Vaccines Researches for the Future: The CoReVac initiative

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ITMO Microbiologie et maladies infectieuses
CoReVac an IMMI Consortium for Researches on vaccines

✓ Missions to:

➢ Inter-Connect:

  • Multidisciplinary researchers on vaccines (about 250 teams):
    – AVIESAN Research Institutes (ITMO) and laboratories
    – Public Health bodies & Regulatory agency,
    – Scientific societies
    – Industry
    – International (and EU) research community on Vaccines

➢ Facilitate Vaccine researches and innovation:

  • Organisation of Vaccine research programs and participation to international consortia
  • Company access to academic research potentials

✓ Governance

➢ Steering Committee: B Autran (UPMC), B Combadière (Inserm), O Launay (U Paris-Descartes), R Le Grand (CEA), C Locht (I Pasteur-Lille), C Perronne (U Paris-Ouest), P Verger (U Méditerranée), B Murgue (IMMI), F. Tangy (I Pasteur)
Objectives:

- To boost Vaccine researches
- By networking:
  - Researchers
  - Regulatory bodies
  - Industry
- By creating Virtual Research Platforms
- To integrate European & International programs
Actions and Agenda

✓ « Improving Vaccine Immunogenicity & Acceptability»:

- **COREVAC Workshops:**
  
  **2012/13:**
  
  
  Expert Research Group
  
  => Research programs

  - 2nd: Routes of Immunisation: 30 May 2013 & Follow-up

  **2014:**

  - 3rd: January 2014: → Cohorts

  **Societal aspects** of Vaccine researches
Connexions & virtual Research Platforms:

✓ **NHP Research Platform**: *IDMIT*  
  Status: Connected

✓ **Clinical Research Platform**: *REIVAC*  
  Status: Connected

✓ **Cohort Platform Network**:  
  (Investissements d’Avenir)  
  Status: Connexions in progress

✓ **Vectorology/Formulation Platform Network**  
  (WHO/Transvac Platform.....)  
  Status: Connexions in progress

✓ **Immunology Platform Network**:
  - Serological Assays
  - Hi-Tech CMI: T cell and B cell, Innate
  - Transcriptome
  Status: Connexions in progress

• **International Courses on Vaccines**  
  Status: Connected
In vivo Imagin
BSL2/3

Infectious Diseases Models for Innovative Therapies

PIA: 27 M€
Partners: 12 €M
5045 m² (SU)

• Laboratories BSL2/3

• In vivo Imaging
  • PET-CT
  • MRI 7T (MIRCen)
  • In vivo microscopy
  • Fluorescence

• Animal facilities
  • 519 NHP
  • BSL2/3

• Personnel (103)
  • 83 Permanents
  • 20 External teams
Missions: «Promoting clinical research in vaccinology»
- Improve French attractiveness for the implementation of preventive and therapeutic vaccine trials from pre-clinical to clinical phases (I to IV)
- Link up scientists and physicians, pharmas and academic institutions

Objectives
- Volunteers Recruitment
- Vaccine trials in France and EU
  - innovative concepts from basic vaccinology research
  - newly developed vaccines
- Build a biobank for vaccine researches
Virtual Vaccine Cohort Platform

Connexions with existing Cohorts
(Grand Emprunt and others)
Inserm-Transfert

Groups at risk

Elderly: Constances + 3C: 10,000

Premature (EPIPAGE)

Cancer
Adult (Breast: 20,000: Canto; Bladder: 2000 Coblances)
Pediatric (Hope-Epi: 17,000)
Allo-BMT: (Cryosystem: 3,600)

Immune-suppressed:
HIV: (FHDH: N= 35,000); HCV (Hepather) …
Chronic Kidney disease: CDK Rein
RADICO: Chronic Rare Diseases 200,000 …/…

General cohorts:

Adults: CONSTANCES:
200,000: >18 years

Students: ISHARE:
30,000: 18y/o > 10 years

Children: ELFE:
20,000: 1 ans > 18 years

➢ 2013 Feb. ELFE Call for projects open for vaccine researches
2013: Actions:

- To link CoReVac to International Organisations and Programs:
  - Int. Alliance for Biological Standards (IABS)
  - EU Programs:
    - Member of FP7: EVI (Eur. Vaccine Initiative)
  - VIPER: Eur. Network on Vaccine researches to prepare: Horizon 2020
    - Plans: IMI 2013 Call / vaccines: Correlates of protection / Influenza
  - International: Gates Foundation
Actions and Agenda

Relations with the Industrial Sector

✓ A major COREVAC Goal:

➢ To link Academic Researches to the vaccine Industry:

   Academic Sector:

   • Big Pharmas
     - LEEM
     - IMI
     - IABS
     - .../

   • BioTech Sector

➢ CoReVac is linked to the Inserm-Transfert DVS
Actions and Agenda

✓ Web site  www.corevac.org  (in construction)

➢ 2 sections:

• "showcase website" with CoReVac’s mission, organizations, news about vaccine, partners ...

• "extranet” for subscribers only:
  – members
  – Workshop Programs
  – Researchers Exchanges
  – Platforms
  – Projects
  – .../...

➢ Scheduled for mid-June.
Future Actions & Deliverables

« Improving Vaccine Immunogenicity & Acceptability »

2012 → 2013 → 2014 → 2015 → 2016 → 2017 → 2018

- Research Platforms
- International Consortia
- International and National Vaccine Research programs
- New vaccines
  - Societal aspects
  - Niche and Frail Populations
A New paradigms for Therapeutic immunization against HIV

The 2000s years:
➢ To re-immunize against HIV:
  - while on ART
  - before virus relapse,
➢ In order to limit:
  - time on therapy
  - disease progression during time « off ART »

The 2010s years:
➢ To re-immunize against HIV:
  - while on ART
  - in association with anti-latency agents
➢ In order to:
  - reduce or purge the HIV reservoirs
  - allow functional cure of HIV