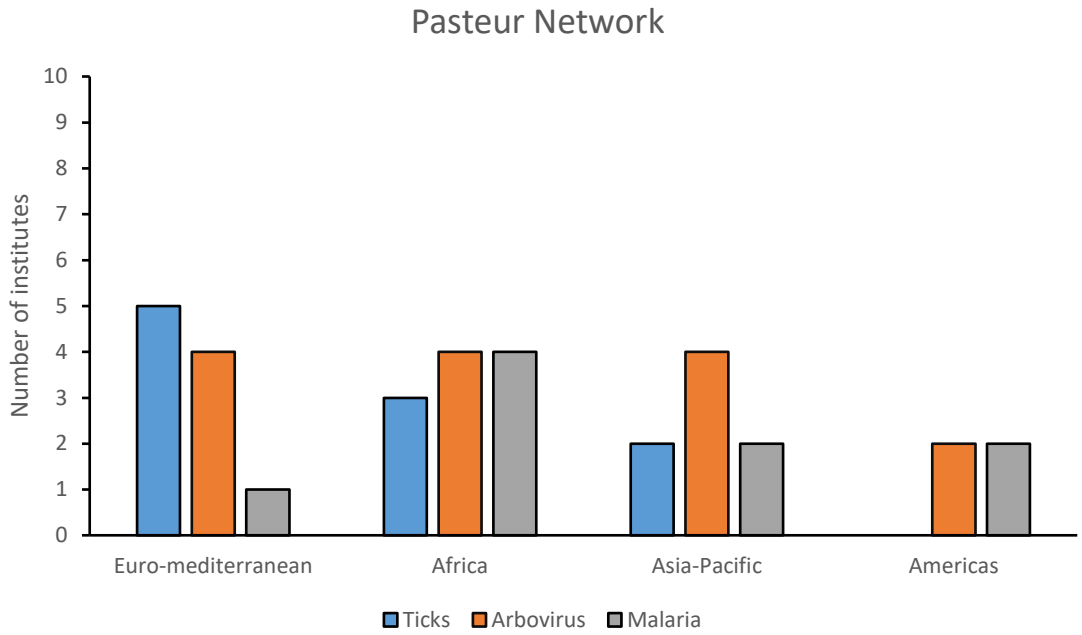
- Inventory of groups
- Send a questionnaire and analysis
- Organization of a workshop
- Set up brainstorming sessions
- Final report

WG Vector-borne diseases

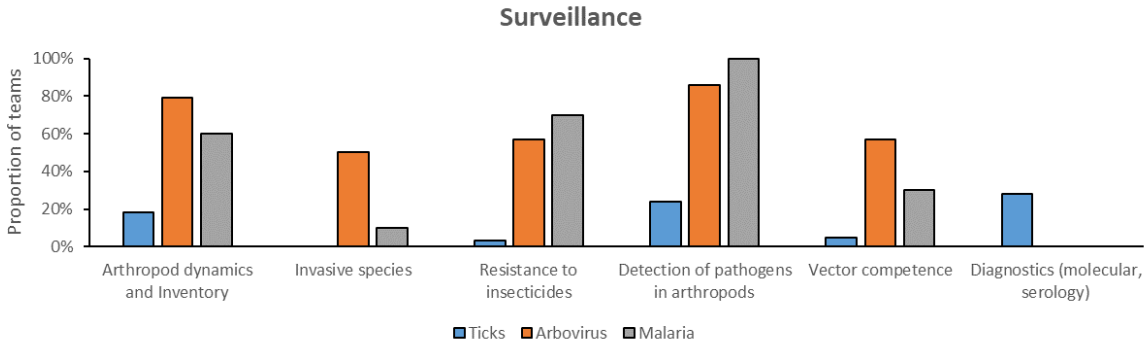
Ticks (10)

Mosquitoes and arboviruses (14)

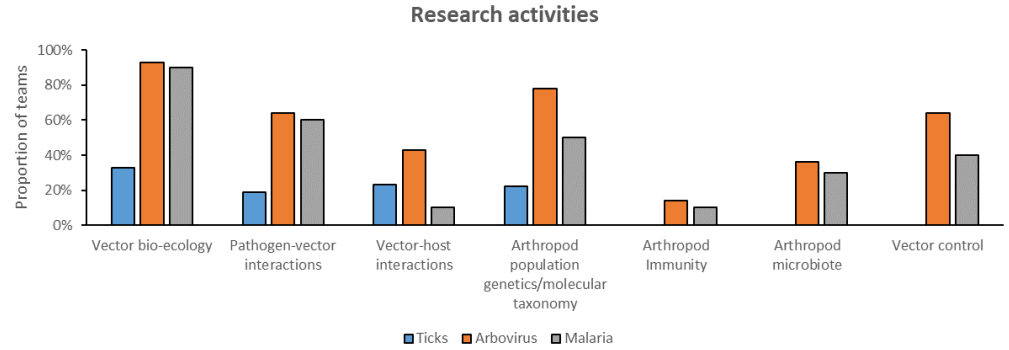
Mosquitoes and malaria (9)



Surveillance & Research

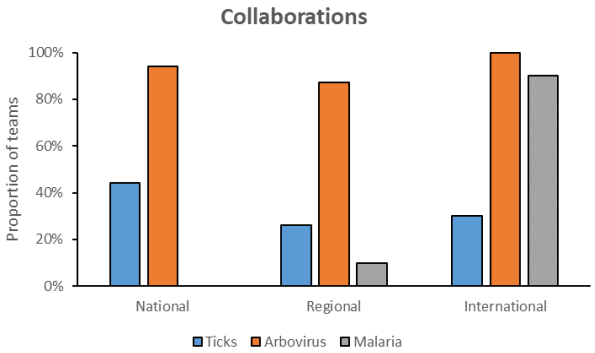


- Tick teams are less implicated in surveillance, partly related to the low number of scientists involved

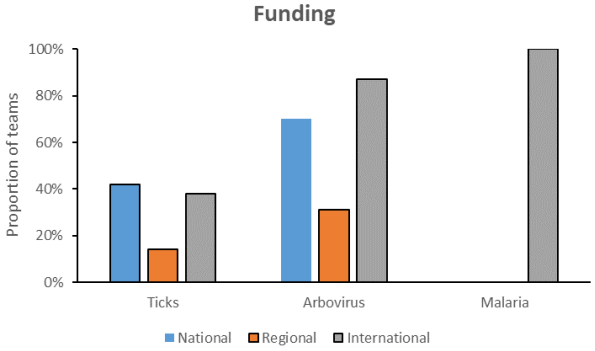


- Tick teams are less advanced, developing mainly vector bio-ecology studies

Collaborations & Funding



- Arbovirus teams develop collaborations at all levels.
- For ticks, collaborations remain small



- Funding is quite small for the tick teams

The WG on VBD suggests:

- Develop a multi-sites PhD program;
- Engage targeted recruitments (post-doc, scientists, G4);
- Propose on-line courses, thematic discussions, workshops;
- Organize trainings to harmonize protocols, data management and analyses;

- Launch targeted calls (ACIP/PTR) to increase regional collaborations (four PN regions);
- Find an international grant calling on the expertise of each institute.

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WG Child Health

(June 2021 – April 2022)

C: Institut Pasteur in Italy – Cenci Bolognetti Foundation

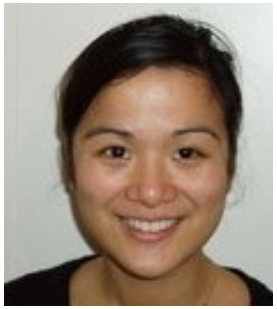
WG Child Health

- Creation of the working group in June 2021

Tania CRUCITTI
Institut Pasteur de Madagascar

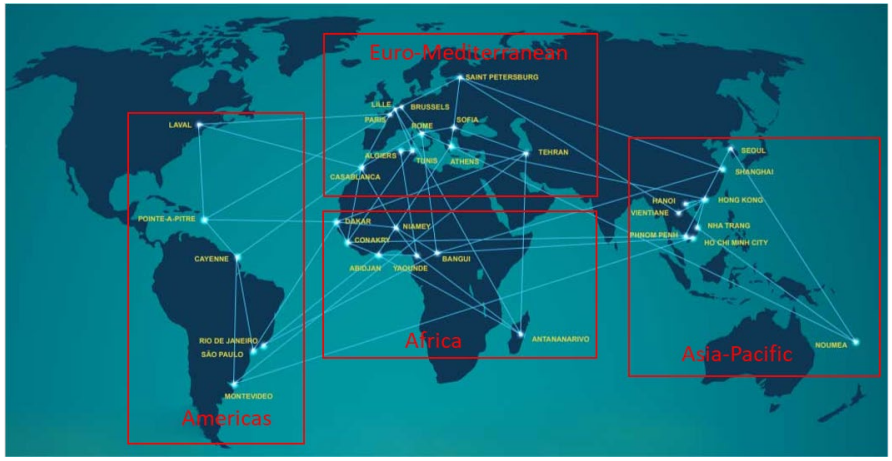
Valérie Carole GBONON
Institut Pasteur de Côte d'Ivoire

Ridha BARBOUCHE
Institut Pasteur de Tunis



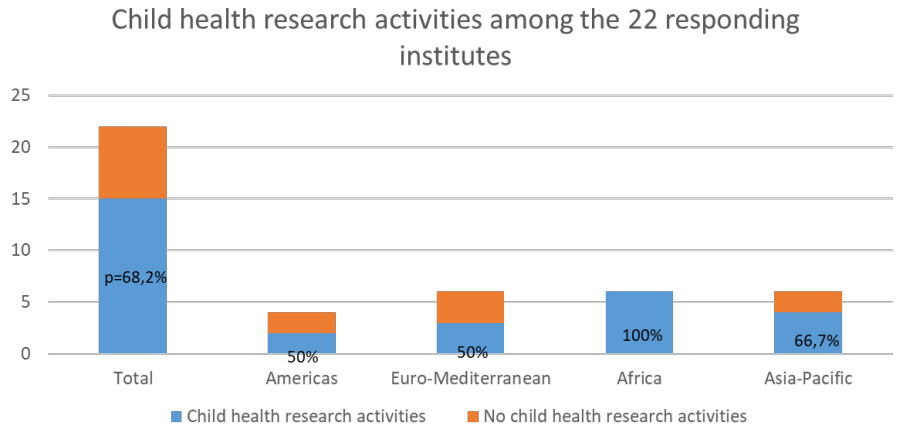
Bich-Tram HUYNH
Institut Pasteur à Paris

15/22 institutes conducted a child health research

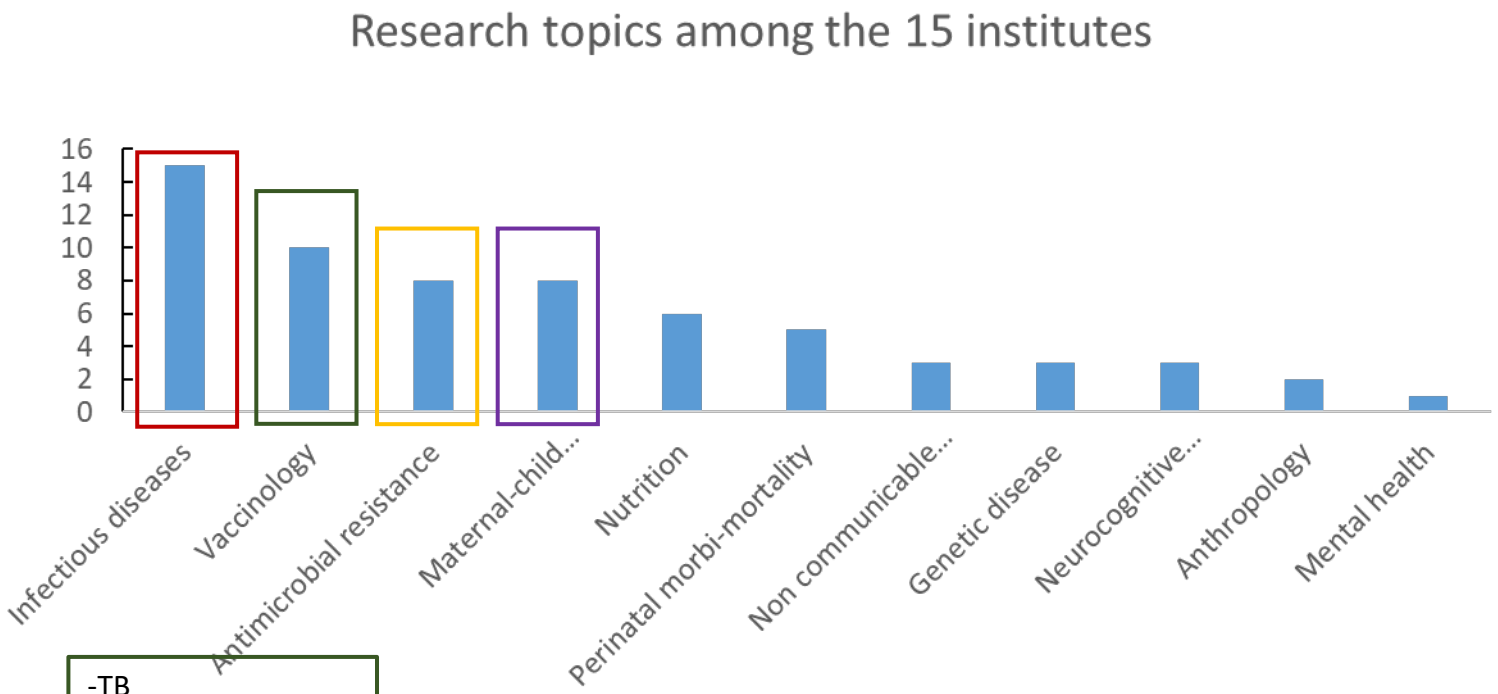


	Number of institutes (N)	Number of responding institutes (n,(%))
Americas	6	4 (66,7%)
Euro-Mediterranean	9	6 (66,7%)
Africa	7	6 (85.8%)
Asia-Pacific	9 (+/-1)	6 (66,7%)
Total	31(+/-1)	22 (71%)

- Questionnaire sent to directors of 32 institutes
- Good response rate : **71%**



Child Health: research activities mainly in relation with infectious diseases



-TB
-Malaria
-Diarrhea
-Pneumoniae
-Meningitis
-Rabies
-Bordetella pertussis
-Measles
-Rubella
-Yellow fever
-Poliovirus
-Chikungunya
-Zika
-Diphteria
-Mumps
- Helicobacter pylori

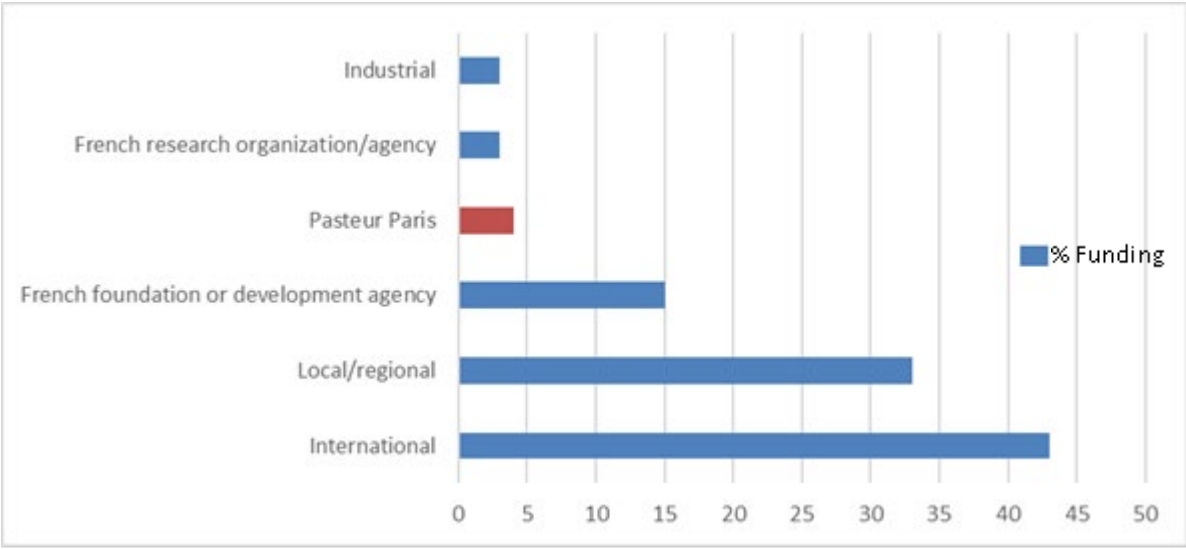
-TB
-Bordetella pertussis
-Malaria
-Covid 19
-Measles
-Rubella
-Mumps
-Rabies
-Vaccine coverage

-Neonatal sepsis
-ESBL transmission
-Early life resistome
-Malaria

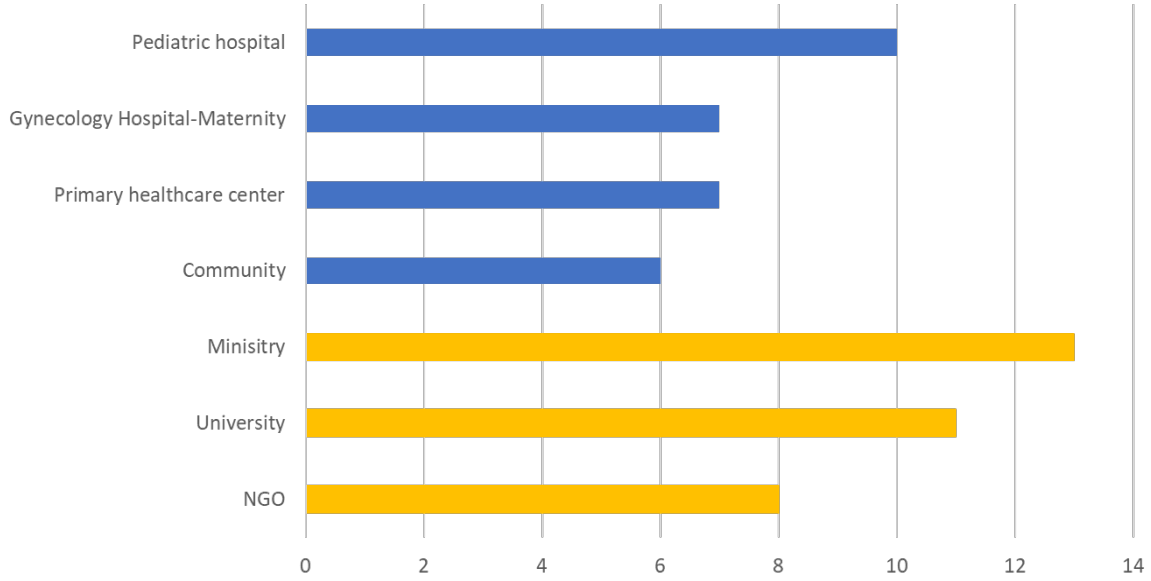
-Hepatitis B
-HIV
-maternal microbiome
-GBS

Funding and Collaborations

- Funding from international research agencies and organizations
- Industrial funds and from IP are limited



- Good partnership with paediatric hospitals
- Good connection with ministry of health and universities



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The WG on Child health suggests to:

- **Open to missing fields:** prematurity/growth retardation, adolescent pregnancy, asthma, obesity/poor nutrition, sickle cell disease, vaccine coverage/seroprevalence, long-term neurocognitive development, diseases reporting surveillance
- **Increase human ressources:** hire more (young) scientists, train staff on good clinical practices
- **Reinforce some expertise:** bioinformatics, biostatistics, clinical research, modeling
- **Encourage collaborations:** exchange between scientists, sharing protocol and study methods, collaborations on common diseases of interest
- **Increase funding:** launch specific calls

COS-PN: a role without means?

The role of the COS-PN is to make suggestions

What is lacking? Instruments to implement the recommendations/suggestions.

- **To increase exchanges:** a multi-site PhD program such as Marie Sklodowska-Curie program
- **To increase human resources:** post-doc, G4
- **To implement scientific foresight:** thematic discussions, workshops
- **To promote capacity building:** on-line courses, trainings to harmonize protocols, data management, bioinformatics, biostatistics, clinical research modeling
- **To increase funding** with specific calls beside open calls

COS-PN: what next?

One of the major aims of the COS-PN is to **develop proposals for better visibility of the PN with stronger networking between PN members.**

- Create links between institutes sharing the same ecosystems and pathosystems: Euro-Mediterranean, Asia-Pacific, Americas, Africa
  - Set up a surveillance of national, regional and international calls
  - Share funding opportunities
  - Regional office collecting funding opportunities?
- Weaknesses? Your expectations? How to do better?

Link between institutes…better visibility…more funding opportunities

Thank you !

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Unis pour la santé mondiale