

We connect to protect



DCVMN

2022 Directory

Welcome note from the Board Chair

Dear DCVMN Members, Partners and Friends,

On behalf of DCVMN, welcome to the 23rd DCVMN Annual General Meeting (AGM)! After two years, I'm glad we can finally get together in person. These are extraordinary times. We are witnessing the dawning of a new era. This AGM presents us an opportunity to assess our position as a network post the pandemic, and start planning for a future with the knowledge we have acquired.


To begin with, my deepest gratitude goes out to the Serum Institute of India, for hosting this year's AGM in Pune, as well as to all participating member firms, industry stakeholders, funders, and corporate partners.

As my term as Board Chair winds down this year, I reflect on the network's stellar performance over the past three years, and I want to highlight its exceptional progress. During our first year, we swiftly restructured our Executive Committee into the Network's Board, and inducted our first CEO, Mr. Rajinder Suri, who contributed significantly to implementing the Board's vision within and outside the Secretariat.

Many believe that the network has faced the biggest challenge of the 21st century. I am proud to say that our member companies supplied 40% of COVID-19 vaccines globally. The network broke barriers in various segments of the industry with the participation of over 15 manufacturers. Our accomplishments range from securing vaccine licenses at a rapid pace, to manufacturing and supplying volumes of life-saving vaccines that have never been tried before. This is not only a testament to the network's ability to commercialize vaccines, but also to its ability to foster strong partnerships with industry stakeholders to make this feat possible.

This pandemic echoed the concepts of decentralized manufacturing and vaccine supply equity. While over 15 manufacturers within the COVID-19 vaccine manufacturer network attempted to implement these concepts, we did fall short in ensuring equitable access to COVID-19 vaccines globally. I was quite startled by this given that the network has extensive experience in providing non-pandemic essential vaccines in an equitable manner. The network boasts of some of the largest vaccine suppliers in the world, and offers over 80 different WHO-prequalified vaccines.

This discrepancy became apparent after trying to rationalize it: the lack of a consistent advance market commitment (AMC) allocation from industry stakeholders and equitable financial support. As an advocate for member companies to develop novel products and increase of production capacities, I believe the network should encourage industry stakeholders to look a little closer at this discrepancy. Equitable financing and AMC allocation are necessary for equitable supply.



One of the board's visions was to ensure that there is a greater representation of the network's opinion to all our stakeholders. Members of the Secretariat's Working Groups (WGs) have been involved in a number of internal and external initiatives, with more than 100 personnel from our member companies. These WGs covered various verticals of the industry, such as, regulatory harmonization, clinical development, product commercialization, etc., Members also worked on projects associated with developing risk management programs for COVID-19 vaccines. In addition, the network and our members were well-represented at international conferences related to vaccines and public health, such as the WHO, CEPI, GAVI, ACT A group, WEF, and PAVM. All this exposure has resulted in the secretariat and subject matter experts in collaborating with our membership to successfully publish over five peer-reviewed publications.

It gives me great pleasure that the network's representation is gradually expanding across various verticals of the industry. This expansion is essential to ensure the health of the industry.

Besides strengthening the network's representation in the industry, the board also succeeded in strengthening the secretariat. With the hiring of new members to the secretariat team and hiring new subject matter experts, I believe we are now in a position to effectively build on what has been done over the past three years.

Keeping this growth sustainable and prioritizing a healthy industry should be the network's goal moving forward. As I sign off, I would like to thank all members and partners of the network for entrusting me with this position, and wish the current Board elect the best of luck.

Mr. Sai D. Prasad

Board Chair
DCVMN



Board Members



Mr. Sai D Prasad

Chair

Bharat Biotech International Limited, India



Mr. Patrick Tippoo

Deputy Chair

The Biovac Institute, South Africa



Mr. Fernando Lobos

Treasurer

Sinergium Biotech, Argentina



Mr. Adriansjah Azhari

Member

Bio Farma, Indonesia



Ms. LingJiang Yang

Member

China National Biotech Group, PR China



Mr. Tiago Rocca

Member

Instituto Butantan, Brazil



Ms. Wendy Huang

Member

Xiamen Innovax Biotech Co. Ltd.,
PR China



Ms. Mahima Datla

GAVI Board Representative &
GAVI PPC Representative
Biological E Limited, India



Mr. Rajinder Kumar Suri

Chief Executive Officer
DCVMN



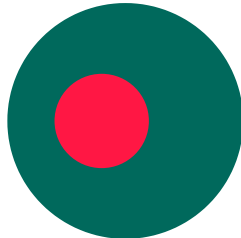
Dr. Sonia R Pagliusi

Executive Secretary
DCVMN International

Member Organizations' Geographical Presence



Argentina



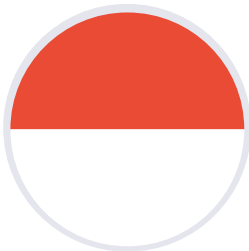
Bangladesh



Brazil



India



Indonesia



Pakistan



P.R. China



Republic of Korea



Russia



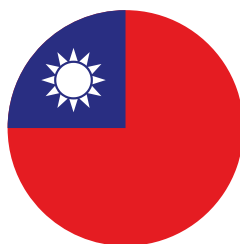
Saudi Arabia



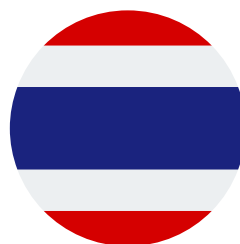
Senegal



South Africa



Taiwan



Thailand



Vietnam

List of Member Organizations

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List of Member Organizations

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22	Institute of Medical Biology Chinese Academy of Medical Sciences	P.R China	63
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24	Korea Vaccine Co., Ltd.	Republic of Korea	68
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27	Medigen Vaccine Biologics Corporation	Taiwan	74
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List of Member Organizations

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36	Sinovac Biotech Co., Ltd.	P.R. China	95
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Name of the company:

AIM Vaccine Co., Ltd.

Head of institution:

Mr. Yan ZHOU, Executive Director, Chairman of the Board and the Chief Executive Officer

Established:

2011

Country:

P. R. China

OVERVIEW OF THE COMPANY

AIM Vaccine Co., Ltd. (Stock code 06660.HK), committing to develop and manufacture top quality vaccines to safeguard the health of the world, was founded in 2011 and registered in Beijing. As a major vaccine company in China, AIM Vaccine cover the full value chain from research and development to manufacturing and to commercialization. AIM Vaccine is the only China-based vaccine player that has all five proven human vaccine platform technologies worldwide, and is one of the first two human vaccine companies in the PRC that have been granted permission under the Fourteenth Five Year Plan of the PRC to build a P3 Lab.

AIM Vaccine acquires 4 wholly-owned licensed vaccine manufacturers, namely Rongan Bio, AIM Honesty, AIM Kanghuai and AIM Weixin, and 3 research institutes, namely AIM Explorer, Liverna and AIM Jianchi . AIM Vaccine currently commercializes 8 vaccine products and 22 vaccine candidates, the pipeline covers the top ten vaccine varieties in the world. The commercialized products have held a leading position in the market for a long time, AIM is the largest manufacturer of HBV vaccine and second largest one of human rabies vaccine globally , with sales covering all 31 provinces, cities and autonomous regions in China and reaching more than 2 000 CDCs at district and county level.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
HBV	Recombinant HBV Vaccines (Hansenula Polymorpha)	Vial/Prefilled Syringe	0.5ml: 10ug/20ug
HAV	Inactivated HAV Vaccines(HDC)	Vial/Prefilled Syringe	0.5ml/1ml
Mumps	Mumps Vaccine	Vial	0.5ml
HFRS	HFRS Inactivated Vaccine	Vial	1ml
Rabies	Human Rabies Vaccine	Vial	1ml
MPSV4	Group ACYW135 Meningococcal Polysaccharide Vaccine	Vial	0.5ml

FUTURE PRODUCT PIPELINE

- COVID-19 vaccine
- HFMD
- Pneumococcal disease
- DTP
- Hib
- Rabies
- HPV
- Meningococcal disease
- Influenza
- Herpes
- RSV

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
mRNA COVID-19 Vaccine					Q2 2023
Inactivated COVID-19 Vaccine					After launching mRNA COVID-19 vaccine
Broad-spectrum COVID-19 Vaccine					2024 to 2025
EV71-CA16 Bivalent HFMD Vaccine Candidate (HDC)					2026
PCV13					2024
PPSV23					2023
PCV20					2025
DTP-Hib Combination Vaccine					2026
DTaP					2026
DTcP					After 2026
Absorbed Tetanus Vaccine					2025
Hib Vaccine					2026
mRNA Human Rabies Vaccine					2025
Human Rabies Vaccine(Vero Cell, Serum-free)					2025
Human Rabies Vaccine(HDC)					2026
HPV2					After 2026
HPV9					After 2026
MCV4					2025

FUTURE PRODUCT PIPELINE

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Tetravalent Influenza Vaccine (MDCK Cells)					2026
Universal Influenza Vaccine					2026
Shingles/Herpes Zoster Vaccine					After 2026
mRNA RSV Vaccine					After 2026

AREAS OF INTEREST FOR COLLABORATION

- Covid-19 vaccine
- Noval vaccine technologies
- Localization of production
- Market Access and commercialization

CONTACT DETAILS

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Beijing, P.R.China**

City : Beijing

State :

Location: P.R.China

Postal code: 100022



Name of the company:

Amson Vaccines & Pharma (Pvt.) Ltd

Head of institution:

Mr. Shamim Ahmed Khan

Established:

1995

Country:

Pakistan

OVERVIEW OF THE COMPANY

Amson Vaccines & Pharma (Pvt.) Ltd, is one of the leading pharmaceutical companies of Pakistan with the distinction of being the only one in the private sector of Pakistan that is licensed to manufacture vaccines. In addition to vaccines, we also manufacture various pharmaceuticals that are available throughout Pakistan through our distribution network. We are regular supplier of our products to Government Programs and Institutions including Federal EPI. We provide jobs to above 950 personnel who are involved from production to selling / marketing of our products.

Vaccine being our especially our interest in vaccine delivery system is quite natural. We have set up a plant for the manufacturing of Auto Disable Syringes in Pakistan and five of our designs have been approved by World Health Organization for sale to UNICEF and other UN Agencies.

We have been supplying our AD Syringes to UNICEF since 2018 and UNICEF has currently entered into Long term Agreement with us for the supply of AD & RUP Syringes for the year 2020 – 21.

Our aim is to make Pakistan self-sufficient in vaccine production and is in discussion with Government of Pakistan for this purpose.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Imatet Injection	Tetanus Toxoid Vaccine	Vial / Ampoule	0.5ml / 5ml / 10ml
Amvax-B Injection	Recombinant Hepatitis B Vaccine	Vial / Ampoule	0.5ml/1ml/5ml/10ml
Typbar Injection	Polysaccharide Typhoid Vaccine	Ampoule	0.5ml
Polyvalent Anti Snake Venom Serum	Anti Snake Venom Serum (Liquid) (Indo-Pak Sub Continent)	Vial	10 ml

FUTURE PRODUCT PIPELINE

- Pentavalent Vaccine
- Anti Tetanus Serum
- Seasonal Influenza Vaccine (TIV & QIV)
- Oral Cholera Vaccine
- Tetanus Diphtheria

Bulk vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	

AREAS OF INTEREST FOR COLLABORATION

- J.V for vaccine manufacturing
- Typhoid conjugal vaccine (filling)
- BCG vaccine (Import and manufacturing)
- MMR vaccine (Import and manufacturing)
- Export of Auto Disable Syringes
- Rabies (Cell Cultured Vaccine)(Import and manufacturing)

CONTACT DETAILS

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www.applysyringe.com



Name of the company:

Arab Company for Pharmaceutical Products (Arabio).

Head of institution:

Dr. Abdulrahman Almutairi (Arabio CEO).

Established:

2005

Country:

Saudi Arabia

OVERVIEW OF THE COMPANY

Brief:

Arabio is the first biopharmaceutical company in the Gulf Cooperation Council (GCC) specialized in human vaccines & biological products. The size and scope of activities intended to be made by Arabio would make Arabio the first biological company of its kind in the region. Arabio aims to bring to the markets of the Middle East and North Africa, high-quality products that comply with the international quality standards. Arabio has production lines of pre-filled syringes, liquid vials and lyophilized vials from the best global machines suppliers to make high quality products and meet cGMP & international standards.

Description of ARABIO capabilities:

- Biological sterile manufacturing.
- PFS and vial filling.
- PFS and vial blister packaging.

Arabio Partners:

A. Supply & Manufacturing Vaccines Partners:

1. Sanofi Pasteur.
2. LG Chem.
3. BioFarma.
4. GC Pharma.

B. Toll Manufacturing Biological Partners:

1. AbbVie.
2. J&J.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Hexaxim	Hexavalent Vaccine (DTaP+Hib+HepB+IPV)	PFS & Vial	
Menactra	Meningococcal Vaccine (MenACWY-DT)	Vial	
Vaxigrip Tetra	Quadrivalent Seasonal Flu Vaccine (QIV)	PFS	

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Euvax 10	Hepatitis B Pediatric	Vial	
Euvax 20	Hepatitis B Adult	Vial	
Arapenta	Pentavalent Vaccine (DTwP+HIB+HepB)	Vial	
Barycella	Varicella Vaccine	Vial	
Mevax	Measles Vaccine	Vial	
OPV	Oral Polio Vaccine (trivalent) 10 ds	Vial	
Stablix	Tetanus Toxoid (TT) Vaccine 10 ds	Vial	
DT	Diphtheria Tetanus (DT) Pediatric Vaccine	Vial	

FUTURE PRODUCT PIPELINE

- BCG Vaccine
- Tuberculin Test

Bulk vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	

AREAS OF INTEREST FOR COLLABORATION

- Vaccines:
 - Pneumococcal conjugate vaccine.
 - Rota virus vaccine.
 - Hepatitis A vaccine.
 - MMR / MMRV vaccines.
 - HPV Vaccine.
 - COVID-19 Vaccine
 - Dengue Fever vaccine.

Others:

- Insulin
- Blood products
- Growth hormones
- Erythropoietin

CONTACT DETAILS

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Commercial center Opposite to King

Fahad Medical City. P.O Box 63243,

Riyadh11516, KSA.

Factory:

Al Umrah District, Makkah

Industrial Zone, P.O. Box 20355,

Makkah 21955, KSA.

City : Riyadh

State : Central Province (Riyadh Region)

Location: Saudi Arabia

Postal code: 11516



Name of the company:
Beijing Minhai Biotechnology Co., Ltd.
 Head of institution:
Mr. Zheng Haifa, General Manager
 Established:
2004
 Country:
P.R. China

OVERVIEW OF THE COMPANY

Beijing Minhai Biotechnology Co., Ltd. (referred to as "Minhai") is a modern biotechnology enterprise specialized in vaccine R&D, production and distribution. Minhai's mission is to provide safe, stable and affordable vaccines; increase immunization coverage, reduce the incidence of infectious disease and mortality; protect human health.

Minhai was founded in June 2004, with a registered capital of 1 billion RMB and a total asset of 1.9 billion RMB, at No.35 Simiao Road, Bioengineering & Pharmaceutical Industrial Park, Daxing District, Beijing, which has a leading R&D center and a modern vaccine manufacturing site composed of over 60,000 m² GMP compliant workshops, equipped with advanced large-scale bacteria vaccine production line and virus vaccine production line. At present, Minhai international Vaccine R&D center is under construction, with a total area of about 99,000 m². Until 2021, there are five commercialized vaccine products, including Hib conjugate vaccine, MR vaccine, DTaP-Hib vaccine, 23-valent Pneumococcal Polysaccharide vaccine and 13-valent Pneumococcal Conjugate Vaccine. DTaP-Hib vaccine, which is independently developed by Minhai, is the first domestic tetravalent vaccine. 13-valent Pneumococcal Conjugate Vaccine is also independent research and development by Minhai, using two kinds of carrier proteins (tetanus toxoid/diphtheria toxoid) conjugated with pneumococcal capsular polysaccharide. This dual carrier system is the first of its kind in the world.

There are over 20 vaccines in Minhai's pipeline (from pre-clinical trial to NDA), including, HDCV rabies vaccine, Sabin IPV and PENTA etc.

In the meantime of developing novel vaccines, Minhai initiated international registration and accelerated the process of export. From 2013, Minhai has started the registration of the five marketed products in more than 15 countries including Uzbekistan, Pakistan, India, Russia, Indonesia and the Philippines, also launch the WHO prequalification preparation work. Minhai is enlarging multi-angle, multi-level international collaboration, and extensively promote globalization strategy.

After the outbreak of the COVID-19 in Wuhan, Minhai and its parent company, Biokangtai (Shenzhen Kangtai Biological Products Co., Ltd.) quickly started the vaccine R&D and industrialization work, and has successfully independently developed an inactivated SARS-CoV-2 vaccine. Minhai and Biokangtai completed the Phase I/II clinical study in Feb 2021, Phase III clinical trial was conducted in Malaysia, the Philippines and Ukraine. It has been approved for emergency use in China in May, and the vaccination had commenced in the Guangdong Province on June 1, 2021.

Minhai is collaborating and competing with world class vaccine enterprises, working hard to share Minhai's safe, stable and affordable vaccines with all human beings around the world.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Hib	Haemophilus Influenzae Type b Conjugate Vaccine	Vial / Pre-filled syringe	0.5ml
Hib	Haemophilus Influenzae Type b Conjugate Vaccine, Free-dried	Vial	Free-dried
DTaP	Diphtheria, Tetanus, and Acellular Pertussis Combined Vaccine, Adsorbed	Vial	0.5ml
DTaP-Hib	Diphtheria, Tetanus, Acellular Pertussis, and Hemophilus Influenzae type b combined vaccine	Vial	0.5ml+0.5ml
MR	Measles and Rubella Combined Vaccine	Vial	Lyophilized
23-Valent PPSV	23-Valent Pneumococcal Polysaccharide vaccine	Vial/Pre-filled syringe	0.5ml
13-Valent PCV	13-Valent Pneumococcal Conjugate Vaccine	Pre-filled syringe	0.5ml
HepB	Recombinant Hepatitis B vaccine (BioKangtai)	Vial	10µg,20ug,60ug

FUTURE PRODUCT PIPELINE

Product name	Pre Clinical	File IND	Clinical			Expected launch date Quarter / Year
			Phase I	Phase II	Phase III	
SARS-Cov-2 vaccine					(BioKangtai /Minhai)	Have got EUA and launched vaccination in China in 2021
Varicella					NDA	
HDCV Rabies					NDA	
Sabin IPV						
DTcP						
DTcP-Hib-sIPV			In preparation			
DTcP-sIPV			In preparation			
5-Valent Rotavirus						
MMR combined live attenuated vaccine						
20-Valent PCV						

FUTURE PRODUCT PIPELINE

Product name	Pre Clinical		Clinical			Expected launch date Quarter / Year
			Phase I	Phase II	Phase III	
23-Valent PPSV (new process)						
TT(adolescent and adult)						
DTcP-Hib-sIPV (one vial)						
Inactivated 4- Valent Enterovirus (Vero Cell)						
mRNA Covid-19 vaccine						
Recombinant 4- Valent Enterovirus (Hansenula)						
Recombinant COVID-19 Vaccine (Y25 Adenovirus Vector)		BioKangtai/ Minhai)				
4-Valent Influenza (split)			Expect to launch by the end of 2022			
Hepatitis A						
Recombinant Enterovirus 71 (Hansenula)						
Recombinant HepB (Hansenula)						

AREAS OF INTEREST FOR COLLABORATION

- Technology Transfer
- Vaccine Co-development
- Overseas Registration and Distribution

CONTACT DETAILS

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Name of the company:

Bharat Biotech International Limited

Head of institution:

Dr. Krishna M. Ella

Established: 1996

Country: India

OVERVIEW OF THE COMPANY

Bharat Biotech International Limited (BBIL) was cofounded in 1996 by Dr. Krishna Ella and Mrs. Suchitra Ella with the core focus being development of novel health care solutions for region-specific neglected diseases. The company has fully integrated expertise in R&D, Product Development, Clinical Development, GMP Manufacturing, Quality Management Systems, Marketing and Distribution.

BBIL is a WHO Prequalified manufacturer of BIOPOLIO B1/3[®] (Bivalent Oral Polio Vaccine), ROTAVAC[®] [Oral Rotavirus Vaccine (-20°C)], Typbar TCV[®] (Typhoid Conjugate Vaccine) and ROTAVAC 5D[®] [Oral Rotavirus Vaccine (2° to 8°C)] for supplies to UN agencies. BBIL has also received WHO Emergency Use Authorization for its Whole-Virion Inactivated SARS-CoV-2 vaccine, COVAXIN[®]. Significant investments from BBIL towards R&D have resulted in development of breakthrough vaccines, such as a Rotavirus vaccine from a naturally reassorted and attenuated strain, the world's first clinically proven Typhoid Conjugate Vaccine.

BBIL has a history of developing novel health care solutions with focus on developing world populations. Vaccine candidates against Zika, Chikungunya, Cholera and additional SARS-CoV-2 candidates are now in late stage development and are on track to being commercialized in the coming years.

BBIL has filled over 400 patents worldwide and was granted over 160 patents with a strong tradition respecting IPR. With globally accredited facilities, BBIL has supplied more than 4 billion doses of vaccines to over 120 countries worldwide.

CURRENT PRODUCTS

BHARAT BIOTECH

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Revac-B+ [®]	Recombinant Hepatitis B Vaccine (rDNA)	Vial	0.5/1.0/5.0/10.0 ml
Revac-B mcf [®]	Recombinant Hepatitis B Vaccine (rDNA) [Thiomersal Free]	Vial/PFS	0.5/1.0 ml
INDIRAB [®]	Purified Inactivated Rabies Vaccine (Vero Cell)	Vial	0.5 ml
TYPBAR [®]	Typhoid Vi Capsular Polysaccharide Vaccine	Vial/PFS	0.5/2.5 mL
JENVAC [®]	Japanese Encephalitis Vaccine, Inactivated (Adsorbed)	Vial/PFS	0.5/2.5 mL
HNVAC [®]	H1N1 Pandemic Flu Vaccine	Vial	0.5/2.5mL

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
BIO-HIB®	Haemophilus Influenza Type b (PRP-TT Conjugate)	Vial	Lyophilized Powder with Diluent 0.5 mL
Typbar-TCV®	Typhoid Vi Capsular Polysaccharide-TT Conjugate Vaccine	Vial /PFS	0.5/2.5mL
ROTAVAC®	Oral Rotavirus Vaccine 116E (Live attenuated) Storage at -20°C	Vial	0.5/2.5/5.0 mL
BIOPOLIO® B1/3	Bivalent Oral Polio Vaccine	Vial	1.0/2.0 mL
ComVac 3®	Diphtheria, Tetanus and Pertussis (w) Vaccine (adsorbed)	Vial/PFS	0.5mL
ComVac 4-HB®	Diphtheria, Tetanus, Pertussis (w) and Hepatitis-B Vaccine	Vial	0.5mL
ComVac 5®	Diphtheria, Tetanus, Pertussis (w), Hepatitis B and Hib PRP	Vial/PFS	0.5/2.5/5 mL
REGEN-D® 60	Recombinant Human Epidermal Growth Factor Gel (60 µg)	Tube	7.5 /15 g
REGEN-D® 150	Recombinant Human Epidermal Growth Factor Gel (150 µg)	Tube	7.5 /15 g
SLVRGEN®	Recombinant Human Epidermal Growth, Silver Sulfadiazine & Chlorohexidine Gluconate Cream	Tube	15/30 g
BIOGIT	Saccharomyces Boulardii (Granular) 250 mg, oral	Sachet	800g
ROTAVAC 5D®	Oral Rotavirus Vaccine 116E (Live attenuated) Storage at 2° to 8°C	Vial/PFS	0.5/2.5 ml
COVAXIN®	Whole-Virion Inactivated SARS-COV-2 Vaccine	Vial	5.0/10 ml
INCOVACC®	Intra-nasal SARS-COV-2 Vaccine	Vial	

CURRENT PRODUCT PIPELINE (CHIRON BEHRING):

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
ChiroRab®	Purified Inactivated Rabies Vaccine (PCEC)	Vial	1.0

FUTURE PRODUCT PIPELINE

- SARS-CoV-2: Inactivated Rabies Vector
- SARS-Cov-2: Replicating deficient Flu Vector (M2SR)
- Zika
- Chikungunya
- Cholera
- NTS Conjugates
- S. Paratyphi
- Sabin IPV
- Malaria (RTS,S/AS03)
- Tuberculosis

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
SARS-CoV-2: Inactivated Rabies Vector					
SARS-Cov-2: Replicating deficient Flu Vector (M2SR)					
Zika					
Chikungunya					
Cholera					
NTS Conjugates					
S. Paratyphi					
Sabin IPV					
Malaria					
Tuberculosis					

AREAS OF INTEREST FOR COLLABORATION

- Development of novel vaccines
- De velopment of novel Therapeutics

CONTACT DETAILS

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Location : India

Postal code : 500 078



Name of the company:

PT Bio Farma (Persero)

Head of institution:

Honesti Basyir (President Director)

Established:

Since 1890

Country:

Indonesia

OVERVIEW OF THE COMPANY

PT Bio Farma (Persero), a state-owned company, continues to accelerate its growth towards becoming a fully-pledged Life Science company for the betterment of health and quality of life of the community. Bio Farma has through the years acquired WHO Pre-Qualification (PQ-WHO) for numerous of its vaccines which is a pre-requisite for supply to UN agencies and several countries. Our products are used in more than 150 countries worldwide, which include Polio vaccine Tetanus, Diphtheria, Pertussis, BCG, Measles, etc. Since its establishment in 1890, Bio Farma has been playing an active role in supporting public health initiatives through the production and distribution of quality vaccines and antisera.

Bio Farma strives to innovate and collaborate with prominent organizations in numerous R&D activities. Collaborating with The Bill and Melinda Gates Foundation (BMGF) together with PATH, Bio Farma has developed a novel OPV2 (nOPV2) derived from genetically stable strain. While Sabin OPV2 has a long history of use throughout the world, current circumstances support the development of a novel OPV2 (nOPV2) with an improved benefit/risk profile. This development has led the vaccine to be granted WHO Emergency Use Listing (EUL) in November 2020; the first vaccine to be granted WHO EUL in the world. This WHO EUL procedure has subsequently paved the way for EUL grants of COVID vaccines that were soon to follow. Development of nOPV1, nOPV3 and ntOPV is currently in progress.

Bio Farma has developed COVID-19 vaccine in collaboration with Baylor College of Medicine, USA using a recombinant subunit protein technology platform. This vaccine, under a brand name "IndoVac", has been granted Emergency Use Authorization (EUA) by the Indonesian Drug and Food Agency.

In terms of digital technology, Bio Farma has developed a track and trace system and has been implemented to several products. This system is a barcode-based product monitoring system, to monitor product movement from packaging to the end point distribution line.

In early 2020, the Indonesian Government through the Ministry of State-Owned Enterprises (SOE) established a Healthcare Holding Company by merging three existing SOEs namely Bio Farma, Kimia Farma and Indo Farma with Bio Farma as the parent company. Each entity bears its own unique product portfolio; Bio Farma as manufacturer of biotechnology-based products, Kimia Farma chemical drugs (pharmaceuticals) and Indo Farma herbal medicines and medical devices.

For more information kindly visit our website at www.biofarma.co.id.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Vaccines			
BCG	BCG vaccine is a freeze-dried vaccine containing live attenuated <i>Mycobacterium bovis</i> (Bacillus Calmette Guerin), a Paris strain.	Ampoule	Box @10 ampoules BCG vaccine + Box @10 ampoules diluent (4 mL) Box @5 ampoules BCG vaccine+ 5 ampoules solvent (4 mL)
DT	DT vaccine is a milky white homogeneous colloidal suspension in a glass vial, containing tetanus toxoid and diphtheria toxoid adsorbed into aluminum phosphate.	Vial	Box : 10 vial @ 5mL (10 doses)
Td	Td vaccine is a white suspension, containing tetanus toxoid and diphtheria toxoid, with a low diphtheria component, which has been purified and adsorbed on aluminum phosphate.	Vial	Box : 10 vial @5mL (10 doses)
TT	TT vaccine is a milky white homogeneous colloidal suspension in a glass vial, containing tetanus toxoid, adsorbed into aluminum phosphate.	Vial	Box : 10 vial @5mL (10 doses)
Pentabio	DTP-HP-Hib Combination Vaccine, homogeneous suspension containing diphtheria and tetanus toxoids, pertussis bacteria, HepB antigen and Hib components	Vial	<ul style="list-style-type: none"> • Box @ 10 vial @ 0,5 mL (1 dose) • Box @ 10 vial @ 2,5 mL (5 doses) • Box @ 10 vial @ 5 mL (10 doses)
DTP	DTP vaccine is a milky white homogeneous colloidal suspension in a glass vial, containing diphtheria, tetanus toxoids and pertussis bacteria.	Vial	Box : 10 vial @5mL (10 doses)
mOPV1	mOPV1 vaccine is a light yellow to pink liquid in a glass vial containing a suspension of type 1 Live attenuated Poliovirus (Sabin strain).	Vial	Box: 50 vial @ 2 mL (20 doses) + Box: 50 droppers
bOPV	Bivalent oral poliomyelitis vaccines types 1 and 3 (bOPV) are bivalent vaccines containing a suspension of live attenuated poliomyelitis viruses types 1 and 3.	Vial	Box : 10 vial @ 1 mL (10 doses) Box: 50 vial @ 2 mL (20 doses)
nOPV2	Novel Oral Poliomyelitis Vaccine Type 2, which is used for emergency use from the polio outbreak type 2 in the world, contains poliomyelitis virus whose DNA has been recombined to prevent vaccine-derived type 2 poliovirus (VDPV2)	Vial	Box : 50 vial @ 5 mL (50 doses)

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Measles	Measles vaccine is a live attenuated vaccine, a yellowish freeze-dried vaccine in a glass vial, which must be dissolved only with diluent of measles vaccine produced by PT Bio Farma. The measles vaccine is in the form of an injection powder.	Vial	Box: 10 vial @10 doses + Measles Vaccine Diluent Box @ 10 ampoules @ 5 mL Box: 10 vial @20 doses + Measles Vaccine Diluent Box @ 10 ampoules @10 mL
Flubio	Influenza HA vaccine is a clear or slightly whitish suspension (Slightly turbid), containing haemagglutinin from influenza virus antigen. Influenza HA vaccine is a suspension that is given for injection.	Vial	Box: 2 vial@ 1 doses (0,5 mL)
Hepatitis B	The recombinant Hepatitis B vaccine contains the non-infecting Hepatitis B virus antigen, HBsAg, which is produced from yeast cell culture using DNA engineering technology. Recombinant Hepatitis B vaccine is in the form of a whitish sterile suspension in a prefill injection device, which is packaged in an aluminum foil pouch and vial.	Vial	Box: 10 pouch @ 1 Prefilled injection device (Uniject) @ 1 mL Box : 10 pouch @ 1 Prefilled injection device (Uniject) @ 0,5 mL Box : 100 pouch @ 1 Prefilled injection device (Uniject) @ 0,5 mL
IPV	Inactivated Poliomyelitis Vaccine is a trivalent vaccine containing suspension of poliovirus types 1, 2, and 3. It was developed on Vero cells, inactivated with formaldehyde. The dosage form is a suspension for injection in multi doses.	Vial	Box: 10 vial @2.5mL (5 doses)
IndoVac	COVID-19 Vaccine Recombinant Protein derived from the genetically engineered SARS CoV-2 spike protein in the yeast <i>Pichia pastoris</i> . This vaccine is supplemented with a combination of Al3 and CpG 1018	Vial	Box : 10 Vial @5mL (10 doses)

Biotherapeutics

BIOSAT	BIOSAT (Anti Tetanus Serum) is an anti-sera made from horse plasma which is immune to tetanus, and contains phenol as a preservative, in the form of a clear yellowish liquid.	Ampoule	Box : 10 ampoule @1mL (1.500 IU)
BIOSAVE	BIOSAVE (Polyvalent Snake Venom Serum) is a pure antisera made from horse plasma which provides immunity against neurotoxic snake venom (such as snakes of the <i>Naja sputatrix</i> species - Cobra, <i>Bungarus fasciatus</i> - Striped Snake) and hemotoxic (<i>Agkistrodon rhodostoma</i> snake). - Ground Snakes) which are commonly found in Indonesia, and contain phenol as a preservative. Polyvalent Anti Snake Venom Serum is a clear yellowish liquid.	Vial	Box : 1 Vial @5mL

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
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Biotherapeutics

BIOADS	BIOADS (Anti Diphtheria Serum (horse)) 20,000 IU is a pure antisera made from horse plasma which is immune to diphtheria and contains phenol as a preservative, in the form of a clear yellowish liquid.	Vial	Box : 1 vial@10mL (20.000 IU)
Enoxaparin	Low Molecular Weight Heparin is indicated for ST segment myocardial infarction (STEMI), unstable angina and deep vein thrombosis (DVT). Consists of doses of 40, 60 and 100 mg.	PFS	Box, 40mg/0.4mL, 60mg/0.6 mL and 100 mg/1mL

Diagnostics

BIOVTM	Virus carrier media in the form of sterile clear liquid used as an intermediate medium in the examination of SARS-CoV-2.	Tube	
BioSaliva	Gargle-PCR has a sensitivity of up to 95% so it can be used as an alternative to the gold standard Nasopharyngeal-Oropharyngeal Swab using a PCR Kit.	Tube	
mBioCoV-19	One step real time Reverse Transcription Polymerase Chain Reaction (RT-PCR) multiplex kit to detect the presence of the SARS-CoV-2 virus.	Tube	
RxReady	One step real time Reverse Transcription Polymerase Chain Reaction (RT-PCR) multiplex kit to detect the presence of the SARS-CoV-2 virus.	Tube	
VarScreen	VarScreen RxReady mBioCoV-19+ is an RT-PCR kit that can simultaneously be used for the detection and identification of SARS-CoV-2 virus variants through an innovative combination of 4 SGTF target genes (S Gene Target Failure) and deletion of 1 ORF1ab gene.	Tube	

FUTURE PRODUCTS PIPE LINE

- TCV
- Rotavirus
- nOPV1
- nOPV3
- Hexavalent
- MR
- sIPV
- New TB

AREAS OF INTEREST FOR COLLABORATION

- Vaccine new platform technologies (mRNA, Adeno, etc.)
- Vaccine development and technology transfer
- Adjuvant technologies development
- Clinical trial aspects
- Vaccine formulation development
- Vaccine delivery system
- Assay development
- Marketing alliance

CONTACT DETAILS

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State : Indonesia

Location : Indonesia

Postal code : 40161



Name of the company:

**Bio-Manguinhos – Immunobiologicals Technology Institute
The Oswaldo Cruz Foundation – Ministry of Health**

Head of institution:

Mauricio Zuma

Established:

May 04, 1976

Country:

Brazil

OVERVIEW OF THE COMPANY

Bio-Manguinhos was founded in 1976 to strengthen vaccine manufacturing capacity to meet public health demands, as defined by the Ministry of Health (MoH) National Immunization Program (PNI). Since then, the Institute has played a prominent role in government health programs, investing in innovation, technological development, and manufacturing of vaccines, in vitro diagnostics, and biotherapeutics. Our portfolio is made of 61 products, which are supplied primarily to the Unified Health System (SUS).

To master advanced production processes and state-of-the-art technologies, Bio-Manguinhos besides in-house R&D invests also in partnerships and technology transfer agreements with national and international institutions.

Bio-Manguinhos is also a member of the Executive Group of Health Industrial Complex (Gecis), which brings together government authorities, representatives of the national industry, associations, and teaching and research institutions, as well as funding agencies. As a member of Gecis, it contributes to the formulation of health public policies.

The changes go further, and the Institute is constantly growing and strengthening its technological capabilities. The Industrial Complex for Biotechnology in Health (CIBS), in Santa Cruz, Rio de Janeiro; and the Vaccines Plant-Based Technology Center, in Eusebio, Ceará, are the two newest sites under construction. The building of new facilities will allow the expansion of productive capacity.

CURRENT PRODUCTS

• VACCINES

- COVID-19 (recombinant);
- Haemophilus influenzae b (Hib) conjugated;
- Yellow fever;
- Diphtheria, tetanus, and whooping cough + Hib;
- Meningococcal ACW;
- Pneumococcal 10-valent conjugated;
- Poliomyelitis 1 e 3 oral;
- Inactivated poliomyelitis;
- Human rotavirus;
- Measles, rubella (attenuated);
- Measles, mumps and rubella;
- Measles, mumps, rubella, and chickenpox.

IVD REAGENTS: 38 PRODUCTS

Product name	Description	Presentation/kit
NAT Kit HIV/HCV/HBV	Molecular Biology NAT Assay HIV/HCV/HBV	96 tests
NAT Plus Kit (HIV/HCV/HBV/Malaria);	Molecular Biology NAT Assay HIV/HCV/HBV/ Malaria	96 tests
ZDC (Zika, Dengue and Chikungunya)	Molecular Biology Assay for Zika, Dengue and Chikungunya	48 tests
POC DPP® RAPID IMMUNOBLOT HIV-1/2	Rapid Test – Immunoblot DPP® HIV1/2	20 tests
POC HIV-1/2	Rapid Test HIV- 1/2	20 tests
POC DPP® Syphilis	Rapid Test – DPP® Syphilis	20 tests
POC DPP® Syphilis DUO	Rapid Test – DPP® Syphilis (Non treponemic and treponemic in the same test)	20 tests
POC DPP® HIV / Syphilis Combo	Rapid Test - DPP® HIV / Syphilis Combo (HIV + Syphilis detection in the same test)	20 tests
POC DPP® Canine Visceral Leishmaniasis	Rapid Test – DPP® Canine Leishmaniasis	20 tests
POC DPP® Leptospirosis	Rapid Test – DPP® Leptospirosis	20 tests
POC DPP® Zika IgM/IgG	Rapid Test – DPP® Zika	20 tests
POC DPP® Chikungunya IgM/IgG	Rapid Test – DPP® Chikungunya	20 tests
POC DPP® Dengue IgM/IgG	Rapid Test – DPP® Dengue	20 tests
POC TR DPP® Dengue NS1	Rapid Test – DPP® Dengue NS1	20 tests
POC DPP® ZDC (Zika, Chikungunya, Dengue) IgM/IgG	Rapid Test – DPP® Zika, Chikungunya, Dengue	20 tests
IFI Chagas Disease	Immunofluorescence – Chagas Disease	600 tests
RAPID TEST CHAGAS	Single-use Screening Test	20 tests
EIE Visceral Canine Leishmaniasis (ELISA)	ELISA – Canine Leishmaniasis	384 tests
EIE COVID-19 IgG	Enzyme Immunoassay Test - SARS-CoV-2	192 tests
IFI Human Leishmaniasis	Immunofluorescence – Human Leishmaniasis	600 tests
Helm Test	Kato Katz – Helm Test	100 tests
POC DPP® COVID-19 IgM/IgG	Rapid Test – DPP® CoVID-19	20 tests
POC COVID-19 IgM/IgG - Bio- Manguinhos	Rapid Test COVID-19 IgM/IgG	25 tests
POC COVID-19 Ag Bio-Manguinhos	Rapid Test COVID-19 Ag	25 tests
POC SARS-CoV-2 Ag - Bio- Manguinhos	Rapid Test SARS-CoV-2 Ag	10 and 20 tests
POC DPP® COVID-19 AG	Rapid Test DPP® COVID-19 AG	20 tests
Quick Test Chagas	Rapid Test – Chagas	20 tests
Selftest HIV ½	Rapid immunochromatographic test	Single use
SARS-CoV-2 Molecular kit (E/RP)	Molecular kit SARS-CoV-2	24, 96 (2x48) tests
SARS-CoV-2 Molecular kit (EDx);	Molecular kit SARS-CoV-2	24 tests
TRIPLE POC (SARS-COV-2, INFLUENZA A AND INFLUENZA B)	Rapid Test SARS-CoV-2/INFA/INFB	25 tests

Product name	Description	Presentation/kit
Yellow Fever Molecular Kit	Molecular Yellow Fever kit	26 tests
Molecular Kit SC2 (E/N)	Molecular kit SC2	96 tests
Molecular Kit ZC D-typing	Molecular kit ZC D-typing	32 tests
Molecular Kit INFA/INFB/SC2	Molecular kit INFA/INFB/SC2	96 tests
Yellow Fever Discriminatory Kit	Molecular Discriminatory kit	12 tests
Molecular Kit 4Plex SC2/VOC	Molecular kit 4Plex	96 tests

PS: DPP® = DUAL PATH PLATFORM.

Biopharmaceuticals: 11 products (derived from technology transfer)

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Alfaepoetin	Erythropoietin recombinant	Vial	2.000 / 4.000 / 10.000UI
Alfataliglucerase	Taliglucerase alfa	Vial	200U
Interferon Alfa 2b	Interferon Alfa 2b	Vial	3 MIU, 5 MIU and 10 MIU
Infliximab	Infliximab	Vial	100 mg
Betainterferon 1a	Betainterferon 1a recombinant	prefilled syringe	22 and 44 mcg
Etanercept	Etanercept biosimilar	prefilled syringe	50mg
Somatropin	Somatropin biosimilar	Vial	4UI and 12UI
Rituximab	Rituximab biosimilar	Vial	10ml and 50ml
Trastuzumab	Trastuzumab biosimilar	Vial	150mg
Golimumab	Golimumab	Prefilled syringe	50mg
Adalimumab	Adalimumab	Prefilled syringe	40mg

FUTURE PRODUCT PIPELINE

- Yellow Fever Vaccine Improvement (attenuated)
- Measles, Mumps, Rubella (MMR) Vaccine Improvement
- Zika Vaccine
- Conjugate Meningitis C Vaccine
- S.agalactiae and A.baumannii conjugate vaccine
- NAT Assay new targets
- Yellow Fever Vaccine (inactivated)
- Molecular Platform for Epidemiological Surveillance
- Development of tests adapted to remote diagnosis and database
- Pembrolizumab (biopharmaceutical)
- Nivolumab (biopharmaceutical)
- Natalizumab biobetter
- COVID-19 Vaccine Improvement (recombinant)
- COVID-19 RNA Vaccine

PROJECT PORTFOLIO BY PRODUCT LINE

	Non-clinical development	Clinical Development	Technological Development product improvement	New product technology transfer	Total
Bacterial Vaccines	1	1	-	1	3
Viral Vaccines	3	1	3	3	10
Biopharmaceuticals	3	-	-	9	12
IVD reagents	2	-	1	-	3
Total	9	2	4	13	28

Areas of Interest for Collaboration

- Prokaryotic expression
- Eukaryotic expression
- Conjugation
- Plant based
- RNA platform

CONTACT DETAILS

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Biological E. Limited
Celebrating Life Every Day



Name of the company:

Biological E. Limited

Head of institution:

Ms. Mahima Datla, Managing Director

Established:

1953

Country:

India

OVERVIEW OF THE COMPANY

Biological E Ltd (BE) is established in the year 1953 in Hyderabad, India. Over the years, we have built up a very significant share in the world of vaccine market, especially in the pediatric range. Our company is a major supplier to the National Immunization Program (EPI programme) of the Government of India, UNICEF, Pan American Health Organization and various Ministries of Health globally. BE envisages becoming a major world player in vaccine business by expanding the product range, market access, improving infrastructure through investments, increasing manufacturing and development capabilities and marketing agreements.

BE achieved WHO Prequalification status for various vaccines viz. Tetanus, Pentavalent (DTP-HepB-Hib), Japanese Encephalitis, DTP, Td, MR and Typhoid Conjugate Vaccine. BE is the first company in the world to get WHO prequalification for Japanese Encephalitis Vaccine. BE is in the process of obtaining WHO Prequalification for various vaccines viz. Hepatitis B, CORBEVAX – COVID-19 vaccine and Pneumococcal Conjugate Vaccine in the near future.

As part of continuous efforts to develop new products for human use, BE is currently engaged in development and commercialization of several recombinant, conjugate, bacterial & viral vaccines. BE has productive partnerships with several well respected and renowned Institutions and Public Health Services across the world for joint development of new products to fulfill the unmet needs of India and other global markets.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
ComBE Five	Pentavalent vaccine - Liquid Diphtheria, Tetanus, Pertussis, Hepatitis B and Haemophilus type B conjugate vaccine (DTwP-HepB-Hib)	Vial (Liquid) PFS	1, 2, 5 & 10 dose Single dose
BETT	TT Adsorbed Tetanus Vaccine	Vial Ampoule	1, 10 and 20 dose Single dose
TRIPVAC	DTwP Diphtheria, Tetanus and Pertussis vaccine (adsorbed)	Vial	1 & 10 dose
BE Td	Td Diphtheria and Tetanus vaccine (Td) (for adolescents & adults)	Vial	1 & 10 dose

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
JEEV	JE Japanese Encephalitis Vaccine, Inactivated (Strain SA14-14-2 propagated on Vero cell line)	Vial PFS	3 mcg / 0.5 ml 6 mcg / 0.5 ml Single dose
MRBEV	MR Measles and Rubella Vaccine (Live) (Attenuated, Freeze Dried)	Vial	0.5 mL, 2.5 mL & 5 mL
TYPHIBEV	Typhoid Conjugate	Vial	1, 5 & 10 dose
OTHER VACCINES :			
BEVAC	Hepatitis B Hepatitis B vaccine (recombinant)	Vial	1, 2, 5 & 10 dose Pediatric and 1 & 10 dose Adult
BI VAC	DT Adsorbed Diphtheria & Tetanus Vaccine (for Pediatric)	Vial	1, 10 & 20 dose
CORBEVAX	COVID-19 Protein sub-unit Vaccine	Vial	10 & 20 dose

VACCINES IN PIPELINE :

1	PCV	Pneumococcal Conjugate Vaccine
2	IPV	Inactivated Polio Vaccine
3	Hexavalent	DTwP-IPV-Hib-HepB

• ANTI SERA PRODUCTS

Product name	Description	Type Vial/Ampoule /PFS	Presentation 0.5/1.0/5.0/10.0 ml
ANTI SNAKE			
Snake Antivenin	Snake Antivenin (Polyvalent)	Vial	10 mL
BEAFRIQUE-10	Anti Snake Venom Serum – Pan Africa (10)	Vial	10 mL
BEAFRIQUE-6	Anti Snake Venom Serum – Central Africa (6)	Vial	10 mL
BEAFRIQUE-1	Anti Snake Venom Serum – Monovalent – Echis Ocellatus	Vial	10 mL
ANTI-TETANUS			
BEATS	Tetanus Antitoxin	1mL Ampoule	1500 IU / mL
BEATS	Tetanus Antitoxin	1mL Ampoule	3000 IU / mL
ANTI-DIPHTHERIA			
BEADS	Diphtheria Antitoxin	10mL Vial	1000 IU / mL

AREAS OF INTEREST FOR COLLABORATION

- Vaccines – Bulk & Finished & Strategic Partnership
- Long term partnership arrangements

CONTACT DETAILS

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Name of the Company:

BioNet-Asia Co., Ltd.

Head of Institution:

Vitoon Vonghangool, President

Pham Hong Thai, Chief Executive Officer

Established: 2001

Country: Thailand

OVERVIEW OF THE COMPANY

BioNet-Asia is a Biotech company with a manufacturing base in Asia and with clinical and business operations in Europe, Asia and Australia.

BioNet aims to provide a rapid and guaranteed access to vaccines against life-threatening infectious diseases to the neediest.

BioNet has been producing new generation recombinant pertussis vaccines containing a genetically-inactivated Pertussis Toxin in a monovalent formulation (aP) and combined with tetanus and diphtheria toxoid (TdaP).

BioNet has also forged several long-term strategic alliances fostering vaccine self-sufficiency and resulting in the production and supply of billions of doses of vaccines worldwide.

For additional information, please visit

www.bionet-asia.com

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Pertagen®	Recombinant acellular pertussis vaccine (aP)	PFS	0.5 ml
Boostagen®	Tetanus toxoid, reduced diphtheria toxoid, Recombinant acellular pertussis vaccine (TdaP)	PFS	0.5 ml

FUTURE PRODUCT PIPELINE

- Tdap
- DTaP
- DNA COVID-19
- DNA Zika /Dengue

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Tdap					
DTaP					
DNA COVID-19					
DNA Zika /Dengue					

AREAS OF INTEREST FOR COLLABORATION

- Marketing and Distribution of vaccines
- Vaccine joint development and R&D collaborations
- Technology transfer for COVID-19, Hib, HBV, Rabies
- In-and out-licensing opportunities

CONTACT DETAILS

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State :

Location : Thailand

Postal code : 10260



Name of the company:

Biovac (Pty) Ltd

Head of institution:

Dr Morena Makhoana

Established: 2003

Country: South Africa

OVERVIEW OF THE COMPANY

Biovac is a South African vaccine development and manufacturing company formed in partnership with the South African Government in 2003.

Vaccine manufacture in Africa is very limited, resulting in the majority of donor funded vaccine volumes being supplied to Africa.

Our vision and mission is to create a world class international African vaccine manufacturer by making a contribution to the world by protecting life through the development, manufacture and supply of needed, quality and effective vaccines and biologicals.

Biovac has built a modern, world class and state of the art manufacturing site located in Cape Town, with vial and prefilled syringe manufacturing capability making it one of the select few licensed vaccine-manufacturing facilities in Africa.

Biovac has built capacity and know-how in conjugate vaccine development, outlicensing its Haemophilus Influenza type B conjugate vaccine technology to three partners in Asia and the US. With respect to product development, Biovac is working on the development of a novel multivalent Group B Streptococcus (GBS) conjugate vaccine.

Strategic partnerships are at the heart of Biovac's success in building local capacity in Africa. To date, inward technology transfer projects that Biovac has secured are with two vaccine multinational companies for local formulation/fill-finish of a fully liquid hexavalent combination vaccine and a pneumococcal conjugate vaccine. Biovac is equally proud to be working with DCVMN members in commercialising their vaccines in South Africa and the Southern Africa region.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
	Pneumococcal Conjugate Vaccine	PFS	
	Hexavalent vaccine	Vial	0.5 ml

FUTURE PRODUCT PIPELINE

- Group B Streptococcus (GBS)

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Group B Streptococcus Vaccine	Current	TBD	TBD	TBD	TBD

AREAS OF INTEREST FOR COLLABORATION

- Inward technology transfers on products relevant to Africa, particularly bacterial and conjugate vaccines.
- Collaborations on conjugate-vaccine product development
- Contract production of bulk antigen – pilot and full-scale GMP
- Fill/finish partnership of product for local and regional markets
- Sourcing finished products for the local and regional markets

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Name of the company:

BravoVax Co., Ltd

Head of institution:

Dr. Ke WU, Chief Executive Officer

Established:

2012

Country:

P.R. China

OVERVIEW OF THE COMPANY

Established in year 2012, BravoVax is a private pharmaceutical company specialized in development, production and commercialization of human vaccines. It is situated at Wuhan, a large modern city in central China. BravoVax is committed to supply safe, effective and affordable vaccines to protect the vast population in the developing world from various infectious illnesses.

The current product pipeline includes vaccines against bacterial and viral diseases. The first vaccine product of the company, a tetravalent attenuated oral rotavirus vaccine, was sublicensed from USA in 2014 and is expecting to enter the clinical trial phase in 2017.

BravoVax currently possess a R&D and pilot production facility with four vaccine technology platforms and two pilot production lines. The company has established the quality system as per WHO cGMP requirement. In addition, a state-of-the-art industrial-scale facility is being planned with a capacity of 100 million doses per year, which will not only meet the domestic needs, but also to enable the company to provide vaccine supply to the large populations in developing countries.

BravoVax has established active partnership with various renowned academic institutions worldwide. The company strategy is to collaborate with the global health community on the development of vaccines to address unmet healthcare needs.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml

FUTURE PRODUCT PIPELINE

- Rotavirus Vaccine
- Pneumococcal Vaccine
- Respiratory Syncytial Virus Vaccine
- Zika Virus Vaccine

FUTURE PRODUCT PIPELINE

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Rotavirus Vaccine					2020
Pneumococcal Vaccine					2021
Respiratory Syncytial Virus Vaccine					2023
Zika Virus Vaccine					2022

AREAS OF INTEREST FOR COLLABORATION

- Vaccines targeting diseases responsible for high rates of mortality and morbidity in developing countries
- Therapeutic biologicals that targeting diseases with high social and economic burdens in both established and emerging markets.
- Technologies improving the vaccine accessibility and affordability in developing world settings

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Location : P.R. China

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Name of the company:

CanSino Biologics Inc.

Head of institution:

Dr. Xuefeng YU, Chairman and CEO

Established:

2009

Country:

P. R. China

OVERVIEW OF THE COMPANY

CanSino Biologics Inc. (CanSinoBIO, SHSE: 688185, HKEX:06185) is an innovative biopharmaceutical company dedicated to exploring best solutions to the prevention of diseases through cutting-edge research & development, advanced manufacturing and commercialization of innovative vaccine products for human use worldwide.

Since its establishment in Tianjin, China in 2009, CanSinoBIO has experienced tremendous growth with 17 vaccines preventing 12 diseases, including approved vaccines for Ebola virus disease (Ad5-EBOV), COVID-19 (Ad5-nCoV, trade name: Convidecia and Convidecia Air), and meningitis (MCV2, trade name: Menphecica, and MCV4, trade name: Menhycia). CanSinoBIO has been listed on the Main Board of Hong Kong Exchange and Clearing Limited (HKEx) in March 2019. A year later, CanSinoBIO has successfully listed on the Sci-Tech Innovation Board (STAR Market) of the Shanghai Stock Exchange, making it the first "A+H" dual listing vaccine company. CanSinoBIO is focusing on continually expanding manufacturing capacity for its current vaccine candidates and further enhancing the competitiveness and the scope of its portfolio by promoting the R&D of new vaccine candidates.

Leveraging broad experiences of our accomplished team of scientists and business leaders who had previously held technical and senior management positions at leading vaccine and pharmaceutical companies in the world. CanSinoBIO has developed five key platform technologies, including viral vector-based technology, synthetic vaccine technology, protein structure design and recombinant technology, mRNA technology as well as formulation and delivery technology.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Ad5-EBOV	Adeno5-based Ebola vaccine	1-dose vial	0.5mL per dose
Convidecia™	Adeno5-based SARS CoV-2 vaccine	1-dose vial 3-dose vial Pre-filled Syringe	0.5ml per dose
Convidecia Air™	Adeno5-based SARS CoV-2 vaccine, administered by inhalation	Multidose vial	0.1ml per dose
Menphecica™	Bivalent meningococcal conjugate vaccine (A, C)	1-dose vial	0.25mg/5doses
Menhycia™	Quadrivalent meningococcal conjugate vaccine (A, C, W135, Y)	1-dose vial	0.5ml per dose

FUTURE PRODUCT PIPELINE

- PCV13 (Pneumococcal conjugate vaccine, 13 valent, infants)
- PBPV (Protein-based Pneumococcal Vaccines, seniors)
- DTcP infants (Diphtheria, Tetanus, Acellular Pertussis vaccine for infants)
- DTcP Booster (Diphtheria, Tetanus, Acellular Pertussis Booster vaccine for infants)
- TdcP adolescents and adults (Tetanus, Diphtheria, Acellular Pertussis booster for adolescents and adults)
- TB booster (Tuberculosis booster vaccine)
- COVID-19 mRNA vaccine
- DTcP-Hib combo (Diphtheria, Tetanus, Acellular Pertussis Haemophilus B combination vaccine for infants)
- IPV (Inactivated Polio Vaccine) in VLP (Virus-Like Particles)

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Convidecia Air™					Q2 2023
PCV13 i					
PBPV					
DTcP Infant					
DTcP Booster					
TdcP Adolescent and Adult					
TB Booster					
COVID-19 mRNA vaccine					
DTCP-Hib Combo Vaccine					
IPV (VLP)					
Meningo B					
Adenovirus platform inhaled					
Shingles					

AREAS OF INTEREST FOR COLLABORATION

- Novel vaccine technologies
- Localization of production
- Market Access and commercialization

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Name of the company:

Changchun BCHT Biotechnology Co.

Head of institution:

Dr. Kong Wei

Established:

March, 2004

Country:

P.R. China

OVERVIEW OF THE COMPANY

Changchun BCHT Biotechnology Co., established in 2004 and located in Changchun, is a biopharmaceutical enterprise engaging in research, development, production and marketing of vaccines, biologics and peptide drugs.

BCHT has well-established innovative platform by the most talented researchers and with the state-of-the-art facility. The management team consists of the members with strong international background and extensive experience in China in biopharmaceutical industry. BCHT owns among the most advanced R&D laboratories and pilot plants for vaccines and peptide drugs in China. Currently, there are vaccines, varicella and LAIV vaccine, in the market and many products such as HIB vaccine and DTP vaccine, in its developing pipeline at the different stages. The manufacturing plant, production process and quality assessment and control are fully with the compliance of GMP requirements and some products aim at receiving WHO prequalification in the near future.

BCHT has established a wide cooperation with international partners for technology promotion and product marketing. For example, LAIV is the project collaborated with WHO. The company's products have received the certificate or are in the process of registration for the permit of market access in many countries. BCHT is to strategically explore the international market and business opportunity with the partners.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Varicella Vaccine, Live	Gelatin-free, validity for 36 months, lyophilized, Oka strain	Vial	0.5ml/vial
Rabies Vaccine (Vero Cell) for Human Use	Produced with microcarrier bioreactor with high potency not less than 2.5IU	Vial	1.0ml/vial
Influenza Vaccine, Live, Nasal, Freeze-dried	Attenuated strains made with influenza A and B viruses recommended by WHO	Vial	0.2ml/ Vial

FUTURE PRODUCT PIPELINE

- VZV Vaccine
- DTP-Hib Vaccine
- MRC-5 Rabies Vaccine
- Antibodies (for infectious disease)

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
VZV Vaccine					
DTP-Hib Vaccine					
MRC-5 Rabies Vaccine					
Antibodies (for infectious disease)					

AREAS OF INTEREST FOR COLLABORATION

- Vaccines
- Peptide
- Biologics
- Export

CONTACT DETAILS

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Name of the company:
China National Biotec Group Company Limited (CNBG)
Head of Institution:
Dr. Xiaoming YANG, Chairman
Established:
1919
Country: P.R. China

OVERVIEW OF THE COMPANY

China National Biotec Group Company Limited (CNBG) has been dedicated in the field of healthcare since 1919. It's a key member of China National Pharmaceutical Group Co.Ltd. (Sinopharm), a Global Fortune 500 company. CNBG has 6 business segments including human vaccines, blood products, animal health, medical aesthetics, diagnostics and biotherapeutics. CNBG is capable to produce 50 kinds of human vaccines against 34 infectious diseases. The annual production capacity could reach up to 7 bn doses. It supplies over 80% of EPI vaccines to China NIP. It is the first Chinese vaccine manufacturer pre-qualified by WHO. It is also the largest blood producer in China, annually producing 14 varieties of blood products, plasma consumption capability can reach 2000 tons. The company is the only licensed botulinum toxin manufacturer in China, with a leading market share of 77%. CNBG has 110 subsidiaries, among which, there are 9 innovative R&D centers, 7 human vaccine manufacture sites, 2 animal vaccine manufacture sites, 5 plasma derived product manufacture sites, 1 diagnostic company, 1 medical aesthetic company, and 1 public listed company (TiantanBio).

CNBG has more than 13,000 employees. The total revenue had reached USD 16.9 Bn in 2021.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
	Hepatitis B vaccine (yeast)	Ampoule	5,10,20 µg
	BCG vaccine for intradermal injection	Ampoule	0.25mg/5doses
	bOPV live attenuated (human diploid cell)	vial	1ml, 20doses/vial
Shanliantai	Diphtheria Tetanus and Acellular Pertussis combines (DTaP), Adsorbed	Ampoule/vial	0.5 ml
	Measles, Mumps and Rubella combined vaccine, Live /Measles/MR	Vial	0.5ml
RS.JEV	Japanese Encephalitis Vaccine Live	Vial	0.5ml
Mengllingkan	Group A+C Meningococcal Polysaccharide vaccine	Ampoule	100µg/dose,400µg/4 doses
	Group A Meningococcal Polysaccharide vaccine	ampoule	150µg/5doses, 300µg/10doses

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Havac	Live attenuated Hepatitis A vaccine	Vial	1ml
	Split Influenza virus vaccine (Tri, Quad)	Prefilled syringe/vial	0.25ml, 0.5ml
Huiyikang	23 Valent Pneumococcal Polysaccharide vaccine	Vial	0.5ml
Loutewei	Live Rotavirus Vaccine (oral)	Vial	3ml
Keerbe	Haemophilus Influenza type b conjugate vaccine	Vial	0.5ml
Shengdoushi	Freeze-dried Live attenuated Varicella vaccine	Vial	0.5ml
Wushengxinling	Rabies Vaccine for human use (VERO cell)	Vial	0.5ml X 5vial /dose
	Yellow Fever Vaccine, Live	Vial	0.5ml
	Typhoid Vi Polysaccharide vaccine	ampoule	1ml/2doses
Sentaibao	Tick- Borne Encephalitis Purified Vaccine	ampoule	1ml
	Human Albumin	Vial	2g,5g,10g,12.5g
	Human Immunoglobulin (pH4) Intravenous Injection	Vial	1.25g, 2.5g,5g
	Human Hepatitis B/Tetanus/ Rabies Immunoglobulin	Vial	100IU,200IU/ 250IU/ 200IU per vial
LANTOX	Botulinum Toxin A for injection	Vial	50IU,100IU
Yiweile	EV71 vaccine (Vero Cell), Inactivated	Vial	0.5ml
	sIPV vaccine (Vero Cell)	Vial	0.5ml
COVILO	Covid-19 Vaccine (Vero Cell), Inactivated	Vial	0.5ml

FUTURE PRODUCT PIPELINE

Product name	Pre Clinical	IND Filed	Clinical			Expected launch date Quarter / Year
			Phase I	Phase II	Phase III	
Trivalent Reassortant Rotavirus Vaccine						
Paratyphoid A Conjugate Vaccine						
Hexavalent Rotavirus Vaccine, Live, Oral						
13-valent Pneumococcal Conjugate Vaccine						

FUTURE PRODUCT PIPELINE

Product name	Pre Clinical	IND Filed	Clinical			Expected launch date Quarter / Year
			Phase I	Phase II	Phase III	
HPV-4						
HPV-11						
Herpes Zoster live Vaccine						
Therapeutic HepB						
Novel HIV vaccine						
Influenza, Split virion, Quadri-valent (MDCK Cell)						
COVID-19 Vaccine, Recombinant (CHO Cell)						
Rabies Vaccine, Lyophilized (2BS Cell)						

AREAS OF INTEREST FOR COLLABORATION

- Combined Vaccine
- Cancer vaccine
- Immuno-oncology
- Cell therapy
- Gene therapy
- Novel adjuvant
- New target/ MOA
- New cell substrate
- Formulation
- Overseas clinical research
- Education/Researcher training and exchange

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Name of the company:

CPL BIOLOGICALS PRIVATE LIMITED

Head of institution:

Mr. Atin Tomar, President

Established: 2009

Country: India

OVERVIEW OF THE COMPANY

Based in Ahmedabad, India, CPL Biologicals Pvt. Ltd. is a joint-venture biotechnology company established in 2009 by Novavax Inc., USA and Cadila Pharmaceuticals Limited, one of India's largest privately held pharmaceutical companies. CPL Biologicals has a three pronged approach to providing novel solutions for global healthcare - vaccines, biologics and diagnostics, with integrated capabilities from early stage research and development to clinical and commercial manufacturing along with dedicated sales and marketing teams. CPL Biologicals has established state-of-the-art R&D and manufacturing facilities in Dholka, Gujarat (India), which currently has the capability of producing up to 25 million doses every year.

CPL Biologicals aims to be a leading provider of high quality novel vaccines, biologics and diagnostics through world-class research and innovations combined with cost effective and efficient manufacturing to address current and future global health challenges.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Cadiflu (Pandemic Influenza Vaccine)	VLP based H1N1 Vaccine	Vial	0.5 ml
Cadiflu-S (Seasonal Influenza Vaccine)	VLP based Trivalent Influenza Vaccine	Vial	0.5 ml

FUTURE PRODUCT PIPELINE

- Rabies Vaccine
- Quadrivalent Influenza Vaccine
- Varicella Zoster Virus Vaccine
- Pancreatic Cancer Vaccine

FUTURE PRODUCT PIPELINE

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Rabies 3 dose Vaccine					Q2/2019
Pancreatic Cancer Vaccine					
Rabies single dose Vaccine					
Varicella Zoster Virus Vaccine					

AREAS OF INTEREST FOR COLLABORATION

- Development and adoption of new products and technologies through Partnerships
- Recombinant proteins and Monoclonal antibodies for therapeutic use
- Vaccines for commercialization by CPL Biologicals
- In licensing /out licensing

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Name of the company:

EuBiologics Co., Ltd

Head of institution:

Dr Yeongok Baik and Dr Seukkeun Choi

Established:

March 10, 2010

Country:

Republic of Korea

OVERVIEW OF THE COMPANY

EuBiologics Co., Ltd. is a Korean biopharmaceutical company providing contract research and manufacturing services, in addition to building a portfolio of vaccines designed to improve global public health. The company was incorporated in March 2010 and has provided customized services for various stages of product development including cell line development, GMP production, validation and regulatory support. It went public on the KOSDAQ Exchange in 2017. EuBiologics's facilities are designed to manufacture a variety of mammalian cell and microbe-derived, protein-based therapeutics and antibodies. EuBiologics has a subsidiary called EUPOP Life Sciences in New York, USA.

The company has become the largest supplier of an oral cholera vaccine to GAVI eligible countries through global stockpile and shipped 65 million doses so far. In parallel with the development of its oral cholera vaccine product ("Euvichol-Plus"), EuBiologics is pursuing a number of other vaccines against diseases such as COVID-19, typhoid fever, meningitis, pneumonia, human papilloma virus, respiratory syncytial virus and herpes zoster virus.

The company's administrative headquarters is in Seoul and its manufacturing facilities are located in Chuncheon, Korea. For additional information about the company, please visit <http://www.eubiologics.com/ENG/>.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Euvichol®	Oral Cholera Vaccine	Vial	1.5 ml
Euvichol-Plus	Oral Cholera Vaccine	Plastic	1.5 ml

FUTURE PRODUCT PIPELINE

- COVID-19 Vaccine
- Typhoid Conjugate Vaccine (TCV)
- Meningococcal Conjugate Vaccine (MCV)
- Pneumococcal Conjugate Vaccine (PCV)
- Human Papilloma Virus Vaccine (HPV)
- Respiratory Syncytial Virus Vaccine (RSV)
- Herpes Zoster Virus (HZV)

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
EuCorVac-19					2023
EuTCV					2023
EuMCV					2026
EuPCV					2026

AREAS OF INTEREST FOR COLLABORATION

- Development of bacterial conjugate vaccines
- Development of combo vaccines
- New adjuvant development and application to bacteria vaccines
- Virus Like Particle (VLP) based vaccine development

CONTACT DETAILS

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Name of the company:

GC Biopharma Corp. (formerly known as Green Cross Corporation)

Head of institution:

Il Sup Huh

Established:

1967

Country:

Republic of Korea

OVERVIEW OF THE COMPANY

Since its establishment in 1967, GC Biopharma Corp. has been safeguarding the public health of S. Korea and is now becoming a leader in the global health industry through its focus on developing necessary, but difficult-to-make medicines.

In 1971, GC Biopharma Corp. (formerly known as Green Cross Corporation) became the first company in S. Korea and the sixth company in the world to establish a plasma fractionation plant. In 2009, it completed the construction of the Ochang Plant, the largest biotech facility at the time. GC Biopharma Corp. has been producing and exporting a variety of plasma-derived products, including albumin, immunoglobulin, and antithrombin. The company has acquired unparalleled expertise in plasma fractionation, and continues to research and develop safer and ever more effective next-generation products.

Prevention of disease is another priority at GC Biopharma Corp.. In 1983, the company became the third in the world to develop a hepatitis-B vaccine, known as Hepavax, followed by in 1988 becoming the first in the world to develop a vaccine against the Hantavirus hemorrhagic fever (Hantavax). In 1993, GC Biopharma Corp. became the second in the world to develop a varicella vaccine (Suduvax), and in 2015 it became the fourth in the world to develop a quadrivalent flu vaccine (GCFlu Quadrivalent), thereby establishing itself as a world-class leader in vaccine development.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
GCFLU Quadrivalent	Split virion inactivated Influenza Vaccine (quadrivalent)	pre-filled syringe	0.5ml
		vial	0.5ml, 5ml
GCFLU	Split virion inactivated Influenza Vaccine (trivalent)	pre-filled syringe	0.5ml, 0.25ml
		vial	0.5ml, 5ml
Varicella Vaccine – GCC inj.	Varicella vaccine (live-attenuated)	vial	0.7ml
BARYCELA inj.	Varicella vaccine (live-attenuated)	vial	0.7ml
Td Vaccine	Tetanus, diphtheria toxoid vaccine	pre-filled syringe	0.5ml

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Hantavax inj.	Inactivated hantaan virus vaccine (Hemorrhagic fever with renal syndrome vaccine)	vial	0.5ml
GCC- Freeze-dried Cell Culture-derived Japanese Encephalitis Vaccine	Inactivated Japanese Encephalitis Vaccine	vial	0.7ml, 0.4ml
Avian Influenza vaccine	Inactivated pre-pandemic avian influenza vaccine (H5N1)	vial	2.5ml

FUTURE PRODUCT PIPELINE

- BCG vaccine
- Anthrax vaccine
- Tdap vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
BCG vaccine					2023
Anthrax vaccine					2023
Tdap vaccine					2026

AREAS OF INTEREST FOR COLLABORATION

- Development and marketing partnership for novel vaccine products
- Co-development and commercialization of biologics for rare disease(Hunter syndrome, Hemophilia A)
- In-Licensing partnership for novel oncology or orphan products
- In-Licensing partnership for novel technology

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Name of the company:
GreenSignal Bio Pharma Private Limited
 Head of institution
Dr. P. Murali (Managing Director)
 Established:
2007
 Country:
India

OVERVIEW OF THE COMPANY

At a time when India is showing great progress as a destination for vaccine Research and Development, Manufacturing etc., GSBPL is all set to make the giant leap into the big league of vaccine manufacturing. GSBPL is now India's second and one of the only 5 WHO Pre-qualified BCG Vaccine manufacturers in the world. Vaccines manufactured by the GreenSignal Bio Pharma Private Limited are pre-qualified by the World Health Organization, Geneva and are being used in countries across the globe in their national immunization programs, saving millions of lives throughout the world. Our clientele include The Government of India, UNICEF, The Government of Nepal etc.

We also manufacture UROVAC, a BCG for Immunotherapy product for Bladder Cancer. UROVAC is being used globally as therapeutic agent against Bladder Cancer.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
BacilloVAX®	BCG Vaccine Freeze Dried (Live Attenuated)	Vial	1mg/vial strength (20 doses)
UROVAC®	BCG for Immunotherapy Freeze Dried (Live Attenuated)	Vial	40mg/vial strength

CURRENT PRODUCTS

- Tetanus Vaccine
- MMR Vaccine
- Anti Snake Venom
- Rabies Vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	

AREAS OF INTEREST FOR COLLABORATION

- R&D
- Anti Venom Production

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Name of the company:

Incepta Vaccine Ltd

Head of institution:

Abdul Muktadir

Established:

2009

Country:

Bangladesh

OVERVIEW OF THE COMPANY

Incepta Vaccine Limited (IVL) is a sister concern of Incepta Pharmaceuticals Ltd, the second largest drug manufacturer of Bangladesh.

Incepta Vaccine Ltd. started in 2009 with the objective to provide quality and affordable vaccines for our people as well as for users globally. IVL has been able to create a huge impact on the local vaccine market and has thereby claimed its leadership role among developing countries.

IVL entered collaborative ventures with a number of international vaccine producers. Oral Cholera Vaccine is the first vaccine developed with the support of IVI. We are developing various vaccines in its own R&D laboratory and some of them are in the stages of clinical studies e.g., TCV, COVID vaccine etc. Other vaccines e.g., Pneumococcal 13 conj., HPV vaccine (4 valent) is being developed.

IVL is poised to manufacture all the vaccines available at present in the world. We are also in the process of producing some new generation vaccines. We have set up separate facilities for Fill Finish, Bacterial Bulk antigen, Viral Bulk Antigen, Bacterial and Viral Research and Development. These facilities are equipped with the latest machinery and well-trained manpower in the biological field. At present, IVL has the yearly capacity to produce 180 million single doses.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Papilovax	Human papillomavirus vaccine (rDNA), Bivalent	PFS	0.5 ml (Single Dose)
Influvax Tetra	Seasonal Influenzae Vaccine (quadrivalent)	PFS	0.5 ml (Single Dose)
Ravix-VC	Vero Cell based Rabies Vaccine	Vial	Lyophilized (1.0 ml), Single Dose
Vaxitet	Adsorbed Tetanus Vaccine	Vial/Ampoule	0.5 ml (Single Dose) 5.0 ml (10 Doses)

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Rubavax-M	Measles and Rubella Vaccine	Vial	Lyophilized (0.5 ml), Single Dose
Vaxphoid	Typhoid Polysaccharide Vaccine	Vial	0.5 ml (Single dose)
Vaxitet-IG	Tetanus Antitoxin (Equine)	Vial	1ml (Each ml contains 3000 IU)
Rabix-IG	Rabies immunoglobulin	Vial	5 ml (Each ml contains 200 IU)
Vaxpol	Poliomyelitis Vaccine Live (Oral). Bivalent, type 1 and 3	Vial	1 ml (10 doses)
PrevaHAV	Inactivated Hepatitis A vaccine	Vial	Adult: 1.0 ml (Single Dose) Pediatric: 0.5 ml (Single dose)
Antivenom	Polyvalent Snake venom antiserum	Vial	10 ml (Lyophilized)
Protet-IG	Human Tetanus Immunoglobulin	Vial	1 ml (Each ml contains 250 IU)
Normoglobin	Human Normal Immunoglobulin	Vial	50 ml & 10 ml (Each ml contains 50 mg IgG)

- OWN BULK

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Hepa B	Recombinant Hepatitis B Vaccine (r- DNA)	Vial	Adult: 1.0 ml (Single Dose) Pediatric: 0.5 ml (Single dose)
Ingovax ACWY	Meningococcal polysaccharide of Neisseria meningitides Group A, C, Y and W135 Vaccine	Vial	Lyophilized 0.5 ml, (Single Dose) 5.0 ml, (10 Doses)
Cholvax	Inactivated Oral cholera vaccine (Bivalent)	Vial	1.5 ml (single dose)

FUTURE PRODUCT PIPELINE

FILL FINISHED

- Varicella Vaccine
- Hepatitis E vaccine
- 23 Valent PPV
- 13 Valent PCV
- Rota Virus Vaccine

Bulk vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Rabies Vaccine					Q2 / 2023
Haemophilus Influenzae B (Hib)					Q2 / 2023
Typhoid Conjugate Vaccine				Ongoing	Q2 / 2023
Human Papilloma Virus vaccine (4 valent)	To be started by 2023				
Pneumococcal 13 strains	To be started by 2023				

AREAS OF INTEREST FOR COLLABORATION

- Conjugation technologies
- Bulk antigen supplies
- Development of Rotavirus vaccine
- Any other new generation vaccines & biological

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Name of the company:
Indian Immunologicals Limited
Head of institution:
Dr. K. Anand Kumar, Managing Director
Established:
1982
Country:
India

OVERVIEW OF THE COMPANY

National Dairy Development Board (NDDB) set up Indian Immunologicals Limited in 1982. IIL's veterinary and human vaccine manufacturing facilities are located at Hyderabad and Ooty in India.

IIL is a major player in the human vaccine market in India, focusing on the paediatric and rabies segment with its flagship product "Abhayrab". IIL is also a major supplier of vaccines to India's Universal Immunization Programme. IIL is also a contract manufacturer of vaccines for leading companies in India.

IIL research efforts are directed at developing frontier technologies in biologicals, diagnostics and vaccines. Vaccines for tropical diseases which are of little interest to western countries, but very relevant for a country like India are a major focus of research. IIL has research collaborations with several reputed national and international institutes including NIH, CDC, GALVMED, Pirbright Institute etc.

IIL exports its products to more than forty countries across the world with customer focus in Middle East, Asia Pacific region, Africa and CIS countries.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Abhayrab	Vero cell culture Rabies vaccine	Freeze dried vial with diluent ampoule	0.5 mL and 1 mL
Abhayrab PF	Vero cell culture Rabies vaccine	Freeze dried vial with diluent ampoule	0.5 mL
Elovac B	Recombinant Hepatitis B vaccine	Vial	0.5 mL, 1 mL, 5 mL and 10 mL
Abhay TAG	Diphtheria, Pertussis and Tetanus vaccine	Vial	0.5 mL and 5 mL
Abhay DAG	Diphtheria and Tetanus vaccine	Vial	0.5 mL and 5 mL
Abahy TOX	Tetanus vaccine	Vial	0.5 mL and 5 mL
Abhay RIG	Equine Rabies immunoglobulins	Vial	5 mL
Vaxtar 5	Diphtheria, Pertussis, Tetanus, HiB and Hepatitis B vaccine	Vial	0.5 mL and 5 mL

FUTURE PRODUCT PIPELINE

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Hepatitis A					2022
MR					2022
Chikungunya Vaccine			NA	NA	
Dengue			NA	NA	2024
Hexavalent vaccine		NA	NA	NA	
Live attenuated COVID 19 vaccine			NA	NA	
JE vaccine					
TD vaccine					2022

AREAS OF INTEREST FOR COLLABORATION

- Rotavirus vaccine technology
- mRNA technology
- Adenovirus technology

CONTACT DETAILS

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Name of the company:
Institut Pasteur de Dakar
Head of institution:
Amadou Alpha SALL
Established:
1896
Country: Senegal

OVERVIEW OF THE COMPANY

Established in 1896 in St Louis of Senegal as a laboratory and later transferred to Dakar, the Institut Pasteur de Dakar was created in 1924.

The Institut Pasteur in Dakar, where the yellow fever virus was discovered in 1927 « French Neurotropic Virus » invested very earlier in research and development which lead to the development of the yellow fever vaccine.

Manufacturing yellow fever vaccine since 1937, Institut Pasteur de Dakar is one of the 4 WHO prequalified manufacturers to supply the UN Nations and the the only one located in Africa.

Apart from Pasteur's mission (Public Health, Education, Training and Research), Institut Pasteur de Dakar ambition to play a key role in vaccine manufacturing in Africa through skills development, and to contribute in reducing vaccine preventable diseases.

To increase its production capacity, Institut Pasteur de Dakar is building a new facility (AfricAmaril project) in Diamniadio (new city 40 km far from Dakar).

With regards to the Covid-19 pandemic, Institut Pasteur de Dakar have been comitted by the Goverment of Senegal to implement a multimodal plateforme to contribute in vaccine production in Africa (MADIBA project)

Apart from vaccine production activities, Institut Pasteur de Dakar develop a platform for Rapid test diagnostic (RTD) for epidemics diseases.

In 2010, the Institut Pasteur de Dakar became a Senegalese non-profit foundation of public utility

Owned by the Government of Senegal and Pasteur Institute in Paris.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Vaccin Amaril Stabilise	Yellow fever vaccine	Ampoule	5, 10 and 20 doses

FUTURE PRODUCT PIPELINE

- Covid-19 vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	

AREAS OF INTEREST FOR COLLABORATION

- R&D
- Tech transfer
- Rapid diagnosis Test

CONTACT DETAILS

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Name of the company:

Institute of Medical Biology Chinese Academy of Medical Sciences

Head of institution:

You Dan

Established:

1958

Country: P.R China

OVERVIEW OF THE COMPANY

The Institute of Medical Biology, Chinese Academy of Medical Sciences (IMBCAMS), integrates basic medical research, postgraduate education with development and production of biological products.

Basing on the solid theoretical basis, rich research accumulation and professional talent teams accumulated in the past 60 years, IMBCAMS has established an independent innovation system for vaccine's R&D. Such a system is a whole industry chain covering from lab scale to industrial scale and even to post-market surveillance. In addition, IMBCAMS also has been rewarded as "WHO Collaborative and Research Center on Enteroviruses", "International S&T Cooperation Base of Development and Industrialization for Infectious Disease Vaccine of China", "National Torch Plan Key High-Tech Enterprise" and "National Engineering Research Center of Biological Product on Virus Diseases".

Recently, benefiting from domestic primate resources and accumulated animal experimental experiences, IMBCAMS established a National High-level (BSL-3/4) Biosafety Research Center for Non-human Primate. The center not only becomes an important basic research platform for discovering, monitoring, and preventing infectious diseases, but also provides significant support in responding to acute public health threats.

In the future, IMBCAMS will improve the innovation ability and fasten the steps to internationally standardize our capacity, provide vaccines targeting international market, and devote to the goal of creating human health wealth over the world.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
	Poliomyelitis Vaccine Type I Type III in Dragee Candy (Human Diploid Cell), Live	Pill	1.0g
	Poliomyelitis (Live) Vaccine Type I Type III (Human Diploid Cell), Oral	Dropper	0.5ml&1.0ml
Weisairuiji	Hepatitis A (Live) Vaccine, Freeze-dried	Vial	1.0ml
Aibiwei	Inactivated Poliomyelitis Vaccine Made From Sabin Strains (Vero Cells)	Vial	0.5ml
EntroVac	Enterovirus Type 71 Vaccine, Inactivated (Human Diploid Cell)	Vial/Prefilled Syringe	0.5ml
ICORNVAC	SARS-CoV-2 Vaccine, Inactivated (Vero Cell)	Vial/Prefilled Syringe	0.5ml

FUTURE PRODUCT PIPELINE

- F-Genotype Attenuated Mumps Vaccine (Human Diploid Cell)
- Meningococcal Polysaccharide Vaccine Group A
- Meningococcal Polysaccharide Vaccine Group A and C
- SARS-CoV-2 Vaccine, Inactivated (Vero Cell)
- Monovalent Rotavirus Vaccine, Inactivated (Vero cell)
- DTaP-sIPV Combined Vaccine
- DTaP
- Rabies Vaccine (Human Diploid Cell) for Human Use, Freeze-dried
- Freeze-dried Haemophilus Influenzae Type b Conjugate Vaccine
- EV71-CA16 Vaccine
- Influenza Vaccine (Split Virion), Inactivated, Quadrivalent

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
F-genotype Mumps (Live)Vaccine (Human Diploid Cell)					
Meningococcal Polysaccharide Vaccine Group A					
Meningococcal Polysaccharide Vaccine Group A and C					
SARS-CoV-2 Vaccine, Inactivated (Vero cell)					
Monovalent Rotavirus Vaccine Inactivated (Vero cell)					
DTaP-sIPV Combined Vaccine					
DTap					
Rabies Vaccine (Human Diploid Cell) for Human Use, Freeze-dried					
Freeze-dries Haemophilus influenza type b conjugate vaccine					
EV71-CA16 Vaccine					
Influenza Vaccine (Split Virion), Inactivated, Quadrivalent					

AREAS OF INTEREST FOR COLLABORATION

- Product export
- Clinical Trials
- Vaccine development
- WHO pre-qualification

CONTACT DETAILS

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Name of the company:

Instituto Butantan

Head of institution:

Dimas Tadeu Covas

Established:

23rd February, 1901

Country:

Brazil

OVERVIEW OF THE COMPANY

Instituto Butantan: Ready to go global

Open for partnerships, in the service of public health

Instituto Butantan supplies the Brazilian public health system with 90% of the sera and 65% of all vaccines distributed in the country. Of the 170 million doses of vaccines dispensed annually by the Brazilian immunization program, 100 million are produced at Butantan.

In particular, Instituto Butantan manufactures 100% of the influenza vaccine doses used by the Ministry of Health. WHO prequalification for this vaccine was achieved in 2021.

Butantan is a public, non-profit institution, part of the São Paulo State Health Department. As its operational branch, private-owned Fundação Butantan allows for agile decision making.

Butantan's main site is located in São Paulo, the state capital and the largest city in South America. This is the most dynamic place for business in Brazil; 78% of the pharmaceutical sales and 74% of R&D expenditure in the country occur in São Paulo State. The organization is set to be a global player in the development and manufacturing of the most advanced and needed biological products, in the service of life and public health.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Seasonal influenza vaccine	influenza trivalent vaccine (split and inactivated)	Vial	5ml
COVID-19	Sars-Cov-2 adsorbed vaccine (inactivated)	Vial	5ml
DTP	diphtheria, tetanus and pertussis (cellular) adsorbed vaccine (DTP)	Vial	5ml
DT	diphtheria y tetanus adsorbed vaccine (dT) - adults	Vial	5ml
DT	diphtheria y tetanus adsorbed vaccine (DT) - pediatric	Vial	5ml
Rabies	human rabies vaccine (inactivated)	Vial	1 ml
Hepatitis B	adsorbed hepatitis B vaccine (recombinant)	Vial	5 ml
HPV	recombinant	Vial	0.5 ml
dTPa	diphtheria, tetanus and pertussis (acellular) adsorbed vaccine (dTPa)	Vial	0.5 ml
HepA	adsorbed hepatitis A vaccine (inactivated)	Vial	0.5 ml

FUTURE PRODUCT PIPELINE

- NDV-HXP-S (Covid-19) vaccine
- Quadrivalent Influenza vaccine
- Tetravalent dengue vaccine
- Chikungunya vaccine
- Pentavalent Rotavirus Vaccine
- BCG (recombinant)
- Pandemic Influenza vaccine H7N9
- dTap
- Adjuvant Monophosphoryl Lipid A
- Adjuvant Silica

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
NDV-HXP-S (Covid-19) vaccine					2025
Quadrivalent Influenza vaccine					2024
Tetravalent Dengue Vaccine					2025
Chikungunya Vaccine					2024
Pentavalent Rotavirus Vaccine					ND
Diphtheria, tetanus and pertussis (acellular) adsorbed vaccine (dTPa)					2027
BCG (recombinant)					ND
Adjuvant Silica					ND
Adjuvant Monophosphoryl Lipid A					ND

AREAS OF INTEREST FOR COLLABORATION

- Product's Innovation
- Combined vaccines
- Adjuvants
- Clinical Trials

CONTACT DETAILS

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Name of the company:
Korea Vaccine Co., Ltd.

Head of institution:
Choi, Duck Ho

Established:
1956

Country:
Republic of Korea

OVERVIEW OF THE COMPANY

KoreaVaccine(KV) is a vaccines and medical devices company in Korea. Since 1956, KV has made an effort to manufacture (fill & finish) and distribute high quality biological products as well as medical devices to achieve our vision which is 'Improvement of the contribution to the better society.'

To accomplish our vision, KV not only focuses on researching and developing new and better products, but also provides services to various biological companies in CMO, CLO, and CSO areas based on its outstanding human resource, technology and infrastructure combined with our passion and sincerity.

With an effort to become an incubator of bio-industry in Korea and lead continuous innovation in our business, KV became one of the top players in Korean vaccine market especially in pediatric segment.

For healthier society and better life, KV will continuously improve our product, and expand its global network for the well being of all stakeholders.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Kovax-Influ PF Inj. (tri, quad)	Seasonal influenza vaccine	Pre-filled syringe	0.25ml, 0.5ml
Kovax-Flu Inj. (tri, quad)	Seasonal influenza vaccine	Pre-filled syringe	0.25ml, 0.5ml
Freeze-dried BCG vaccine for percutaneous use	BCG vaccine (Tokyo172 strain)	Ampoule	12mg x 1amp 0.15ml x 1amp of saline solution

FUTURE PRODUCT PIPELINE

[illegible]

AREAS OF INTEREST FOR COLLABORATION

- Vaccine development
- Transfer of vaccine bulk for commercialization in Korea
- Pre-filled syringe CMO (fill & finish)
- CLO & CSO for Korean MFDS registration and local distribution

CONTACT DETAILS

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Name of the company:

LG Chem, Ltd.

Head of institution:

Hak Cheol Shin

Established:

1947

Country:

Republic of Korea

OVERVIEW OF THE COMPANY

LG Chem developed and commercialized an array of pharmaceuticals for human and animal applications since 1984. LG Chem successfully developed hepatitis B vaccine (EUVAX B™ Inj.) which is used in more than 80 countries and represented the major portion of overseas sales. Further to hepatitis B vaccine, LG Chem successfully developed Hib vaccine (Euhib™ Inj.) and tetravalent DTP-based combined vaccine DTwP-HepB (Euforvac™ Inj.), as a component of pentavalent vaccine by reconstitution DTwP-HepB/Hib(Euforvac-Hib™ Inj.). In 2016, LG Chem launched a fully-liquid pentavalent vaccine(Eupenta™ Inj.) based on the accumulated technology and knowhow for UN vaccine market. LG Chem was selected as one of tech transfer recipient of Sabin IPV by WHO, and based on this technology, LG Chem successfully launched Sabin Inactivated Polio Vaccine (Eupolio™ Inj.) in 2020 and continues to develop fully internalized DTwP-HepB-sIPV-Hib hexavalent vaccine. Through the long development history LG Chem accumulated broad experiences in vaccines and came to have very strong capability in vaccine development. In the future, LG Chem will remain a leader in life sciences and biotechnology-value added areas that are knowledge intensive.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Euvax B™ Inj.	Recombinant Hepatitis B vaccine	Vial Liquid	0.5/1.0/5.0/10.0 ml
Euvax B™ Prefilled Syringe	Recombinant Hepatitis B vaccine	Syringe	1.0 ml
Euhib™ Inj.	Haemophilus influenzae type b vaccine	Vial Lyophilized	0.5 ml
Eupenta™ Inj.	Adsorbed diphtheria, tetanus, whole cell pertussis, hepatitis B and Haemophilus influenzae type b combined vaccine	Vial Liquid	0.5/5.0 ml
Eupolio™ Inj.	Sabin Inactivated Polio Vaccine	Vial Liquid	0.5/2.5 ml

FUTURE PRODUCT PIPELINE

- Hexavalent vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Hexavalent vaccine					Q4 / 2024

AREAS OF INTEREST FOR COLLABORATION

- Development and marketing partnership for novel vaccine products
- Marketing alliance for biologics

CONTACT DETAILS

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Name of the company:
Liaoning Cheng Da Biotechnology Co., Ltd (CDBIO)
Head of institution:
Ms. Zhang XiaoHua, General Manager
Established:
2002
Country:
P. R. China

OVERVIEW OF THE COMPANY

CDBIO is an integrated biotechnology company engaged in R&D, manufacturing, distribution and sales of vaccine products. In 2002, the company introduced world's leading technology platform - bioreactor and micro-carrier cell culture technology" - from which the company has developed rabies vaccine and Japanese Encephalities vaccine.

Until now, our products have been distributed in almost all over the China as well as more than 15 countries in international markets. According to the statistic data, totally more than 100 million doses of rabies vaccine for human use have been used for rabies prophylaxis during the last 7 years and there is no failure case reported after finishing the whole vaccination schedule. The inactivated Japanese Encephalitis vaccine (Vero Cell) has also been launched since 2008 and now it has become a better choice for JE prevention. In 2012, the company built a new manufacturing facility following to the current GMP regulations and it will come into use in 2013.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Rabies Vaccine for human use	<ul style="list-style-type: none"> Perfusion Culture by Bioreactor and micro-carrier system Chromatographically Purified High Immunogenicity (>4.5IU/dose before lot release) High safety Preservative free, antibiotics free 	Vial	Liquid solution: 0.5ml/dose Lyophilized powder 0.5ml/dose after reconstitution
Rabies vaccine for veterinary use	<ul style="list-style-type: none"> Perfusion Culture by Bioreactor and micro-carrier system High Immunogenicity (2.0IU/dose) High safety Antibiotics free 	Vial	1ml/vial for one dose 5ml/vial for 5 doses
Inactivated Japanese Encephalities Vaccine for Human use	<ul style="list-style-type: none"> Perfusion Culture by Bioreactor and micro-carrier system Chromatographically Purified Preservative free, antibiotics free High safety High Immunogenicity 	Vial	Liquid solution: 0.5ml/dose Lyophilized powder 0.5ml/dose after reconstitution

FUTURE PRODUCT PIPELINE

- Hemorrhagic Fever with Renal Syndrome Bivalent Vaccine
- Combined bacterial vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Hemorrhagic Fever with Renal Syndrome Bivalent Vaccine					2014
Combined bacterial vaccine					2017

AREAS OF INTEREST FOR COLLABORATION

- We are seeking partnerships with large pharmaceutical company who are interested in developing biotech and vaccine products
- In-licensing Opportunity in China

CONTACT DETAILS

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Name of the company:
Medigen Vaccine Biologics Corporation
Head of institution:
Dr. Stanley Chang (Chairman)
Established:
October, 2012
Country:
Taiwan

OVERVIEW OF THE COMPANY

Medigen Vaccine Biologics Corporation (MVC), founded in 2012 and located in Hsinchu, Taiwan, is devoted to developing innovative pharmaceutical products with cell-culture technologies and single-use production systems.

Currently, MVC has Enterovirus 71 (EV71) vaccine, Dengue vaccine, Pandemic Influenza vaccine (H7N9), and Quadrivalent Influenza Vaccine (QIV) under clinical development. Among them, Enterovirus 71 has the most advanced timeline, currently at enrollment of Phase III. Besides vaccine, MVC also extends our cell-based technology to biosimilar, developing anti-Respiratory Syncytial Virus (RSV) mAb by cooperation with UCAB and other partners.

MVC's manufacturing plant fully complies with PIC/S GMP. From the production of vaccine bulk to aseptic filling/finishing into either vials or PFS, our integral vaccine production line fulfills the stringent requirement, and with annual capacity at up to 45 million PFS.

MVC values cooperation. Our key partners are located all around the world, including US NIH, SII, UCAB, GC Pharma, and etc.

Through building of pipeline, pursuing of quality, and establishing of cooperation, MVC endeavors to become one of the leading pharmaceutical companies producing the needed pharmaceutical products. Our commitment is to improve global health for better life.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml

FUTURE PRODUCT PIPELINE

- Enterovirus 71(EV71) Vaccine
- Dengue vaccine
- Pandemic Influenza Vaccine (H7N9)
- Anti-RSV mAb
- Rotavirus vaccine
- Quadravalent Influenza Vaccine (QIV)

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Ev71 Vaccine					
Dengue vaccine					
H7N9 vaccine					
Anti-RSV mAb					

AREAS OF INTEREST FOR COLLABORATION

- Joint development for novel cell-based vaccines & biologics
- Marketing and distribution of vaccines & biologics
- In licensing / out licensing
- Contract manufacturing and development (CDMO)

CONTACT DETAILS

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Name of the company:
LLC NANOLEK
Head of institution:
Vladimir Khristenko, President
Established:
2011
Country:
Russia

OVERVIEW OF THE COMPANY

NANOLEK is a Russian biopharmaceutical company that specializes in the production of import-substituting and innovative drugs both developed in-house and in partnership with international partners.

NANOLEK is focused on the development and production of drugs for the prevention and treatment of socially significant diseases.

The company's diversified product portfolio includes vaccines, drugs for treatment of cancer and rare diseases, HIV and others.

The company has a unique experience in the field of technology transfer through partnerships with leading global pharmaceutical companies such as Merck, Sanofi, Yanssen, Novartis, Egis, Aspen, Celltrion and others.

The company now employs more than 700 people, 35% of whom are highly-qualified biotechnology scientists.

NANOLEK's biomedical center is located in the Kirov region on 14 hectares. The high-tech production facility covers an area of 30,000 square meters and meets GMP and ISO standards. It includes laboratories, an R&D center, vaccine, biopharmaceutical and solid formulation production areas and warehousing.

Like any modern international company, Nanolek fulfills its obligations regarding the implementation of social responsibility programs geared toward environmental protection, health and safety of the personnel, training programs for staff members who specialize in the field of bio-pharmaceuticals.

NANOLEK is open to any kind of cooperation which contributes to the development of the pharmaceutical industry focusing on the priorities of WHO policies.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Polimilex	Inactivated poliovirus vaccine (in partnership with Bilthoven Biologics)	Vials	Suspension 0.5 ml
Pentaxim	Vaccine for prevention of diphtheria, tetanus, pertussis, poliomyelitis and Hemophilus infection type b (in partnership with Sanofi Pasteur)	Vials	Lyophilizate 0.5 ml

FUTURE PRODUCT PIPELINE

- POLIOVAXIN – sIPV vaccine solution 0.5 ml
- PNEUMOTEX – PCV vaccine suspension vial 0.5 ml
- HPV-4 vaccine – suspension, vials and prefilled syringes 0.5 ml

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
sIPV vaccine					2021 (In registration)
PCV vaccine					2022
HPV-4 vaccine					2025
sIPV vaccine					2021 (in registration)

AREAS OF INTEREST FOR COLLABORATION

- Localization projects for the Russian Federation and EAEU countries
- Global exports of sIPV and HPV-4 vaccines
- Early stage or late stage in-licensing of vaccines

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Name of the company:

Panacea Biotec

Head of institution:

Dr. Rajesh Jain, Ph.D., Managing Director

Established:

February 1984

Country:

India

OVERVIEW OF THE COMPANY

Panacea Biotec is a progressive, Innovative biotechnology company in India with high focus on R&D, Manufacturing, Marketing of Pharmaceuticals, Vaccines and Biosimilars. We specialize in complex generics, vaccines, and novel drug delivery platforms to offer higher value and better health outcomes for our patients, governments, and overall society.

We have a rich experience of > four decades in vaccines and have significantly contributed to global immunization programs of Developing Countries

Our manufacturing capabilities are recognized by major regulatory bodies through accreditations such as WHO, USFDA, UK MHRA, Saudi FDA, ANVISA, etc.

Our state-of-art production facilities are located in Baddi (HP) and Lalru (Punjab) with capabilities for Drug Substance and Drug Product for cell-culture, viral recombinant, bacterial proteins, and recombinant bacterial vaccines. We also have a dedicated monoclonal antibody manufacturing facility for mammalian cell-culture related products.

Our R&D programs are backed by distinguished, ultra-modern, state-of-art centres with over 300 scientists with deep roots within the academic community in important clusters in India, US, and Germany. We have over 1,400 patent filings in over 68 countries. 382 granted patents are under various stages of examination or publication in countries USA, Germany, Mexico, Brazil, Australia, South Africa, Japan, Russia, Canada, Ukraine, Korea, China, etc.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Enivac HB	Recombinant Hepatitis B Surface Antigen Vaccine	Glass Vial	SDV, MDV (10-dose)
NovoHIB	Haemophilus Type b conjugate (PRP- TT) vaccine.	Glass Vial, Glass PFS	SDV, MDV (5 & 10-dose), PFS
Oral Polio Vaccine	Bivalent Poliomyelitis vaccine including monovalent Type1 and 3 (Oral)	Glass Vial	MDV (20-dose & 10 dose)
Easyfour-TT	DTwP-HibTT Fully liquid Tetravalent Vaccine	Glass Vial, Glass PFS	SDV, PFS
Easyfive-TT	DTwP-HepB-Hib Fully liquid Pentavalent Vaccine	Glass Vial, Glass PFS	SDV, MDV (10-dose), PFS

Product name	Description	Type vial / ampoule	Presentation 0.5/1.0/5.0/10.0 ml
EasySix	DTwP-HepB-Hib-IPV (Salk) Fully liquid Hexavalent Vaccine	Glass Vial, Glass PFS	SDV, PFS, MDV (4-dose, 10-dose)
EasyFour-Pol	DTwP-Hib-IPV (Salk) Fully liquid Pentavalent Vaccine	Glass Vial, Glass PFS	SDV, PFS, MDV (4-dose, 10-dose)
EmulsiPan (oil-in-water adjuvant)	Oil-in-water based adjuvant that is licensed for use in human vaccines (including H1N1 based Flu vaccines). Adjuvant effects include dose sparing, CD4, CD8, T helper response (like Th1), etc.	Multiple	Multiple

SDV = Single Dose Vial MDV = Multi Dose Vial PSF = Pre-filled Syringe

FUTURE PRODUCT PIPELINE

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Pneumococcal Conjugate vaccine (11-valent)				Ongoing	2024
Pneumococcal Conjugate vaccine (10-valent)					
Dengue vaccine				Ongoing	2024
Tetanus diphtheria (reduced)				Ongoing	2023
Tdap					
Meningococcal Conjugate vaccine					TBD
Betacoronavirus vaccine	Ongoing				TBD
SARS-COV-2 Variants of Concern mAb for Treatment					TBD
EmulsiPan-T adjuvant (oil-in-water based TLR7/8 agonist adjuvant)	Ongoing				TBD

AREAS OF INTEREST FOR COLLABORATION

- Vaccines
 - o Human Papilloma Virus (HPV) Vaccine
 - o Flu vaccines
 - o Rotavirus Vaccine
 - o Other vaccines (including infectious diseases, therapeutic, etc.)
- Gene therapies
- Cell therapies

CONTACT DETAILS

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Name of the company:
Pasteur Institute of India, Coonoor
Head of institution:
Dr. S. Sivakumar, Director
Established:
1907
Country:
India

OVERVIEW OF THE COMPANY

The death of a young English lady Lily Pakenham Walsh, due to hydrophobia in the year 1902 who could not get Antirabies treatment in time, led to the establishment of Pasteur Institute of Southern India. Mr. Henry Phipps, American Philanthropist donated to Lord Curzon, the then Viceroy of India, a sum of Rs.50.00 lakhs for the development of Medical Institutions, out of which, a sum of Rupees one lakh was allocated to start the Pasteur Institute of Southern India at Coonoor. The cool and equitable climate led to the choice of Coonoor as the most suitable location for the construction of the Institute. Spread over an area of 16 acres of land the Institute is situated on a grassy knoll on the upper reaches of Coonoor town amidst beautiful surroundings with lush greenery, manicured lawns and flower gardens. It has a glorious tradition of single minded dedication to alleviate the suffering of humanity by its contribution to the research and development of vaccines in the country.

Pasteur Institute of India, Coonoor is a pioneer Institute involved in the production of Antirabies Vaccine since 1907 and DPT group of Vaccines since 1982. The Institute started functioning as Pasteur Institute of Southern India, on 6th April 1907 and took a new birth as the Pasteur Institute of India and started functioning as an Autonomous Body under the Ministry of Health and Family Welfare, Government of India, New Delhi from the 10th of February, 1977. The affairs of the Institute are managed by a Governing Body. The Institute is functioning on a 'no profit no loss' basis. This Institute has been the primary contributor of DPT group of vaccines to the Universal Immunization Programme (UIP), Govt. of India since 1982.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
DPT vaccine	Diphtheria, Pertussis and Tetanus vaccine	Vial	10 doses per vial
DT vaccine	Diphtheria and Tetanus vaccine	Vial	10 doses per vial
TT vaccine	Tetanus Toxoid vaccine	Vial	10 doses per vial
Tissue Culture Anti Rabies Vaccine	Tissue Culture Anti Rabies Vaccine (Vero Cell purified)	Vial	Single Human dose per vial

In the year 2011, the Govt. of India funded to establish cGMP facility for manufacturing DPT group of vaccines with a project cost of Rupees 137.02 crores. 7 new state of art GMP facilities and 2 modified GMP facilities are taken over by our Institute from Management Consultant in Feb. 2019. Currently these facilities are under the process of qualification. The proposed Green field facility for manufacturing of DPT group of vaccines, which is being established, will have total annual installed capacity of 130 million doses (mds). The following are the installed capacities for individual vaccines that are planned to be produced in the new GMP facility,

S. No.	Name of the Vaccine	Installed Capacity (million doses)
1.	DPT Vaccine	60 mds
2.	Td vaccine	50 mds
3	TT vaccine	20 mds

FUTURE PRODUCT PIPE LINE

Currently this institute is in the process of expansion of manufacturing facility for DPT group of vaccines. The facilities are commissioned and qualifications are underway. This institute also has proposal on the anvil to produce the following vaccines,

AREAS OF INTEREST FOR COLLABORATION

- Recombinant Hepatitis B Vaccine rDNA (Hep B)
- Sabin Injectable Polio Vaccine (sIPV)
- Hexavalent Vaccine
- Conjugate Vaccines
- Rotavirus Vaccine (Live & Inactivated)
- Inactivated Japanese Encephalitis Vaccine (JE)
- Vero cell based viral vaccine technologies
- R&D Facilities for vaccine development - This Institute has a strong R&D facility for the developmental studies of existing vaccines and also for newer vaccines using modern recombinant technology. This institute has fruitful collaborations with National Institutes for developing cutting edge technology for futuristic vaccines.

CONTACT DETAILS

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Name of the company:
Center for Research and Production of Vaccines and Biologicals (POLYVAC)
 Head of institution:
Prof. Dr. Nguyen Dang Hien
 Established:
1994
 Country: Vietnam

OVERVIEW OF THE COMPANY

The Center for Research and Production of Vaccines and Biologicals (formerly the Center for Poliomyelitis Vaccine Production) was established in 1994 by the Ministry of Health of Vietnam with the task of carrying out development and application of new technology for production of vaccine and biological products.

From the end of 1962, OPV has been produced in Vietnam. With the great efforts of all professionals and staff, with unity and self-sufficiency spirit in order to fulfill the assigned tasks and duties, the quality of vaccine produced by the Center has increased every year up to 40 million doses, meeting the national vaccination demand for eventual recognition in 2000 by WHO that Vietnam was polio free.

Besides the production of OPV (now bOPV), Center also produces Measles vaccine (MV), Measles - Rubella combined vaccine (MR), Rotavin-M1 vaccine which meets GMP/WHO. Since 2010, Vietnam stop importing measles vaccine while being active in preventing and controlling measles as recommended by WHO. The Rotavirus vaccine has been licensed also from 2012.

Recently, POLYVAC develops new products such as Inactivated Polio Vaccine (IPV), new generation of rotavirus vaccine and SARS-CoV-2 virus rapidly detection kit. The new rotavirus, heat stable one, will be put in use at the end of 2021.

For additional information about the Center, please visit <http://www.polyvac.com.vn>

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
MVVAC	Live attenuated freeze-dried vaccine	Vial	10 doses/vial
MRVAC	Live attenuated freeze-dried Measles-Rubella combined vaccine	Vial	10 doses/vial
bOPV	Bivalent oral poliomyelitis Vaccine	Vial	20 doses/vial
ROTAVIN-M1	Live oral attenuated Rotavirus vaccine (type G1P [8])	Vial	1 dose/vial

FUTURE PRODUCT PIPE LINE

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
sIPV					2021-2022

AREAS OF INTEREST FOR COLLABORATION

- Development of COVID-19 vaccines
- New adjuvant development and application to bacterial vaccines

CONTACT DETAILS

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สมาคมชาดไทย
The Thai Red Cross Society



Name of the company:

Queen Saovabha Memorial Institute, The Thai Red Cross Society

Head of institution:

Prof. Dr. Visith Sitprija, Director

Ms.Duangporn Pornmuttakun, Assistant Director

Established: 1922

Country: Thailand

OVERVIEW OF THE COMPANY

The Queen Saovabha Memorial Institute (QSMI) founded in 1922 and has its mission in producing vaccines eg. BCG vaccines, rabies vaccines and sera preparations eg. snake antivenoms, rabies immunoglobulin and conducting research on snakes, snake venoms, rabies and related topics.

QSMI established a snake farm in 1923 and a horse farm in 1956. QSMI has been manufacturing snake antivenoms since 1923, BCG vaccine since 1953 and rabies immunoglobulins since 2002. Work on snakes, snake antivenoms, rabies and equine rabies immunoglobulin has gained international reputation for many decades. The horse farm has more than 500 horses. The Institute is recognized by WHO as WHO Collaborating Centres in both rabies and snake work. The activities of Queen Saovabha Memorial Institute cover 3 main areas of service, research and production as follows.

SERVICE

1. Treatment of animal bites and vaccination against rabies
2. Animal clinic and Rabies diagnosis
3. Travelers immunization clinic
4. Other immunization
5. Snake farm for public
6. Joint collaborative projects in clinical and laboratory diagnosis of human and animals suspect of being rabid, route of rabies vaccine administration (with ministry of public health, livestock department, WHO and US communicable disease center).

RESEARCH AND DEVELOPMENT

1. Research for improvement of products and diagnosis.
2. Biomedical and clinical research in areas of rabies, snakes, snake venoms and horses.
3. Collaboration and joint research projects Between QSMI and other educational and research institute.
4. Future plan: New tuberculosis vaccine.

PRODUCTION

- Biological products as indicated in Current Product Pipeline.
- Antidote for the NHSO (National Health Security office) eg. Sodium nitrite 3%, Sodium thiosulfate 25%, Methylene blue injection 5%, Diphenhydramine injection 5% and Edetate Calcium Disodium 20% solution for injection.
- Biosimilar product (EPIAO Injection 4,000 IU/ml) for human use.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
BCG Vaccine	lyophilized product of BCG 0.05 mg dose of 0.1 ml and 10 doses per vial	Vial	0.5 mg / ml
Rabies vaccine (TRCS Speeda)	lyophilized product of rabies antigen ≤ 3.5 IU / 0.5 ml in vial	Vial	0.5 ml
Equine rabies immunoglobulins (TRCS ERIG)	injection liquid of 200 IU / ml	Vial	5.0 ml, 2.0 ml
Antivenoms for poisonous snake bite - King Cobra antivenin (Ophiophagus Hannah) - Cobra antivenin (Naja Kaouthia) - Banded Krait antivenin (Bungarus fasciatus) - Malayan Pit Viper antivenin (Calloselasma rhodostoma) - Russell's Viper antivenin (Daboia russelli siamensis) - Green Pit Viper antivenin (Trimeresurus albolabris) - Malayan Krait antivenin (Bungarus candidus) - Neuro polyvalent antivenin (Naja kaouthia, Ophiophagus hannah, Bungarus fasciatus and Bungarus candidus) - Hemato polyvalent antivenin (Calloselasma rhodostoma, Trimeresurus albolabris, Daboia russelli siamensis)	All are lyophilized snake antivenoms in 20 ml. vial and packed with Water for Injection 10 ml.	All are in vial	All are 10.0 ml after reconstituted with solvent

FUTURE PRODUCT PIPE LINE

(imported bulk vaccine for formulation and filling)

- EPIAO Injection : Human Recombinant Erythropoietin Alfa Injection, 1 ml (4,000 IU), produced by recombinant DNA in Chinese Hamster Cells (CHO). Ready to fill bulk from Shenyang Sunshine Pharmaceutical Co., Ltd (3SBio).

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
EPIAO Injection					

AREAS OF INTEREST FOR COLLABORATION

- New TB vaccine

CONTACT DETAILS

Name of contact person:

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Name of the company:

**St. Petersburg Scientific Research Institute of
Vaccines and Serums (SPbSRIVS)**

Head of institution:

Trukhin Victor Pavlovich, PhD

Established: 1938

Country:

Russia

OVERVIEW OF THE COMPANY

SPbSRIVS FMBA of Russia is a leading Russian manufacturer of vaccines for the prevention of influenza, has the GMP certificate from PAHO reference center of CECMED, which confirms compliance of technology and production of vaccines with international standards.

From 2016, SPbSRIVS maintains regular supplies of the influenza vaccine to countries of the Latin American region.

In April 2019 the Russian and Nicaraguan project of construction in Managua of the Latin American Institute of Biotechnology MECHNIKOV was realized and the St. Petersburg Research Institute made the transfer of the production technology of influenza vaccine, as well as a number of other immunobiological products.

SPbSRIVS is fully engaged in research activities, both fundamental and applied, devoted to microbiology and virology, experimental immunology, biomedicine in general, and vaccinology in particular. Particular attention focused to the support of young scientists and specialists, as well as the professional development of personnel to the highest qualifications, in particular, the preparation of doctoral research for academic degrees.

The promising development direction for the Institute is the creation of a scientific & practical cluster uniting production, research and educational institutions of FMBA of Russia.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
PPD skin test	Allergen tuberculosis purified liquid in the standard dilution	Ampoule	1 mL
Flu-M	The Flu-M inactivated split influenza vaccine	Ampoule	0.5 mL

FUTURE PRODUCT PIPE LINE

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	

AREAS OF INTEREST FOR COLLABORATION

- Vaccine development

CONTACT DETAILS

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Name of the company:
SERUM INSTITUTE OF INDIA PVT. LTD.,
 Head of institution:
DR. CYRUS S. POONAWALLA, Chairman & Managing Director
DR. ADAR C. POONAWALLA, CEO
 Established: 1966
 Country: India

OVERVIEW OF THE COMPANY

Serum Institute of India Pvt. Ltd. (SII) founded in 1966 by a true visionary Dr. Cyrus Poonawalla, CMD, is now the World's largest producer of vaccines by number of doses, producing 1.5 billion doses a year that are used in over 170 countries. It is a testament to the vision, grit and innovative approach that Serum Institute has attained world leadership by reaching the unmatched figure of protecting more than 2/3rd of the infant population globally, thus saving the lives of more than 20 million children across the globe. This was achieved by making vaccines available at very affordable prices when these were in acute shortage. Over the last 50 years, Serum Institute has sacrificed more than thousand crores of revenue to achieve this goal. SII is also one of the largest suppliers of WHO prequalified vaccines to U.N. Agencies; and also recognized as the reliable largest source of high quality & affordable vaccines and biologicals. SII made its first international acquisition by acquiring Bilthoven Biologicals, a bioengineering and pharmaceutical company from The Netherlands Govt. SII is the only Indian company to feature in world's top five vaccine companies (in terms of volume) along with global giants GlaxoSmithKline, Merck, Novartis and Sanofi.

SII products are also registered in several countries including Switzerland. This impact has been large enough to make global agencies such as WHO, GAVI, PATH, NIH, NVI/RIVM, CBER/USFDA & BMGF to work with SII to develop newer vaccines. The production facilities of SII are the best in terms of equipment and human resources; essential to ensure high quality of vaccines. Its manufacturing facilities conform to WHO cGMP requirements and till date SII's 25 vaccines are prequalified by WHO/Geneva; and its two Covid vaccines have received Emergency Use Listing. SII Covid-19 vaccines facilities are also approved by USFDA and MHRA.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
TT * DT * Td *	Tetanus Vaccine Diphtheria and Tetanus Vaccine (Paediatrics) Diphtheria and Tetanus Vaccine for Adults & Adolescents	Ampoule Vial Vial	Single dose (0.5 ml) 10 doses (5 ml) 20 doses (10 ml)
DTP *	Diphtheria-Tetanus-Pertussis Vaccine	Ampoule Vial	1 & 2 doses (0.5/1 ml) 10 & 20 doses (5/10 ml)
Quadravax *	DTP + Hib Vaccine (Lyo. & Liquid)	Vial	0.5ml, 1 & 5 ml

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Pentavalent *	DTP Hepatitis B + Hib Vaccine (Lyo. & Liquid)	Vial	0.5ml, 1, 5 & 10 ml
BCG *	BCG Vaccine	Vial	5ml, 10ml/ 10, 20 doses
Measles * Rubella * MR * MMR *	Measles Vaccine Live (Lyo.) Rubella Vaccine Live (Lyo.) Measles and Rubella Vaccine Live (Lyo.) Measles, Mumps and Rubella Vaccine Live (Lyo.)	Vial	1, 2, 5 & 10 doses (0.5ml per dose)
IPV *	Inactivated Poliomyelitis Vaccine	Vial	1, 2 & 5 dose
Nasovac-S *	Seasonal Influenza Vaccine, Live Attenuated (Freeze-dried)	Vial/Ampoule	1 dose (0.5ml per dose)
Hep B *	Recombinant Hepatitis B Vaccine (Pediatric & Adult)	Vial/Ampoule Vial	0.5ml & 1ml 5 & 10 ml
Hib *	Haemophilus type b Conjugate Vaccine (Lyo.)	Vial	1 dose
Men AfriVac *	Meningococcal A Conjugate Vaccine (Lyo.) 5mcg / 10mcg	Vial	1 & 10 doses
bOPV *	Bivalent Oral Poliomyelitis Vaccine types 1 & 3	Vial	10 & 20 doses
ATS	Tetanus Antitoxin	Ampoule/Vial	1 ml / 5 ml
Onco-BCG	BCG for Immunotherapy	Vial	40mg & 80mg /vial
Vero Rabies*	Vero Rabies Vaccine	Vial	1 ml / 1 dose
RMab	Rabies Human Monoclonal Antibody (rDNA)	Vial	100IU/2.5ml & 250IU/ 2.5 ml
Rotavirus*	Rotavirus Vaccine (Live Attenuated Oral) Liquid and Lyophilized	Vial	1 & 2 dose (2.5ml per dose)
PCV-10*	Pneumococcal Polysaccharide Conjugate Vaccine (Adsorbed)– 10 Valent	Vial	1 & 5 dose (0.5ml per dose)
Covishield#	ChadOx 1 nCoV-19 Corona Virus Vaccine (Recombinant)	Vial	10 dose (0.5ml/dose)
Covovax #	SARS-CoV-2 rS Protein (COVID-19) Nanoparticle Vaccine (adjuvanted)	Vial	10 dose (0.5ml/dose)

* Products prequalified by WHO for supplies to U.N. Agencies

WHO granted Emergency Use Listing (EUL) in Feb'2021

FUTURE PRODUCT PIPE LINE

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	

AREAS OF INTEREST FOR COLLABORATION

- Newer Vaccines development
- Biosimilars
- Monoclonal antibodies

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NAME OF THE COMPANY:

SINERGIUM BIOTECH S.A

Head of institution:

Alejandro Gil

CEO & PRESIDENT

Established: 2010

Country:

Argentina

OVERVIEW OF THE COMPANY

Sinergium Biotech is an Argentine biopharmaceutical company specialized in the research, development, production and commercialization of vaccines and biopharmaceutical products of high complexity. Carries out an innovative production model of strategic partnerships with national and international laboratories that allows: the transfer and availability of state-of-the-art technologies, autonomy in the production and supply of strategic products that previously had to be imported, the generation of new sources of employment with highly qualified professionals, the replacement of imports and the generation of an important export potential.

Sinergium built partnerships with top vaccine companies such as Pfizer, MSD, Seqirus, Sanofi, Serum Institute and Sinovac among others. These partnerships contributed to elevate Sinergium's quality standards and worldwide recognition as a world-class manufacturer.

Sinergium supplies regularly vaccines to the Argentinean MOH, some LATAM countries and PAHO tenders. Current available capacities includes both drug substance (in our group companies) and drug product production, with 4 bioreactors of 2000 liters, and PFS and vial filling lines.

Sinergium is open to collaborations for in-licensing new products and CMO for other companies. Our unique position in LATAM and a NRA recognized by PAHO, allow us to play a predominant role in the region.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Virafllu Pediatric	Inactivated influenza vaccine	Prefilled Syringe	0.25
Virafllu	Inactivated influenza vaccine	Prefilled Syringe	0.5
Fluxvir	Inactivated with adjuvant MF59C.1	Prefilled Syringe	1.0
SILGARD	Human Papillomavirus (HPV)	Prefilled Syringe	0.5
Carcivac	Onco BCG Vaccine Bacillus Calmette Guerin	vial	
Vaxipat	Inactivated Hepatitis A Vaccine	Prefilled Syringe	0,5

FUTURE PRODUCT PIPE LINE

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	

AREAS OF INTEREST FOR COLLABORATION

- Partnerships for marketing including local manufacturing for LATAM
- R&D partnerships of novel vaccines
- CMO (drug substance and drug product) for other companies
-

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NAME OF THE COMPANY:
SINOVAC BIOTECH CO., LTD.

Head of institution:

Mr. Weidong Yin

Established:

2001

Country:

P.R. China

OVERVIEW OF THE COMPANY

Sinovac Biotech Co., Ltd. is one of the leading bio-pharmaceutical companies in China, focusing on research, development, manufacturing and commercialization of human vaccines that protect against infectious diseases.

In 2017, Its Healive® - Inactivated Hepatitis A Vaccine (Human Diploid Cell), has passed the assessment under WHO Prequalification procedures. In 2016, Inlive®, an innovative vaccine developed by Sinovac against HFMD caused by EV71 was commercialized in China. Sinovac is internationally recognized for the successful development of the pandemic influenza vaccine against H1N1 virus in 2009. Sinovac is also the only company in China to produce an avian flu vaccine (H5N1) for human for government stockpiling program, to develop a SARS vaccine candidate which has been tested in a phase I human clinical study in 2014.

Sinovac is currently developing many products including a Sabin-strains inactivated polio vaccine, pneumococcal polysaccharides vaccine, quadrivalent Influenza Vaccine, varicella vaccine etc.

Sinovac has been working with 37 countries to register and export its vaccines products. While we are executing our business plan to "supplying vaccines to eliminate human diseases", Sinovac is open and flexible for any potential collaboration with participants in the global vaccine industry.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Healive® WHO Prequalified in 2017	Hepatitis A Vaccine (Human Diploid Cell), Inactivated	Vial/ Pre-filled Syringe	0.5ml/ 1.0ml
Bilive®	Hepatitis A & Hepatitis B Combined Vaccine	Vial/ Pre-filled Syringe	0.5ml/ 1.0ml
Anflu®	Influenza Vaccine (Split Virion), Inactivated	Vial/ Pre-filled Syringe	0.25ml/ 0.5ml
Inlive®	Enterovirus Type 71 Vaccine (Vero cell), Inactivated	Vial/ Pre-filled Syringe	0.5ml
Panflu®	Pandemic Influenza Vaccine (inactivated, adjuvanted)	Vial	0.5ml
Mumps	Mumps Vaccine, Live	Vial	0.5ml

FUTURE PRODUCT PIPE LINE

- sIPV, Poliomyelitis Vaccine (Vero Cell), Inactivated, Sabin Strain
- PPV23, 23-valent Pneumococcal Polysaccharide Vaccine
- QIV, Quadrivalent Influenza Vaccine
- Varicella Vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
sIPV, Poliomyelitis Vaccine (Vero Cell), Inactivated, Sabin Strain					2020
PPV23, 23-valent Pneumococcal Polysaccharide Vaccine					2020
QIV, Quadrivalent Influenza Vaccine					2020
Varicella Vaccine					2019

AREAS OF INTEREST FOR COLLABORATION

- Strategic collaboration on vaccine regulatory approval and distribution outside of China
- Overseas Vaccine Product Localization
- Vaccine co-development Cooperation
- Merger and Acquisition

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NAME OF THE COMPANY:

SK BIOSCIENCE CO., LTD.

Head of institution:

Mr. Jaeyong Ahn

Established:

2018

Country:

Republic of Korea

OVERVIEW OF THE COMPANY

SK bioscience, a member of SK Group which is a third-largest enterprise in South Korea, is a leading innovative vaccine and biopharmaceutical company, working rigorously in the frontline of the global public health.

SK bioscience has been devoted to vaccine research and development since its establishment. It has launched cell culture-based trivalent and quadrivalent influenza vaccine, SKYCellflu®, in 2015 and 2016 respectively. SKYZoster® Inj. and SKYVaricella® Inj. have also been successfully commercialized in 2017 and 2018. SKYCellflu® and SKYVaricella® were prequalified by the World Health Organization in 2019.

Utilizing its cutting-edge vaccine development and manufacturing technologies, SK has been collaborating with various public and private institutions for vaccine R&D and manufacture, expanding its vaccine portfolio including a typhoid conjugate vaccine and non-replicating rotavirus vaccines under cooperation with IVI (International Vaccine Institute) and the global organization PATH (Program for Appropriate Technology in Health) respectively, with support of the BMGF (Bill & Melinda Gates Foundation). SK bioscience is also undergoing development for its vaccine candidate against SARS-CoV-2 with support from the BMGF and CEPI, and it has been cooperating to develop and manufacture COVID-19 vaccines with external vaccine development partners as contract development and manufacturing partner.

A state-of-the-art vaccine manufacturing facility of SK bioscience (Andong L-House), located in Andong, Korea, has highly advanced and efficient manufacturing capabilities in producing multiple types of vaccines utilizing its multi-modular and single-use production system since 2014.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
SKYCellflu® Trivalent	Cell culture-based trivalent inactivated subunit influenza vaccine	Prefilled syringe and vial	0.25mL/0.50mL
SKYCellflu® Quadrivalent	Cell culture-based quadrivalent inactivated subunit influenza vaccine	Prefilled syringe and vial	0.50mL
SKYZoster® Inj.	Live attenuated varicella zoster vaccine for shingles in adult	Vial	0.50mL
SKYVaricella® Inj.	Live attenuated varicella zoster vaccine for chickenpox in children	Vial	0.50mL

FUTURE PRODUCT PIPE LINE

- SARS-CoV-2 Vaccine
- Human Papillomavirus Vaccine
- Rotavirus Vaccine
- Typhoid Conjugate Vaccine
- Non-Replicate Rotavirus Vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
SARS-CoV-2 Vaccine					
Human Papillomavirus Vaccine					
Rotavirus Vaccine					
Typhoid Conjugate Vaccine					
Non-Replicate Rotavirus Vaccine					

AREAS OF INTEREST FOR COLLABORATION

- Out/In-Licensing of vaccine production & platform technology
- Co-development projects of novel vaccines products
- Contract Development and Manufacturing
- Global Partnership for distributorship

CONTACT DETAILS

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Name of the company:

The Government Pharmaceutical Organization

Head of institution:

Bangkok

Established:

August 5, 1966

Country:

Thailand

OVERVIEW OF THE COMPANY

The Government Pharmaceutical Organization (GPO) is a state enterprise within the Society and Technology Sector and was established in accordance with the GPO Act of 1966 (B.E. 2509). GPO operates in accordance with its established mission to comply with Thailand's public health policy by producing and supplying medicines and medical supplies to support the public health system of the country, as well as to act as a mechanism in maintaining the price level of medicines and in reserving medicines and medical supplies for situations of emergency and to sustain national security.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
TAT	Tetanus Anti-Toxin	Ampoule	1.0 ml

FUTURE PRODUCT PIPE LINE

- COVID-19 vaccine
- Seasonal Influenza vaccine (TIV/QIV)
- Pandemic Influenza vaccine (H5N2, H7N9)

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
NDV-HXP-S Covid-19 egg-based vaccine					Q1/24
Egg-based TIV					Q3/23
Egg-based QIV					Q1/26
TIV (Bulk filling)					Q3/25
QIV (Bulk filling)					Q4/25
H5N2, H7N9 Pandemic Influenza vaccine					

AREAS OF INTEREST FOR COLLABORATION

- Finished goods local distributor
- Bulk filling
- Receive technology transfer

CONTACT DETAILS

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Name of the company:

The Company for Vaccine and Biological Production No. 1 (VABIOTECH)

Head of institution:

Established:

2000

Country:

Vietnam

OVERVIEW OF THE COMPANY

VABIOTECH is one of the leading companies in Vietnam in manufacturing, trading, researching and developing a wide range of vaccines and biologicals for human use.

Being the biggest vaccine manufacturer and supplier for the National Expanded Program on Immunization in Vietnam, VABIOTECH is proud of its contribution to prevent, eliminate and gradually eradicate dangerous infectious diseases in order to improve children's health in Vietnam.

Currently, VABIOTECH produces 4 vaccines: Hepatitis B, Hepatitis A, Japanese Encephalitis, Oral Cholera. Besides, VABIOTECH also imports and provides some other vaccines and biological products to meet the market's demand such as: Mumps, Rubella, MR, Meningococcal, Pentavalent and Varicella vaccines.

VABIOTECH is highly committed to provide its best products at favorable price in order to improve Vietnamese people's health and well-being.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
HAVAX	Hepatitis A Vaccine	Vial	0.5/1.0
Gene-HBvax	Hepatitis B Vaccine	Vial	0.5/1.0
JEVAX	Mouse brain derived Japanese Encephalitis Vaccine	Vial	1.0/5.0
mORCvax	Oral Cholera Vaccine	Vial	1.5/7.5

FUTURE PRODUCT PIPE LINE

- Hib Conjugate Vaccine
- Cell based Japanese Encephalitis Vaccine
- Cell based Rabies Vaccine
- Dengue Vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Hib Conjugate Vaccine					
Cell based Japanese Encephalitis Vaccine					
Cell based Rabies Vaccine					
Dengue Vaccine					

AREAS OF INTEREST FOR COLLABORATION

- New vaccine research and development
- Vaccine Exportation and Importation
- Filling and secondary packaging

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Name of the company:
VINS BIOPRODUCTS LIMITED
 Head of institution:
SIDDARTH DAGA
 Established:
1997
 Country:
INDIA

OVERVIEW OF THE COMPANY

Vins Bioproducts Limited is a leading fully integrated anti-sera manufacturing company established in 1997 in Hyderabad, India. Vins has captured substantial market share of Anti-sera product range and developed technology to enhance quality life of the patients. Vins has its presence in India and more than 60 countries across the world. Vins has been a regular supplier to WHO, UNICEF, UNDP and PAHO organizations. Vins facility is approved by International Regulatory Authorities of Ukraine (PICs), Ethiopia, Ghana, Nepal, Kenya, Yemen, Jordan and approved by International distributors like Imres – Netherlands & Mission Pharma – Denmark. And successfully completed the GMP audit of Tanzania FDA.

Vins products are approved by the Regulatory Authorities of Myanmar, Philippines, Thailand, Ghana, Kenya, Nigeria, Zambia, Ivory Coast, Burkina Faso, Congo, Niger, Togo, Mali, Georgia, Uzbekistan, Jordan, Yemen, Nepal, Pakistan, Sri Lanka, etc.. After years of dedicated efforts, Vins Bioproducts Limited has grown into a leading anti-sera company in India conquering 90% of our range of products in 2017-2018

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Cobra antivenin	Specific anti snake venom for South East Asian region	Vial	10.0 mL
Diphtheria antitoxin 10000 I.U.	For the treatment of suspected and confirmed Diphtheria patients.	Vial	10.0 mL
European viper venom antiserum-6 Ph.Eur.	Specific anti snake venom for Europe region	Vial	10.0 mL
Rabies antiserum 1000 I.U. & 1500 I.U.	For the treatment of category –II and category-III animal bites.	Vial	5.0 mL
Scorpion venom antiserum	Specific anti scorpion venoms for MENA region	Vial	10.0 mL
Snake venom antiserum	Specific anti snake venoms for India, South East Asia, Africa and MENA region	Vial	10.0 mL
Tetanus antitoxin 1000 I.U. & 1500 I.U.	For the treatment of tetanus cases.	Vial	1.0 mL

FUTURE PRODUCT PIPE LINE

- Gas gangrene antitoxin
- COVID antiserum

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Gas gangrene antitoxin					
Covid antiserum					

AREAS OF INTEREST FOR COLLABORATION

- Interested in 'Bulk vaccine filling'

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Name of the company:
Walvax Biotechnology Co., Ltd
Head of institution:
 Yunchun Li, Chairman
Established:
2001
Country:
P. R. China

OVERVIEW OF THE COMPANY

Established in 2001, Walvax Biotechnology Co., Ltd. (referred to as Walvax) is a listed fast-growing private company mainly engaged in research and development, manufacture and distribution of biopharmaceutical products with a leading industry position for innovative human vaccine in China. Through fast development over the last 19 years, Walvax has established a rich product pipeline for vaccine and constructed an industry leading R&D and commercialization technology platforms and assembled a talented technology and management team with domestic and overseas experience.

Walvax's largest state-of-art manufacturing site is located in Yuxi, a southwestern city of China, with close to a million-square footage facility, producing all 7 vaccine products currently on the market in China and some of them have been launched into overseas market.

Globally, Walvax has exported products to many countries, including the United States, Indonesia, Egypt, Bangladesh, Nigeria and so forth. Walvax has been partnering with international organizations such as DCVMN, WHO, BMGF, GAVI and CHAI. In addition, Walvax got grants from the Bill& Melinda Gates Foundation to support R&D for HPV-2, HPV-9 and COVID-19 vaccine.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
PCV13-TT	13-valent Pneumococcal Polysaccharide Conjugate Vaccine (Tetanus Toxoid Protein)	Vial & PSF	0.5 ml
PPSV23	23-valent Pneumococcal Polysaccharide Vaccine	PSF	0.5 ml
MPV ACYW135	Group ACYW-135 Meningococcal Polysaccharide Vaccine	Vial	0.5 ml
MPV AC	Group A and C Meningococcal Polysaccharide Vaccine	Vial	0.5 ml
MCV AC	Group A and C Meningococcal Polysaccharide Conjugate Vaccine	Vial	0.5 ml
Hib	Haemophilus Influenzae Type b Conjugate Vaccine	Vial & PSF	0.5 ml
DTaP	Diphtheria, Tetanus and Acellular Pertussis Combined Vaccine, adsorbed	Vial	0.5 ml

FUTURE PRODUCT PIPE LINE

- Human Papillomavirus Vaccine
- Group ACYW135 Meningococcal Polysaccharide Conjugate Vaccine
- LNP-encapsulated mRNA vaccine (ARCoV) targeting the RBD of SARS-CoV-2
- Recombinant SARS-CoV-2 Vaccine (Chimpanzee Adenovirus Vector) (ChAdTS-S)
- Recombinant SARS-CoV-2 Subunit-based Vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
HPV-2 (16/18)					2021 Q2
HPV-9					2025
MCV ACYW135					2023
ARCoV					2021
ChAdTS-S					2021
Recombinant Subunit-based Covid-19					2021

AREAS OF INTEREST FOR COLLABORATION

- Agent distribution of finished product
- Secondary packaging
- Bulk transfer
- Tech transfer
- Co-development

CONTACT DETAILS

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Name of the company:
XIAMEN INNOVAX BIOTECH CO., LTD.
Head of institution:
Mr. Steven Gao
Established:
March, 2005
Country:
P.R. China

OVERVIEW OF THE COMPANY

Xiamen Innovax Biotech Co., Ltd. (INNOVAX), with its premises located in coastal city in East China, was established in 2005. Being wholly owned subsidiary of Beijing Wantai Biological Pharmaceutical Co., Ltd. under the Yang Sheng Tang Group, INNOVAX is dedicated in developing, manufacturing of innovative vaccines, with the mission of providing high-quantity and affordable innovative vaccine for people in need worldwide.

There are two manufacturing sites and facilities respectively for HEV and HPV bivalent vaccine in INNOVAX, with designed capacity of 5 million doses per year and 30 million doses per year.

In collaboration with the National Institute of Diagnostics and Vaccine Development in Infectious Diseases (NIDVD), INNOVAX has established a core-platform using DNA recombinant technology to express protein in *E. coli* for vaccine production. Based on this platform, the world's first Hepatitis E Vaccine--Hecolin® was launched in China in October 2012. In addition, INNOVAX is working on developing HPV vaccine series, an HPV 16/18 bivalent Vaccine--Cecolin® has submitted for BLA review in 2017 in China, an HPV 6/11 bivalent Vaccine in post phase II clinical trial stage and another HPV 9-valent Vaccine in phase II clinical trial.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
Hecolin®	Hepatitis E Vaccine (<i>E.coli</i>)	Pre-filled Syringe	0.5 ml

FUTURE PRODUCT PIPE LINE

- HPV 16/18 bivalent Vaccine
- HPV 6/11 bivalent Vaccine
- HPV 9-valent Vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
HPV 16/18 bivalent Vaccine (Cecolin®)	2002-2007	2010-2011	2011-2012	2012-2018	2019
HPV 6/11 bivalent Vaccine	2002-2009	2013-2016	2016-2017	2019-2021	2024
HPV 9-valent Vaccine	2012-2015	2018-2019	2019-2020	2020-2024	2025

AREAS OF INTEREST FOR COLLABORATION

- Licensing
- Overseas distribution
- Product co-development

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Name of the company:
Zydus Lifescience Limited
 Head of institution:
Mr. Pankaj R. Patel
 Established:
1995
 Country:
India

OVERVIEW OF THE COMPANY

Zydus Lifesciences is an innovation driven, fully integrated, global healthcare provider, with strengths all along the life-sciences value chain. With a core competence in the field of healthcare, Zydus provides total healthcare solutions ranging from formulations, active pharmaceutical ingredients to wellness products and diagnostics. Globally, the group has a strong presence in over 55 countries worldwide including the regulated markets of the US and Europe. The group is supported by over 23000 employees and is committed to its purpose of empowering people to live healthier and more fulfilled lives.

With several innovations to its credit, the group discovered and developed ZyCoV-D the world's first Plasmid DNA vaccine for COVID-19. The group has also launched Bylipsa (Saroglitazar) in India which is the first drug to be approved anywhere in the world for NAFLD (Non-Alcoholic Fatty Liver Disease) and NASH (Non-Alcoholic Steatohepatitis), an unmet healthcare need. The drug has been given an orphan drug status by the USFDA and the European Medicines Agency (EMA) for Primary Biliary Cholangitis. The group's second NCE, Oxemia (Desidustat), has been approved in India for the treatment of Anemia in Chronic Kidney Disease (CKD) patients. Twinrab, the group's novel biologic developed in collaboration with the WHO is a next generation anti-rabies therapy for rabies post-exposure prophylaxis. Exemptia, the world's first biosimilar of Adalimumab, the largest selling therapy worldwide for inflammatory arthritis was also launched by the company. The company launched the world's first antibody drug conjugate biosimilar of Trastuzumab and Emtansine, a critical therapy for the treatment of HER2 positive Breast Cancer. Lipaglyn, the novel drug approved for the treatment of diabetic dyslipidemia is also product of Zydus' innovation. The group has a team of over 1400 research professionals spearheading its research and development programme across 7 sites.

CURRENT PRODUCTS

Product name	Description	Type Vial/Ampoule/PFS	Presentation 0.5/1.0/5.0/10.0 ml
VacTyph	Vi capsular polysaccharide typhoid vaccine	Vial & PFS	0.5 ml
ZyVAC TCV	Typhoid-Vi conjugate vaccine	Vial & PFS	0.5 ml
Vaxirab N	Purified chick embryo cell culture rabies vaccine	Vial	1 ml
Vaxiflu - 4	Inactivated quadrivalent influenza vaccine (split virion)	Vial & PFS	0.5 ml/0.25 ml
ZyCoV-D Vaccine	Plasmid construct with Spike protein gene region from SARS CoV-2 Virus	Vial	2 ml
ZyVac MMR	Measles, Mumps & Rubella Vaccine (Live I.P.) (Freeze dried)	Vial	0.5 ml, 5 ml
MR vaccine	Measles & Rubella Vaccine (Live I.P.) (Freeze dried)	Vial	0.5 ml, 2.5 ml, 5 ml
Twinrab	Cocktail of mAbs (docaravimab and miromavimab) for passive immunization against rabies	vial	1 ml, 2.5 ml

APPROVED PRODUCTS

- Tetanus Toxoid
- Tetanus Diphtheria toxoid (Td)
- Varicella vaccine
- Measles vaccine
- Pentavalent (DTwP-Hib-Hep B) vaccine
- Hepatitis B vaccine
- Swine Flu(H1N1) vaccine

FUTURE PRODUCT PIPELINE

- MMRV vaccine
- HPV vaccine
- Hepatitis E vaccine
- Hepatitis A Vaccine
- Inactivated Chikungunya Vaccine
- Vero cell culture based Rabies Vaccine
- Bivalent Typhoid Vaccine

Product name	Pre Clinical	Clinical			Expected launch date Quarter / Year
		Phase I	Phase II	Phase III	
Tetanus toxoid					NA
Tetanus Diphtheria (Td)					Q4 2023
MMR vaccine					Q4 2022
Varicella vaccine					NA
Measles vaccine					NA
Pentavalent (DTwP-Hib-Hep B) vaccine				Q1/2021	NA
Hepatitis B vaccine				Q1/2021	NA
Hepatitis E vaccine				2024	
HPV vaccine tetravalent				2025	

AREAS OF INTEREST FOR COLLABORATION

- Tuberculosis vaccine
- Malaria vaccine
- Therapeutic cancer vaccines
- Therapeutic metabolic disease vaccines
- RSV vaccine
- Thermostable vaccine technologies
- New adjuvants
- Rotavirus vaccine
- IPV vaccine
- ETEC vaccine
- Shigella vaccine
- Delivery devices and platforms

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that protect and
save lives**



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