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SENATE

S.B. No. 3140

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Introduced by SENATOR EDGARDO J. ANGARA

EXPLANATORY NOTE

The last decades of the 20th century saw rapid advances in our knowledge of life and its mechanisms that have given rise to a new set of practical tools and techniques collectively referred to as biotechnology. Biotechnology, in turn, developed for the world novel products such as safer, more effective pharmaceuticals, less capital-intensive crops and less polluting industrial and agricultural production systems. In this century, with concerns about climate change, non-renewable energy sources, dwindling fresh water supply, increasing population and environmental protection on one hand, and new discoveries in biology on the other, these factors are expected to greatly increase the number of technologies developed based on biological systems. Thus, the 21st century has been hailed the biotech century.

The world biotechnology industry is a multibillion industry. Investment in medical biotechnology alone is estimated at US\$200 billion whereas investment in agricultural biotechnology was worth US\$67 billion in 2003. The start of the 21st century indicates the coming convergence of agriculture and medicine with pharmaceuticals being produced by genetically engineered plants and the greater acceptance of herbal medicine. The biotech century will further see the integration of agriculture and industry especially in energy production. Enzyme-based processing of agricultural produce and its by-products are being developed to produce biofuels, plastics and other products. It is predicted that this will eventually comprise the largest sector of the biotechnology industry.

As early as 1979, the Philippine government has invested in biotechnology with the establishment of the National Institute of Biotechnology and Microbiology (BIOTECH), now known as the National Institute of Molecular Biology and Biotechnology at UP Los Baños. This institute has been replicated in four other campuses of the University of the Philippines System. In mid-1980s, the Department of Science and Technology identified biotechnology as a priority investment area and developed the UPLB science park for business incubation. The Department of Agriculture two years ago organized its leading research centers – Philippine Rice Research Institute, Philippine Carabao Center, and National Fisheries Research Institute into a network of biotechnology research centers for crops, livestock and aquatic resources, respectively. Still these investments have not sufficiently fostered the growth of a biotechnology industry as what was previously envisioned in the establishment of the BIOTECH at UP Los Baños.

The US, Canada, Australia and several EU countries, as well as Singapore, Malaysia, China, India and Taiwan, have put in place a policy environment that encourages bioindustry development. These policies include support for high quality research, support to rapidly develop research results into marketable products/services, support for start-up companies, and other incentives for industry to develop/adopt new technologies. Large and competitive grants are provided for high quality research work in research institutions. Huge grants are also provided for industry-public collaborations to fast-track technology development. Guarantee funds for venture capital investing in biotechnology have been provided. Science parks/bioincubators were established to provide infrastructure, technical, administrative, marketing and legal support for start-up companies. Technology transfer from public research institution is encouraged. For example, the US passed the Bayh-Doyle Act in 1980 which was credited with stimulating significant growth in university-industry technology transfer and research collaborations. France encourages scientists to become entrepreneurs by allowing them to leave their post for a maximum of 6 years and awards a maximum of 15% of capital in the creation of a start-up. Protection of intellectual property rights further encouraged technology development and biotechnology companies are graded according to their patent portfolios. In Malaysia and Singapore, foreign companies are encouraged to locate in their countries; whereas Canada requires foreign companies doing business within the country to establish R&D units.

In the Philippines, we need to put in place the appropriate policy environment to promote bioindustry development. Biodiversity, our greatest resource, remains untapped. While we continue to train scientists, lack of local employment lead them either to other occupations or to foreign shores. The cumbersome government accounting and auditing procedures often results in poor fund utilization in public research institutions and stifles scientific creativity. Industry-academe collaborations in technology development are few. Many policies encourage individual rather than multidisciplinary achievements, yet biotechnology requires amultidisciplinary approach. Government funds for research cannot be committed for terms longer than one year yet technology and product development may take years. Venture capital for biotechnology is virtually non-existent. The present bioprospecting policy is biased against a Filipino start-up and favors well-capitalized foreign companies. Many scientists are not familiar with intellectual property rights protection. Although biotechnology investment is highly profitable, it is also very risky with a long gestation period, hence, private sector investments in biotechnology R&D is low.

The proposed legislation intends to address the weaknesses of our system to enable the country to develop a biotechnology-based industry. The private sector is given incentives to invest in biotechnology R&D by allowing the total R&D cost and prices of shares of stocks in biotech companies as tax deductible. Majority of the government's investments in biotechnology R&D is awarded through a government corporation so as to lessen the burden of an unwieldy accounting and auditing system.


EDGARDO J. ANGARA

FOURTEENTH CONGRESS OF THE)
REPUBLIC OF THE PHILIPPINES)
Second Regular Session)

9 MAR 30 2019

SENATE

RECORDED
[Handwritten Signature]

S. B. NO. 3140

Introduced by SENATOR EDGARDO J. ANGARA

AN ACT
PROMOTING THE GROWTH OF A BIOTECHNOLOGY INDUSTRY IN THE
PHILIPPINES AND THE CREATION OF WEALTH FROM BIODIVERSITY

Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:

CHAPTER I

TITLE, DECLARATION OF POLICY AND OBJECTIVES

SECTION. 1. *Short Title.* – This Act shall be known as the “Bioindustry Development Act of 2009”.

SEC. 2. *Declaration of Policy.* – It is hereby declared the policy of the State to fully recognize that biotechnology is a powerful tool in the creation of wealth from human capital as well as from biodiversity.

SEC. 3. *Objective.* – The Act aims to put in place a policy environment for the continuing generation and application of biological knowledge and promote the sustainable growth of a biotechnology-based industry.

SEC. 4. *Definition of Terms.* – As used in this Act, the following terms shall be taken to mean as follows:

- (a) “*Biodiversity*” refers to the variability among living organisms from all sources, including, terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part, such as diversity within species, between species and of ecosystems;
- (b) “*Bioindustry*” or “*biotechnology-based industry*” consists of companies involved in research, development, manufacture and sale of materials such as cell cultures, catalysts, genetic materials, immune response materials, biochemicals,

1 enzymes, proteins, bioactive molecules, genetically engineered organisms, and
2 equipment specifically used in biological and genetic research. It also includes
3 service organizations performing consulting, testing, processing, and storage of
4 such products;

5 (c) **“Biotechnology”** refers to a set of tools and procedures involving living
6 organisms or parts thereof that produces a product or service;

7 (d) **“Start-up”** refers to a newly established biotech company for profit.
8

9 CHAPTER II

10 THE PHILIPPINE BIOINDUSTRY R&D CENTER

11
12 **SEC. 5. *The Philippine Bioindustry Research and Development Center.*** – To ensure the
13 continued availability of suitable yet innovative and competitive bio-based technologies, a
14 Philippine Bioindustry Research and Development (R&D) Center (hereafter the “Center”) shall
15 be established.
16

17 **SEC. 6. *Functions of the Center.*** The Center shall perform the following functions:

18 (a) Develop and market competitive, biologically-based technologies and products;

19 (b) Harness Philippine biodiversity in developing competitive products for the world
20 market;

21 (c) Conduct contract research and provide technical services to the public;

22 (d) Manage a Biotechnology Research Fund that will support off-Center research and
23 development relevant to its corporate objectives as well as support a research
24 fellowship and training program;

25 (e) Establish state of the art facilities for research and study.
26

27 **SEC. 7. *Powers of the Center.*** – To enable the Center to carry out its functions, it shall
28 have the following powers:

29 (a) To own, hold, plan and construct buildings and other facilities as may be
30 necessary or proper to attain its purposes and objectives;

31 (b) To enter into, make and execute contracts and agreements of any kind or nature;

32 (c) To borrow money and obtain loans from all sources, whether local or foreign and
33 whether government or private, in order to finance its research programs and its
34 capital and operating expenditures;

35 (d) To invest in, purchase or otherwise acquire, own, hold, use, lease, mortgage,
36 pledge, encumber, sell, assign, convey, exchange, or otherwise deal in real and/or
37 personal properties of whatever kind and nature, or any interest therein, including
38 shares of stock, bonds, notes, securities and other evidences of indebtedness of

1 natural or juridical persons, whether domestic or foreign and whether government
2 or private;

- 3 (e) To conduct bioprospecting activities: *Provided*, That in conducting these
4 activities, it shall be exempted from the fees and requirements of Republic Act
5 No. 9147, otherwise known as The Wildlife Resources Conservation and
6 Protection Act;
- 7 (f) To acquire or obtain from any governmental authority, whether national or local,
8 foreign or domestic, or from any person, corporation, partnership, association or
9 other entity, such charters, franchises, licenses, rights, privileges, assistance,
10 financial or otherwise, and concessions as are conducive to and necessary or
11 proper for the attainment of its purposes and objectives;
- 12 (g) To receive and acquire from any person, government and other private entity,
13 whether foreign or domestic, grants, donations and contributions consisting of
14 such properties, real or personal, including funds and valuable effects or things, as
15 may be useful, necessary or proper to carry out its purposes and objectives and to
16 administer the same in accordance with the terms of such grants, donations and
17 contributions, consistent with its purposes and objectives;
- 18 (h) To establish new corporations solely, in partnership, or in consortium with other
19 entities;
- 20 (i) To exercise all the powers of a corporation under the general corporation law,
21 insofar as such powers are not inconsistent with the provisions of this Act; and
22 (j) To exercise such other powers and functions and perform such other acts as may
23 be necessary, proper or incidental to the attainment of its purpose and objectives.
24

25 **SEC. 8. *Composition of the Board of Directors.*** – The Center shall have a corporate
26 structure and be governed by a Board of Directors (hereafter the “Board”) composed of:

- 27 (a) The Secretary of the Department of Trade and Industry (DTI) as the *ex-officio*
28 Chairperson;
- 29 (b) The President of the Center;
- 30 (c) Three (3) business leaders;
- 31 (d) Two (2) respected scientists, in any one the relevant fields of molecular biology,
32 biotechnology, genetics, biochemistry, chemistry or chemical/bioprocess
33 engineering.

34 *Initially, the members of the Board shall be selected by the Chairperson based on a set of*
35 *criteria to be determined and from nominations submitted by the Biotechnology Coalition of the*
36 *Philippines (BCP), Chamber of Herbal Industries of the Philippines, Inc. (CHIPI), and Philippine*
37 *Food Processors and Exporters Organization Inc. (PhilFoodex).*
38

1 **SEC. 9. *Functions of the Board of Directors.*** – The Board shall exercise the following
2 powers and functions:

- 3 (a) To define and approve the programs, plans, policies, procedures and guidelines
4 for the Center in accordance with its purposes and objectives, and to control the
5 management, operation and administration of the Center;
- 6 (b) To approve the Center’s organizational structure, staffing pattern, operating and
7 capital expenditure, and financial budgets, prepared in accordance with the
8 corporate plan of the Center;
- 9 (c) To approve salary ranges, benefits, privileges, bonuses, and other terms and
10 conditions of service for all officers and employees of the Institute, upon
11 recommendation of the President;
- 12 (d) To appoint, transfer, promote, suspend, remove or otherwise discipline any
13 subordinate officer or employee of the Center, upon recommendation of the
14 President;
- 15 (e) To create such committee or committees and appoint the members thereof, as may
16 be necessary or proper for the management of the Center or for the attainment of
17 its purposes and objectives;
- 18 (f) To determine the research priorities of the Center consistent with the framework
19 of its purposes and objectives; and
- 20 (g) To exercise such other powers and functions and perform such other acts as may
21 be necessary or proper for the attainment of the purposes and objectives of the
22 Institute.

23
24 **SEC. 10. *President and Other Officers.*** – The Center shall be headed by a President who
25 shall be appointed by the Board. He/she shall serve at the pleasure of the Board of Directors.

26 The President shall be assisted by a Vice-President and such other Program Managers as
27 the Board may determine to carry out the purposes and objectives of the Center.

28
29 **SEC. 11. *Powers, Functions and Duties of the President.*** – The President shall be
30 directly responsible to the Board, and shall have the following powers, functions and duties:

- 31 (a) To exercise over-all supervision and direction over the implementation of all
32 research, development and marketing programs of the Center, and in general, to
33 supervise and direct the management, operation and administration of the Center;
- 34 (b) To draft a program of operation for the implementation of all activities necessary
35 to attain the objectives of the Center subject to the approval of the Board;
- 36 (c) To execute contracts, incur obligations, acquire and dispose of assets and deliver
37 documents on behalf of the Center within the limits of the authority delegated to
38 him by the Board;

1 (d) To implement and enforce policies, decisions, orders, rules and regulations
2 adopted by the Board; and

3 (e) To exercise such other powers and functions and perform such other duties as
4 may be authorized or assigned by the Board.
5

6 **SEC. 12. *Ownership of the Center.*** – The Center shall exist as a government-owned and
7 controlled corporation for a maximum period of ten (10) years from the effectivity of this Act,
8 after which time it shall be sold off to the private sector: *Provided, however,* That in the event the
9 Center becomes profitable earlier than the ten (10) year period provided, it shall be sold off to the
10 private sector despite the period not having lapsed.
11

12 **SEC. 13. *Scientific Manpower.*** – To enable the Center to retain its scientific staff, it
13 shall offer salaries at rates competitive with other countries. Upon the privatization of the Center,
14 fifteen percent (15%) of the shares shall be awarded to the scientific staff that has been with the
15 Center for at least five (5) years and has produced at least one patented technology or eight (8)
16 articles published in scientific journals cited in the Institute for Scientific Information (ISI)
17 Journal Citation Report.
18

19 **SEC. 14. *Initial Operations.*** – The BCP is hereby designated to draft a Program of
20 Operations for the Center. The Secretary of the DTI is hereby authorized to provide a grant of
21 Three Million Pesos (P3,000,000.00) to enable the BCP to carry out this function.
22

23 **SEC. 15. *Funding*** – The amount of Five Hundred Million Pesos (P500,000,000.00) shall
24 be released to cover the operation of the Center for ten (10) years.
25

26 **CHAPTER III**

27 **THE BIOTECHNOLOGY GUARANTEE FUND**

28
29 **SEC. 16. *The Biotechnology Guarantee Fund.*** – A Biotechnology Guarantee Fund in
30 the amount of Five Hundred Million Pesos (P500,000,000.00) is hereby established to provide
31 guarantee for venture capital invested in biotechnology companies.
32

33 **CHAPTER IV**

34 **INCENTIVES FOR BIOTECH COMPANIES AND COMPANY START-UPS**

35
36 **SEC. 17.** A biotech company shall, for a period of five (5) years from the time it is
37 subject to corporate income tax, deduct the funds expended in R&D within the country from its
38 taxable income. Biotech companies can also avail of the incentives granted to companies

1 registered as Barangay Micro Business Enterprises (BMBEs) in accordance with Republic Act
2 No. 9178; or registered with the Philippine Economic Zone Authority (PEZA) in accordance
3 with Republic Act No. 7916 or Board of Investments (BOI) in accordance with Executive Order
4 No. 226, otherwise known as the Omnibus Investments Code of 1987, as amended. After the
5 income tax holidays provided by such instruments have expired, the R&D expenditures of the
6 biotech companies can then be used as tax deduction.

7
8 **SEC. 18.** A biotech company shall be allowed to purchase equipment, materials and
9 articles abroad, as may be necessary or proper to carry out its powers and functions and attain its
10 purposes and objectives, and shall be exempt from the payment of any and all forms of taxes,
11 duties, fees and charges imposed by any governmental authority, whether national or local, on
12 any and all such importation of equipment, materials, articles and services: *Provided however,*
13 that the same are not available locally on favorable terms.

14
15 **SEC. 19.** Shareholders of new locally-based biotechnology companies shall be able to
16 claim as tax credit the amount paid for the shares in the same taxable year.

17
18 **SEC. 20.** Scientists in public institutions are hereby allowed up to five (5) years leave of
19 absence to establish a biotech start-up based on technologies they themselves developed.

20
21 **SEC. 21.** In order to encourage top executives and technology investors to participate in
22 the operation of biotech companies and R&D activities and to share their achievements, new
23 shares issued by a biotech company to top executives and technology investors (in return for
24 their knowledge and technology) shall be excluded from the amount of their consolidated income
25 or corporate income of the current year for taxation purposes: *Provided, however,* That if the title
26 to the aforesaid shares is transferred with or without consideration, or distributed as estate, the
27 total purchase price or the market value of the shares at the time of transfer as a gift or
28 distribution as estate shall be deemed income generated in that taxable year and such income less
29 the acquisition cost shall be reported in the relevant income tax return.

30
31 **SEC. 22.** Subject to the approval of the Department of Agriculture, the Agricultural
32 Competitiveness Enhancement Fund can be used as financial grants for technology start-ups with
33 agriculture- and aquaculture-related products and services for seed capital and for subsequent
34 expansion.

35
36 **CHAPTER V**
37 **MISCELLANEOUS PROVISIONS**
38

1 **SEC. 23. *Repealing Clause.*** – The pertinent provisions of Republic Act No. 9147,
2 otherwise known as The Wildlife Resources Conservation and Protection Act; and all other laws,
3 presidential decrees or issuances, executive orders, presidential proclamations, rules and
4 regulations or parts thereof inconsistent with the provisions of this Act, are hereby repealed,
5 modified or amended accordingly.

6
7 **SEC. 24. *Separability Clause.*** – If any provision of this Act is declared unconstitutional,
8 the same shall not affect the validity and effectivity of the other provisions hereof.

9
10 **SEC. 25. *Effectivity.*** – This Act shall take effect fifteen (15) days after its publication in
11 at least two (2) newspapers of general circulation.

12 *Approved,*

13