



## **“Thailand is emerging as Southeast Asia’s prime destination for biotechnology development”**

Biotechnology in Thailand has been through over three decades of development. Today, with its superb infrastructure, substantial scientific capability and strategic location in the center of the Southeast Asia region, Thailand is home to many well-established world tech labs and pharma companies, and is ready to embrace new wave of advanced biotech development. Bio economy is also a new ambition of Thai government, one of ten targeted growth-engine industries under the new “Thailand 4.0” growth model, which focuses on the concept of inclusive, productive and green growth to enhance the country’s competitiveness and economic development.

Biotech companies in Thailand enjoy a variety of competitive advantages from supporting ecosystems including intellectual property protections and technically-equipped workforce as well as an abundance of natural resources and rich biological diversity.

### **Diverse natural resources, biology and thriving agricultural sector**

The first key advantage of Thailand to be a research hub for biotechnology is its hot and humid climate, which supports tropical ecosystems that a large variety of plant, animal and microbe species survive. Thailand has approximately 15,000 species of plant which account for approximately 10% of estimated total number of plant species found globally. Moreover, abundant farmland across the country and a year-round growing season allow agricultural raw materials to be sourced from locally at low prices. Meanwhile, Thai agricultural sector, the mainstay of the country’s socioeconomic foundation, is currently transitioning to ‘Smart Farming’, a key reforming process endorsed by the government to increase the efficiency of agricultural production and enhance cooperation between farmers and the public and private sectors.

### **R & D infrastructure readiness**

Thailand has developed network of organizations that support research and development in biotech. Currently, 24 universities across the country have the combined capacity to supply approximately 7,000 students with a biotechnology background each year. In addition, well-established research infrastructure including various pilot plants located in several leading universities across the country, allowing biotech companies to scale up their research before commercializing their innovations. Many of these pilot plants operate as private and public sector partnership, such as Agricultural Research Development Agency (ARDA) under the Ministry of Agriculture.

### **Public and private organizational support**

Government and organizational support is provided through the National Science and Technology Development Agency (NSTDA) provides government support by acting as a bridge between the requirements of academic research and innovation in the industry, through the operation of four national research centers i.e., BIOTEC, MTEC, NANOTEC, and NECTEC, and one technology management center (TMC).

Thailand Science Park (TSP), the first technology and innovation hub of Thailand, serves as a one-stop service center to assist both foreign and local companies engaged in scientific and technological research. TSP is a key hub for research and development where



specialists and researchers from industry, academia and NSTDA collaborate to further inspire and stimulate the formation and growth of knowledge-based businesses. A network of 1,600 full-time researchers and technicians, of which around 400 hold doctorate degrees, can be found at TSP. TMC also provides important support in biotechnology through its Technology Licensing Office (TLO), which is responsible for the licensing of intellectual property.

The recent setting up of the Strategic Talent Center (STC) helps enhance the country's ecosystem for stronger research and development capability. The center serves as a platform interacting with the private sector in identifying available specialists or researchers in science and technology to support the private sector in conducting R&D and innovation activities. The STC will be actively involved with matching their skills and expertise with real demands from the requesting companies.

### **Enticing investment incentives**

The Board of Investment (BOI) recognizes the importance and value of the bio economy industry, and offers a wide range of tax and non-tax incentives for projects that meet national development objectives. Tax incentives for biotechnology companies investing in Thailand include an 8-year exemption of corporate income tax and exemption of import duties on machinery and raw materials used for manufacturing of export products. Non-tax incentives are visa and work permit for experts, permission to own land for promoted activities and etc.

For more information, please visit [www.boi.go.th](http://www.boi.go.th) or email to [thailandinvestmentyear@gmail.com](mailto:thailandinvestmentyear@gmail.com)

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