

Medigen BioMedical Group



*Innovations for
a Better Life*



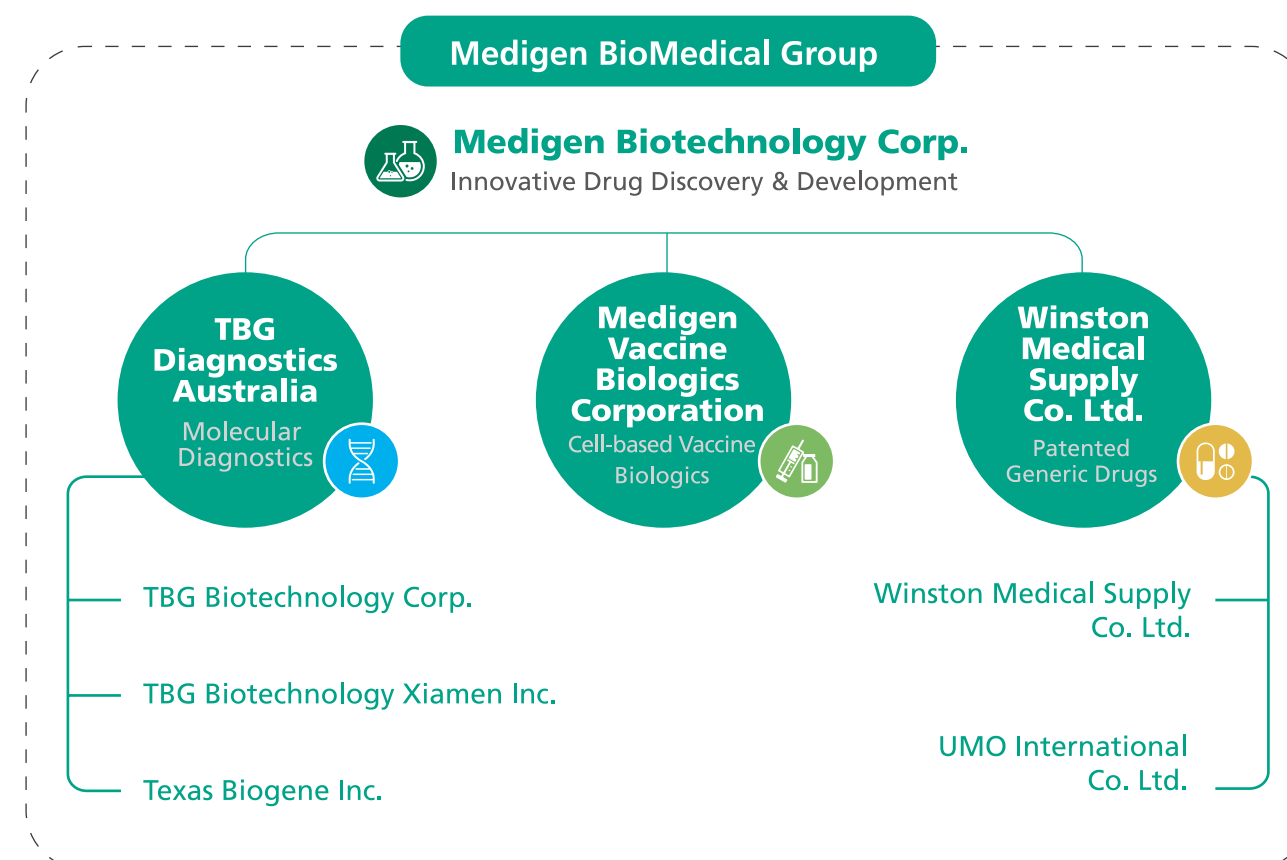
*Innovations
for a Better Life*



Medigen BioMedical Group

Medigen BioMedical Group is committed to upholding its professional philosophy of “Innovations for a Better Life”. It is Medigen's goal to improve the human welfare through new drug development, molecular diagnostics, cell-based vaccines, biologics, and patented generic drugs. We hope to achieve this by cooperation, merger and acquisition, generating our global competitive advantage. So that Medigen will become Asia's leading biotechnology company, and eventually setting a new benchmark for an international biotechnology company.

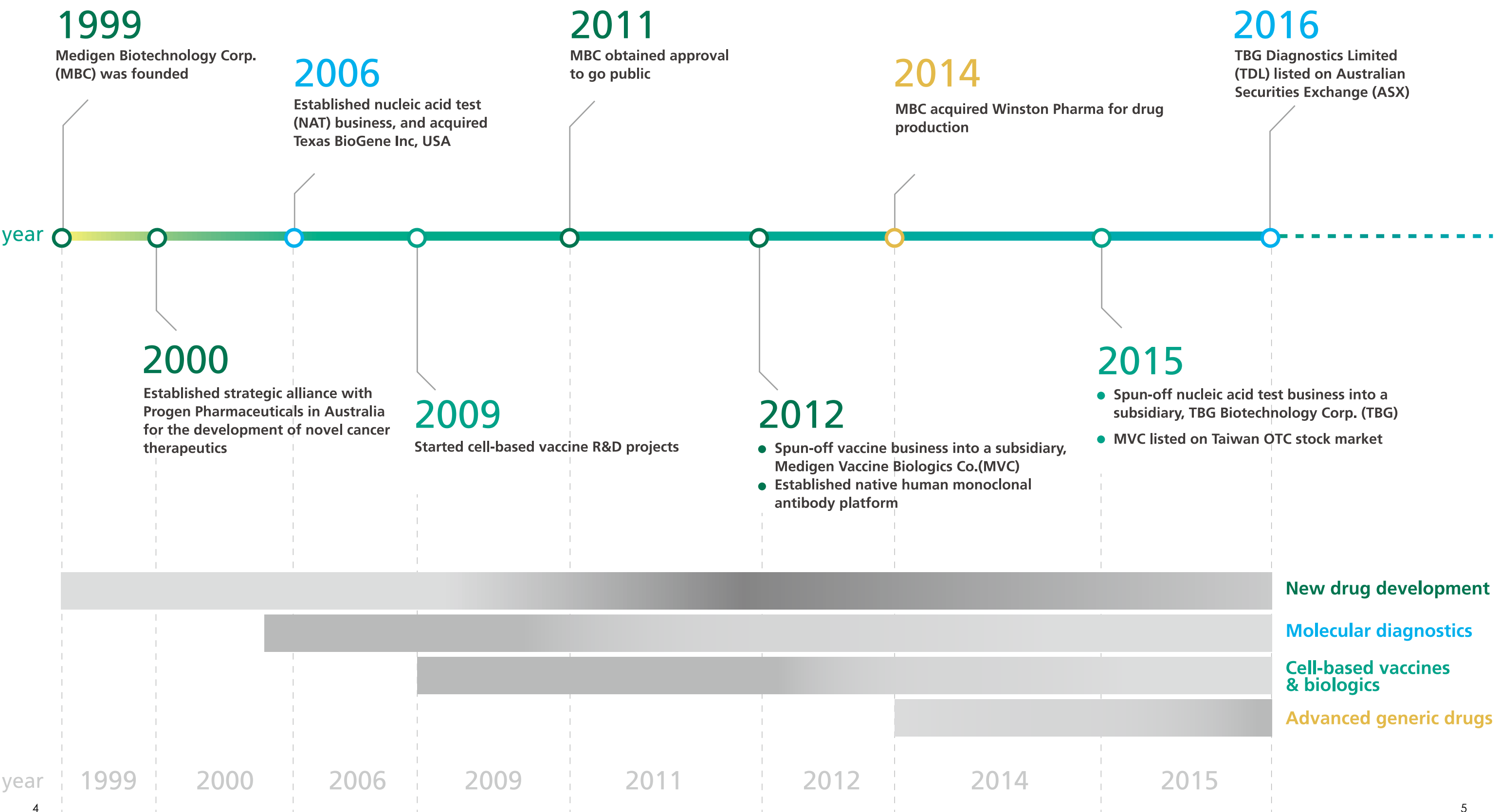
Through our continuous efforts in research and advancement in equipment, Medigen Biomedical Group has more than proven our commitment and capabilities in molecular biology, immunotherapy, drug development, clinical trials, product verification regulations, molecular diagnostic kits, and PIC/S GMP manufacturing.



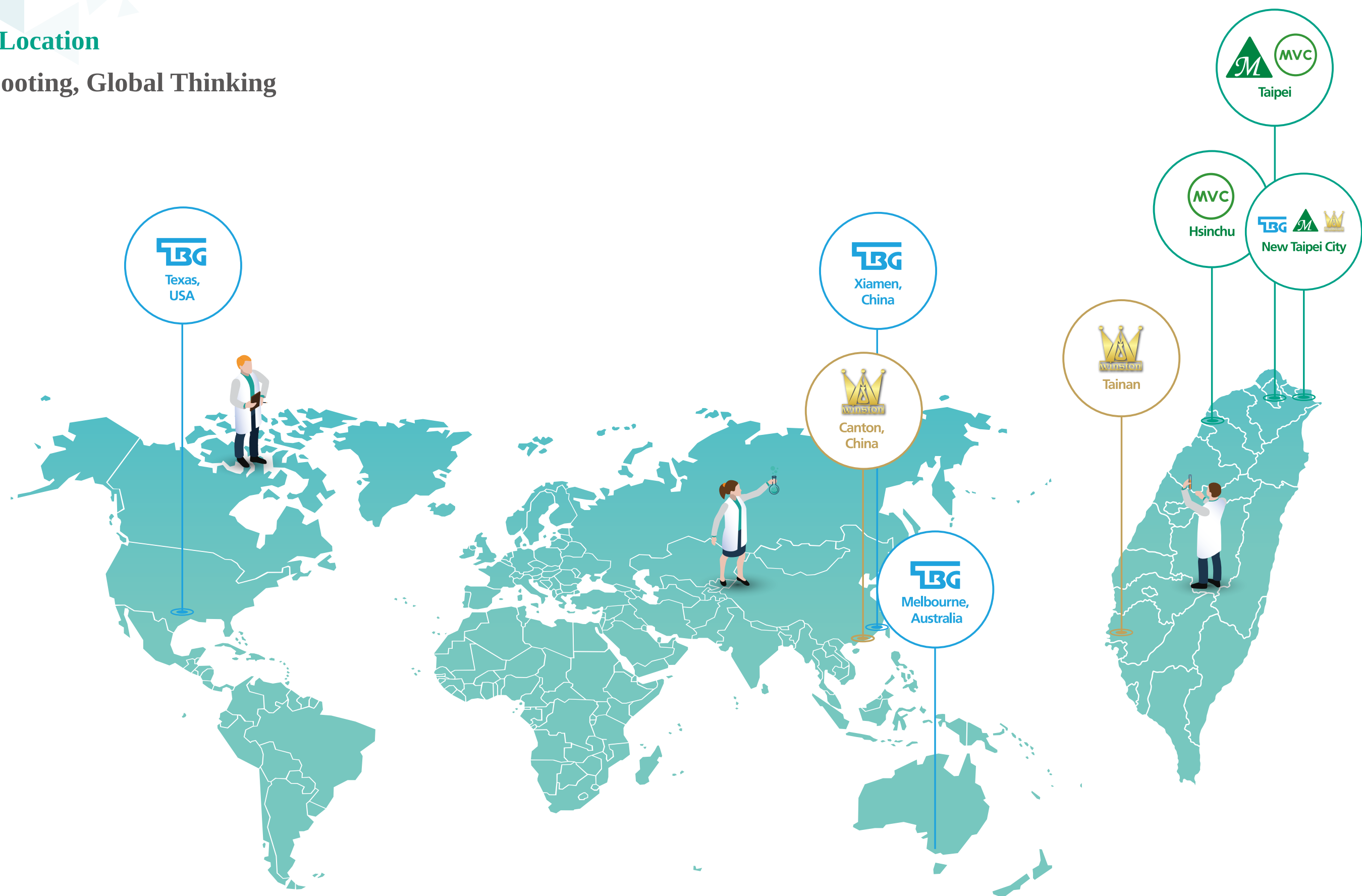
Innovations for a Better Life

Medigen BioMedical Group strives for breakthroughs. We look forward to innovate and improve the quality of human life through prevention and treatment of diseases. So that every life can lived to its fullest potential.

- Medigen Biotechnology Corp.
- TBG Diagnostics Limited
- Medigen Vaccine Biologics Co.
- Winston Medical Supply Co. Ltd.



Global Location
Local Footing, Global Thinking



Compassion
Integrity
Professionalism
Innovation

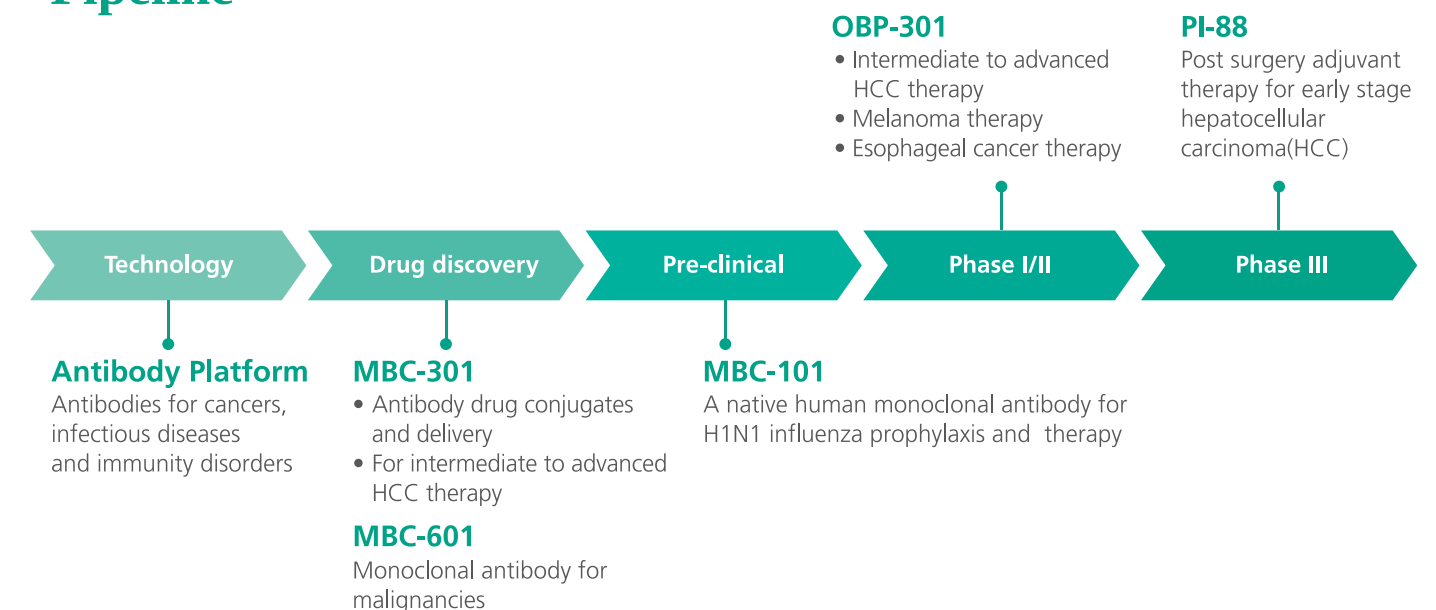
Medigen Biotechnology Corp.



Top research & development team

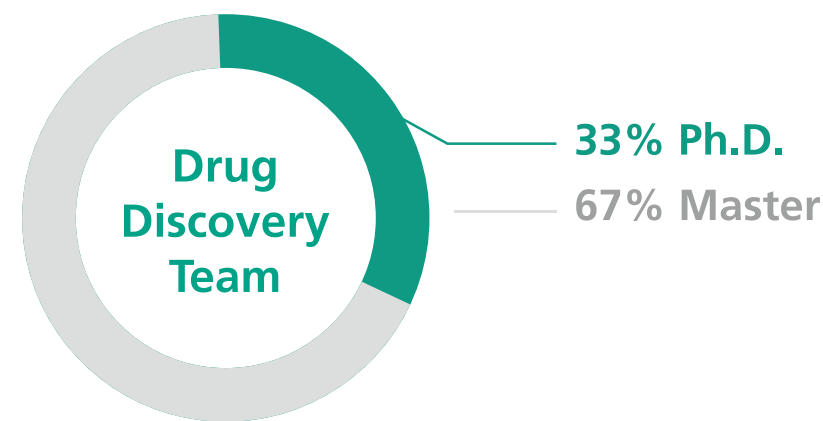
- 2016** ▶ Medigen and Oncolys decided to conduct melanoma and esophageal cancer indications on OBP-301
- 2016** ▶ Medigen's liver cancer new drug OBP-301 licensed to Jiangsu Hengrui Medicine for the right of China, Hong Kong, and Macau.
- 2015** ▶ Published the discovery of human native mAb against pandemic H1N1 Virus (MBC-101) at Protein and Antibody Engineering Europe Conference.
- 2015** ▶ PI-88 finished phase III treatments on all patients.
- 2014** ▶ PI-88 acquired Taiwan Invent Patent I482624.
- 2014** ▶ Completed the recruitment of subjects in PI-88 phase III trial.
- 2014** ▶ OBP-301 started phase I/II trial in Taiwan and Korea.
- 2013** ▶ Liver cancer new drug OBP-301 obtained European patent.
- 2012** ▶ Established native human monoclonal antibody platform.
- 2011** ▶ MBC obtained approval to go public.
- 2008** ▶ MBC co-developed with Oncolys BioPharma Inc. for liver cancer new drug OBP-301
- 2000** ▶ Established strategic alliance with Progen Pharmaceuticals in Australia for the development of novel cancer therapeutics.
- 1999** ▶ Medigen Biotechnology Corp. (MBC) was founded.

Pipeline

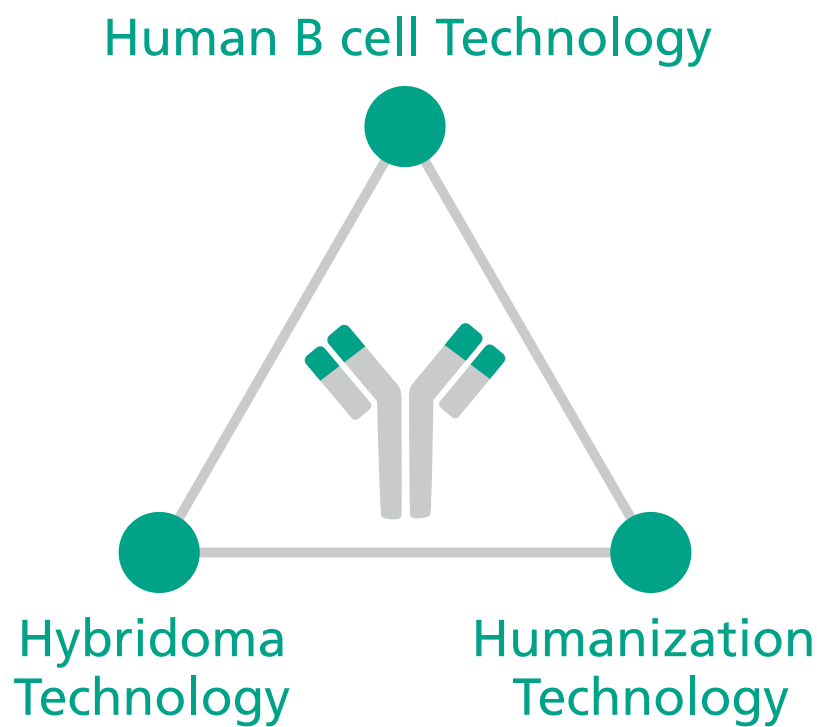


Drug Discovery

Medigen Drug Discovery team consists of highly qualified scientists. Our research team had developed a novel native human monoclonal antibody platform. This platform gives us the ability to immortalize human B cells ex-vivo from blood samples at an efficiency up to 90 percent. Not only does this allow us to screen for high affinity and avidity antibody against cancer, but also for infectious diseases and immunity disorders. With this technology, Medigen can develop safer, more efficient antibody and immunomodulators, with less side effect in a shorter time.

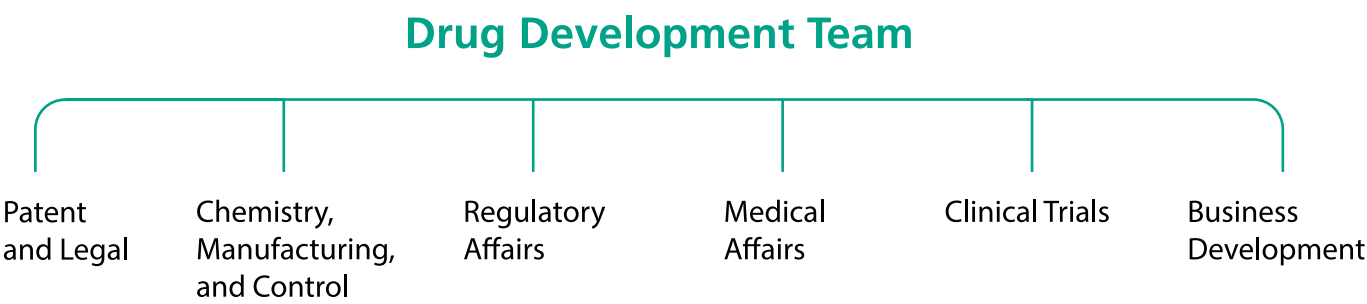


Medigen's Novel Antibody Platform

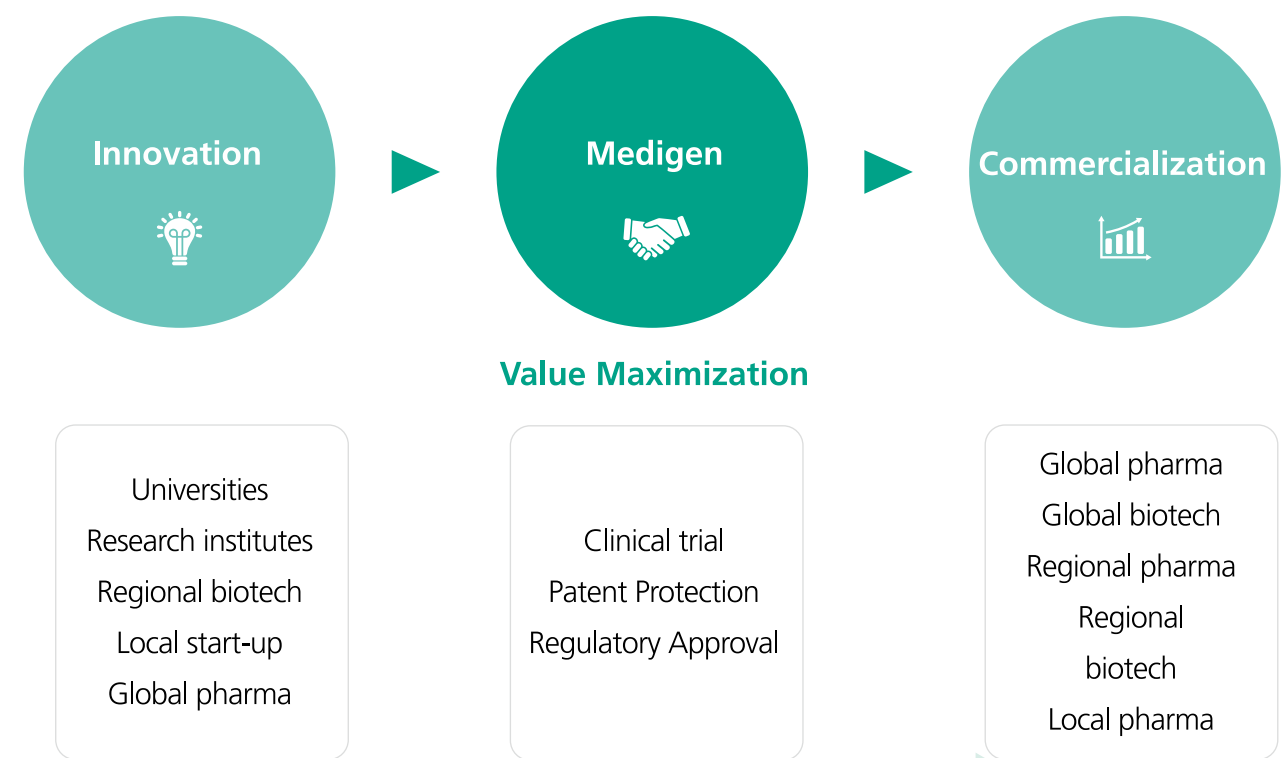


Drug Development

Our new drug development team is a diverse group of professionals. We have experts coming from medical, pharmaceutical, life science, and legal background, working together to facilitate discovery of new cancer drugs, and conduct clinical trials under ICH guidelines. Furthermore, our expertise in pharmaceutical regulatory policies ensures that Medigen will be able to bring our drugs to the market on a global scale.



Collaboration of Drug Developments in Clinical Phases I.II.III





Better Test, Better Care

TBG Biotechnology Corp. Accuracy 、 Efficiency 、 Quality

The First Asian
Biotechnology
Company to
Provide HLA
Typing
Reagents



- 2018 ▶ ExProbe™ HLA Real-time PCR Typing Kit will receive CFDA
- 2017 ▶ Exclusively Licensed from the NTU to Developed Drug Companion Diagnostic Kits
- 2017 ▶ Molecular Typing Laboratory of TBG Biotechnology Xiamen Inc.
- 2016 ▶ Exclusive Distribution of Omixon HLA NGS Kits in Asia
- 2016 ▶ TBG Diagnostics Limited (TDL) Listed in Australian Market
- 2014 ▶ TBG Biotechnology Xiamen Inc. Established
- 2013 ▶ HLAAssure™ SE SBT Kit Received TFDA
- 2012 ▶ Shanghai Haoyuan Sold to Perkin Elmer
- 2011 ▶ HLAAssure™ SE SBT Kit Received CE-IVD
- 2009 ▶ Molecular Typing Laboratory of TBG Biotechnology Corp. Received ASHI
- 2007 ▶ Medigen Acquired Shanghai Haoyuan
- 2007 ▶ Morgan™ HLA SSP Tying Kit Received FDA 510(k)
- 2006 ▶ Texas BioGene Inc. Acquisition by Medigen
- 1999 ▶ Texas BioGene Inc. Established In USA

Taiwan's First HLA IVD Manufacturer and Service Laboratory

TBG Inc. (TBG) acquire the Human Leukocyte Antigen (HLA) Typing technology and is committed to the commercialization of this technology including the establishment of ISO13485 quality management system, production processes, quality control analysis, application of international In Vitro Diagnostic (IVD) certifications with the US FDA, European CE Mark, and Taiwan's Department of Health registration. TBG became one of the first Asian Biotechnology Company to provide HLA typing reagents.

TBG HLA Typing Laboratory is accredited by the American Society of Histocompatibility and Immunogenetics (ASHI), and it is the only ASHI laboratory in Taiwan. TBG's HLA typing ability is recognized internationally.





Global Molecular IVD Provider for HLA and Beyond

TBG is now a global provider for HLA typing products with customers in over 25 countries in Asia-Pacific, America, Europe and Middle-East.

In order to address the global market, TBG is now headquartered in Australia with subsidiaries in Taiwan, China, and United States. These subsidiaries are responsible for administration, research and development, IVD regulations, production, marketing, sales and customer service. As of January of 2016, TBG is listed as TBG Diagnostics Limited (TDL) in the Australia Stock Market.



TBG Xiamen



Morgan™ HLA SSP
Typing Kit



HLAssure™ SE SBT Kit



DX-A™ Automated
Pipetting System

TBG and Medigen has exclusively licensed from the National Taiwan University to developed adverse drug reaction testing kit that can prevent the occurrence of agranulocytosis caused by anti-thyroid drugs in patients with Graves' Disease. The licensed technology has been patented in Taiwan with patents in application in China and Hong Kong. TBG will be the first to provide this type of product in the Greater China region.



NGS Leading Brand



With a reputation in HLA product sales, one of the leading NGS providers, Omixon, has decided to partner with TBG for the exclusive distribution of Omixon products in Asia. Together with the TBG's automation system, we can now provide an automated NGS HLA typing solution for our customers.

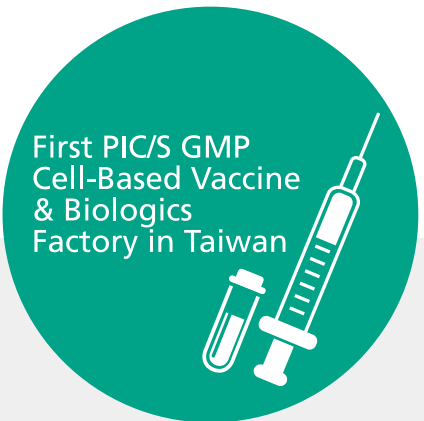


Vaccines for a Healthier World



Medigen Vaccine Biologics Corporation (MVC)

is one of the major vaccine players in Asia-Pacific region. MVC utilizes various cell-based platforms to develop viral vaccines and affordable biosimilar drugs targeting regional infectious diseases.



- 2017 ▶ **BCG vaccine and Snake antivenoms**
 - Signed the technology transfer contract with Taiwan CDC for BCG vaccine and snake antivenoms technology
- 2016 ▶ **Globalization**
 - Collaboration with US CDC to develop VLP (virus-like-particle) dengue vaccine
 - Obtained US NIH's authorization to develop dengue vaccine in 17 countries
 - Received the 13th Taiwan National Innovation Award for EV71 vaccine.
 - Held the opening ceremony of factory in Hsin-chu
 - Collaborated with UCAB (Netherland), mAbxience (Spain), SPIMACO (Saudi Arabia), and Libbs (Brazil) to develop biosimilar mAb drug.
- 2015 ▶ **Investment**
 - Received the 12th Taiwan National Innovation Award for cell-based influenza vaccine
 - Completed factory construction.
 - Listed on Taiwan OTC stock market.
 - H7N9 vaccine entered Phase 1/2 clinical trial
- 2014 ▶ **Taiwan's first PIC/S GMP cell-based vaccine factory**
 - Initiated factory construction in Hsinchu Biomedical Science Park
 - EV71 vaccine entered Phase 2 clinical trial
 - Transferred cell-based H7N9 vaccine from NHRI
- 2013 ▶ **EV71 Vaccine**
 - Transferred EV71 vaccine technology and Phase 1 clinical results from NHRI.
- 2012 ▶ **Founding year**
 - Establishment of Medigen Vaccine Biologics Corporation (MVC).
 - Cell-based H5N1 vaccine entered Phase 1 clinical trial.





Taiwan's First PIC/S GMP Cell based Vaccine Manufacturing Factory

Cell-based vaccines are made by growing virus in well-characterized cell lines to achieve better quality control, more stable supply, faster start-up, and more diversified product applications. Countries like United States, Japan and EU thus gradually incorporate cell-based platform to develop their vaccine products, and Taiwan should not fall behind.

MVC's factory was completed in 2015 and is expected to be Taiwan's first PIC/S GMP certified cell-based vaccine manufacturing factory after completing validation process. The factory is equipped with two kinds of production lines, using suspension or adherent cell lines to manufacture viral vaccines and antibody drugs. During pandemic, MVC's factory is able to manufacture sufficient vaccines by switching all production lines to manufacture viral vaccines using adjustable HVAC system.

Fortify National Health Defense with Mock-up Pandemic Vaccines

Influenza pandemic occurs when a new strain of influenza virus is transmitted to human beings from other species, usually causes high mortality rate in large population. Pandemic vaccine is effective prevention and can be prepared by mock-up strategies.

With experiences in cell-based vaccine, MVC has completed Phase I clinical study of H5N1 vaccine. During H7N9 outbreak in 2013, in response to the government's call, MVC initiated development of H7N9 vaccine and completed Phase II. MVC is looking forward to obtaining the licensure of mock-up influenza vaccine for the preparedness of the future pandemic.

MVC Marching into Biosimilar Market

MVC extends collaborative agreement with an international consortium led by UCAB to develop biosimilar mAb. Together with mAbxience (Spain), SPIMACO (Saudi Arabia), and Libbs (Brazil), MVC develops affordable mAbs to prevent infants from infecting respiratory syncytial virus.

MVC Teamed with US NIH for Preventing Dengue Fever infection

Since Taiwan suffers deadliest dengue outbreak in 2015 and the global incidence of dengue has grown dramatically in recent decades. MVC enters a license agreement with US National Institute of Health (NIH) to develop, make, sell and sublicense NIH's dengue vaccine in 17 countries of Asia-Pacific and Middle East. The vaccine elicits robust immune response and protection against Dengue virus with just only 1 dose. The first phase 3 trial was initiated in Brazil, 2016. MVC will conduct a multi-regional clinical trial in Taiwan and other target market.

The World's First EV71 Vaccine Targeting 2-6 Months Old Babies

Babies under 6 months old have the highest mortality rate when infected with hand-foot-mouth disease. Recognizing their medical needs, MVC designed clinical trials to include subjects between 2 to 6 months old, so the vaccine can be applied to the most vulnerable population as soon as it hit the market.

EV71 vaccine entered phase 2 clinical trial (CT) in 2014 and the trial is completed. All subjects showed good immune responses and developed cross protection against other circulating strains like B4, B5, and C4. So far, the vaccine showed satisfactory safety results.

MVC Continues to Develop Vaccines and Biologics to Fulfill Global Demand

MVC will continue to collaborate with research institutions to develop more effective vaccines and affordable protein drugs. With a diverse product portfolio and a vision to save children from preventable infections, MVC strives to become one of the leading pharmaceutical companies to provide quality medications to all communities.





Shaping the future

Winston Medical Supply Co., Ltd

Founded in Taiwan in 1974, the Winston Medical Supply Co., Ltd. develops, manufactures, and markets generic drugs, food supplements, hormonal drugs and cosmeceuticals. Under PIC/S GMP, all Winston's products are manufactured under high international standard.

Comprehensive
Generic
Manufacturer



- 2016 ► Obtained the cosmetics factory certification ISO 22716
- 2015 ► Set up the medical marketing channel in the People's Republic of China
- 2014 ► Obtained the PIC/S GMP certification
- 2014 ► Signed a M&A agreement with Medigen by signing a share exchange agreement
- 1997 ► Constructed a food factory
- 1974 ► Winston Medical Supply Co., Ltd is founded

Spearheading the World of Medicine While Going Global

We possess the core technology and know-how for making ophthalmic related products in all optimized dosage forms. We also possess production and manufacturing plants for producing hormone-based oral drugs for birth control and supplements for combating cancer. Winston is committed to looking for partners for international exports, seeking global partnerships as an OEM/OBM partner as well as distribution channels in Taiwan.



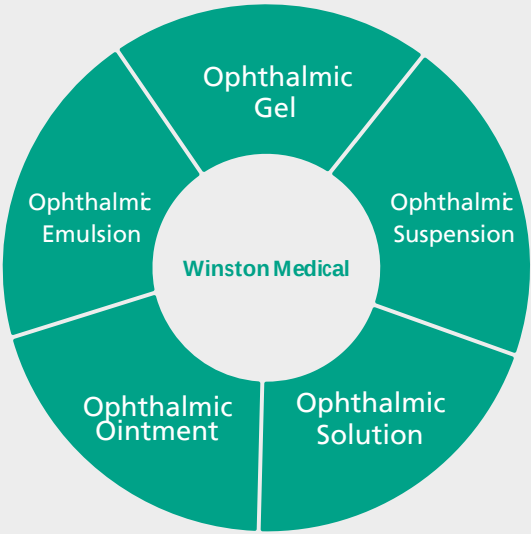


A Holistic Marketing Strategy

Winston's current product line covers medicine, food, cosmeceuticals, and ophthalmic related products. We have six major sales channels including over-the-counter (OTC) pharmacies, general practice (GP) clinics, hospitals, OEM/OBM foundries, medical aesthetics (MA) and an international trading group for domestic and international biotech pharmaceutical markets.

A Leading Brand in Ophthalmic Products

Eye fatigue due to electronics as well as a drastically aging population are becoming a global problem. Winston positions itself as a professional vision care solutions provider and leader in this sector aiming to offer ophthalmic related products in all-inclusive dosage forms as well as special formulated food supplements for vision care. (eg: Lutein sustained-release tablets).



A Leading Brand in Health Supplements and Rehabilitation Products

The right and easy method to prevent pregnancy has become the way of smart living among many single/ married adults. The hormone based Pre/Emergency oral contraceptive pill developed by Winston is considered a safe and effective way for birth control. Patients that are going through serious medical conditions may experience loss of appetite and poor digestion which causes fatigue. Our hormone-based supplements are developed to help cancer sufferers who need an immediate boost in energy to foster a better quality of life.

A Leading Medical Skincare Brand

Reversing signs of aging skin is still a growing interest to most people. Seeing this trend, Winston has cooperated with various medical research facilities and academia in Taiwan to continuously develop effective ingredients for cosmetics that are patented and marketed for moisturizing, whitening and anti-aging. Supported with unique and advanced formulation, we have created a technologically-advanced skincare line of safe and effective products for all skin types. Our skincare line works just as if you had a doctor perform medical treatments at home. All our product lines are hypoallergenic, paraben-free and deliver clinically proven results for healthy and beautiful skin.

Holistic Marketing



22 Hospital



General Practice



Over the Counter



Original Equipment Manufacturer



International Trade



Medicine Aesthetic



Innovations for a Better Life

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