

# Group of the Biotechnological and Pharmaceutical Industries of Cuba.

The pharmaceutical and biotechnology sectors in Cuba have a worldwide reputation thanks to their high standards of innovation and quality. BioCubaFarma, the business group that represents the sector, is made up of 34 companies, which in turn have 61 production lines and more than 20,000 employees. BioCubaFarma has a consolidated international presence, with exports to more than 40 countries.

The main products in its portfolio are biopharmaceuticals for the prevention and treatment of different diseases, such as cancer, infectious diseases, cardiovascular diseases, diabetes, as well as diagnostic reagents and medical equipment. In addition, it has a wide portfolio of projects in different stages of development, both for human health, as well as animal and agricultural use. The high scientific level of human resources in the Cuban biopharmaceutical industry guarantees the quality and competitiveness of its projects.

The Mariel Special Development Zone (ZEDM) is contributing significantly to the growth of the sector through its regulatory framework, favorable for those international companies wishing to invest in research-production facilities with high added value. The Portfolio of Opportunities for Investment offers several options to be inserted as an investor in the companies of the new biopharmaceutical hub of that Special Zone.

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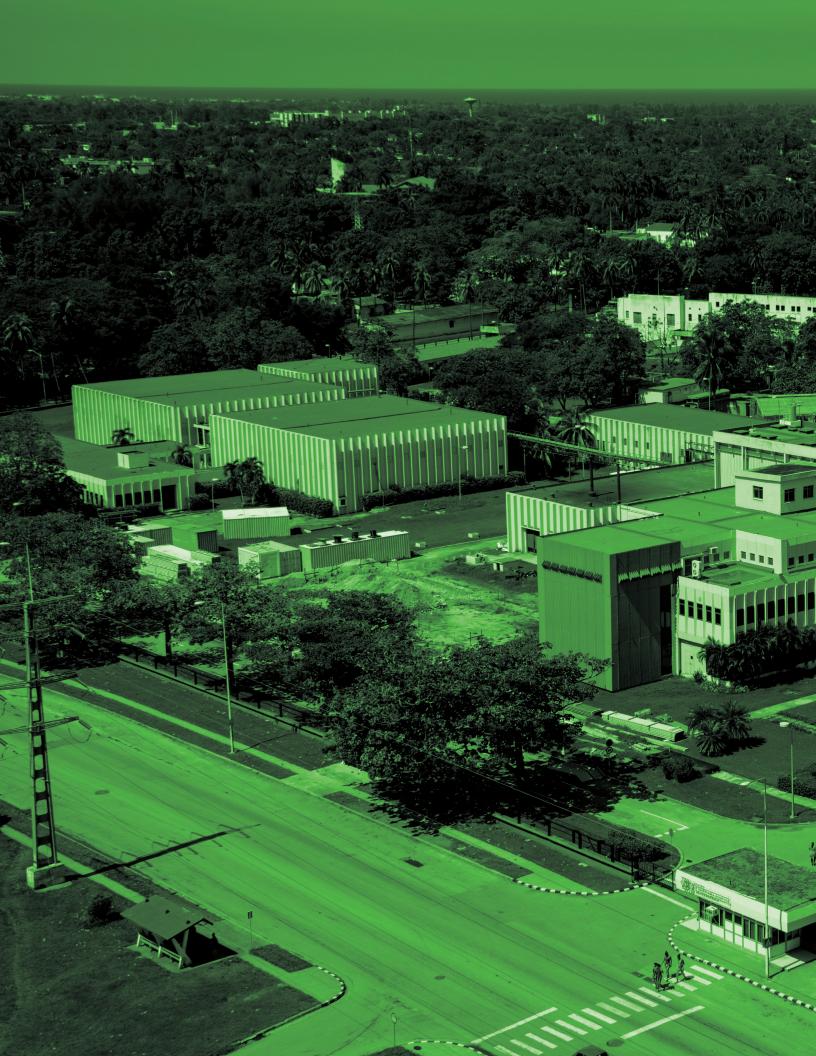
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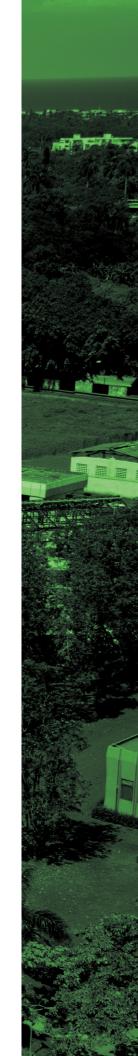
# Center for Genetic Engineering and Biotechnology.

#### BRIEF CHARACTERIZATION:

Biotechnological company that which belong to BioCubaFarma Group. It was founded in 1986, has close to 1,500 highly qualified workers, among which there are more than 200 doctors in science. The company has a wide range of products that are sold in more than 50 countries. CIGB also presents a portfolio of projects with over 30 new projects in biomedical and agricultural fields that include human and veterinary vaccines, recombinant proteins for therapeutic use, synthetic peptides and monoclonal antibodies. Almost all of these projects have intellectual property with more than 200 patents granted worldwide. Heber Biotec, S.A. is its commercialization company.

#### MOST REPRESENTATIVE PRODUCTS:

- **HEBERPROT P:** Unique product worldwide, used for the treatment of Diabetic Foot Ulcers.
- **HEBERBIOVAC:** Prophylactic vaccine against Hepatitis B
- **HEBERPENTA:** Combined prophylactic vaccine against five diseases: Hepatitis B, HI type b, Diphtheria, Tetanus and Pertussis.
- **HEBERON ALPHA AND GAMMA:** Interferons alpha and gamma.
- HEBERQUINASA: Streptokinase to treat circulatory thrombus.
- HEBERNASVAC: Therapeutic vaccine against Chronic Hepatitis B.
- PROCTOKINASA: Streptokinase suppository to treat acute hemorrhoidal crises.
- **HEBERFERON:** Combination of interferons alpha and gamma for the treatment of non-melanoma skin cancer.
- GAVAC: Vaccine against the tick of cattle.
- **HEBERNEM:** Ecological Bionematicide for the treatment of the crops affected by nematodes.
- **PORVAC:** Prophylactic vaccine against Classical Swine Fever.
- **HEBERMIN:** Healing based on the Epidermal Growth Factor.





Classical Swine Fever (CSF) is a contagious and frequently fatal disease that affects both domestic and wild pigs. The CSF is distributed throughout the world with a high prevalence in East and Southeast Asia, Eastern Europe, South and Central America and the Caribbean area. The countries of the European Union, United States, Canada and others, are considered free of CSF, although outbreaks periodically cause great economic losses.

The CSF eradication programs are based on vaccination with alive attenuated viruses, which protect pigs against clinical signs and viral spread. However, live attenuated vaccines induce an antibody pattern which is similar to that one of infected animals. This means that, by serological methods, vaccinated animals cannot be distinguished from those that have been infected with wild strains of the

virus. there are also biosafety considerations associated with attenuated vaccines, due to the risk of reversion of virulence. Hence, vaccination with alive attenuated strains has a negative impact on exports of alive pigs and products derived from the swine industry.

It has been described that E2 protein of the capsid of the CSF virus is the most promising candidate for the development of an effective vaccine, but due to its great complexity the attempts to produce them in different expression systems have not been totally successful.

The CIGB researchers have developed a technology for the expression in mammalian cells of the E2 protein fused to a molecule that stimulates the immune system (molecule CD 154) that allows to generate in pigs an immune response similar to that generated by live attenuated vaccines. This is an

advantage compared to similar vaccines on the market. The clinical trials carried out in Cuba with pigs and the experiments carried out in world reference laboratories show that our vaccine induces high titers of neutralizing antibodies in vaccinated pigs, protects vaccinated pigs from 15 days and up to at least 9 months post-vaccination in front of immunization against a challenge with 105 lethal doses of a highly pathogenic strain, also supports up to 7 days at 37 °C without suffering detectable impairments in their immunogenic capacity.

The vaccine is covered by the patent PCT / CU2007 / 000008, with the name: Chimeric vaccine antigens against Classical Swine Fever Virus. This patent has been granted in Cuba, USA (US8409562B2), Europe, Russia, Mexico, Japan, Colombia, Vietnam, Chile, Brazil, Korea and Canada. It is also presented in China and Argentina.

#### **OBJECTIVES**

Achieve the increase of production capacities and the improvement of the standard of facilities where the vaccine against porcine cholera (Porvac) is currently produced, so that it can cover the national demand (of 10 million doses) and make exports to others markets.

#### BACKGROUND

Construction and assembly of a facility for fermentation, purification and formulation of the finished product, which allows to produce the vaccine under good manufacturing practices (GMP) conditions.

#### ESTIMATED INVESTMENT CAPITAL

6.83 million CUC

#### FOREIGN INVESTMENTS PROPOSAL

International Economic Association Contract.

#### CONTRIBUTIONS BY THE PARTIES.

The Foreign Partner (to be identified) contributes with the financing for the initial investment of the project and the search for external market.

The Cuban Party (Heber Biotec SA) contributes with the facilities and personnel for the productive operation to obtain the Active Pharmaceutical Ingredient (API) and the Final Product on a commercial scale from the exploitation of the Cuban patent for the manufacture of the CSF vaccine.

#### FINANCIAL INDICATORS

- Internal Rate of Return (IRR): 44,5 %.
- Net Present Value (NPV): 35,79 million CUC
- Update Rate: 12%.
- Period of Payback: 4,5 years

#### POTENTIAL MARKETS:

In addition to the domestic market, external markets can be opened in Asia, Eastern Europe and some countries in Latin America. It is also desirable to occupy the market niche dedicated to the vaccine reserves acquired by the countries where the disease is eradicated as protection against the possibility of new outbreaks.

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The peptides present a broad spectrum of clinical benefits. Currently there are different categories for the therapeutic application of them as they can be used as antibiotics / antifungals, antivirals, vaccines, diagnostic means, for the treatment of disorders in the autoimmune system, cardiovascular diseases, neuronal disorders and cancer. The development of synthetic peptides has reached a rapid growth in the present decade. In CIGB there are research projects that are aimed at obtaining these synthetic molecules to treat autoimmune diseases such as Rheumatoid Arthritis, prostate cancer, cervix cancer, condyloma, solid tumors, among others. In the agricultural sphere there are also different molecules with wide applications. Currently, many of these peptides transit through different stages of preclinical and clinical studies. It is important to highlight that many of the peptides developed by the CIGB have intellectual property, which gives a lot more value to the projects.

#### **OBJECTIVES**

Construction of a Peptide Chemical Synthesis Facility for the industrial production of the Active Pharmaceutical Ingredient (API) and the final product with the possibility of offering manufacturing contracts.

#### DESCRIPTION OF THE INVESTMENT

The investment would be located in the Mariel Special Development Zone, Havana, Cuba. The project consists of a Joint Venture between a Foreign Partner and a Cuban Party (Heber Biotec, S.A.), where the foreign partner contributes with the necessary financing for the construction and acquisition of the equipment. Heber would provide the personnel with the knowledge required for the establishment of the industrial production technology of Peptides by Chemical Synthesis under GMP conditions.

#### ESTIMATED INVESTMENT CAPITAL

35 million CUC.

#### FOREIGN INVESTMENTS PROPOSAL

International Economic Association Contract for the production and commercialization.

#### CONTRIBUTIONS BY THE PARTIES

The CIGB will provide accumulated information for the production of the Peptide APIs, human resources for the establishment of the technology of the industrial production of synthetic peptides and Know How.

The partner will contribute with capital and financial resources for the construction of the production facility, as well as for the acquisition of equipment and capital for the start-up of the facility.

#### INVESTMENT OPORTUNITY

A lot of research-development projects based on synthetic peptides that are held at the CIGB are novel and have intellectual property which gives an additional value to them. Some of the synthetic molecules pass through different phases of preclinical and clinical trials.

The global pharmaceutical market in 2011 was estimated at 956 billion USD whereof approximately 14 billion corresponded to the peptides. It is important to note that an annual growth rate of sales of 9.4% is foreseen between 2012-2018, while in the pharmaceutical industry in general a 3-6% annual increase is foreseen in the 2012-2016 interval.

#### POTENTIAL MARKETS

Until the moment more than 100 therapeutic peptides, mostly synthetic, have been introduced in the markets of the United States (US), Europe and Japan. The largest contributor to the global market is the US with 40% of sales. Latin America, Africa, Middle East and the rest of Asia are also a potential market for the synthetic peptides developed in the CIGB since these regions have a high incidence in diseases that can be treated with these products.

#### **CONTACTOS**

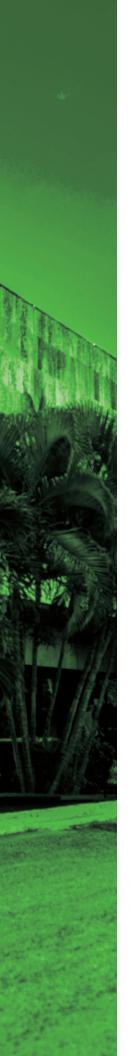
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# Center of Molecular Immunology.

#### BRIEF CHARACTERIZATION:

One of the main organizations of biotechnology in Cuba is the Center for Molecular Immunology (CIM), belonging to the Superior Organization of Business Management BioCubaFarma (BCF), which is dedicated to scientific research, development and manufacture of products from mammalian cell culture. The CIM produces recombinant proteins, monoclonal antibodies and vaccines against cancer since 1994 and is connected to the National Health System through 80 clinical trials involving more than 55 hospitals in the 15 provinces of the country. The CIM has a mature team of experts in both manufacturing and quality control. Its production in Cuba has been inspected by regulatory agencies and experts from several countries, including Europe and Japan, and has achieved more than 100 health records of its products.

For more than 25 years, CIMAB S.A. is the exclusive representative of the CIM for the commercialization of its biopharmaceutical products in the national and international market, as well as for the negotiation of research projects in different stages of development, mainly related to monoclonal antibodies and therapeutic vaccines for the treatment of cancer. Its negotiation policy includes the licensing of technology projects and patents, as well as strategic alliances for the joint development of these projects.

#### MOST REPRESENTATIVE PRODUCTS:

- **NIMOTUZUMAB MONOCLONAL ANTIBODY,** for the treatment of head and neck cancer, brain and esophagus.
- VAXIRA AND CIMAVAX EGF VACCINES, for the treatment of advanced lung cancer.
- RECOMBINANT HUMAN ERYTHROPOIETIN, for the treatment of anemia in patients with chronic renal failure and patients receiving chemotherapy.
- GRANULOCYTE COLONY STIMULATING FACTOR (FILGRASTIM), for the treatment of Leukopenia in patients receiving chemotherapy.

#### FOREIGN INVESTMENT OPPORTUNITY



# Production of therapeutic antibodies.

#### BACKGROUND

The CIM has three monoclonal antibodies registered in Cuba and in other countries (nimotuzumab, itolizumab and racotumumab), in addition to four other antibodies in development (rituximab, trastuzumab, infliximab, adalimumab). Innovative antibodies are protected by CIM patents, and biosimilar antibodies are based on a patented and validated technology also developed by the CIM. All these antibodies are intended for the main indications of cancer.

#### DESCRIPTION OF THE INVESTMENT

Construction of a new industrial biotechnological installation for the manufacture of monoclonal antibodies for therapeutic use against cancer and other non-communicable chronic diseases, starting from the Active Pharmaceutical Ingredient (API) to the final pharmaceutical form. Production will be mainly destined for export.

#### ESTIMATED INVESTMENT CAPITAL

75 million CUC.

FOREIGN INVESTMENTS PROPOSALS

Joint Venture.

#### FINANCIAL INDICATORS

- Net Present Value (NPV): 125 million CUC.
- Internal Rate of Return (IRR): 28%.

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#### DESCRIPCIÓN

Construction of a new industrial biotechnological installation for the manufacture of recombinant proteins against cancer and other non-communicable chronic diseases, starting from the Active Pharmaceutical Ingredient (API) to the final pharmaceutical form. Production will be mainly destined for export.

#### ESTIMATED INVESTMENT CAPITAL

60 million CUC.

FOREIGN INVESTMENTS PROPOSALS

Joint Venture.

#### FINANCIAL INDICATORS

- Net Present Value (NPV): 324 million CUC.
- Internal Rate of Return (IRR): 50%.

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# Pharmaceutical Company "8 de Marzo"

#### BRIEF CHARACTERIZATION:

Pharmaceutical Company "8 de Marzo", belonging to the Group of the Biotechnological and Pharmaceutical Industry (BioCubaFarma), has more than 3 decades of experience. It's the only company which produces beta-lactam antibiotics in the country for national demands and exports.

"8 de Marzo" has three pharmaceutical form, which are:

- Capsules: Penicillanics and Cephalosporins.
- Oral Suspension Powders: Penicillanics and Cephalosporins.
- Injectable (bulbs): Cephalosporins and Carbapenems.

#### MOST REPRESENTATIVE PRODUCTS:

- MEROPENEM 500 mg
- MEROPENEM 1 g
- **CEFTRIAZONE** 1 g
- CEFEPIMA 1 g
- **CEFTAZIDIME** 1 g
- **AMOXICILLIN** 500 g
- AMOXICILLIN 250 mg
- **CEFIXIME** 100 g



The Company ensures the production of its catalogue lines, as well as the products registrations within the drug regulatory authority in Cuba and abroad. Unfortunately, some of its production facilities do not satisfy the increasingly demands of the market. Their modest capacities do not offer the technical requirements for the introduction of new product lines.

#### **OBJECTIVES**

To build three production facilities of drug substances for beta-lactam antibiotics, with higher quality standards according to national and foreign governing regulatory agencies, in order to reach its certification and to satisfy the markets demands, mainly from Latin-America and Africa.

#### DESCRIPTION OF THE INVESTMENT

The production facilities will have the following capacities:

- Injectable Cephalosporins Plant: 21 million bulbs per year.
- Injectables carbapenems Plant: 10 million bulbs per year.

Oral Penicillanic Plant: 11 million bottles and 300 million capsules per year.

The complex will include the introduction of the latest medicine available, which will considerably impact our national and foreign markets.

#### ESTIMATED INVESTMENT CAPITAL

180,588.3 million CUC.

#### FOREIGN INVESTMENTS PROPOSALS

Joint Venture.

#### FINANCIAL INDICATORS

- Internal Rate of Return (IRR): 26.7 %
- Net Present Value (NPV): 156,697.8 MCUC
- Updating Rate: 12%
- Recovery Period: 6,2 years (including investment period).

#### MARKETS DESTINATIONS

The products will be destined to the satisfaction of the demands in national and foreign markets. According with market studios, the foreign potential clients are from the public and private sectors in the areas of Latin America, the Caribbean and Africa standing out: Bolivia, Panama, Ecuador, Colombia, Guatemala, Peru, Chile, Nicaragua, Paraguay, Angola, Uganda, Dominican Republic and Algeria.

#### CONTACTS

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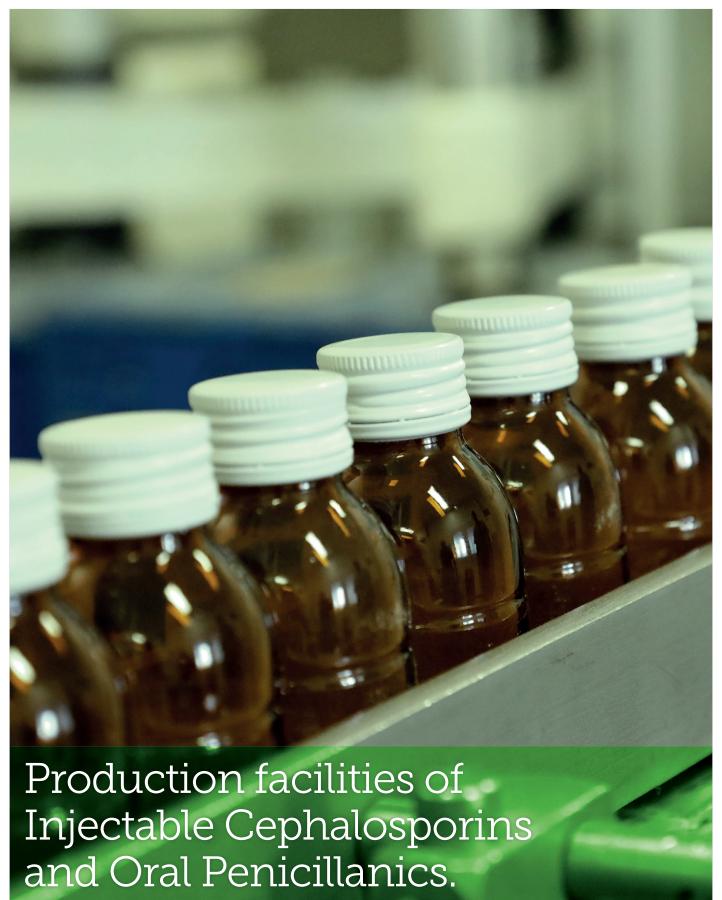
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The Company ensures the production of its catalogue lines, as well as the products registrations within the drug regulatory authority in Cuba and abroad. Unfortunately, some of its production facilities do not satisfy the increasingly demands of the market. Their modest capacities do not offer the technical requirements for the introduction of new product lines.

#### **OBJECTIVES**

To build two new production facilities of drug substances for beta-lactam antibiotics with high quality standards according to national and foreign governmental entities for regulation of medicines, in order to reach its certification and to satisfy the markets demands, mainly from Latin-America and Africa.

#### DESCRIPTION OF THE INVESTMENT

The production facilities will have the following capacities:

- Injectable Cephalosporins Facility: 21 million bulbs per year
- Oral Penicillanic Facility: 11 million bottles and 300 million capsules per year.

Both facilities will include the introduction of the latest medicine available, which will considerably impact our national and foreign markets.

ESTIMATED INVESTMENT CAPITAL

74 023 000 CUC.

FOREIGN INVESTMENTS PROPOSAL

Joint Venture.

#### CONTRIBUTIONS BY THE PARTIES

According with contribution of each party, initially considering:

- 51% Cuban party.
- 49% foreign investor.

#### FINANCIAL INDICATORS

- Internal Rate of Return (IRR): 28 %
- Net Present Value (NPV): 90 907 000 CUC
- Update Rate: 12%
- Period of Payback: 6,3 years (including investment period).

#### POTENTIAL MARKETS

The products will be destined to the satisfaction of the demands in national and foreign markets. According with market studios, the foreign potential clients are from the public and private sectors in the areas of Latin America, the Caribbean and Africa standing out: Bolivia, Panama, Ecuador, Colombia, Guatemala, Peru, Chile, Nicaragua, Paraguay, Angola, Uganda, Dominican Republic and Algeria.

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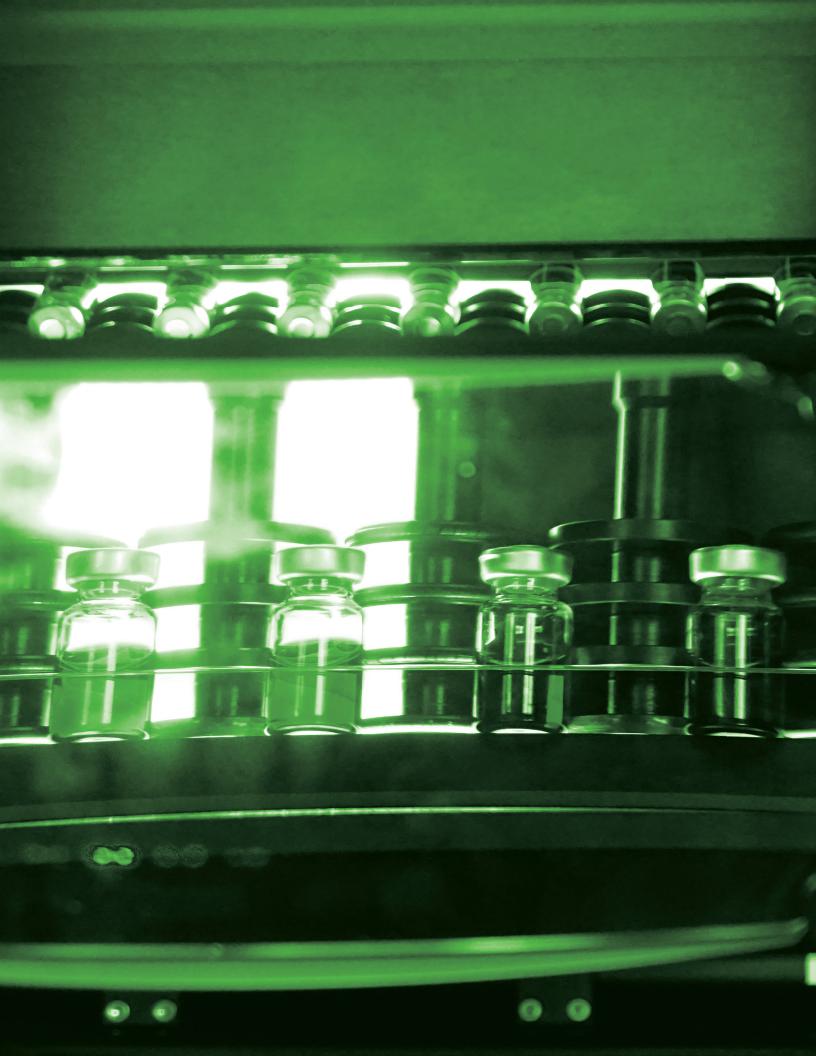
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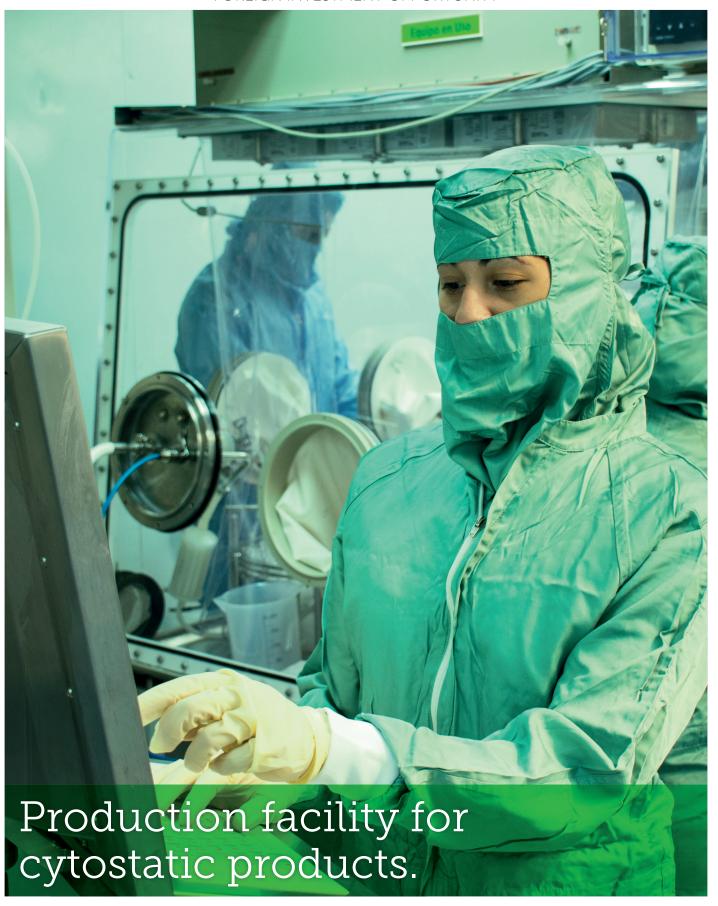
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### Empresa Laboratorios AICA. BRIEF CHARACTERIZATION: LLaboratorios AICA is a leading company in the manufacture of generic medicines in Cuba with a capacity of 120 million units annually, and 170 products distributed in 20 pharmacological groups in presentations like injectable ampoules, liquid and lyophilized vials, anesthetics dental in carpuls and ophthalmic solutions in plastic bottles. AICA has 4 production facilities and a Research and Development center. MOST REPRESENTATIVE PRODUCTS: **AMFOTERICINA B** CLINDAMICINA DICLOFENACO SÓDICO HEPARINA SÓDICA LATANOPROST **METILPREDNISOLONA** OMEPRAZOL **BROMURO DE ROCURONIO** VANCOMICINA

ÁCIDO ZOLEDRÓNICO

#### FOREIGN INVESTMENT OPPORTUNITY



Laboratorios AICA has a production facility for the manufacture of cytostatic drugs in liquid bulbs, but lacks other presentations of these drugs such as lyophilized and oral doses, both necessary for the treatment of cancer. This situation requires an investment process to modify the existing installation and the acquisition of technological equipment for these new presentations; the rest of the areas and support equipment can be used.

#### **OBJECTIVES**

To create a Contract Manufacturing facility which manufacture drug substances of cytostatic products and provide Cuban and foreign entities with the final filling and packaging services.

#### DESCRIPTION OF THE INVESTMENT

To create a facility that complies with international regulations such as the Food and Drugs Administration (FDA) and European Medicines Agency (EMA) in order to facilitate the marketing of the products with national and international customers worldwide. This Cytostatic Products Manufacturing Facility is conceived with a Cytostatic Product Manufacturing Line in liquid and lyophilized vials with a capacity of 10 Million units per year and a line for cytostatic products in oral doses with a capacity of 70 Million units per year.

#### ESTIMATED INVESTMENT CAPITAL

30 Million CUC.

FOREIGN INVESTMENT PROPOSAL

Joint Venture.

#### CONTRIBUTIONS BY THE PARTIES

- Cuban Party: Production facility.
- Foreign Party: investment capital.

#### POTENTIAL MARKETS

Cytostatic products in lyophilized vials and oral doses for Cuban market. The Joint-Venture shall find other markets.

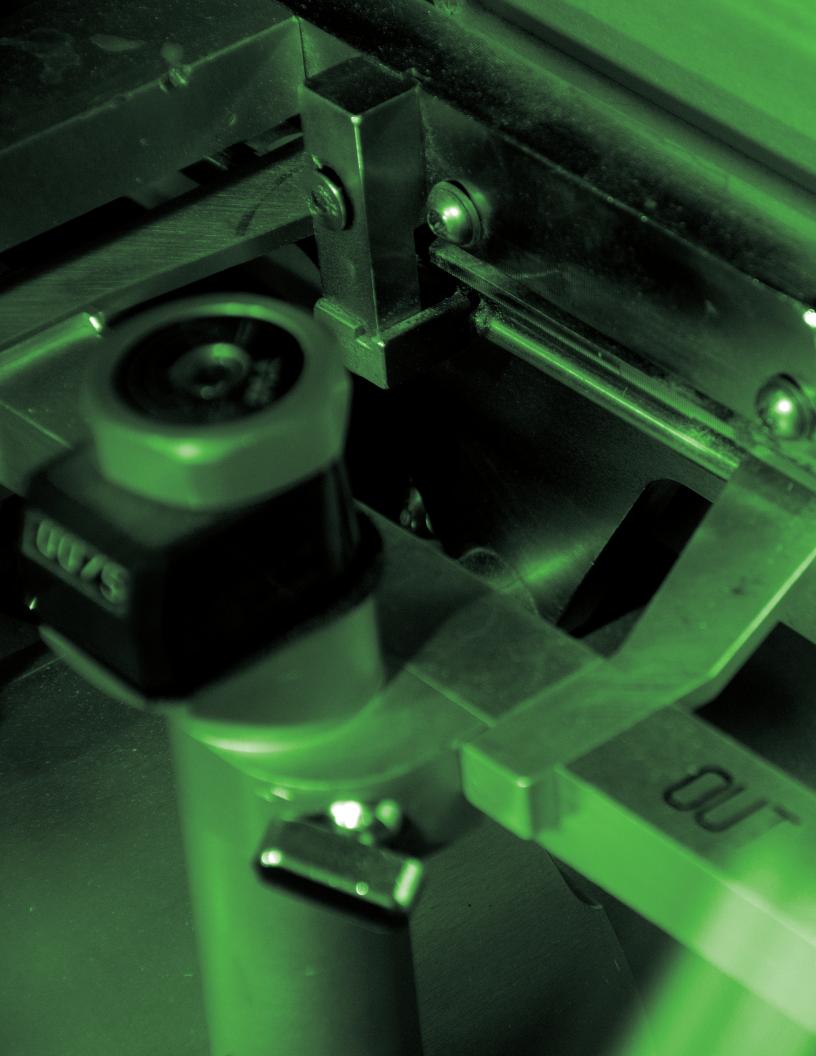
#### FINANCIAL INDICATORS

- Internal Rate of Return (IRR): 82 %
- Net Present Value (18%): 220.196.700 CUC
- Period of Payback: 3,6 years
- Profitability Index: USD 7,3

#### CONTACTS

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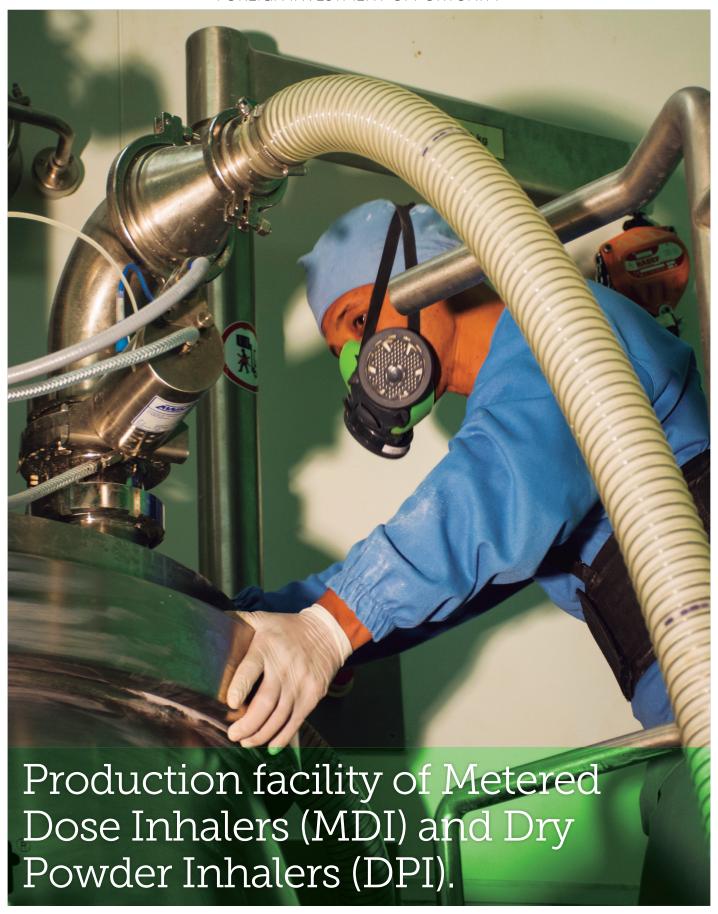
# Laboratorios MEDSOL Enterprise.

#### BRIEF CHARACTERIZATION:

The Laboratorios MedSol Company is a producer of generic medicines of the Cuban pharmaceutical industry integrated into the Group of Biotechnology and Pharmaceutical Industries (BioCubaFarma).

MedSol integrates three production enterprises (SolMed, Novatec and Reinaldo Gutiérrez), with more than 20 years of production experience, which are dedicated to the manufacture of medicines in different pharmaceutical forms: Tablets, Coated Tablets, Capsules, Powders, Sprays and Plastic Containers.

Due to the diversity of the products, high production capacity, equipment and workforce with highly qualified experience, MedSol is among the leading companies of the Cuban Pharmaceutical Industry with an average of 2280 workers, 397of them linked to the Research & Development activity, which represents a 17.4%. The 55% are qualified as, professionals (Includes Technicians, Masters and PhD). The company devotes annually 3% of its total budget to the R&D activity.



The enterprise Reinaldo Gutiérrez, has a MDI production facility with a capacity of 5.0 million Units. The facility technology was installed in 2010. However, the facility does not have the potential to grow in physical space to increase its productive capacity, that s why it s not able to make the introduction of new assortments.

#### **OBJECTIVES**

To build a facility for the production of MDI and DPI, for the treatment of asthma, allergic respiratory diseases and Chronic Obstructive Pulmonary Diseases, which meets international standards for the certification of Good Manufacturing Practices in the Pharmaceutical Industry and increase productions in order to cover the domestic consumption, besides introducing new products that will guarantee export levels.

#### DESCRIPTION OF THE INVESTMENT

The new production facility will be designed for the production of MDI and DPI, with a production capacity of 12 million MDI and 90 million capsules annually for DPI (unit dose). In the conception it is foreseen to insert (by means of transfer of technology) a new pharmaceutical form, the DPI.

#### ESTIMATED INVESTMENT CAPITAL

Two possible scenarios are presented, taking into account the contributions of the parties:

- Scenario No.1: 67,970.3 MCUC.
- Scenario No.2: 67,751.2 MCUC.

#### FOREIGN INVESTMENTS PROPOSAL

Joint Venture.

#### CONTRIBUTIONS BY THE PARTIES

According with contribution of each party, initially considering:

Scenario No.1.

- 51% Cuban party
- 49% Foreign investor

Scenario No.2.

- 42% Cuban party
- 58% Foreign investor.

#### FINANCIAL INDICATORS

Scenario No.1.

- Internal Rate of Return (IRR, 15%): 77.5 %.
- Net Present Value (NPV, 15%): 380,205.6 MCUC.
- Period of Payback: 3,8 years

Scenario No.2

- Internal Rate of Return (IRR, 15%): 77.6 %.
- Net Present Value (NPV, 15%): 380,380.6 MCUC.
- Period of Payback: 3,8 years

#### POTENTIAL MARKETS

The productions of the Joint Venture will be mainly directed to satisfy the national demand. Besides, market studios have estimated in more than 9,000.0 thousand Units the internal demand of MDI for the next 5 years. Also it has been predicted that the DPI will be the systems of higher growth until the year 2025, with a compound annual rate of 5.8%. Because of that, the exports of the products are directed to foreign potential clients, coming from the public and private sectors in the geographical areas of Latin America, Africa and Asia.

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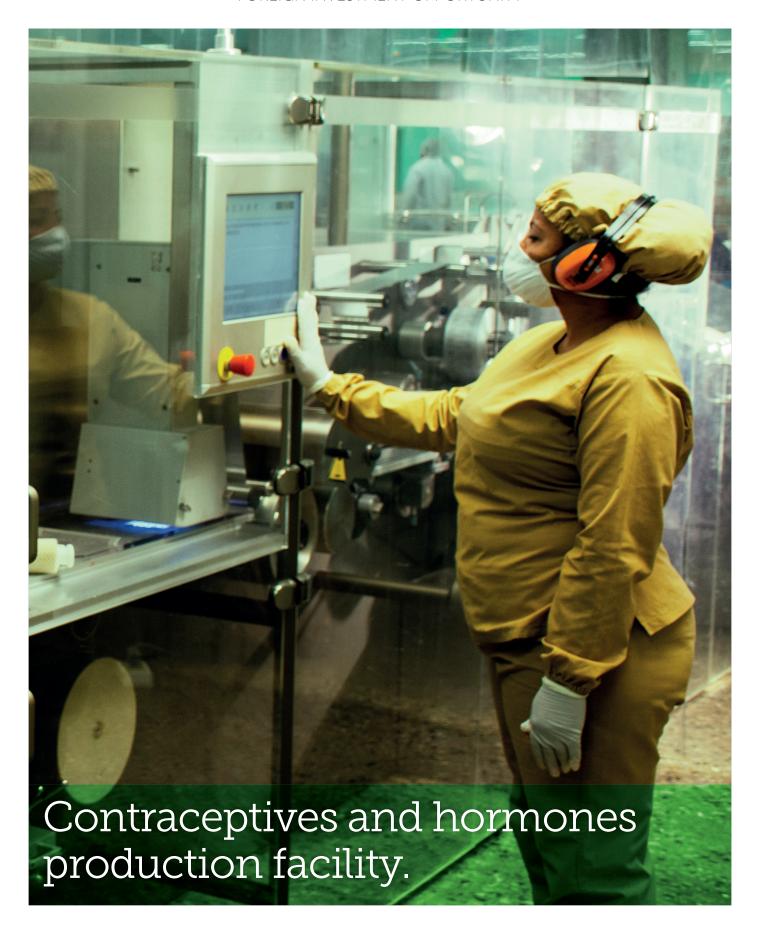
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The enterprise "Reinaldo Gutiérrez", belonging to the company Laboratorios MedSol, has a capacity of 1080 million tablets with 89 different assortments, but it presents obsolescence of technological equipment and poor structural design conditions. It includes within its facilities a Contraceptive Production Facility with limited capacity reserves of 10%, representing only 10 million more of contraceptive tablets per year. This facility does not have possibilities to grow in physical space to increase its productive capacity, that s why it s not possible to make the introduction of new assortments.

#### **OBJECTIVES**

To build of a production facility for oral contraceptive tablets and hormones, which complies with international standards for the certification of Good Manufacturing Practices in the Pharmaceutical Industry and increase productions in order to cover domestic consumption, besides introducing new products for guaranteeing export levels.

#### DESCRIPTION

It was conceived a production facility with a capacity of 500 million units of contraceptives tablets and hormones per year.

ESTIMATED INVESTMENT CAPITAL

50476.7 MCUC.

FOREIGN INVESTMENTS PROPOSAL

Joint Venture.

#### CONTRIBUTIONS BY THE PARTIES

According with contribution of each party, initially considering:

- 51% Cuban party
- 49% Foreign investor

#### FINANCIAL INDICATORS

- Internal Rate of Return (IRR, 15%): 50.5 %.
- Net Present Value (NPV, 15%): 148,482.7 MCUC.
- Period of Payback: 4,6 years

#### POTENTIAL MARKETS

With this projects it is expected to satisfy the national demand from the third year of the investment with hormones and contraceptive pills of domestic production, for guaranteeing emergency contraception in the National Health System. Market Studios have estimated the internal demand of contraceptives tablets and hormones for the coming years in more than 200,000 thousand Units.

There are real perspectives in the sense of expanding demand to export to many countries. This perspective is based on the interest of acquiring oral contraceptives in countries such as Bolivia, Ecuador, Uruguay, Algeria, Syria, Paraguay, among others.

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Considering the technological obsolescence of the current production facilities of tablets and capsules, it has been considered an investment in the Mariel Special Development Zone that allows us to build a facility that meets international standards and can be certified in compliance with Good Manufacturing Practices in the Pharmaceutical Industry.

#### **OBJECTIVES**

To build a production facility for oral solid drugs (tablets, capsules and antiretroviral), which meets international standards for the certification of Good Manufacturing Practices in the Pharmaceutical Industry and increase productions to cover the national demand, besides introducing new products for guaranteeing export levels.

#### **DESCRIPTION**

The facility is projected with a production capacity of 5 billion Units per year.

The 50% of the proposed products in the assortment of this facility is part of the Program for the Development and Innovation of Generic Drugs, which is a priority of the National Health Programs and it will allow to increase export levels.

#### ESTIMATED INVESTMENT CAPITAL

150.0 MCUC.

#### FOREIGN INVESTMENTS PROPOSAL

Joint Venture.

#### CONTRIBUTIONS BY THE PARTIES

According with contribution of each party, initially considering:

- 51% Cuban party
- 49% foreign investor

#### POTENTIAL MARKETS

There were carried out Market Studios in 2015 in different countries such as: Angola, Algeria, Argentina, Ecuador, Bolivia, Nicaragua, Venezuela and Colombia. In most of this countries, the use of generic drugs is promoted, the products of interest are included in the list of essential medicines and they have a high market share, which may be an opportunity.

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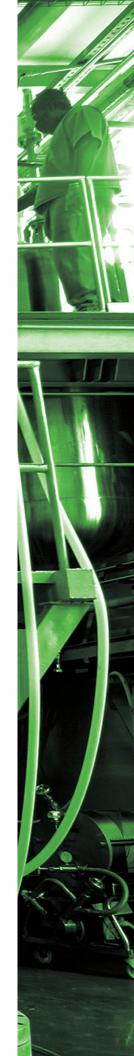
### Placental Histotherapy Center.

#### BRIEF CHARACTERIZATION:

The Placental Histotherapy Center was created on April 25, 1986 under the direction of Dr. Carlos Manuel Miyares Cao to research, produce and market products derived from the human placenta, as well as natural and biotechnological products and also to provide medical services. The activity of Research and Development in CHP has achieved products for the treatment of dermatological conditions such as Vitiligo, Psoriasis, Alopecia, among others.

#### MOST REPRESENTATIVE PRODUCTS:

- MELAGENINA PLUS, for the treatment of Vitiligo,
- **PILOACTIVE LOTION,** for the treatment of seborrheic dermatitis, alopecia (universal, areata, androgenic) and psoriasis of the scalp.
- **CORIODERMINA,** water soluble jelly for the treatment of psoriasis.
- **BIOPLA**, dietary supplement to combat various clinical and surgical conditions.
- **COSMETICS,** for the Cosmetic Amniotherapy method as biostimulants.





#### **OBJECTIVE**

To build a production and commercialization facility in the Mariel Special Development Zone (MSDZ) for products derived from the human placenta.

#### DESCRIPTION OF THE INVESTMENT

The investment foresees the construction of a production and commercialization facility for products derived from the human placenta in the MSDZ, Cuba, which fulfill standards of Good Manufacturing Practices for the production of medicines for the treatment of diseases such as Vitiligo, Psoriasis and Alopecia Areata, as well as the production of dermocosmetics with therapeutic action, facial, corporal and capillary lines; also nutritional supplements. The investment should also contemplate the implementation of

a system that guarantees the collection of the human placenta, used as an active principle.

ESTIMATED INVESTMENT CAPITAL

25 million CUC.

FOREIGN INVESTMENT PROPOSAL

Joint Venture.

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