



BioNet Vaccine Manufacturing Plant and R&D Centre

Fully-Integrated Vaccine Company

Present at Side Meeting PMAC Thailand Jan 29-2020

BioNet-Asia

Focus on Discovery and Supply of Life-Saving Vaccines

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BioNet is a vaccine company focusing on the discovery and supply of life-saving vaccines, and access to technologies through **bio**tech innovation and partnering **net**works.

BioNet is also manufacturing novel recombinant vaccines issued from its own product development.

Vision

Our vision is to become a leading vaccine company sharing biotech innovation and partnering networks to enable access to life-saving vaccines anywhere in the world.

Mission

"A world free of any preventable disease is our dream. To make this dream come true is our mission."





International Executive Team

An Extensive Experience and Vaccine Knowledge



Dr. Jean Petre (Belgium)Co-founder



Mr. Vitoon Vonghangool (Thailand)
President and co-founder



Dr. Pham Hong Thai (France)CEO and co-founder



Nadir Harjee Technical Advisor



Jacques Francois Martin Strategic Advisor



Dario Cresci Production Advisor





Jane SpiegelDirector, Regulatory Affairs



Souad Mansouri Acting Director, Clinical Dev.



Laurent DapremontDirector, Strategic Bus. Dev.



Scientific Advisory Board

International Vaccine Experts Trusting Thai Vaccine Innovation



Emeritus Prof. Stanley Plotkin (USA) Chairman of the Scientific Advisory Board

- Emeritus Professor of Wistar Institute and University of Pennsylvania
- Principal, Vaxconsult



Prof. Claire-Anne Siegrist (Switzerland)

- Director of the Center of Vaccinology of the University Hospitals of Geneva
- Head of the WHO Collaborating Center for Vaccine Immunology



Prof. Nicole Guiso (France)

- Former Research Unit Head at the Institut Pasteur, Paris
- Former Director of the French National Center of Reference for Pertussis



Prof. Adam Finn (UK)

- Professor of Paediatrics, University of Bristol
- President of the European Society for Paediatric Infectious Diseases (ESPID)



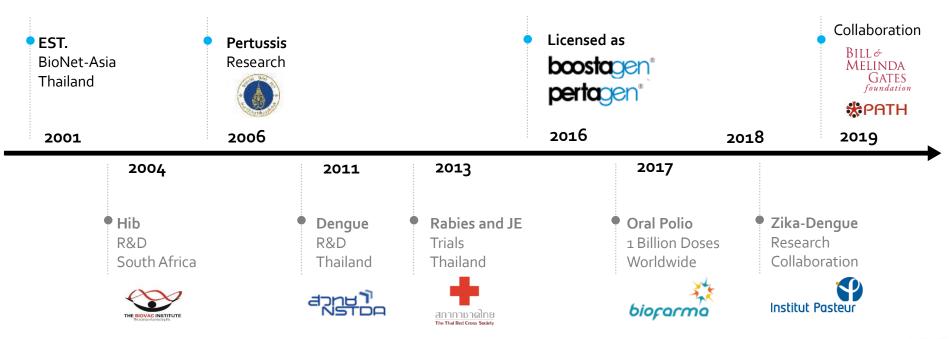
Prof. Kathryn M. Edwards (USA)

- Professor of Paediatrics, School of Medicine, Vanderbilt University
- Scientific Director of Vanderbilt Vaccine Research Program



BioNet-Asia

Discovery and Supply of Life-Saving Vaccines Since 2001







BioNet Recombinant Pertussis Vaccine

Translational Research from Project to Product

Licensed Clinical Trials B. Pertussis Established **R&D** Clinical Trials Publication **IMaP Vaccine** Research Ph II/III study Switzerland R&D Plant Project boostagen° Vaccine Plant Operation THE LANCET **pertagen**® 2016 2018 2006 2017 2019 2009 2013 2014





Scientific Publications and Patents

Proprietary Recombinant DNA Technology

2012

Bordetella pertussis
Strain expressing PTgen

2015

2016

2017







Buasri et al. BMC Microbiology 2012, 12:61 http://www.biomedcentral.com/1471-2180/12/61



RESEARCH ARTICLE

Open Access

Construction of *Bordetella pertussis* strains with enhanced production of genetically-inactivated Pertussis Toxin and Pertactin by unmarked allelic exchange

Wasin Buasri¹, Attawut Impoolsup¹, Chuenchit Boonchird¹, Anocha Luengchaichawange², Pannipa Prompiboon², Jean Petre^{2*} and Watanalai Panbangred^{1,3*}











Network of Partnerships

With Public and Privates Organizations

BioNet collaborates with first class biopharmaceutical companies, vaccine manufacturers, public institutes and universities.

Thai partners



International partners























R&D Pipeline Expertise in Recombinant DNA Technology

Bacterial Vaccines

boostagen°

pertagen°

Recombinant PTgen Patch **IMaP Vaccine Project** Recombinant DTaP /Tdap

Hib / Penta*

Viral Vaccines

Rabies**

Japanese Encephalitis** DNA Zika /Dengue **Recombinant Dengue** Recombinant Chikungunya

Recombinant HPV



^{*} Technology Transfer



^{**} Production partnership

State-of-the-Art Manufacturing Plant and R&D Centre

Committed to Quality and Excellence

Bacterial Vaccine Pilot Plant

2009

Viral Vaccine **R&D** Centre

2012

QC Labs

2013

Primary and Secondary Manufacturing Plant

Animal House

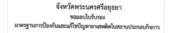
2015



























Fully- Self Funding Integrated Vaccine Company

World's Only Manufacturer of Recombinant Pertussis Vaccines











First plant in Thailand with **prefilled syringe line**



Operation Team in Ayutthaya Facility

A Fully Operational Manufacturing Company



- R&D
- Production
- QC
- OA
- Regulatory Affairs
- Clinical Development
- Health, Safety & Environment
- Project Management
- Supply Chain
- Engineering
- Industrial Project & IT
- HR & Admin





Expertise in Vaccine Supply and Distribution



Manufacturing

- Pertagen®
- Boostagen®



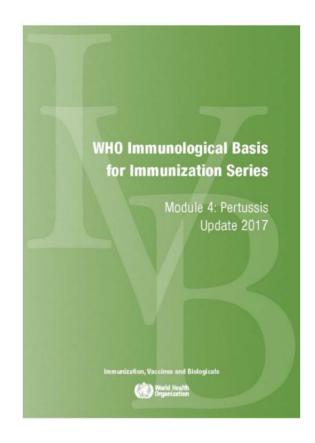
Import & Export

- OPV
- Equirab
- DTP
 - BioTT
- TT10
- Healive



Certified logistic and supply chain with international standard from both Thai FDA & SGS on GSDP





"Most aP vaccines are combined with other antigens in combination vaccines, and no monovalent aP vaccine is available in the Americas or the European Union (EU).

A licensed monovalent aP vaccine for booster immunizations is available in Thailand."

Module 4: Pertussis Update 2017 WHO Immunological Basis for Immunization Series





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