Connecting the World for a Cause





WELCOME NOTE FROM THE PRESIDENT

I am delighted with the growing engagement of Network member in bringing together a community of vaccine professionals and experts determined to share experiences and learn from each other.

I had the privilege of being a member of the DCVMN Executive Committee and collaborated with many vaccine manufacturers around the world. It is a great honor for me to enter the year of 2013 as the President of the Developing Countries Vaccine Manufacturers Network, a unique organization that strives to contribute interventions to control vaccine preventable infectious diseases across the globe to save more lives.

We, as a committed group of vaccine manufacturers, must pursue the prophylactic agenda to develop, produce and supply better and new vaccines for healthier lives everywhere. In 2013, the Network has reached out to more people and contributed new vaccines against life-threatening infectious diseases. Within the Network, two Japanese Encephalitis Vaccines and a new typhoid conjugate vaccine were launched in recent times. DCVMN is on the threshold to introduce other new vaccines soon. Preparedness to manufacture pandemic vaccines has to be given due priority.

New agreements were entered into by DCVMN members to supply of key vaccines to GAVIeligible countries. GAVI announced that "Children across Indonesia are set to be protected from five major childhood diseases through the pentavalent vaccine thanks to an ambitious plan to reach children across the country". We urge for increased attention to routine immunization. Let us fully support the end game plans for the eradication of poliomyelitis and take on to eliminate tetanus, measles and rubella.

DCVMN members will have to impress upon our national governments and the international organizations to achieve better routine immunization while fighting regional threats that could become global if not prevented early. I would like to thank our Resource Members for their continued support and valuable inputs.

During 2013, DCVMN International completed arrangements with several institutions to sponsor various technical events for our members. We expect to collaborate with international institutions in 2014 to harmonize standardization procedures and adapt better quality management systems.

Mr. Mahendra Suhardono, President, DCVMN

EXECUTIVE COMMITEE MEMBERS



Mr. Mahendra Suhardono President Bio Farma, Indonesia



Dr.G.V.J.A.HarshavardhanVice-President
Bharat Biotech International Limited
India



Dr. Akira HommaTreasurer
Bio-Manguinhos (Fiocruz),Brazil



Dr. Suresh S Jadhav GAVI Board Alternate Serum Institute of India, India



Dr. Luciana Cezar Cerqueira Leite Instituto Butantan, Brazil



Dr. Morena Makhoana The Biovac Institute, South Africa



Dr. Yonglin Wu China National Biotec Group., China



Dr. Steven Gao Xiamen Innovax Biotech Co. Ltd., China



Ms. Mahima Datla GAVI Board Representative Biological E. Limited, India



Dr. Sonia R Pagliusi Executive Secretary DCVMN International

Member Organizations' Geographical Presence







Name of the company: Beijing Minhai Biotechnology Co., Ltd

Head of Institution : Dr. Zheng Haifa

Established : 2004
Location : China

Overview of the company

Beijing Minhai Biotech focuses on the R&D, manufacture and distribution of human use vaccines, the company provides high quality products including Hib conjugate vaccine, Hib-DTaP combined vaccine and MR vaccine. The company located in Daxing Biomedical Base, Beijing.

Beijing Minhai Biotech has a competitive pipeline of new vaccine products under development including bacterial vaccine, viral vaccine and genetic engineering vaccines. The company has a successful technology transfer with Sanofi Pasteur on

rabies vaccine and will continue seek collaboration opportunities domestically and internationally.



Shenzhen Kangtai Biological Products Co., Ltd - the twin company of Minhai - is the largest Hepatitis B vaccine manufacturer in China. The company located in Shenzhen, Guangdong province.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Hib	Hemophilus Influenzae type b vaccine	Vail	0.5 ml
DTaP-Hib	Diphtheria, Tetanus, acellular Pertussis, and Hemophilus Influenzae type b combined vaccine	Vail	0.5 ml
MR	Measles and Rubella combined vaccine	Vail	Lyophilized
Нер В	Hepatitis B vaccine	Vail / Ampoule	10, 20, 60 ug

Product Name P	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
B Meningococcal Vaccine					Q1/2017
15-valent Pneumococcal Conjugate Vaccine					Q1/2017
Trivalent Cholera Vaccine					Q1/2016
5-valent Rotavirus Vaccine					Q1/2017
Hep A-Hep B Combined Vaccine					Q1/2016
4-valent HPV					Q1/2017
H1N1 Genetic Vaccine					Q1/2017
Genetic Herpes Vaccine					Q1/2017
Genetic EV71 Vaccine					Q1/2017
13-valent Pneumococcal Conjugate Vaccine					Q1/2016
4-valent Meningococcal Polysaccharide Vaccine					Q1/2016
4-valent Meningococcal Conjugate Vaccine					Q1/2016
DTaP Vaccine					Q1/2016
Hib Conjugate Vaccine (frozen-dried)					Q1/2016
Rabies Vaccine (MRC-5)					Q1/2016
23-valent Pneumococcal Polysaccharide Vaccine					Q1/2014
Inactivated Hepatitis A Vaccine					Q1/2014
Split Influenza Vaccine					Q1/2016
Recombinant Hepatitis B Vaccine (Hansenula)					Q1/2014

Areas of Interest for Collaboration

- Technology Transfer
- o IPV vaccine
- Overseas Registration and Distribution

Contact Details -

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Postal code: 102600 Website: www.biominhai.com



Phone: +86 10 59613632



Name of the company: Beijing Tiantan Biological Products Co., Ltd.

Head of Institution : Mr. Zeng Lingbing, General Manager

Established : 1998
Location : China

Overview of the company

Beijing Tiantan Biological Products Co., Ltd. (abbreviated as TiantanBio) is a state-controlled listed corporation for high technology, engaging in research, manufacturing and marketing of biological products such as vaccines, blood derivatives and diagnostic kits. It's a spin-off company from National Vaccine & Serum Institute (NVSI) and became public listed in the China Shanghai Stock Exchange since 1998. TiantanBio owns several subsidiary companies, such as Chengdu Rongsheng Pharmaceutical Co., Ltd., Changchun Keygen Biological Products Co., Ltd., and several serum sampling companies. Now China National Biotec Group Company Limited is its controlling shareholder. At present, TiantanBio has more than 2200 staffs,



including a batch of influential senior technical personnel working in the field of R&D, manufacturing and quality assurance.

TiantanBio has the most complete portfolio of vaccines in the National Immunization Program. The leading products are Hepatitis B Vaccine (Yeast Recombinant), Attenuated Measles Mumps and Rubella Combined Vaccine Live, Attenuated Measles and Rubella Combined Vaccine Live, Diphtheria Tetanus and Acellular Pertussis Combined Vaccine Adsorbed, Poliomyelitis Vaccine in Dragee Candy (Human Diploid Cell) Live, Japanese Encephalitis Vaccine (Vero Cell) Inactivated, Attenuated Freeze-dried Varicella Vaccine Live, Influenza Vaccine (Spilt Virion) Inactivated, H1N1 Influenza A Vaccine (Spilt Virion) Inactivated, Human Albumin, Human Immunoglobulin (pH4) for Intravenous Injection, Human Immunoglobulin and so on.

Product Nam	e Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
TEMREVAC	Hepatitis B Vaccine made by Recombinant DNA Techniques in Yeast	Ampoule	0.5ml , 1.0ml
	Yellow Fever Vaccine, Live	Vial	6 doses 0.3ml
	Influenza Vaccine (Split Virion), Inactivated	Injector /Vial	0.5ml
RUBEVAC	Rubella vaccine, Live (Human Diploid Cell)	Vial	0.5ml
	Japanese Encephalitis Vaccine (Vero Cell), Inactivated	Vial	0.5ml
	Measles, Mumps and Rubella Combined Vaccine, Live (M/R/MR/MMR)	Vial	0.5ml
	Poliomyelitis Vaccine in Dragee Candy (Human Diploid Cell), Live	Pill	1g
Shengdoushi	Freeze-dried Live Attenuated Varicella Vaccine	Vial	0.5ml
Trivac	Diphtheria, Tetanus and Acellular Pertussis Combined Vaccine, Adsorbed (DTaP)	Ampoule	0.5ml
	Group A Meningococcal Polysaccharide Vaccine	Vial	10 doses 300µg
	Typhoid Vi Polysaccharide Vaccine	Ampoule	2 doses 1 ml
	Anti-human T Lymphocyte Rabbit Immunoglobulin	Vial	25mg
	Human Hepatitis B Immunoglobulin	Vial	100IU
	Human Albumin	Vial	10ml/25ml/50ml
	Human Immunoglobulin(pH4) for intravenous Injection	Vial	25ml/50ml
	Human Tetanus Immunoglobulin	Vial	250IU

- O Recombinant Interferon β1b
- Meningococcal ACWY Vaccine (Polysaccharide)
- O Meningococcal A+C Conjugate Vaccine
- O MMR+ Varicella Vaccine

- O Pertussis component vaccine
- Inactivated Poliomyelitis Vaccine

Product Name	Pre Clinical		Clinical		Expected launch date
riodoci Name	rie Cillicui	Phase 1	Phase 2	Phase 3	Quarter / Year
Recombinant Interferon β1b					
Meningococcal ACWY Vaccine (Polysaccharide)					
Meningococcal A+C Conjugate Vaccine					
MMR+ Varicella Vaccine		7			
Pertussis component vaccine					
Inactivated Poliomyelitis Vaccine					

Areas of Interest for Collaboration

- O Combined Vaccine
- Large-scale Production Technology
- O Quality System
- O New Antigen

Contact Details

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Pioneering research, I lealthy toworrow,

Name of the company: Bharat Biotech International Limited

Head of Institution : Dr. Krishna M. Ella, Chairman & Managing Director

Established : 15 February 1996

Location : India

Overview of the company

Bharat Biotech International Limited (BBIL) was incorporated as a company in 1996 at Hyderabad, Andhra Pradesh, India. BBIL was founded by Dr. Krishna M. Ella and Mrs. Suchitra K. Ella, to establish a knowledge base for new vaccine development in the developing world. BBIL has a vision to develop novel vaccines against neglected diseases of the developing world. Dr. V. Krishna Mohan, Executive Director, heads the day to day operations.

BBIL is a multi-dimensional biotechnology company specializing in product-oriented research, development and manufacturing of



vaccines and bio-therapeutics. BBIL is providing affordable, global health care solutions at world class quality. The company pioneered manufacture of the world's first Cesium chloride- free Hepatitis-B vaccine with HIMAX® technology, a novel purification matrix patented globally. BBIL has successfully manufactured preservative -free Hep-B and Hib vaccines. BBIL is the first Indian company to obtain a global patent for a biotech molecule r-LYSOSTAPHIN, to fight Staphylococcal infections. BBIL was certified by KFDA for the manufacture of parenterals. BBIL has a strong focus on innovation and intellectual property rights, with a belief in "developing our own IPR and not violating IPR". Typhoid Vi polysaccharide Conjugate and Inactivated Japanese Encephalitis vaccines of BBIL have been granted commercial licensure in 2013. The focus on neglected diseases is unparalleled at BBIL. Vaccines against malaria, chikungunya, severe rotavirus gastroenteritis, human papiloma, MRSA strains and salmonellosis are in the pipeline.

Product Name	Description	Type Vial/ Ampoule	Presentation 0.5 / 1.0 / 5.0 / 10.0 mL
Revac-B+	Hepatitis B Vaccine, rDNA (Pichia pastoris), 20 µg of HBsAg/1.0 mL (Adult)	Vial	0.5 mL,1.0 mL, 2.5 mL, 3.0 mL, 5.0 mL,10.0 mL
Revac-B mcf	Hepatitis B Vaccine, rDNA (Pichia pastoris) Thiomersal Free, 20 μg of HBsAg/1.0 mL (Adult)	Vial	0.5 mL,1.0 mL
Indirab	Rabies Vaccine Vero Cell-Derived; Pitman-Moore strain of Rabies virus Potency ≥ 2.5 I.U/0.5 mL	Vial	0.5 mL,1.0 mL
TYPBAR	Vi Capsular Polysaccharide Typhoid VaccineVi Capsular polysaccharide of S. typhi (Ty2 strain) 25 µg/ 0.5 mL	Vial	0.5 mL, 2.5 mL
Typbar TCV	Typhoid Vi Capsular Polysaccharide Conjugate Vaccine	Vial/ PFS	0.5 mL, 2.5 mL
JENVAC	Japanese Encephalitis Vaccine, Inactivated	Vial	0.5 mL, 2.5 mL
BIOPOLIO	Trivalent Oral Poliomyelitis Vaccine Live, Attenuated (Sabin) 0.1 mL (2 drops)	Vial	0.5 mL,1.0 mL
BIOPOLIO M1	Monovalent Oral Poliomyelitis Vaccine Type 1 Live, Attenuated (Sabin) 0.1 mL	Vial	2 mL,1.0 mL
BIOPOLIO M3	Monovalent Oral Poliomyelitis Vaccine Type 3 Live, Attenuated (Sabin) 0.1 mL	Vial	2 mL,1.0 mL
BIOPOLIO 1&3	Bivalent Oral Poliomyelitis Vaccine Type 1&3 (Sabin) 0.1 mL	Vial	2.0 mL,1.0 mL
ComVac4-HB (DPT+Hep-B)	Diphtheria, Pertussis (w),Tetanus, Hepatitis-B Vaccine (Quadrivalent Vaccine) 0.5 mL	Vial	0.5 mL, 2.5 mL, 5.0 mL
ComVac5 (DPT+Hep B+Hib)	Diphtheria, Pertussis(w), Tetanus, Hepatitis-B & Haemophilus influenzae Vaccine, (Pentavalent Vaccine) 0.5 mL	Vial	0.5 mL, 2.5 mL. 5.0 mL
ComVac3	Diptheria Tetanus Pertussis Vaccine (DTP Vaccine) 0.5 mL	Vial	0.5 mL, 2.5 mL, 5.0 mL
REGEN-D 150	r- Human Epidermal Growth Factor Gel 150 µg/gm	Tube	7.5g, 15g, 30g, 60g, 150g
REGEN-D 60	r- Human Epidermal Growth Factor Gel 60 μg/gm	Tube	7.5g, 15g, 30g, 60g, 150g
BIO-ENOX 20 mg	Low Molecular Weight Heparin Enoxaparin Sodium Injection. 20mg/0.2 mL (2,000 anti-Xa I.U)	PFS	0.2 mL Pre-Filled Syringes
BIO-ENOX 40 mg	Low Molecular Weight Heparin Enoxaparin Sodium Injection 40mg/0.4 mL (4,000 anti-Xa I.U)	PFS	0.4 mL Pre-Filled Syringes
BIO-ENOX 60 mg	Low Molecular Weight Heparin Enoxaparin Sodium Injection.60mg/0.6 mL (6,000 anti-Xa I.U)	PFS	0.6 mL Pre-Filled Syringes
BIO-ENOX 80 mg	Low Molecular Weight Heparin Enoxaparin Sodium Injection. 80mg/0.8 mL (8,000 anti-Xa I.U).	PFS	0.8 mL Pre-Filled Syringes
HEPASOLV 1000 IU	Heparin Sodium Injection, Sterile	Vial	5mL Vial
HEPASOLV 5000 IU	Heparin Sodium Injection, Sterile	Vial	5mL Vial
HEPASOLV 25000 IU	Heparin Sodium Injection, Sterile	Vial	5mL Vial
BIOGIT / FloraNorm	Saccharomyces boulardii (Granular) 250 mg, oral	Sachet	Sachet
BIO-OSTEON	Sodium Hyaluronate Solution 1%, Sterile	PFS	Sterile 2mL PFS syringe
BioHib	Purified capsular polysaccharide of Hib [covalently bound to 20-40 µg Tetanus toxoid (PRP-TT)] 10 µg	PFS	0.5 mL
BIO-VISEON	Sodium Hyaluronate Solution 1.4% Sterile	PFS	2.25 mL pre-filled syringe

- Recombinant Human Growth Hormone
- O Recombinant Human Serum Albumin
- Recombinant Parathyroid Hormone
- O THR-100 [Recombinant Staphylokinase]
- O Lysostaphin for S.aureus infections, topical
- Rotavirus Vaccine Candidate 116E

- O Malaria Vaccine Candidate -1 (r-PvRII)
- O Malaria Vaccine Candidate -2 (PfMSP-19)
- Malaria Vaccine Candidate -3 (PfF2)

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Recombinant Human Growth Hormone					
Recombinant Human Serum Albumin					
Recombinant Parathyroid Hormone					
THR-100 [Recombinant Staphylokinase]		/			
Lysostaphin for S.aureus infections, topical					
Rotavirus Vaccine Candidate 116E					
Malaria Vaccine Candidate -1 (r-PvRII)					Q1 /2014
Malaria Vaccine Candidate -2 (PfMSP-19)					
Malaria Vaccine Candidate -3 (PfF2)					

Areas of Interest for Collaboration

- Development of Novel vaccines for Neglected diseases
- O Development of novel adjuvants
- O Development of novel therapeutics

Contact Details -

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Biological E. Limited Celebrating Life Everyday

Name of the company: Biological E. Limited

Head of Institution : **Ms.Mahima Datla**, Managing Director

Established : 1953
Location : India

Overview of the company

Biological E Ltd (BE) is a privately held company established in the year 1953 in Hyderabad, INDIA. Over the years, we have built up a very significant share in the world vaccine market, especially in the pediatric range. It is a major supplier to the National Immunization Programme (EPI programme) of the Government of India. BE has supplied over 1.2 billion doses of vaccines to the Government of India and UNICEF. BE envisages becoming a major world player in vaccine business by expanding the product range, market access, manufacturing facilities and infrastructure through investments, increasing manufacturing and development capabilities and marketing agreements.



BE achieved WHO Prequalification status for Four vaccines i.e Japanese Encephalitis, Tetanus Toxoid, Pentavalent Lyophilised & Pentavalent Liquid. This is the first prequalification of a Japanese Encephalitis vaccine and also expects the pediatric indication to be prequalified by the end of the year. We are exporting these vaccines to UN organisations and other international markets.

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 regions countries.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
BETT	Tetanus Toxoid (adsorbed) (TT)	Vial & Ampoule	0.5 / 5.0 / 10.0 ml
TRIPVAC	Diphtheria, Tetanus and Pertussis vaccine (adsorbed) (DTPw)	Vial	0.5 / 5.0 ml
BIVAC	Diphtheria & Tetanus Toxoid (DT)	Vial	0.5 / 5.0 ml
BE Td	Diphtheria and Tetanus vaccine (Td) (for adolescents & adults)	Vial	0.5 / 5.0 ml
BEVAC	Hepatitis B vaccine (recombinant)	Vial	0.5 / 1.0 / 2.5 / 5.0 / 10 ml
TRIPVAC HB	Diphtheria, Tetanus, w-Pertussis, Hepatitis B (recombinant) (DTPw+HepB)	Vial	0.5 / 1.0 / 2.5 / 5.0 ml
HiBE	Haemophilus type b conjugate vaccine (lyophilized) (Hib)	Vial (combipack)	0.5 / 1.0 / 2.5 / 5.0 ml
JEEV	Japanese Encephalitis Vaccine, Inactivated (Strain SA14-14-2 propagated on Vero cell line)	Vial	0.5 ml
ComBE Five	Diphtheria, Tetanus, Pertussis, Hepatitis B and Haemophilus type B conjugate vaccine (DTPw-Hep B + Hib)	Vial (lyophilized)	0.5 / 1.0 / 2.5 / 5.0 ml
ComBE Five	Diphtheria, Tetanus, Pertussis, Hepatitis B and Haemophilus type B conjugate vaccine (DTPw-Hep B -Hib)	Vial (liquid)	0.5 / 1.0 / 2.5 / 5.0 ml

- O Meningococcal Conjugate Vaccine
- O Hexavalent
- O TCV

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Meningococcal Conjugate Vaccine					
Hexavalent					
TCV		1			

Areas of Interest for Collaboration

O Vaccines

Contact Details

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Name of the company: Bio Farma

Head of Institution : **Iskandar**, President Director

Established : August 6, 1890

Location : Indonesia

Overview of the company

Bio Farma is a state-owned vaccine and antisera manufacturer in Indonesia and it plays a vital role in supporting the National Immunization Program. All of vaccines needed by Government are supplied by Bio Farma. The company has an extensive and strong major goal to responsibly endure its high quality vaccine production whilst holding the awareness to persistently develop the green industry by covering all the aspects of the green industry's activities.

Bio Farma was established in 1890 and throughout its extended history, the company has gone a long way from its beginning and has



proven its strength to the world. This reputation has always been upheld properly and could be reflected from its magnificent qualification and ability to acquire WHO prequalification for its vaccines.

Bio Farma's products are exported to many countries through the direct distribution or UN agencies. Bio Farma actively involve in various international organizations such as WHO, International Vaccine Institute, DCVMN, GAVI and Self Reliance in Vaccine Production- in OIC.

In order to stimulate more breakthroughs ahead, the company pledge to conduct new products research, both independently or collaborate with research institutions. The partnership could lead to new vaccine development or new technology platform.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
TT	Tetanus Toxoid Vaccine	Vial Uniject	5.0 ml/10.0 ml 0.5 ml
Bio-TT	Tetanus Toxoid Vaccine	Ampoule	0.5 ml
DT	Diphtheria and Tetanus Vaccine	Vial	5.0 ml
Td	Tetanus and Diphtheria Vaccine (for adult)	Vial	5.0 ml
DTP	Diphtheria, Tetanus and whole -cell Pertussis Vaccine	Vial	5.0 ml
DTP-HB	Tetravalent Combination Vaccine	Vial	2.5ml/5.0 ml
НВ	Hepatitis B Vaccine	Uniject	0.5 ml, 1.0 ml (for adult)
mOPV, bOPV	Monovalent, bivalent Polio Vaccine	Vial	2.0 ml
tOPV	Trivalent Oral Polio Vaccine	Vial	1.0 ml/2.0 ml
Measles	Measles Vaccine	Vial	10 doses/20 doses
BCG	Tuberculosis Vaccine	Ampoule	20 doses
Flubio	Seasonal flu Vaccine	Vial	0.5 ml/2.5 ml
DTP-HB-Hib (Pentabio)	Diphtheria, Tetanus, Whole-cell Pertussis, Hep-B and Haemophilus Influenzae type b	Vial	0.5 ml/2.5 ml/5.0 ml

- O Sabin-IPV (sIPV)
- O Rotavirus Vaccine
- O Flu Vaccine (H5N1 and seasonal flu)
- Measles Rubella Vaccine
- O Typhoid Conjugate Vaccine

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Sabin-IPV (sIPV)					2017
Rotavirus Vaccine					2017
Flu Vaccine (Pandemic & Seasonal)					2017
Measles Rubella Vaccine		7			2015
Typhoid Conjugate Vaccine					2018

Areas of Interest for Collaboration

- O Capacity Building
- O QMS Training
- O Research
- Product Development & Process Innovation
- O Marketing & Distribution

Contact Details -

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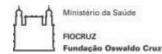
State: West Java Fax: +62 22 204 1306

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Name of the company: Bio-Manguinhos - Institute of Technology on

Immunobiologicals

The Oswaldo Cruz Foundation - Ministry of Health

Head of Institution : Artur Roberto Couto

Established : Avenida Brasil, 4365 – Manguinhos –

Pavilhão Rocha Lima - 21040-360, Rio de Janeiro-RJ

Location : Brazil

Overview of the company

Bio-Manguinhos is a Technical Unit of Oswaldo Cruz Foundation (Fiocruz), Ministry of Health, dedicated to technological development and production of vaccines, biopharmaceuticals and IVD reagents for diagnosis. Formally established in 1976, Bio-Manguinhos plays a strategic role supplying most of the vaccines required by the Brazilian National Immunization Program.

Our production facility is one of the largest and most modern vaccine industrial plants in Latin America. We are investing heavily in technological innovation of immunobiological needed to public health programs and have established several national and international partnerships, in order to accelerate the incorporation of new production technologies. Two vaccines are pre-qualified by



WHO and are exported through the United Nations Agencies: the yellow fever and meningitis meningococcus AC vaccines. About 74 countries have already received these vaccines.

The production of kits for laboratory diagnosis has increased in the last year, especially for infectious and parasitic diseases, such as AIDS, Hepatitis C Leishmaniasis, Chagas Disease, Leptospirosis, among others. Around 11 million tests are produced each year.

The biopharmaceutical production of Interferon and Erythropoietin is around 12 million vials per vear.

In 2012, Bio-Manguinhos began to supply two new vaccines for the National Program of Immunization (NPI): Polio inactivated virus vaccine (IPV) and measles, mumps, rubella and varicella vaccine (MMRV).

Most rewarding to Bio-Manguinhos has been the contribution to the success of the Brazilian National Program of Immunization.

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Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
DTP + Hib	Haemophillus influenzae type B, dipthteria, tetanus and pertussis vaccine	5 doses/vial	2.5 ml
Hib	Haemophillus influenzae type B vaccine	1 and 5 doses/amp	0.5 ml
Yellow Fever	Yellow fever vaccine	5,10 and 50 doses/vial	0.5, 1.0 and 25 ml
Polysaccharide Meningitis AC	Polysaccharide Meningiti AC vaccine	10 doses/vial	1.5 ml
OPV	Oral poliomyelitis virus vaccine	25 doses/tube	2.5 ml
MMR	Measles, mumps and rubella triple vaccine	10 doses/amp	5.0 ml
MMRV	Measles,mumps, rubella and varicella vaccine	1 dose/vial	0.5 ml
Rotavirus	Rotavirus vaccine	1 dose/vial	2.0 ml
10-valent Pneumococcal	10-valent Pneumococcal vaccine	1 dose/vial	0.5 ml

Vaccines pipeline:

- O DTP/HB/Hib/MenC/IPV vaccine
- O Dengue tetravalent vaccine (recombinant)
- O Dengue tetravalent vaccine (inactivated)
- O Yellow fever vaccine (attenuated)
- Yellow fever vaccine (inactivated)
- O Yellow fever vaccine (one dose)
- Hepatitis A vaccine (inactivated)

- Influenzae pandemic vaccine (recombinant)
- O Malaria vaccine (recombinant)
- Leptospirosis vaccine (recombinant)
- O Polysaccharide Meningitis B vaccine
- O Conjugate Meningite C vaccine
- Pneumo proteic vaccine

Stage of development of vaccines, biopharmaceutical, kits for laboratory diagnosis:

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Bacterial Vaccines	3	-	1	1	-
Viral Vaccines	8	-	-	-	-
Biopharmaceuticals	2	-	-	1	-
Kits for lab diagnosis	4	-	-	-	1

Areas of Interest for Collaboration

- o Fermentation
- Prokaryotic expression
- o Eukaryotic expression
- Conjugation
- Plant-based development (Dengue, Malaria, Men B, Men C, YF, Influenza, HAV)

Contact Details

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Name of the company: **BioNet-Asia Co., Ltd.**Head of Institution : **Mr. Vitoon Vonghangool**

Managing Director

Dr. Pham Hong Thai Managing Director

Established : 2001

Location : Thailand

Overview of the company

BioNet-Asia Co., Ltd is a biotech company focusing on the networking, development, manufacturing and supply of vaccines in emerging countries.

For the last ten years, BioNet has built a unique Biotech Network (BIONET) of manufacturers, experts and distributors dedicated to vaccines. We provide our partners with technological and business growth opportunities and ultimately share this common vision that strategic network collaboration is necessary to deliver rapidly conventional and innovative vaccines to the needlest.



BioNet-Asia has been supporting Vaccine Manufacturers in their rapid expansion into international markets and in proposing new growth opportunities. We have successfully facilitated several strategic public and private partnerships in the field of manufacturing and supply of vaccines worldwide.

BioNet is also a technology provider and can propose development collaboration or technology transfer of vaccines using innovative and efficient technologies.

BioNet is now leveraging its international expertise and vaccine networking to build up vaccine development capacity in Thailand with the aim to become a Regional Centre of Excellence in R&D and manufacturing of vaccines.

BioNet is already recognized as a pioneer in the vaccine development in Thailand. We use the most recent technologies available in the field of genetic engineering, protein conjugation and cell-culture in order to produce recombinant acellular pertussis, dengue, hepatitis B and conjugate vaccines.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
NA	NA	NA	NA

- Acellular pertussis vaccine
- O Haemophilus influenzae type b (Hib) conjugate vaccine
- Meningococcal conjugate vaccine
- O Hepatitis B vaccine
- O Adult combinations TdaP vaccine
- Pediatric combinations (tetra/penta vaccines)
- O Dengue vaccine
- O Japanese Encephalitis vaccine
- O Chikungunya vaccine
- Protein carriers

Product Name	Product development R&D Phase	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year

Areas of Interest for Collaboration

- Distribution of vaccines
- O Joint development
- O Proposing technology transfer for Hib, rabies
- Searching for technology licensing of chikungunya, polio, rotavirus, and enterovirus EV-71 vaccines

Contact Details

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Postal code: 13260 Website: www.bionet-asia.com





Name of the company: Cadila Pharmaceuticals Limited

Head of Institution : Shri Dr. Rajiv I.Modi, Chairman & Managing Director

Established : **28-02-1991**

Location : India

Overview of the company

Cadila Pharmaceuticals is one of the largest privately held pharmaceutical companies in India. Over the last few decades, it has been developing and manufacturing pharmaceutical products and selling and distributing these in India and in over 90 countries around the world. It is a research-driven integrated healthcare solutions provider with a pharmaceutical product basket of 450 plus in therapeutic areas that include cardiovascular, gastrointestinal, analgesics, haematinics, anti-infectives and antibiotics, respiratory agents, antidiabetics and immunologicals. The state-of-the-art Research and Development (R&D) facility at Cadila Pharmaceuticals is manned by more than three hundred and fifty scientists

The company also participates in Public-Private partnerships for developing preventive and curative pharmaceutical and diagnostic products.



Over the last decade, Cadila Pharmaceuticals has focused on novel approaches to cancer management and is the first Indian company to get multiple investigational new drugs applications (INDs) cleared by USFDA.

The company has manufacturing facilities conforming to the most stringent international norms at Dholka, Ankleshwar, Kadi and Hirapur in Gujarat; Samba in Jammu and Kashmir and Addis Ababa in Ethiopia.

Cadila Pharmaceuticals has recently emerged on the World map with the development of world's first introductions like 'Polycap'- a novel drug combination for prevention of Cardiovascular Heart Disease; and 'Risorine', a boosted Rifampicin dosage for TB treatment. Cadila Pharmaceuticals also has a strong footprint in micropropagation and bioformulation through its Agro division.

Cadila Pharmaceuticals Ltd. has also formed a joint venture with Novavax, Inc. USA. The JV-CPL Biologicals will be developing and manufacturing vaccines, biological therapeutics and diagnostics in India.

Product Name	Description	Type Vial/PFS	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Pandemic Influenza	H1N1 vaccine produced from VLP technology	Vial/PFS	0.5 ml/2ml vial
Seasonal Influenza Vaccine	Trivalent Influenza vaccine produced from VLP technology	Vial/PFS	0.5 ml/2ml vial
Rabies vaccine	Recombinant G-Protein produced by VLP technology	Vial/PFS	0.5 ml/2ml vial

- O HPV Vaccine
- O Malaria Vaccine
- O Hepatitis B
- O Hepatitis E
- O Pneumococcal conjugate vaccine

Product Name	Pre Clinical	Clinical			Expected launch date	
1 Todoci Name	Tre Chinedi	Phase I	Phase II	Phase III	Quarter / Year	
Pandemic Influenza					2014	
Seasonal Influenza					2014	
Rabies Vaccine					2014	

Areas of Interest for Collaboration

- O Vaccine-recombinant
- O Vaccine- cell culture based
- O Conjugate vaccine
- Adjuvant (Biological and small molecules)
- O Recombinant proteins and Monoclonal antibody for therapeutic use
- O In licensing /out licensing

Contact Details

Name of contact person : **Dr. Bakulesh M Khamar**, Executive Director-Research

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Location: India e-mail: bmk@cadilapharma.co.in

Postal code: **382210** Website: http://www.cadilapharma.com





Name of the company: Changchun BCHT Biotechnology Co.

Head of Institution : **Dr. Kong Wei**Established : **March, 2004**

Location : 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 two vaccines, varicella and rabies, in the market and many products, such as HIV vaccine and LAIV 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.

Product Name	Product Name Description		Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Varicella Vaccine, Live	gelatin-free, validity for 36 months, lyophilized, Oka strain	Vial/PFS	0.5ml/vial
Rabies Vaccine(Vero Cell) for Human Use	Produced with microcarrier bioreactor, with high potency not less than 2.51U	Vial/PFS	1.0ml/vial

- O Acellular DTP Vaccine
- O Live Attenuated Influenza Vaccine
- O HPV Vaccine
- O Exenatide
- o STa1

Product Name	Pre Clinical		Clinical		Expected launch date
riodoci Name	The Clinical	Phase I	Phase II	Phase III	Quarter / Year
Acellular DTP Vaccine					2016
Live Attenuated Influenza Vaccine					2016
HPV Vaccine					2018
Exenatide					
Sta1					

Areas of Interest for Collaboration

- O Vaccines
- Peptide and chemical drugs
- O Biologics
- O Export

Contact Details

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Name of the company: China National Biotec Group (CNBG)

Head of Institution : **Dr. Yang Xiaoming**, President

Established : 1989

Location : P.R. China

Overview of the company

CNBG is a state-owned company and one of the subsidiaries of China National Pharmaceutical Group Company (Sinopharm). It's the largest vaccine and blood products manufacturer and supplier in China and has been dedicated in the field of healthcare for nearly a century. CNBG consists of six institutes of biological products which are located in Beijing, Changchun, Chengdu, Lanzhou, Shanghai, Wuhan respectively. CNBG is also the major shareholder of Beijing Tiantan Biological Products Co., Ltd. and Beijing Vigoo

Biological Co., Ltd.



CNBG has nearly 10000 empolyees, among which more than 4000 are scientists and technicians. CNBG owns dozens of achievements with independent intellectual properties rights and are currently operating more than a hundred SFDA cGMP certified manufacturing lines enabling to manufacture over 200 types of biological products for disease prevention, therapeutic and diagnostic use, also including all the vaccines for Chinese EPI program.

CNBG has successfully integrated a flow of R&D, manufacturing, marketing and post-marketing activities for biological products and has become one of the few companies in the world that could offer the widest range of vaccines with large quantities.

Product Name	Description	Type Vial/Ampoule	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
	tOPV(dragee candy)	Pill	1g
Shanliantai	Diphtheria Tetanus and Acellular Pertussis combines(DTaP), Adsorbed	Amouple/vial	0.5ml
	Measles, Mumps and Rubella combined vaccine, Live(M/R/MR/MM/MMR)	vial	0.5ml
CD.JEV	Japanese Encephalitis Vaccine Live	vial	0.5ml
Mengllingkang	Group A+C Meningococcal Polysaccharide vaccine	Ampoule	100µg/dose,400µg/4doses
	Group A Meningococcal Polysaccharide vaccine	Ampoule	150µg/5doses, 300µg/10doses
Havac	Live attenuated Hepatitis A vaccine	vial	1ml
	Split Influenza virus vaccine	Injector/vial	0.25ml, 0.5ml
Huiyikang	23 Valent Pneumococcal Polysaccharide vaccine	vial	0.5ml
Loutewei	Live Rotavirus Vaccine (oral)	vial	3ml
Keerbei	Haemophillus Influenza type b conjugate vaccine	vial	0.5ml
Shengdoushi	Freeze-dried Live attenuated Varicella vaccine	vial	0.5ml
Wushengxinning	Rabies Vaccine for human use(vero cell)	vial	0.5ml X 5vial /dose
	Yellow Fever Vaccine, Live	Ampoule	0.3ml/6doses
	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
Hengli	Botulinum Toxin A for injection	vial	5,10,20 µg
	Murine Monoclonal Antibody Anti-Human CD3 antigen of T Lymphocyte	vial	5ml

Product Name	Pre Clinical	IND Filed	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Beijing Strain Varicella Live Attenuated Vaccine						
Ev71 Vaccine						
Trivalent Reassortant Rotavirus Vaccine						
Typhoid Vi Conjugate Vaccine						
Group A+C Meningococcal Conjugate Vaccine						
ACYW135 Meningococcal Polysaccharide Conjugate						
Hexavalence Rotavirus Vaccine						
13-valent Pneumococcal Conjugate Vaccine						
Recombinant Hexavalent Human Papillomavirus						
sIPV						
Lyophilized Herpes Zoster Inactivated Vaccine						
Measles, Mumps, Rubella and Varicella Combined Vaccine Live (MMRV)						
DTaP+Hib						

Areas of Interest for Collaboration

- Large-scale Production Technology
- O Combined Vaccine
- O Cell line
- O New Antigen
- O Adjuvant

Contact Details

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Name of the company: EuBiologics, Co. Ltd.

Head of Institution : **Dr. Yeong-Ok Baek**, CEO

Established : March 10, 2010
Location : Republic of Korea

Overview of the company

EuBiologics is a biopharmaceutical company with the goal of improving global public health through supplying safe and effective vaccines. EuBiologics focuses manufacturing and marketing of vaccines against a range of infectious diseases in pediatric, travel and endemic fields.

EuBiologics was incorporated in Anyang-si, Gyeonggi-do, The Republic of Korea in March 2010 and in September of the same



year, it was selected for oral cholera vaccine manufacturing technology transfer by International Vaccine Institute (IVI). Up to now it concerts all efforts for constructing a vaccine manufacturing plant and processing oral cholera vaccine licensure. Currently EuBiologics is constructing vaccine manufacturing and R&D facilities at Chuncheon Bioindustry Foundation (CBF), aiming at the completion of the construction work and the manufacturing of oral cholera vaccine clinical trial lots in early 2013.

EuBiologics will make every effort to promote welfare of all mankind and to improve public health in developing countries through the supply of the vaccines of high quality.

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

- Oral cholera vaccine
- O Typhoid conjugate vaccine

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Oral cholera vaccine				in planning	Q1/2014

Phone: +82 31 442 6675

Areas of Interest for Collaboration

- Development of bacterial conjugate vaccines
- Development of combo vaccines
- O New adjuvant development and application to bacterial vaccines

Contact Details

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Location: Republic of Korea email: yobaek@eubiologics.com

Postal code: **430-731** Website: **www.eubiologics.com**





Name of the company: Finlay Institute

Head of Institution : **Dr. Concepción Campa Huergo**, President / General Director

Established : 27th Ave No. 19805, La Coronela La Lisa, Habana City

Location : Cuba

Overview of the company

The FINLAY INSTITUTE, founded in 1991, is a scientific organization, dedicated to research, development, production and commercialization of human vaccines, internationally recognized in this field. This institution is a world leader in the field of meningococcal vaccine and other classic vaccines included in the Extended Immunization Program (EIP). VA-MENGOC-BC®, created and produced by the Finlay Institute was the first effective vaccine against serogroup B meningococcus.



The almost 1000 members of Finlay's staff constitute the largest capital of Finlay Institute and they have been recognized for their experience in the field of vaccines, more than 60% of them have high technical and professional qualification in the field of vaccine research, development, production and quality control. Many of them have more than 20 years of experience in these specialties, which guarantees the preparation and continuity of the projects with the inclusion of new talents graduated from the universities.

The facilities engaged in the production of vaccines and active pharmaceutical ingredients were designed, built, equipped and they are operated according to cGMP. Some products manufactured in these facilities have been prequalified by WHO.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
VA-MENGOC-BC®	Meningococcal BC vaccine	Vial	0.5/2.5/5.0 ml
vax-MEN-AC®	AC Meningococcal polysaccharide vaccine	Vial	5.0 ml
vax-MEN- ACW ₁₃₅ ®	Meningococcal ACW ₁₃₅ vaccine	Vial	5.0 ml
vax-SPIRAL®	Trivalent leptospirosis vaccine	Vial	0.5/5.0ml
vax-TyVi®	Vi polysaccharide typhoid vaccine	Vial	0.5/5.0/10.0 ml
vax-TET®	Tetanus vaccine	Vial	0.5/5.0/10.0 ml
VA-DIFTET®	Diphtheria-Tetanus vaccine for children	Vial	0.5/5.0/10.0 ml
dT-vax®	Diphtheria-Tetanus vaccine for adults	Vial	0.5/5.0/10.0 ml
DTP-vax®	Diphtheria- Tetanus-wPertussis vaccine	Vial	0.5/5.0/10.0 ml

- O Cholera vaccine (attenuated)
- O Plain ACYW₁₃₅ meningococcal vaccine (porcine components free)
- O AW₁₃₅ OMV vaccine
- O Plain polysaccharide Vi Vaccine (porcine components free)
- O Plain ACYW₁₃₅ X meningococcal vaccine

- O AW₁₃₅X OMV vaccine
- Conjugated Vi polysaccharide vaccines
- O Conjugated Meningococcal ACYW₁₃₅X vaccine
- Onco BCG

Product Name	Pre C	linical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Cholera vaccine (attenuated)						
Plain ACYW ₁₃₅ meningococcal vaccine (porcine components free						
AW ₁₃₅ OMV vaccine						
Plain polysaccharide Vi Vaccine (porcine components free)						
Plain $ACYW_{135}$ X meningococcal vaccine						
AW ₁₃₅ X OMV vaccine						
Conjugated Vi polysaccharide vaccines						
Conjugated Meningococcal ACYW _{13.5} X vaccine						
Onco BCG						

Areas of Interest for Collaboration

- O Cooperated manufacturing
- O Vaccine technologycal transfer
- O Bacterial vaccines development based on outer membrane vesicles and based on capsule polysaccharides
- O Application of novel adjuvants based on serogroup B Neisseria meningitidis outer membrane vesicles and proteoliposome-derived cochleate structure for vaccine development

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Name of the company: GreenCross Corporation

Head of Institution : II-Sup Huh

Established : 1967

Location : Republic of Korea

Overview of the company

Green Cross Corporation (GCC) is one of the leading research based biomedical and pharmaceutical companies in Korea. The corporate headquarter and R&D facilities are located in Yongin. GCC has 3 production plants. Since its establishment in 1967, GCC has pioneered in the field of biopharmaceuticals, such as vaccines, plasma-derivatives, diagnostics, recombinant proteins and therapeutic antibodies.

GCC has been well known for the R&D and commercialization of 'Hepavax B', a world's biggest selling hepatitis B vaccine,



'Hantavax', a world's first epidemic hemorrhagic fever vaccine, and 'Suduvax', a world's second chicken pox vaccine. Starting from the nation's first Albumin production in 1971, it currently manufactures more than 12 plasma fractions including immunoglobulin, anti-hemophilic factors, and anti-thrombin factor. Manufacturing over 250 diagnostic reagents in 41 items, GCC is the leader in the nation's diagnostic reagent sector. Recent innovations include 'BDD rhFVIII (GreenGene™)', a recombinant human coagulant factor VIII and a complete flu pipeline including seasonal flu vaccine (GCFLU®), H1N1 vaccine, avian flu vaccine as well as flu therapeutics, Peramivir. GCC is also pursuing opportunities in rare diseases developing therapies for Hunter syndrome (Hunterase $^{\text{TM}}$) and Fabry's disease (GC1119).

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
GC FLU	Influenza Vaccine (Split virion, Inactivated)	pre-filled syringe	0.5ml, 0.25ml
Japanese Encephalitis Vaccine- GCC inj.	Japanese Encephalitis Vaccine	Vial	0.5ml, 1ml
Varicella Vaccine – GCC inj.	Varicella Vaccine (Live)	Vial	0.7ml

^{*} More detailed information of GCC' full list of current product pipeline & future product pipeline is available at www.greencross.com.

- O Avian Influenza vaccine
- O Adult Td vaccine
- O Anthrax vaccine
- O TdaP vaccine
- O Varicella Zoster vaccine
- O Cell Culture Influenza vaccine

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Avian Influenza vaccine					
Adult Td vaccine					
Anthrax vaccine					
TdaP vaccine					
Varicella Zoster vaccine					
Cell Culture Influenza vaccine					7

Areas of Interest for Collaboration

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

Contact Details

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Name of the company: Haffkine Bio-Pharmaceutical Corporation Limited

Head of Institution :

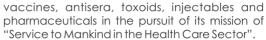
Established : 1974

Location : India

Overview of the company

The Haffkine Bio-Pharmaceutical Corporation was incorporated in 1974, aiming to take-up and expand the production of the erstwhile Haffkine Institute and to manufacture standard biological and non-biological products of public health importance. The Company established a subsidiary Company in 1977 viz. Haffkine Ajintha Pharmaceuticals Ltd at Jalgaon, producing tablets, capsules, powders, ointments etc.

Haffkine is engaged in the manufacture and supply of biological and non-biological products especially bacterial and viral



The Company has contributed significantly towards the universal immunization and the Polio Eradication Programme, launched by the Government of India, ensuring timely supply of Oral Polio Vaccine (OPV) in sufficient quantity.

The Company has WHO-GMP prequalification for its Oral Polio Vaccines (mOPV1, bOPV(1&2) and tOPV) for supply to UNICEF.

Haffkine timely and adequatly supplies all its products at affordable prices to all the Public Health Institutions of Government of Maharashtra.

Specific initiatives are underway for meeting the demands for the lifesaving drugs in other States, as well as in other countries. The Company plans to increase vaccine/antibodies production and diversify into the manufacture of newer vaccines of social relevance.



Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
tOPV	trivalent Oral Polio Vaccine	Vial	2.2 ml (20 doses)
bOPV(1&3)	Bivalent Oral Polio Vaccine	Vial	2.2 ml (20 doses)
mOPV(1)	Monovalent Oral Polio Vaccine	Vial	2.2 ml (20 doses)
ASVS	Anti Snake Venom Serum	Vial	10 ml
AScVS	Anti Scorpion Venom Serum	Vial	10 ml
ARS	Anti Rabies Serum 300 IU/ml	Vial	5 ml
ADS	Anti Diphtheria Serum 100001U	Vial	5 ml
ATS	Anti Tetanus Serum 1500IU/ml	Ampoule	1 ml

- O Tissue Culture Anti Rabies Vaccine (TCARV)
- AGGS

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year	

Areas of Interest for Collaboration

- O Measles
- O Hep B
- O HiB
- O IPV
- O Pneumococcal vaccine

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Name of the company: Hualan Biological Engineering Inc.

Head of Institution :

Established : 1992

Location : China

Overview of the company

Founded in 1992, Hualan Biological Engineering Inc. (Hualan Bio) is a high-tech biopharmaceutical company in China engaging in the research, development, production, and commercialization of human blood products, viral and bacterial vaccines, and recombinant biologics. Hualan Bio was the first company whose manufacturing facility for the blood products was validated and compliant with Chinese GMP in 1998. In September, 2011, the production line for the seasonal influenza vaccine at Hualan was the first validated and passed the new version of GMP in China.



Hualan Bio is the largest manufacturer and provider for both human blood products and influenza vaccines in Asia. Driven by the mission of "Dedicating for Human Healthcare", Hualan Bio has made a significant effort and successfully developed and manufactured a number of products such as human Albumin, IVIg, PCC, Fibrin Sealant, Factor VIII, Seasonal Influenza Vaccine, H1N1 Vaccine, ACYW135 Meningococcal Polysaccharide Vaccine, and Hepatitis B Vaccine, which can be classified into 3 categories, 14 products, and 50 formulations. As an example, during the breakout of the H1N1 pandemic in 2009, Hualan Bio reacted swiftly and was the first to manufacture and market the H1N1 vaccine which has a great impact on the human life and social stability.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Vaccines	Recombinant Hepatitis B Vaccine (Hansenula polymorpha)		
	Meningococcal Polysaccharide Vaccine Group ACYW135		
	Inactivated Influenza Vaccine (Split virion)		
	Influenza A (H1N1) Vaccine, (Split, Inactivated)		
Blood Products	Human Albumin		
	Human Immunoglobulin		
	Human Immunoglobulin (pH4) for Intravenous Injection		
	Human Rabies Immunoglobulin		
	Human Hepatitis B Immunoglobulin		
	Human Tetanus Immunoglobulin		
	Human Prothrombin Complex		
	Human Coagulation Factor VIII		
	Human Thrombin, Lyophilized for external use		
	Surgical Lyophilized Fibrin Sealant, Human		
	Human Fibrinogen		

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year

Areas of Interest for Collaboration

Contact Details

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Name of the company: Incepta Vaccine Ltd

Head of Institution : Abdul Muktadir, Managing Director

Established : 2011

Location : Bangladesh

Overview of the company

Incepta Vaccine Ltd is the first manufacturing company of human vaccines in Bangladesh established with the primary objective to provide preventive medicine to vast majority of population at an affordable cost. It has a vision to develop novel vaccines against diseases of the developing world.

Ilncepta vaccine Ltd has state-of-the-art facility fully compliant with WHO GMP requirements. It is a large vaccine facility that has the capacity to manufacture 180 million single dose vials and ampoules per year. It has 4 independent production lines that can manufacture any dose size from 0.1ml to 15 ml

simultaneously.



It has started manufacturing of vaccines from June 2011 and successfully launched number of vaccines in the market including Rabies vaccine, Typhoid polysaccharide vaccine, Adsorbed Tetanus vaccine, Rabies Immunoglobulin vaccine, Tetanus Antitoxin and Hepatitis B vaccine (rDNA) for pediatric and adult. It has an advanced fully GMP compliant R&D facility which can independently handle several projects simultaneously involvina bacteria and virus. It also has a large lab animal house covering around 24,000 square feet area which has Bio safety level 3 standard lab for testing of various vaccines which involve challenge with infectious organisms. It has well designed spacious several cold rooms to store raw materials and finished products. It has 4 cold rooms of temperature within 2-8 °C and 2 cold rooms of temperature - 20 °C to store raw materials and finished products.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Rabix-vc	Rabies vaccine (Human) BP, 2.5 IU/1ml	Vial	1 ml
Vaxitet	Adsorbed Tetanus vaccine BP, 40 IU/0.5 ml	Ampoule	0.5 ml
Vaxphoid	Typhoid Polysaccharide vaccine BP, 25 µg/0.5 ml	Vial	0.5 ml
Rabix - IG	Rabies Immunoglobulin USP, 1000 IU/ 5 ml	Vial	5 ml
Vaxitet - IG	Tetanus Antitoxin (Equine) BP, 3000 IU/ 1 ml	Vial	1 ml
Нера - В	Hepatitis B vaccine (rDNA) BP, for pediatric and adult	Vial	0.5 ml & 1 ml

Product Name	Pre Clinical	Phase 1	Clinical Phase 2 Phase 3		Expected launch date Quarter / Year

Areas of Interest for Collaboration

Incepta Vaccine Ltd. is open for collaboration with other vaccine manufacturers and research organizations. We intend to take up projects for co-development of vaccines required for the developing nations. IVL has a large pool of highly talented scientists who can take up projects for quick development of vaccines.

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Postal code: 1208 Website: www.inceptapharma.com





Name of the company: Indian Immunologicals Limited

Head of Institution : Shri K.V.Balasubramaniam, Managing Director

Established : 1982

Location : India

Overview of the company

National Dairy Development Board set up Indian Immunologicals Limited in 1982. IIL's veterinary and human vaccine manufacturing facilities at Hyderabad and Ooty in India are among the largest vaccine producing plants in the world.

ILL is a major player in the human vaccine market in India, holding the fourth position and focusing on the paediatric and rabies segment with its flagship product "Abhayrab". IIL is also a major supplier of vaccines to India's large Universal Immunization Programme. IIL strongly believes that its mission of "Biotechnology in health care made affordable and accessible" can be actively pursued only with its sound

technology base in modern biotechnology.



IIL's concept of "Abhay Clinic", which provides vaccination service by qualified medical practitioners working on franchise basis, and supported by sound cold chain system, is unique. Further through "Abhay Shoppe" IIL has been able to reach out to a large number of doctors with its unique service proposition of "vaccine on call". Through its new initiative of "Abhay Mart", IIL services the vaccine needs of organized pharmacy chains and corporate hospitals.

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.

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

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Abhayrab	Vero cell culture Rabies vaccine	Freeze dried vial with diluent ampoule	0.5 and 1ml
Abhay M	Measles vaccine	Freeze dried vial with diluent ampoule	0.5, 2.5 and 5 ml
Elovac B	Recombinant Hepatitis B vaccine	Vial	0.5, 1, 5 and 10 ml
Abhay TAG	Diphtheria, Pertussis and Tetanus vaccine	Vial	0.5 and 5 ml
Abhay DAG	Diphtheria and Tetanus vaccine	Vial	0.5 and 5 ml
Abhay TOX	Tetanus vaccine	Vial	0.5 and 5 ml
Abhayvac 3	MMR vaccine	Freeze dried vial with diluent ampoule	0.5 and 2.5 ml
Abhay RIG	Equine Rabies immunoglobulins	Vial	5 ml

- O Tetravalent vaccine (DPT+H)
- O Pentavalent vaccine (DPTH+HiB)
- O Japanese Encephalitis vaccine
- O HiB vaccine
- O Chikungunya vaccine
- O Human Papilloma virus vaccine

Product Name	Pre Clinical		Clinical		Expected launch date
		Phase 1	Phase 2	Phase 3	Quarter / Year
Tetravalent vaccine (DPT+H)				To be initiated	Q4/2013
Pentavalent vaccine (DPTH+HiB)		To be initiated			Q4/2014
HiB vaccine					Q4/2014
Japanese Encephalitis vaccine					Q4/2014
Chikungunya vaccine					Q4/2014
Human Papilloma virus vaccine					Q4/2015

Areas of Interest for Collaboration

Phone: +91 40 2300 0542 / 2300 0211

- O IPV vaccine technology
- Varicella vaccine technology
- Acellular Pertussis Vaccine
- O Dengue Vaccine

Contact Details

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Location: India email: anandkumar@indimmune.com

Postal code: 500 032 Website: www.indimmune.com





Name of the company: Institute of Vaccines & Medical Biologicals (IVAC)

Head of Institution : Dr. Le Van Be

Established : 23rd November,1978

Location : Vietnam

Overview of the company

On November 23^{rd} , 1978, the Ministry of Health made the decision to establish Institute of vaccines and biological substances (changed to INSTITUTE OF VACCINES AND MEDICAL BIOLOGICALS – IVAC from 2006) with functions and responsibilities as following:

To plan and carry out the production of vaccines and serum, mainly to supply the Expanded Program on Immunization in Vietnam (EPI), and the others for prevention and treatment of diseases.

- To do research and apply technological advances in production and development of vaccines, serum and other biological substances.
- To co-operate with organizations in the country and abroad in the research and production of vaccines, serum and other biological substances, in order to expand production and raise their quality.



- To provide training to our staffs, to manage the allocated budget and state-owned property.
 Step by step to control the products and approach self - sustainability about outlay.IVAC consists of 2 establishments:
- Nha Trang establishment, with an area of 13,946m²
 - o Main establishment of IVAC
 - o Produce vaccines and medical biologicals
 - o Conduct scientific and applied research
- Suối Dầu breeding farm with an area of 126hectare, 22 kms from the Southern of Nha Trang
 - o breed testing animals serving research and quality control
 - o Raise horses for producing crude sera
 - o Produce food for cattle, microorganism fertilizer

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
BCG vaccine	Freeze dried vaccine against tuberculosis	Ampoule	10 doses/ampoule
DPT vaccine	Combination vaccines against diphtheria, pertussis and tetanus	Vial	10ml/vial
TT vaccine	Vaccine composed of inactivated tetanus toxins - multidose	Vial	10ml/vial
TT vaccine	Vaccine composed of inactivated tetanus toxins - monodose	Ampoule	0.5ml/ampoule
SAT	Anti tetanus serum	Ampoule	1500IU/ampoule 1000IU/ampoule
SAR	Equine rabies immune globulin	Vial	1000IU/vial
SAV (SAV-a ; SAV-k)	Purified naja kaouthia antivenin and Purified trimeresurus albolabris antivenin	Vial	1000 LD ₅₀ /vial
Im.BCG	BCG immunotherapy of bladder cancer	Ampoule	37.5mg/ampoule
Superferon	Interferon - 2b	Vial	3000000IU/vial

- O Pandemic Inactivated Monovalent Influenza Vacine (H5N1 & H1N1)
- O Seasonal Splitted Trivalent Influenza Vaccine

Product Name	Pre Clinical	ase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
H5N1 Influenza vaccine					
H1N1 Influenza vaccine					

Areas of Interest for Collaboration

- O Consolidate, upgrade, apply advanced technique for main products of IVAC: anti-serum, combo vaccines based on frame of DTP...etc
- O Build up Suoi Dau breeding farm to be suitable for its potential.
- O Upgrade testing animals: species, food, workshop, technical service, etc
- O Establish a laboratory room to meet the Good Laboratory Practice (GLP) standards
- O Build the personnel organization based on new mechanism, agreeing with national strategy on local vaccine production.
- O Join, and associate with both domestic and international institutes in researching on new products.
- Enhance both the quality and quantity of existing vaccines to progress exporting vaccines to foreign markets.
- O Consolidate and upgrade the Quality Management system.

Contact Details -

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Name of the company: Instituto Butantan

Head of Institution : Jorge Kalil

Established : 1901 Location : Brazil

Overview of the company

linstituto Butantan is a Public research center associated with the Secretary of Health of the State of São Paulo dedicated to Biomedical Research with the mission to investigate, develop and provide to the Brazilian population essential products for Public Health. It has a centenary tradition in the investigation on snakes and poisonous animals, and is currently the leading national producer of vaccines and anti-venom sera. Fundação Butantan is a Private foundation created to support the activities of the Institute, allowing technological development, the operation of industrial production units and



commercialization of the products. The Ministry of Health is a partner of the ensemble and its major client.

Butantan provides the Ministry of Health with ~150 million doses of vaccines/year, such as DTP, Hepatitis B and Rabies and ~1 million doses of hyperimmune sera. It has a surplus production capacity, which can be made internationally available. Butantan constitutes a unique association where basic research, technological development and production allows Brazil - within the National Programs of Public Health - to provide state of art immunobiological products in the frontier of knowledge, in a rapidly expanding program of self-sufficiency.

•			
Product Name	Product Name Description		Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
DTP vaccine	Diphtheria, tetanus and whole cell pertussis vaccine	Vial	5.0 ml
dT vaccine	Adult diphtheria and tetanus vaccine	Vial	5.0 ml
HepB vaccine	Recombinant Hepatitis B vaccine	Vial	5.0 ml
Rabies vaccine	Rabies vaccine produced in Vero cell culture for human use	Vial	5.0 ml
Anti-Diphtheria Hyperimmune sera	Anti-diphtheria toxoid hyperimmune sera	Vial	10.0 ml
Anti-Tetanus Hyperimmune sera	Anti-tetanus toxoid hyperimmune sera	Vial	5.0 ml
Anti-Venoms Hyperimmune sera	Bothropic (5 valent), Bothropic-Crotalic, Botropic-Lachetic, Crotalic (2 valent), Lachetic, Elapidic, Escorpionic, Aracnidic (Loxocelles and Phoneutria),Botulinic AB or E, Rabic	Vial	5.0 ml, 10 ml, 20 ml
Influenza vaccine	Influenza vaccine seasonal and H1N1 produced in eggs	Vial	5.0 ml

- O Lung surfactant
- O DTP_{low} vaccine
- o Influenza/adjuvant
- O Dengue vaccine
- Human IgG
- O Rotavirus vaccine
- O Recombinant OncoBCG

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Lung surfactant			XIIIIIIIII		03/2014
DTP low			XIIIIIIIII		01/2015
Influenza/adjuvant			XIIIIIIIII		03/2015
Dengue vaccine			XIIIIIII		03/2017

Areas of Interest for Collaboration

- O Adjuvants
- O Fermentation
- O Conjugation

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Name of the company: Laboratorios de Biológicos y Reactivos de México,

S.A. de C.V. (Birmex)

Head of Institution : Dr.Samuel Ponce de León Rosales

Established : In Mexico City since 1999. Birmex as an enterprise

started in 1999 but, as part of the Ministry of Health, has more than 100 years producing vaccines.

Location : Mexico

Overview of the company

Birmex is a government-owned company that produces, imports and commercializes vaccines, antisera and biological reagents.

Our personnel possess a vast expertise in biologics production which combines with a stringent quality control of the production procedures. This expertise results in the successful updating of facilities, production procedures, and programs aimed to meet Good Manufacturing Practices as certified by the National Regulatory Agency.

Over the years Birmex has evolved into a reliable guarantee of experience and know-how for its customers, incorporating into each product and service:



- The confidence of high quality

- The pledge of an end-to-end service with full tracking and control over shipments at all times, whether by land or air
- The security of on-time distribution to any point in the country – this because Birmex is the only laboratory that delivers to all Mexico's 32 states
- The innovation, competitiveness, honesty and integrity in each process focused on offering solutions that meet the customer's needs
- And finally, the assurance of being with a laboratory whose experience, market knowledge and degree of specialization today make it the leading vaccine manufacturer in Mexico and one of the three principal vaccine-manufacturing countries in Latin America.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
tOPV	Trivalent Sabin Oral Polio Vaccine	Dropper	2.0 ml
Td vaccine	Tetanus and Diphteria Toxins	Vial	5.0 ml
Snake Antiserum	Vial with freeze dried to be reconstituted with 10 mL of Water for Injection as diluent. This serum is made with venoms from the species Crotalus basiliscus and Bothrops asper, and it has also cross reaction against venoms of the species Akgistrodon and Sistrurus.	Vial	10.0 ml
Scorpion Antiserum	Vial with freeze dried to be reconstituted with 5 mL of Water for Injection as diluent. This serum is made with venoms from the species Centruroides	Vial	5.0 ml

- Monovalent oral polio vaccine (types 1, 2 and 3).
- O Influenza vaccine in cell culture systems.
- Influenza vaccine in embrionated chicken eggs.

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Monovalent oral polio vaccine (types 1,2 & 3)					4 / 2013
Influenza vaccine in cell culture systems					3 / 2018
Influenza vaccine in embrionated chicken eggs					2 / 2014

Areas of Interest for Collaboration

- Cell cuture-based vaccines
- Scale-up processes
- O Technology transference
- O Pilot plant design
- From bench to patient (the vaccine development production proccess)

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Location: Mexico Website: www.birmex.gob.mx

Postal code: 03100





Name of the company: LG Life Sciences Ltd.

Head of Institution : Il Jae Jung

Established : 1947

Location : **Republic of Korea**

Overview of the company

LG Life Sciences(LGLS) has developed and commercialized an array of pharmaceuticals for human and animal applications over the years. Especially for vaccines, LGLS successfully developed hepatitis B vaccine (EUVAX BTM Inj.) which has been exported to more than 80 countries through UN-sponsored programs and represented the major portion of overseas sales. Further to hepatitis B vaccine, LGLS successfully developed tetravalent DTP-based combined vaccines. These include DTaP-HepB(EutravacTM Inj.) and DTwP-HepB(EuforvacTM Inj.). Both of them were approved by Korean FDA in



year 2008 and showed superior efficacy and safety. LGLS also developed a Hib vaccine(Euhib™ Inj.), as a component of pentavalent vaccine by reconstitution with DTwP-HepB-Hib(Euforvac-Hib™ Inj.). In addition, LGLS is developing a fully-liquid pentavalent vaccine(Eupenta™ Inj.), based on the accumulated technology and knowhow, for UN vaccine market. And year 2011, LGLS is selected by WHO as one of tech transfer recipient of sabin IPV. Based on this new technology, LGLS will continue to develop hexavalent and further combined vaccines. Through the long development history on vaccines LGLS accumulated a lot of experiences on vaccines and came to have very strong capability on vaccine development area. In the future, LGLS will remain a leader in life sciences and biotechnology-value added areas that are knowledge intensive.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml				
Euvax B™Inj.	Recombinant Hepatitis B vaccine	Vial Liquid	0.5/1.0/5.0ml				
Euforvac™lnj.	Adsorbed diphtheria, tetanus, whole cell pertussis & hepatitis B combined vaccine	Vial Liquid	0.5/1.0/5.0ml				
Eutravac™Inj.	Adsorbed diphtheria, tetanus, aceulluar pertussis & hepatitis B combined vaccine	Vial Liquid	0.5ml				
Euhib™Inj.	Haemophilus influenzae type b vaccine	Vial Lyophilized	0.5/1.0ml				
Euforvac-Hib™Inj.	Adsorbed diphtheria, tetanus, whole cell pertussis, hepatitis B and Haemophilus influenzae type b combined vaccine	Vial Lyophilized	0.5/1.0ml				

^{*} More detailed information of LGLS' full list of current product pipeline & future product pipeline is available at www.lgls.com.

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
hGH					
EPO (Espogen®)					
SR-hGH(adult GHD)					
SR-hGH(Pediatric GHD)					
MAb(LBEC0101)					
MAb(LBIM0101)					
MAb(LBAL)					
DTwP-HepB-Hib (Fully liquid)					
sIPV(sabin strain)					
DTP-HepB-Hib-IPV(fully liquid)					
Cell culture influenza vaccine					
HA IDF 1 (Skin Rejuvenation)					
HA IDF 2(Skin Rejuvenation)					
LBSA0103(Osteo Arthritis)					
Anti-Adhesion Barrier(Post Operation Adhesi	0)				

DS: Discovery, **PC**: Preclinical Studies, **MKT**: Market, **GHD**: Growth Hormone Deficiency, **TS**: Turner's Syndrom, **CRI**: Chronic Renal Insufficiency, **SGA**: Small for Gestational Age, **SR**: Sustained Released, **CRF**: Chronic Renal Failure, **IVF**: In vitro Fertilization, **CML**: Chronic Myeloid Leukemia, **HA**: Hyaluronic Acid, **IDF**: Injectable Dermal Filler

Areas of Interest for Collaboration

- O Development and marketing partnership for novel vaccine products
- Marketing alliance for biologics, SR-hGH, EPO, rFSH, etc.
- O Global marketing partnership or distributionship for HA based products
- O Global marketing partnership or distributionship for Fative®

Contact Details

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Postal code: 110-062 Website: www.lgls.com





Name of the company: Liaoning Cheng Da Biotechnology Co., Ltd (CDBIO)

Head of Institution : Ms. Zhang XiaoHua, General Manager

Established : 2002
Location : 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 Encephalitis 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.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Rabies vaccine for human use	 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	 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 Encephalitis Vaccine for human use	 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

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

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
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
- O In-licensing Opportunity in China

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Name of the company: National Administration of Laboratories &

Institutes of Health Anlis "Dr. Carlos G. Malbrán"

Head of Institution : Dr. Gustavo Ríos

Established : 1996

Location : **Argentina**

Overview of the company

The National Administration of Laboratories and Institutes of Health ANLIS "Dr. Carlos G. Malbrán" agency dependent of The Secretary of Policy, Regulation and Institutes of the Ministry of Health of Argentine Nation nucleates eleven institutes and centers located in different places in our country (all of them of recognized performance in their areas of competence).

Its fundamental function understands in science and technical policy associated with various substantive aspects of actions in public health. The Institutional Plan recognizes 6 strategic areas:



- 1. Research and Technological Development in Health.
- 2. Health Surveillance and outbreak control.
- 3. Prevention and Control Disease Programs.
- 4. Production and Supply of Health Strategic Inputs.
- 5. Education and Training of Health Human Resources.
- 6. Information and Communication in Health.

Planned activities in the Production and Supply of Strategic Inputs Area will focus to achieve more equitable access (regarding availability and prices) to technologies and essential medical supplies, with guaranteed quality, safety, effectiveness and cost effectiveness and to promote reasonable and effective use according to their costs.

The global products portfolio of interest includes: viral and bacterial vaccines, immunotherapics (antidotes and antitoxins sera), diagnosis kits and reagents, inputs for reference and proficiency tests sera panels and reference biological standards, biopharmaceuticals and strategic medicines and laboratory animals.

Product Name	oduct Name Description		Presentation 0.5/ 1.0 / 5.0 / 10.0 ml	
Candid # 1	Virus Junin live attenuated vaccine against Argentine Hemorrhagic Fever	10 doses Vial	Lyophilized	
Viper venom antiserum, Bothrop	os bivalent	vial	10.0 ml	
Viper venom antiserum, Bothrop	os tetravalent	vial	10.0 ml	
Viper venom antiserum, Crotalu	us durissus terrificus	vial	10.0 ml	
Viper venom antiserum, Micruru	us pyrrhocryptus	vial	5.0 ml	
Spider venom antiserum, Loxoso	celes SP	vial	5.0 ml	
Spider venom antiserum, Latroc	vial	2.0 ml		
Scorpion venom antiserum, Tity	Scorpion venom antiserum, Tityus trivitattus			
Rabies vaccine, FP, human use	Rabies vaccine, FP, human use			
Rabies vaccine, FP, veterinary u	use	vial (multidose)	50.0 ml	
Tuberculin purified protein deriv	rate, human use	vial (multidose)	3.0 ml	
BCG for immunotherapy	BCG for immunotherapy			
Serotyping antisera (Enterobac	vial	Miscellaneous volumes		
Tetanus toxoid – API	N/A	N/A		
Diphteria toxoid – API	N/A	N/A		
Pertussis (cellular component) -	API	N/A	N/A	

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Yellow Fever Vaccine					Implementation of a Quality System training to staff ANLIS in Argentina November 2011
dT vaccine – Diphteria and Tetanus vaccine					Adaptation, renovation and design of the productive areas of the components or API's (used to produce DTP and dT)
DTP vaccine – Diphteria, Tetanus and Pertussis vaccine					and acquisition of necessary equipment and instrumentation Execution of the work of the filling and packaging plant and submission a file that includes all equipment and instruments needed in the plant. 2011
Pentavalent vaccine DTP-HB/Hib					In technology transference management

Kits for diagnosis use: Rotavirus, Neisseria meningitidis, Streptococcus pneumonie, Toxoplasmosis, Chagas, Leptospirosis, Brucellosis, etc.

Areas of Interest for Collaboration

- Production technologies
- Quality Control
- O Quality Assurance
- O Management
- Good Manufacturing Practices
- Clinical trials
- O Ethical issues

- O Vaccine development
- O Vaccine patents politics
- Regulatory issues

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Name of the company: National Institute of Infectious Diseases and Vaccinology

Head of Institution : **Ih-Jen Su, M.D., Ph.D.**

Established : May 2011

Location : Taiwan

Overview of the company

The National Institute of Infectious Diseases and Vaccinology (NIIDV) is a mission-oriented R&D department within the National Health Research Institutes (NHRI) in Taiwan, a non-profit organization established by Taiwan government.

NIIDV was formally established in May 2011 by merging the Division of Infectious of Diseases and the Vaccine R&D Center. NIIDV conducts researches on important infectious diseases and advocates for government actions and recommendations to solve healthcare problems. International collaborations are part of NIIDV's endeavors to deal with



global infectious diseases. NIIDV has state-of-the-art technology, cGMP facility and expertise to develop novel vaccines and immuno-therapeutics.

NIIDV has completed the phase I clinical trial of the MDCK cell-based H5N1 flu vaccines in 2010 and transferred to a local biotech company. The influenza vaccine (H5N1, H7N9) is prepared for phase II trials in 2013. The Vero cell-based EV71 vaccine was also developed and the phase I clinical trial has been completed in 2012. The meningococcal B recombinant vaccine is developed and going into phase I clinical trial. To meet national health needs, the BCG vaccine is manufacturing and going to be launched in 2015.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
BCG	Technology and product transfer from Taiwan CDC to be launched in 2015.Live freeze - dried BCG vaccine, 30 doses	Ampoule	3 ml
Antivenin	Technology and product transfer from Taiwan CDC to be launched in 2016.	Vial	30 ml
ProVEU	Cell-based flu vaccine	Vial	3 ml
Ev71vac	Cell-based flu EV71 vaccine	Vial	3 ml
MenBvac	Liporpotein-based meningococcal vaccine	Vial	3 ml

- O Adenovector-based RSV vaccine
- O HPV theraupeutic vaccine
- Recombinant BCG
- O Dengue vaccine

- O Influenza vaccine (H7N9, etc.)
- O Bivalent vaccine against hand-mouthfoot disease

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Adenovector-based RSV vaccine					
HPV theraupeutic vaccine					
Recombinant BCG					
Dengue vaccine					
Influenza vaccine (H7N9, etc.)					
Bivalent vaccine against hand-mouth- foot disease					

Areas of Interest for Collaboration

- Technology transfer cell-based viral vaccines and lipoprotein technology
- Service contract for GMP Filling and packaging
- O Co-development of new vaccines
- O Global marketing partnership/distributorship
- O Licensing out of vaccine products and platform technology

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Name of the company: Panacea Biotec Limited (PBL)

Head of Institution : Dr. Rajesh Jain, Ph.D.,

Established : February 1984

Location : India

Overview of the company

Panacea Biotec is one of India's leading research-based health management companies with established research, manufacturing and marketing capabilities. Panacea Biotec is the 2nd largest vaccine manufacturer in India. Panacea Biotec has been ranked as the 3rd largest biotechnology company (ABLE Survey 2006) in India and is also amongst the top 50 pharmaceutical companies in India.

The Vaccines Business has been among the leading suppliers of vaccines to UNICEF and the Government of India's health programs with a focus on critical pediatric vaccines including oral and injectable polio vaccines, and fully liquid combination



vaccines comprising Hepatitis B, DTwP and HIB. The Pharmaceuticals business of the company is focused on super specialty and acute and chronic care segments mainly into organ transplantation, renal diseases, diabetes, oncology, pain management, orthopedics and gastro-intestinal amongst others with key brands in top 5 positions in their respective segments in the India. The company has collaborations and tie-ups with leading national and international research organizations and corporations. The company's state of the art manufacturing facilities comply with the US-FDA, UK-MHRA, SA-MCC and WHO-CGMP standards. The company is R&D focused with 4 state-of-the-art R&D centers focusing on vaccines, biosimilars, chemistry and biotechnology based drug discovery, novel drug delivery systems and "high barrier to entry" generics. The company also has 10 international product patents. The company has over 3800 employees including over 200 highly skilled scientists..

Product Name	Description	Presentation			
EasyFive TT	Fully liquid Hep B, DPT and HIB	SDV, MDV, PFS			
Polprotec	Poliomyelitis inactivated vaccine	SDV, PFS			
Oral Polio Vaccine	Poliomyelitis vaccine including monovalent Type 1 and 3	Vial			
Enivac HB	Inactivated hepatitis B Vaccine	SDV			
NovoHib	Hib Vaccine	PFS			
Pandyflu	Inactivated H1N1 vaccine	SDV			
EasyFour TT	DTP+Hib Vaccine	SDV			
PacliAll	First Nano particle paclitaxel product in India	Vial			
Pangraf	Tacrolimus	Capsule			
Mycept	Mycophenolate Mofetil	Tablet			
Glizid	Gliclazide (Plain and Combinations)	Tablet			
Sitcom	Euphorbia Prostrata Extract (Plain and Combinations)	Tablet and Cream			

O Vaccine

- 1. Dengue (Tetravalent)
- 2. Japanese Encephalitus (JE)
- 3. Conjugated Meningococcal Vaccineo
- 4. Seasonal Flu
- 5. sIPV based Vaccines

O Pharmaceuticals

- 1. In a unique R&D Collaboration with Osmotica Pharmaceuticals (US) & Kremers Urban Pharmaceuticals (US), PBL is developing more than 18 ANDA products for regulated markets (US & Europe).
- 2. More than 50 % of these products have passed the proof-of-concept phase and are in the commercial batch optimization phase.

Product Name	Expected launch date Quarter / Year
Dengue	2017
Japanese Encephalitus (JE)	2017
Meningococcal	2017
Seasonal Flu	2016

Areas of Interest for Collaboration

- O Human Papilloma Virus (HPV) Vaccine
- O Rotavirus Vaccine
- O Conjugate Typhoid Vaccine

Contact Details

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Name of the company: Production and Research Complex for Pasteur Institute of Iran

Head of Institution : Dr. Mohammad AZIZI

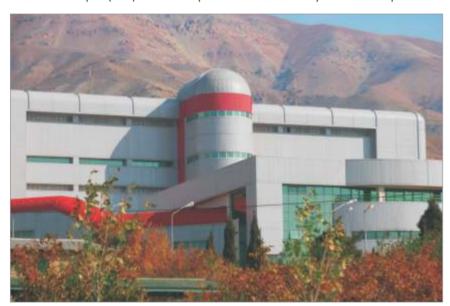
Established : March 1987

Location : Iran

Overview of the company

Located in the heart of Tehran, Pasteur Institute of Iran (PII) has been providing health care services and related products to the public since 1920. The initial goal of PII establishment was to recognize and combat domestic infectious diseases. PII now is the home of different departments and research centers such as Bacteriology, Biotechnology, Genetics, Parasitology & Mycology, Clinics, and Virology. PII has also been involved in manufacturing a number of parenteral fluids for hospital use since its establishment.

To meet increasing domestic demand PII manufacturing part moved to a new place in outskirt of Tehran in 1988 and assigned as "Production and Research Complex (PRC)". In the new place PII was successfully able to develop its manufactures to varieties of product. Currently PRC productions



fall into three categories:

Vaccines: such as Hepatitis B, BCG, and Anti-Rabies (for veterinary use).

Recombinant Protein Preparations: such as Erythropoietin, Interferon alfa 2b, and Streptokinase. Parenteral fluids.

Therapeutics such as intravesical BCG.

Diagnostic materials used in Medical Laboratories.

Equipped with state-of-the-art machineries PRC now is one of the leading companies in manufacturing biopharmaceuticals in the country and the region.

PRC also benefits from quality assurance (QA) and quality control (QC) departments with close cooperation of the National Regulatory Authorities (NRA).

PRC vision is to employ innovative technologies in order to expand its GMP-oriented products to meet domestic demands as well as looking into foreign markets. In order to commercialize products outside the country, PRC recently applied for pre-qualification status through WHO for its vaccines.

Product Name Description		Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Hepatitis B Vaccine (Rec.)	Liquid	Vial	5.0 (10 doses)
BCG Vaccine	Lyophilized	Vial	2.0 (20 doses)
Rabies Vaccine (for animal use)	Liquid	Vial	1.0 (1 dose)
BCG Intravesical (Immune)	Liquid	Vial	120mg/3ml
Erythropoietin (Rec.)	Liquid	Vial	1.0 (2000 I.U.)
Parenteral Solutions	liquid	Vial	50
Diagnostic Kits	Antigens & Antiserums Culture	Vial	
Experimental Animals	Mice- Rabbits- Guinea Pigs- Hamster		

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Interferon Alfa 2b					2014
Streptokinase (Rec.)					2014
Rabies vaccine (for Human use)					2015
MMR Vaccine					
Opaque Agents					
Sodium Bicarbonate					
Pentavalent Vaccine					
Pentaperazole					
Anti Venoms (Snakes & Scorpions)					
Hepatitis B (New Version)					2015
Immunological Diagnostic Kits					
Parenteral Amino Acids Solutions					
PEG Interferon					
VZV Vaccine					
Influenza Vaccine					
Meningitis Vaccine					
Pneumococcal Vaccine					
Hepatitis E Vaccine					
Malaria Vaccine					

Areas of Interest for Collaboration

- Recombinant Biopharmaceuticals
- O Cell-Culture-Based Vaccines
- O Co Operated Manufacturing
- O Vaccine Technology Transfer
- O Quality Control, Quality Assurance

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Name of the company: Queen Saovabha Memorial Institute, The Thai Red Cross Society

Head of Institution : **Prof. Dr. Visith Sitprija**, Director

Established : 1922

Location : Thailand

Overview of the company

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

It established a snake farm in 1923 and a horse farm in 1956. QSMI has been manufacturing snake antivenoms since 1923 and BCG vaccine since 1953. Work on snakes, snake antivenoms, rabies and equine rabies immunoglobulin has gained international reputation for many decades. The horse farm has approximately 400 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: service, research and production as follows.



I. 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 dministration (with ministry of public health, livestock department, WHO and US communicable disease center).

II. Research and Development

- Research for improvement of product 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

III. Production

Biological products as in headline No.6

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
BCG Vaccine	lyophilized product of 10 doses per vial	vial	0.5 ml
Tuberculin test solution	injection liquid of 5 doses per vial	vial	0.5 ml
Equine rabies immunoglobulins	injection liquid of 1,000 IU per vial	vial	5.0 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, Bangarus fasciatus, Bangarus candidus) -Haemato polyvalent antivenin (Calloselasma rhodostoma, Trimeresurus albolabris, Daboia russelli siamensis)	lyophilized product in 20 ml. vial with solvent of Water for injection 10 ml.	vial	10.0 ml

(bulk vaccine for formulation and filling): Estimate launch in year 2012

• Rabies vaccines: lyophilized product of 0.5 ml per vial

O JE vaccines: lyophilized product of 0.5 ml per vial

• Td vaccines: injection in suspension liquid of 2 ml in vial

O DTP-Hep -vaccines: injection liquid of 1 ml per vial

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Rabies vaccines					Q1/2013
JE vaccines					Q4/2013
Td vaccines					Q1/2014
DTP - Hep-vaccines					Q2/2014

Areas of Interest for Collaboration

• Research of new TB vaccine

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Name of the company: Razi Vaccine & Serum Research Institute

Head of Institution : Dr. Hadi Famil Ghadakchi

Established : 1925

Location : IR of Iran

Overview of the company

Razi Vaccine and Serum Research Institute is known as one of the oldest and most reputed scientific centers in the Middle East. This institute began its activities in the year 1925 with producing vaccine against Rinderpest, which at the time had caused large casualties in the cattle population of the country. At present Razi institute is producing more than 60 biological products including human and veterinary vaccines, sera, etc.

Razi institute is governed by a Board of Trustees. The local costumers of the institute products are the Ministry of Health and the Veterinary Organization of the country. The institute is headquartered in the city of Karaj and has six branches in the cities



Mashahad, Ahwaz, Shiraz, Marand, Kerman and Arak. These branches are mainly involved in the production of poultry and other veterinary vaccines.

The Institute is considered a center of research, training and technical assistance for vaccine production and is ready for providing its services and fulfilling the vaccine needs of other developing and neighboring countries.

The objectives are:

- Research & Production of Medical Vaccines and Antisera
- Research & Diagnosis of Veterinary and Poultry Diseases
- Research & Production of Veterinary and Poultry Vaccines
- Research and Diagnosis of Zoonotic Diseases
- ▶ Biotechnology Research
- ▶ Education & Training

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Trivalent DTP, dT, Td	Diphteria-Tetanus-Pertussis Vaccines	Vial	14 doses/7 ml
Measles	Live Attenuated vaccine (Lyo.)	Vial	10 doses/5 ml
Mumps, Rubella	Live Attenuated vaccines (Lyo.)	Vial	1 dose
Polio (type 1,2, and3)	Live Attenuated vaccine	Flakon	15 doses/1.5 ml
MMR , MR, MM	Live Attenuated vaccines (Lyo.)	Vial	10 doses/5 ml
Polyvalent Snake Antivenom	Antivenom	Ampoule	10,5
Polyvalent Scorpion Antivenom	Antivenom	Ampoule	5
Anti-Tetanus Serum	Anti Toxin	Ampoule	2
Anti-Diphtheria Serum	Anti Toxin	Vial	5
Anthrax	Live vaccine	Bottle	100
Blackleg (Cattle)	Inactivated vaccine	Bottle	250
Polyvalent Enterotoxaemia (Sheep & Goat)	Inactivated vaccine	Bottle	250
Brucella Melitansis Strain Rev. 1	Live vaccine (Lyo.)	Vial	100
Brucella Abortus Strain IRIBA	Live vaccine (Lyo.))	Vial	20
Agalactia & Pasterulosis (Cattle & Buffalo)	Inactivated vaccines	Bottle	100
Tetanus (Horse)	vaccine	Vial	20
Rinderpest, Sheep Pox, Goat pox	Live vaccines (Lyo.)	Vial	100
Foot and Mouth Disease (FMD)	Inactivated vaccine	Bottle	250
Bovine Theileriosis	Attenuated vaccine	Vial	12
Fowl Cholera	Inactivated vaccine	Bottle	100
Fowl Pox	Live vaccine (Lyo.)	Vial	1000 , 2000
Infectious Laryngotracheitis	Live vaccine (Lyo.)	Vial	1000 , 2000
Fowl Infectious Bronchitis H-120 & H-52	Live vaccines (Lyo.)	Vial	1000 , 2000
Newcastle La Sota , Newcastle B1	Live vaccines (Lyo.)	Vial	1000 , 2000,4000
Inactivated Influenza (oil-emulsion) H9N2	Inactivated vaccine	Bottle	250
Inactivated Newcastle (oil-emulsion) V4	Inactivated vaccine	Bottle	250
Combined oil-emulsion H9N2 & V4	Inactivated vaccine	Bottle	250
Combined IB (H-120) / ND (B1)	Live vaccine	Vial	2000

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Peste des Petits Ruminants (PPR)					
Combined Live IB (H-120) / ND (La Sota)					
Infectious Bursal Disease (IBD)					
Human Influenza Vaccine					
RS12					
Hib vaccine					
Tetravalent DTP-Hib					
Pentavalent DTP-Hib-HepB					
IPV					

Areas of Interest for Collaboration

- Training in the Fields of Production and QC Tests
- O Production of New Recombinant Vaccines (Human, Poultry and Veterinary)

Contact Details

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Name of the company: Serum Institute of India Ltd.,

Head of Institution : Dr. Cyrus.S. Poonawalla, Chairman & Managing Director

Established : 1966
Location : India

Overview of the company

Serum Institute of India Ltd. (SII) founded in 1966 by a true visionary Dr. Cyrus Poonawalla, is now India's # 1 Biotech Company and the World's 5th largest vaccine manufacturer (by volume) with an installed annual production capacity of over 1 billion doses of various vaccines. It is also one of the largest suppliers of WHO prequalified vaccines to U.N. Agencies catering to over 140 countries; and also recognized as a reliable largest source of high quality & affordable vaccines and biologicals. It is estimated that 1 out of every 2 children immunized globally get at least one vaccine produced by SII. SII is also now the proud owner of Bilthoven Biologicals, The Netherlands.



SII products are also registered in several countries including Switzerland. This impact has been large enough to make global agencies such as WHO, 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. The manufacturing facilities conform to WHO cGMP requirements and till date SII's 19 vaccines are prequalified by WHO/Geneva. Its facilities are also approved by USFDA for pharma products.

Product Nam	e Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
TT *	Tetanus Vaccine	Ampoule	Single dose (0.5 ml)
DT *	Diphtheria and Tetanus Vaccine (Paediatrics)	Vial	10 doses (5 ml)
Td *	Diphtheria and Tetanus Vaccine for Adults & Adolescents	Vial	20 doses (10 ml)
DTP *	Diphtheria-Tetanus-Pertussis Vaccine	Ampoule	1 & 2 doses (0.5/1 ml)
		Vial	10 & 20 doses (5/10 ml)
BCG *	BCG Vaccine	Vial	5ml, 10ml/ 10, 20 doses
Measles *	Measles Vaccine Live (Lyo.)	Vial	1, 2, 5 & 10 doses
Rubella*	Rubella Vaccine Live (Lyo.)		(0.5ml per dose)
MR *	Measles and Rubella Vaccine Live (Lyo.)		
MMR *	Measles, Mumps and Rubella Vaccine Live (Lyo.)		
Rabies	Rabies Vaccine	Vial/Ampoule	1 ml / 1 dose
IPV	Inactivated Poliomyelitis Vaccine	Prefilled Syringe	0.5ml/dose
Nasovac *	Influenza Vaccine, Live Attenuated (Freeze-dried), Pandemic (H1N1)	Vial/Ampoule	1 & 2 doses (0.5 ml per dose)
Нер В *	Recombinant Hepatitis B Vaccine (Pediatric & Adult)	Vial/Ampoule	0.5ml & 1ml
Q-Vac *	DTP and Hepatitis B Vaccine (Adsorbed)	Ampoule/Vial	0.5ml & 1 ml / 5 ml
		Vial	5 & 10 ml
Quadravax *	DTP + Hib Vaccine (Lyo. & Liquid)	Ampoule/Vial	0.5ml & 1 ml / 5 ml
Pentavalent *	DTP Hepatitis B + Hib Vaccine (Lyo. & Liquid)	Vial	0.5ml, 1 & 5 ml
Hib *	Haemophilus type b Conjugate Vaccine (Lyo.)	Vial	0.5ml, 1, 5 & 10 ml
MenAfriVac *	Meningococcal A Conjugate Vaccine (Lyo.)	Vial	1 dose
bOPV *	Bivalent Oral Poliomyelitis Vaccine types 1 & 3	Vial	10 doses
tOPV *	Trivalent Oral Poliomyelitis Vaccine types 1, 2 & 3	Ampoule/Vial	1 ml / 5 ml
ATS	Tetanus Antitoxin	Vial	10 ml
ADS	Diphtheria Antitoxin	Vial	10 ml
ASVS ARS	Anti-Snake Venom Serum (Lyo.) Asia & Central Africa Anti-Rabies Serum	Vial	5 ml

^{*} Products prequalifed by WHO for supplies to U.N. Agencies

- O DTaP vaccine
- O 10-valent Pneumococcal Vaccine
- O Rabies Monoclonal Antibody
- O Measles Vaccine (Dry Powder)
- O Rabies vaccine (Verorab)
- O Aerosol Measles vaccine
- O Seasonal influenza (Live attenuated)
- O Rotavirus Vaccine (Lyophilized)

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
	15				

Areas of Interest for Collaboration

- Newer Vaccines development
- O Biosimilars
- Monoclonal antibodies

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Name of the company: Sinergium Biotech S.A.

Head of Institution : Abel Di Gilio (President)

Established : 2009

Location : Argentina

Overview of the company

Created in 2009, Sinergium Biotech S.A´s objective is to provide Argentina with a Center of Excellence in research and production of human vaccines, manufactured with the highest quality standards. With a private investment of close to 80 million dollars, Sinergium Biotech is building a state-of-the art 15,000 square meters production facility and will generate 320 employments enabling the training of highly-specialized workforce. Argentina will rely on national production capacities of human vaccines to supply its own market, even in case of pandemics, and to generate exports to the region. Sinergium



Biotech represents a great opportunity for international vaccine producers to develop their production capacity in Argentina and therefore set foot and expand their participation in the South-American region markets. Thanks to the strategic initiative of Sinergium Biotech, Pfizer and the Argentine Ministry of Health, babies and toddler are being vaccinated today against pneumococcus infections, the principal cause of pneumonia and meningitis in children, as part of the national immunization program. With a projected capacity of 20 million doses of trivalent vaccine per year, Sinergium Biotech will place Argentina in the short list of countries relying on their own technology to produce flu vaccine and thus to face possible pandemics.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
VIRAFLÚ	Anti – influenza Vaccine (inactivated surface antigens)	Prefilled Syringe	0.5 ml
VIRAFLÚ PEDIÁTRICA	Anti – influenza Vaccine (inactivated surface antigens)	Prefilled Syringe	0.25 ml

- O FLUXVIR, anti-influenza vaccine (adjuvant MF59)
- O PREVENAR 13

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year

Areas of Interest for Collaboration

Contract Manufacturing

Contact Details

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Name of the company: Sinovac Biotech Ltd.

Head of Institution : Weidong Yin

Established : 2001 Location : China

Overview of the company

Sinovac Biotech Ltd. is a profitable biopharmaceutical company headquartered in Beijing, China. The Company focuses on the research, development, manufacture and commercialization of vaccines that protect against human infectious diseases including hepatitis A, seasonal influenza, H5N1 (bird flu) pandemic influenza and H1N1 influenza. Sinovac received approval in 2009 for its H1N1 influenza vaccine, PANFLU.1 and has commenced fulfilling orders from the Chinese Central Government pursuit to the government stockpiling program. Sinovac was the first company worldwide to receive approval for H1N1 influenza vaccine.



Sinovac has a robust pipeline of new vaccine products under development. The Company is currently developing vaccines for Enterovirus 71 (EV 71), Pneumococcal Conjugate Vaccine, Hib, and Meningitis. Its wholly owned subsidiary, Tangshan Yian, is conducting field trials for an independently developed inactivated animal rabies vaccine.

Sinovac is open and flexible to discuss any possible collaborative opportunity of international business and has established a clear path to partnering. We are seeking the partners who share the same value as ours

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Healive®	Inactivated Hepatitis A Vaccine	Vial	0.5, 1.0 ml
Anflu	Split Influenza Vaccine	Vial	0.25, 0.5 ml
Bilive	Hepatitis A and B Combined Vaccine	Vial	0.5, 1.0 ml
PANFLU.1	H1N1 Influenza Vaccine (Split virion)	Ampoule	0.5, 1.0 ml
H5N1	H5N1 Influenza Vaccine (Split virion)	Ampoule	0.5, 1.0 ml
H5N1	H5N1 Influenza Vaccine (Whole virion)	Ampoule	0.5, 1.0 ml
Mumps	Live attenuated vaccine	Vial	0.5ml

- O EV71 Vaccine
- O Human Rabies Vaccine
- O Pneumococcal Conjugate Vaccine
- O Pneumococcal Polysaccharide Vaccine
- O HIB Vaccine

- O DTaP Vaccine
- O HepB Vaccine
- Rotavirus Vaccine
- O Ca16 Vaccine
- O Varicella Vaccine

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
EV71 Vaccine					Q2/2014
Human Rabies Vaccine					Q2/2016
Pneumococcal Conjugate Vaccine					Q2/2016
Pneumococcal Polysaccharide Vaccir	ne /////////	1			2016
HIB Vaccine					Q2/2017
DTaP Vaccine					Q2/2017
HepB Vaccine					Q2/2017
Rotavirus Vaccine					Q3/2017
CA16 Vaccine					Q3/2017
Varicella Vaccine					Q2/2016

Areas of Interest for Collaboration

- Oversea distribution
- R&D cooperation
- O International business
- FDA registration for vaccines
- Adjuvant technology
- Micro-carrier technology
- Novel vaccine technology

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Name of the company: SK Chemicals (Life Science Biz division)

Head of Institution : Chang Geun Kim (CEO and Vice Chairman)

In Serk Lee (Head of Life Science Business)

Established : 1969

Location : **Republic of Korea**

Overview of the company

SK Chemicals is a member of SK Group, the third largest company group in Korea. Since founded in 1969, it has become one of top pharmaceutical companies in Korea with its strong marketing operation in cardiovascular, neurology and vaccine/blood preparation fields.

In 2002, SK Chemicals acquired a blood preparation and vaccine specialized pharmaceutical company Dong-Shin and became the No. 1 vaccine company in

Korea.



In addition to three manufacturing plants, including a plant for vaccines and blood products, SK Chemicals started building a GMP compliant new vaccine manufacturing facility with single-use and eco-friendly concept in Andong, Korea in 2011 to produce vaccines developed by SK under the joint partnership with the Korean Government. The new facility with 150 million dose capacity will begin production of various vaccine products including cell-culture based vaccines in late 2013.

In terms of the development of vaccine products, several our vaccine candidates entered into clinical trials in Korea this year.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
SK Td vaccine	Adsorbed tetanus-diphtheria combined toxoid for adult	Prefilled syringe	0.5ml
SK DPT-3 vaccine	Diphtheria, Tetanus and Pertussis vaccine	Prefilled syringe	0.5ml
SK influenza 10 vaccine	Egg based seasonal flu vaccine	Prefilled syringe	0.25/0.5ml
SK influenza IX vaccine	Egg based seasonal flu vaccine	Prefilled syringe	0.25/0.5ml
SK influenza	Egg based seasonal flu vaccine	Prefilled syringe	0.25/0.5ml
Hepamun prefilled	Recombinant DNA Hepatitis B vaccine	Prefilled syringe	0.5/1ml
FirstHib	Haemophilus influenzae type b conjugated vaccine	Prefilled syringe	0.5ml

- O Conjugate vaccines
- O Recombinant vaccines
- O Cell culture based vaccine

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Cell culture based influenza vaccine*					2014/2015
Varicella vaccine					2015
Conjugate vaccine					2016
Others					2016

^{*}SK's cell culture influenza vaccine is prepared in SK's own cell culture platform. It is highly notable that SK's technology is capable of producing high-yields of influenza virus compared to egg based production.

Areas of Interest for Collaboration

- Co-development of new vaccines
- O Global marketing partnership/distributorship for cell culture influenza vaccines and varicella vaccines
- O Licensing-in / out of vaccine products & platform technology

Contact Details

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Name of the company: The Biovac Institute

Head of Institution : **Dr Morena Makhoana**

Established : 2003

Location : South Africa

Overview of the company

The Biovac Institute (Biovac) is a Public Private Partnership between the South African government and a private consortium. It was formed in 2003 to re-establish domestic manufacture of human vaccines, and, ultimately, to enable regional response to vaccine-preventable diseases and regional epidemics.

Biovac is the largest distributor of vaccines in South Africa, and imports, labels, packages and distributes vaccines for the South African public sector. Biovac also imports and distributes vaccines to Southern African Development Community (SADC) countries.



It is Biovac's vision is to be a Centre of Excellence rooted in Africa for the development and manufacture of affordable quality vaccines for Africa and the developing world.

In its short history, Biovac has been able to develop capacity and know-how in conjugate vaccines. The established technology platform includes bacterial fermentation, polysaccharide purification, conjugation and the associated analytical methods. Product-development partnerships are in place with a number of international agencies.

Biovac has invested extensively over the last few years in new vaccine manufacturing and testing facilities. Inward technology transfers are under way with a number of global vaccine-manufacturer partners for local manufacture.

Biovac is the only manufacturer of human vaccines in southern Africa. It is based in Cape Town, South Africa.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
	Hepatitis B	Vial	0.5, 1.0, 5 ml
	Diluent for BCG vaccine	Vial	1ml
	Seasonal influenza vaccine	Vial or prefilled syringe	0.5ml
	Hexavalent vaccine	Vial	0.5ml

- O Hib (bulk): Biovac has developed its own Haemophilus
- o influenza type b vaccine technology and has successfully concluded out-licensing deals Influenza (Pandemic)
- Further contract formulation/filling/finishing various technology transfer products

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year

Areas of Interest for Collaboration

Biovac welcomes the opportunity to evaluate collaborative partnerships related to the development and manufacture of vaccines and other biological products relevant to Africa and other developing countries.

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

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Name of the company: The Center for Genetic Engineering and

Biotechnology

Head of Institution : Dr. Luis Herrera Martínez. Director General

Established : 1986

Country : Cuba

Overview of the company

The Center for Genetic Engineering and Biotechnology (CIGB) since 1986 has become one of the most important research-production facilities at the "Western Havana Bio-Cluster", equipped and staffed to close the cycle from biological research, which means from biotech product and process development, to production, registering, and commercialization. The CIGB has 20 years of experience in the production of recombinant biopharmaceutical molecules such as interferon, Hepatitis B vaccine, Synthetic Haemophilus influenzae type b vaccine, Tetra- and Penta-valent Combined vaccines, streptokinase, epidermal growth factor formulated in different forms, monoclonal antibodies and other products, which are already producing a positive impact on public health in Cuba and a positive cash flow from sales to more than 50 countries.

The CIGB with about 550 scientists and engineers work in more than 50 research and development projects, which involve new vaccines,



therapeutic recombinant proteins and peptides, therapeutic monoclonal antibody and diagnostic systems. CIGB project/product portfolio is covered by more than 70 patent applications and manufacture of those arriving into production stage take place under the most stringent GMP conditions leading into international recognition by different authorities.

CIGB is open to implement a coordinated and targeted alliance-building policy, in order to speed up projects, to complement our capacities with those of our new partners, and to open new channels to the most sophisticated markets.

A component of that policy is to anticipate negotiation time and to start alliance building earlier in the product's life cycle. Thus, immersed in this movement, you will find in this document general data about the institution and summaries of eleven projects, which we considered most attractive for negotiation with your organization, However, while the mail proposed focus is set within these propositions, discussions can be opened around other projects of mutual interest as well.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Heberbiovac HB	HB Vaccine	Vial (liquid)	Pediatric and adult doses, single and multidose
Quimi- Hib	Hib Vaccine	Vial (liquid)	Pediatric, single dose
Trivac HB	Tetravalent Vaccine (DPT-HB)	Vial (liquid)	Pediatric and adult doses, single and multidose
Heberpenta L	Pentavalent Vaccine (DPT-HB-Hib). Fully liquid in one vial	Vial (liquid)	Pentavalent Vaccine (DPT-HB+Hib)
Heberon	Interferon's	Vial (liquid& freeze dried)	Several presentations
Hebekinasa	Streptokinase	Vial (freeze dried)	Several presentations
Heberprot-P	Heberprot-P® is a novel and unique medicine indicated for diabetic foot ulcer treatment (DFU). This innovative product contains epithermal growth factor (EGF) as active pharmaceutical ingredient (APhI) to be applied by intra-lesional infiltration directly in the wound site	Vial (freeze dried)	25 and 75 mcg/vial

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Heberprot - P					
HBV vaccine (NASVAC)					
HCV vaccine (CIGB - 230)					
CIGB - 500 (Cytoprotective Agent)					
CEA recombinant antiboby fragment (CIGB - M3)					
HPV vaccine					
Prostate cancer vaccine					
CIGB - 370 (Anti-tumor agent)					
CIGB - 166 (anti- VEGF antibody)					
CIGB _ 247 (VEGF vaccine)					
CIGB - 552 (anti -tumor peptide)					
Dengue vaccine					
Dengue anti-viral molecules					
CIGB - 845 (neure-protective agent)					
Peptide for Rheumatoid Arthritis					

Areas of Interest for Collaboration

- O Business Strategy for International Partnership in R&D CIGB's Projects
- O CIGB is open to implement a coordinated and targeted alliance-building policy, in order to speed up projects, to complement our capacities with those of our new partners, and to open new channels to the most sophisticated markets

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Name of the company: The Company for Vaccine and Biological

Production No.1 (VABIOTECH)

1 Yersin Street, Hanoi, Vietnam

Established : 2000

Head of Institution

Location : Vietnam

Overview of the company

The Company for Vaccine and Biological Production No.1 is a State-Owned Company which used to belong to The National Institute of Hygiene and Epidemiology (NIHE), Hanoi-Vietnam. From June 2010, VABIOTECH has been transformed into a State Owned One Member Limited 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, analyzing samples of new developed vaccines and biological products, diagnostic kits, therapeutic products, pharmaceuticals; cosmetics, nutrition foods, providing healthcare services... Being the biggest vaccine



manufacturer and supplier for the National Expanded Program on Immunization in Vietnam with GMP-qualified facilities, 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 and a series of diagnosis kits for detection of HBsAg, anti-HBs, anti-HCV and anti-HIV. Besides, VABIOTECH also imports and provides some other vaccines and biological products to meet the market's demand such as: Mumps, Rubella, Meningococcal and Varicella. VABIOTECH is highly committed to provide its best products at favorable price in order to protect Vietnamese people's health and well-being.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Hepatitis A Vaccine	Vaccine is a suspension containing inactivated hepatitis A virus (HM 175 hepatitis A strain) absorbed onto aluminum hydroxide.	vial	1.0
Hepatitis B vaccine	It is a non-infectious, inactivated recombinant subunit viral vaccine derived from HBsAg produced in yeast cells using recombinant DNA technology. It is a whitish turbid liquid which is produced by culture of genetically engineered yeast cells which carry the relevant gene of HBsAg, purified and inactivated by several physico-chemical steps such as ultra centrifugation, column chromatography and formaldehyde treatment.	vial	0.5/1.0
Japanese Encephalitis vaccine	The vaccine is produced by VABIOTECH upon technology transfer from BIKEN Institute – Japan, use Japanese encephalitis virus Nakayama strain. This is an inactivated, purified vaccine derived from mouse brain.	vial	1.0/5.0
Cholera vaccine	The vaccine is used against Cholera. The vaccine is produced from Cholera bacteria, consisting of V Cholerae Classical biotype, ELTor and O 139.	vial	7.5

- O H_sN₁ influenza vaccine (Primary Monkey kidney cell base)
- O Hib conjugate vaccine
- Rabies vaccine (vero cell base)
- O Japanese Encephalitis vaccine (vero cell base)
- Entero virus 71 vaccine (EV71)
- O S. typhoid Vi conjugate vaccine
- O Hepatitis A vaccine (vero cell base)

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
H _s N ₁ influenza vaccine					I/2014
Hib conjugate vaccine					I/2016
Rabies vaccine					I/2016
Japanese Encephalitis vaccine					I/2017
Ev71 vaccine					I/2016
S. typhoid Vi conjugate vaccine					I/2016
Hepatitis A vaccine					I/2016

Areas of Interest for Collaboration

- Technology transfer
- Filling and secondary packadging
- Register; collaborate in doing clinical trial, import and market vaccines and biological products in Vietnam's market.
- O Export VABIOTECH's products
- Research, develop and commercialize new generation vaccines in Vietnam.

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Name of the company: The Government Pharmaceutical Organization

Head of Institution : Dr. Suwach Siasiriwattana MD. Managing Director.

Established : 5th August 1966

Location : Thailand

Overview of the company

The Government Pharmaceutical Organization (GPO) of Thailand is a state enterprise under Ministry of Public Health. It was founded in the year 1966 by merging of a pharmaceutical manufacturing plant (founded in 1939) and Pharmaceutical Department (founded in 1901) according to the GPO Act of 1966. The annual revenue of fiscal year 2012 (Oct 2011-Sep 2012) is approx. 400 mUSD. The total pharmaceutical product items are more than 300. The total staff is about 2,700.

The main responsibility of GPO is to produce medicines and pharmaceutical products to serve the national health security system and other medicine supplies. Biological Product Department of GPO is, one of the Production Clusters, responsible for production of vaccines and antisera. At present, staff under this department is about 180. Our current products are JE (MB) vaccine, antiserum of



tetanus and snake venoms. The coming vaccines of dT, TT, DTP DTP-HB and influenza vaccines are under development. The development of influenza vaccine has been supported by WHO and Thai Government including domestic and international networks. The H1N1 2009 PLAIV was registered for pandemic purpose in July 2011. The new strain H5N2 PLAIV is now completed clinical study Phase II and ongoing to submit for registration for pandemic use. The seasonal IIV is being scaled up from pilot scale to industrial scale with technical assistance from KAKETSUKEN, Japan.

The industrial influenza vaccine plant in Saraburi province (120 Km away from Bangkok) is under construction with the support from the government and this will be the new factory for biological products in the future.

Product Name	Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Japanese Encephalitis vaccine	Inactivated Japanese Encephalitis vaccine, Beijing strain	Vial	0.5 ml and 5.0 ml
TAT	Tetanus Antitoxin	Ampoule / Vial	1ml / 2ml
Antisnake venom	Anti Cobra, Anti Malayan Pit Viper, Anti Russeli's Viper	Ampoule	10ml

- O Inactivated Influenza vaccine
- O Live attenuated Influenza vaccine
- O DTP-Hepatitis B vaccine
- o dT vaccine
- O Tetanus vaccine
- O Cell based JE

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year

Areas of Interest for Collaboration

- O Development of other vaccines and biopharmaceutical products
- Technology transfer
- Research Collaboration

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Name of the company: VACSERA, holding company for biological products & vaccines

Head of Institution : **Dr. Hamdallah Zedan**

Established : 2003

Country : Egypt

Overview of the company

VACSERA is a state owned company established in 1881by Health Dept. producing small-pox vaccine followed by Rabies vaccine in 1907, still the only company producing vaccines in Egypt. In 2002 VACSERA was announced as a holding company for biological products & vaccines having 3 affiliated companies in 3 main locations.

- 1. EGYVAC: The Egyptian Company for Production of Vaccines, Sera and Drugs.
- 2. EGYBLOOD: The Egyptian Company for Blood Transfusion Services.



3. EGYVET: The Egyptian Company for Drugs & Veterinary Vaccines.

VACSERA mission is to contribute in securing the needs of the country from vaccines (human & veterinary), biotechnological products, blood & blood components, and some laboratory diagnostics, through local manufacturing or procurement to help in the company growth, implementing continuous improvement to all activities, resources and assets of the company.

Egyvac is the sole Producer of vaccines & sera in Egypt & the only supplier of vaccines & sera to the ministries of Health, Defense & interior . The product portfolio includes a wide variety of products that play a major role in the preventive & therapeutic fields. It has two WHO labs & WHO polio regional referenced lab for the EMRO region & WHO National Influenza Center (NIC).

Product Name Description	on Type Vial/Ampoule	Prese 0.5/ 1.0 / 5	ntation .0 / 10.0 ml
Toxovac	Adsorbed Tetanus Toxoid vaccine	Vial / amp	0,5 ml &5 ml
DT vaccine (for pediatric use)	Diphtheria &Tetanus Toxoids	Vial / amp	0.5 ml & 5 ml
Td Vaccine (for adult use)	Diphtheria & Tetanus Toxoids	Vial / amp	0.5 ml & 5 ml
DPT vaccine	Diphtheria & tetanus toxoids & inactivated Bordetella pertussis	Vial / amp	0.5 ml & 5 ml
Cholera vaccine	Formaldehyde Killed Vibrio cholera	Vial / amp	1ml & 10 ml
Typhoid vaccine	Formaldehyde Killed Salmonella typhi	Vial / amp	1ml & 10 ml
Mixvac (Typhoid / tetanus vaccine)	Tetanus toxoid & killed Salmonella typhi	Vial / amp	1ml & 10 ml
Meningococcal AC Vaccine	Purified polysaccharide From Niesseria meningitides of types A&C	Vial	10 ml & 25 ml
Anti- scorpion serum(liquid/lyophilized)	Polyvalent anti- scorpion serum	Amp	1 ml
Snake venom antiserum polyvalent (liquid/ lyophilized)	Polyvalent anti- snake serum	Vial	10 ml
Polyvalent anti – viper venom serum (liquid)	Polyvalent anti – viper serum	Vial	5 ml
Seroviper T (liquid & lyophilized)	Polyvalent anti – viper serum for species present in European environment	Vial	5 ml
Polyvalent anti – viper venom serum (lyophilized)	Polyvalent anti – viper serum	Vial	5 ml
Tetanus antitoxin 30000 IU (therapeutic)	Tetanus antitoxin 30000 IU	Vial	10 ml
Tetanus antitoxin 1500 IU (prophylactic)	Tetanus antitoxin 1500 IU	Amp	1 ml
Tetan 3000 IU (prophylactic)	Tetanus antitoxin 3000 IU	Amp	1 ml
Diphtheria antitoxin	Diphtheria antitoxin 10000 IU	Vial	10 ml

- Oral Polio Vaccine
- O Seasonal Influenza vaccine
- O AC meningococcal conjugate vaccine
- O AC meningococcal polysaccharide vaccine
- Acellular Pertussis vaccine
- O Rabies vaccine
- O Combined tetra & penta-vaccines (DTP- Hep B & DTP- Hep B- Hib)
- O Haemophilus Influenza vaccine

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Oral Polio Vaccine	Pilot Plant scale	Jan 2013			Q2 / 2014
Seasonal Influenza Vaccine	Lab scale				Q4 / 2015
AC meningococcal conjugate vaccine	Lab scale				2016
AC meningococcal polysaccharide vaccine	Preclinical				2016
Acellular Pertussis vaccine	Lab scale				2016
Rabies vaccine	Technology Transfer				

Areas of Interest for Collaboration

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Name of the company: Walvax Biotechnology Co., Ltd

Head of Institution : Li Yunchun

Established : 2001
Location : China

— Overview of the company

Walvax Biotechnology Co., Ltd. (referred to as Walvax) was founded in 2001, which is a modern biological pharmaceutical enterprise engaged in R & D, production and sales of bio-medicine products. Walvax is committed to provide safe bio-medicine (such as vaccines, blood products and so on) with excellent quality and advanced technology for domestic and foreign markets. Walvax's headquarters is located in Kunming, Yunnan Province of China. Currently, Walvax has a modern R & D center in National High-tech Zone of Kunming, and a modern vaccine production base and pilot base in High-tech Zone of Yunnan Yuxi and Jiangsu Taizhou China Medical City, respectively. Walvax's marketing network covers 30 provinces and cities of China, which includes more than 2000 counties.

In November, 2010, Walvax Biotechnology Co., Ltd. (stock name: Walvax Biotech, and stock code: 300142) listed on Shenzhen Stock Exchange. The operation income of 2012 reached 537.55 million RMB, while the net profit was 232.80 million RMB.

Walvax has successfully developed 20 vaccines, in which Haemophilus Influenzae Type b Conjugate Vaccine, Group A, C Meningococcal Polysaccharide Conjugate Vaccine Freeze Dried, Group A, C, W₁₃₅ and Y Meningococcal Polysaccharide Vaccine and Group A, C Meningococcal Polysaccharide Vaccine Freeze Dried have been already marketed.



Product Name	e Description	Type Vial/Ampoule	Presentation 0.5/ 1.0 / 5.0 / 10.0 ml
Haemophilus Influenzae Type b Conjugate Vaccine	The product officially launched into market in September 2007. This vaccine is indicated for infants from the age of 2 months to 5 years to induce the active immunization against infectious diseases caused by Haemophilus influenzae type b, such as meningitis, pneumonia, septicemia, cellulitis, arthritis, epiglottitis etc.	Vial	0.5 ml
Haemophilus Influenzae Type b Conjugate Vaccine	In April 2010, Walvax launched a prefilled syringe dosage form of Haemophilus Influenzae Type b Conjugate Vaccine (Hib). Since no re-dissolution and no need to pierce the vial cap, it can effectively reduce the abundant procedures and waste items in the course of injection. It also can effectively avoid contamination and keep the tip intact. So it can reduce the pain of the vaccinated children.	Pre-filled syringe	0.5 ml
Group A, C Meningococcal Polysacchride Conjugate Vaccine, Freeze Dried	The product was on market officially in September 2009. The vaccine is indicated for infants from the age of 3 months to 5 years preventing diseases caused by Meningococcal Group A or C, such as cerebrospinal meningitis and septicemia.	Vial	0.5 ml
Group A, C Meningococcal Polysaccharide Vaccine Freeze Dried	The product was on market officially in December 2012. This product is only recommended for Children and adults over the age of 2 years. This vaccine is used to prevent disease caused by the bacteria named "Neisseria meningitidis groups A and group C".	Vial	0.5 ml
Group A, C, W ₁₃₅ and Y Meningococcal Polysaccharide Vaccine	The product was on market officially in December 2012. Currently, this product is only recommended for children above 2 years old and the people who are at the high risk of getting this disease to use. After vaccination, it can prevent meningococcal disease caused by epidemic Neisseria meningitidis serogroups A, C, Y, and W-135.	Vial	0.5 ml

- O Diphtheria, Tetanus and acellular Pertussis Combined vaccine. Adsorbed
- O Tetanus toxoid vaccine, adsorbed
- Inactivated split Influenza vaccine (0.5ml)
- O Inactivated split Influenza vaccine (0.25ml))
- O 23 valent pneumococcal polysaccharide vaccine
- O Recombined (Hansenula polymorpha) epatitis B vaccine (10ug)
- O Recombined (Hansenula polymorpha) Hepatitis B vaccine (20ug)
- O DTaP+Hib combined vaccine
- O CpG adjuvant Hep B vaccine
- O 13 valent pneumococcal conjugate vaccine
- O Typhoid Vi polysaccharide vaccine
- O Quadrivalent meningococcal conjugate Vaccine
- Recombined quadrivalence HPV Vaccine

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Diphtheria, Tetanus and acellular Pertussis Combined vaccine, Adsorbed					
Tetanus toxoid vaccine, adsorbed					
Inactivated split Influenza vaccine (0.5ml)					
Inactivated split Influenza vaccine (0.25ml)					
23 valent pneumococcal polysaccharide vaccine					
Recombined (Hansenula polymorpha) Hepatitis B vaccine (10ug)					
Recombined (Hansenula polymorpha) Hepatitis B vaccine (20ug)					
DTaP+Hib combined vaccine					
CpG adjuvant Hep B vaccine					
13 valent pneumococcal conjugate vaccine					
Typhoid Vi polysaccharide vaccine					
Quadrivalent meningococcal conjugate Vaccine					
Recombined quadrivalence HPV Vaccine					

Areas of Interest for Collaboration

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- Asia for vaccine export (especially Southeast Asia)
- O All over the world for all kinds of cooperation

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Name of the company : ${\bf Xiamen\ Innovax\ Biotech\ Co.,\ Ltd.}$

Head of Institution : Mr. Steven Gao, General Manger

Established : 2005

Location : China

Overview of the company

Xiamen Innovax Biotech Co., Ltd., a newly founded innovative company, is dedicated to R&D, manufacturing, marketing of vaccine, diagnosis kit and medical equipment.

With the mission of disease control and prevention in mind, we devoted ourselves to biological product research,

and provide innovative vaccine and new diagnosis product.



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

- O Cervical Vaccine (HPV16/18)
- O Condyloma Acuminate Vaccine (HPV6/11)
- HEV vaccine (pediatric)

Product Name	Pre Clinical	Phase 1	Clinical Phase 2	Phase 3	Expected launch date Quarter / Year
Cervical Vaccine (HPV16/18)					2020
Condyloma Acuminate Vaccine (HPV6/11)					2019
HEV vaccine (pediatric)		N/A	N/A		2017
HPV multi-valents					2028

Areas of Interest for Collaboration

- O Licensing / Technology transfer
- Overseas distribution
- O Product co-development

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List of Member Organizations

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Biological E. Limited	7
Bio Farma	9
Bio-Manguinhos - Institute of Technology on Immunobiologicals	11
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DEVELOPING | COUNTRIES | VACCINE | MANUFACTURERS | NETWORK

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