

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2003

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SENATE DRS35216-LH-113 (03/14)

Short Title: Biomanufacturing Funds. (Public)

Sponsors: Senator Hoyle.

Referred to:

A BILL TO BE ENTITLED

1
2 AN ACT TO APPROPRIATE FUNDS TO THE BOARD OF GOVERNORS OF THE
3 UNIVERSITY OF NORTH CAROLINA TO ASSIST WITH
4 BIOMANUFACTURING CONSTRUCTION FINANCING AND WORKER
5 TRAINING THAT WILL INCREASE THE STATE'S ABILITY TO COMPETE
6 FOR BIOMANUFACTURING MARKETS AND HELP BOOST FUTURE
7 ECONOMIC GROWTH ACROSS NORTH CAROLINA.

8 Whereas, the State is in the midst of an economic downturn; and

9 Whereas, losses of industrial and manufacturing jobs in textile, furniture, and
10 tobacco production as well as high-paying jobs in information technology and
11 telecommunications have reached upward to 235,000; and

12 Whereas, new job creation is needed immediately, mid-term and long-term;
13 and

14 Whereas, biomanufacturing is probably the only industrial sector available to
15 North Carolina that is capable of producing sustained employment growth. Other
16 manufacturing growth opportunities are either single incidents or slow growth; and

17 Whereas, this is a critical time for the State's economy as it transitions from
18 the conventional manufacturing and agriculture-based economy of past years to a more
19 prosperous biomanufacturing economy; and

20 Whereas, the pharmaceutical industry will be producing biopharmaceuticals
21 for at least 100 new products over the next three years and probably for 150 new drugs
22 over a five-year period. The approximately 40 pharmaceutical products being produced
23 today require more biomanufacturing capacity than is currently available. Thus, nearly
24 all of the manufacturing capacity necessary to produce new products will have to be
25 built during the next five years; and

26 Whereas, the required expansion of biopharmaceutical production facilities
27 will approximately double our nation's current manufacturing capacity for these

1 products. An estimated 50 to 100 biopharmaceutical companies will spend somewhere
2 between \$3.5 to \$5.0 billion and create several hundred thousand jobs to meet new
3 manufacturing needs. Immediate jobs will be created in architecture and engineering
4 services, intermediate jobs will be required for construction, equipment manufacturing
5 and production of supplies; long-term jobs will be created in biopharmaceutical
6 manufacturing, sales, delivery and system maintenance; and

7 Whereas, during this same time period, the chemical industry will be working
8 with the pharmaceutical and the agriculture industries to produce new products ranging
9 from industrial enzymes, chemical feedstock for synthesis, and agricultural crops to
10 make specialty chemicals. Several world leaders in this field already have operations in
11 North Carolina, including BASF, Bayer, and Novo Nordisk; and

12 Whereas, genetically engineered plants such as duck weed, tobacco, borage,
13 and trees and genetically modified animals such as chickens, goats, pigs, milk cows, and
14 insect larvae will be used to produce pharmaceuticals and specialty chemicals. North
15 Carolina companies like Paradigm Genetics, Syngenta, and Bayer are working on these
16 technologies; and

17 Whereas, the agricultural industry will produce a new class of food
18 supplements called "nutraceuticals". These foods will provide consumers with special
19 or therapeutic nutritional benefits; and

20 Whereas, the contract biomanufacturing industry will be huge; between \$1.5
21 billion and \$2.0 billion in facilities are already on the drawing board by companies such
22 as Boehringer Ingelheim, Lonza, Diosynth, Dow Chemical, Dupont, and DSM not to
23 mention emerging companies like Biogen, KBI, Biolex, Protein Sciences and Biopure.
24 The majority of these companies represent recruitment opportunities for North Carolina;
25 and

26 Whereas, most biomanufacturing jobs will pay \$35,000 to \$40,000 each; and

27 Whereas, North Carolina has the possibility of creating 40,000 to 50,000 such
28 new jobs over the next ten years by expanding North Carolina companies and recruiting
29 new companies from the many fields mentioned above; and

30 Whereas, a viable and competitive strategy must be developed and
31 implemented immediately to capture a significant portion of this lucrative market and
32 ensure future economic growth statewide; and

33 Whereas, the strategy is to create an educational alliance among the State's
34 universities, communities, and biomanufacturing companies to further this economic
35 endeavor; and

36 Whereas, the physical facilities needed by this alliance are a central
37 biomanufacturing center and six regional training centers to be located at six community
38 college campuses to meet the workforce training and education needs of the bioprocess
39 and biopharmaceutical industry in each of the State's seven economic development
40 regions; and

41 Whereas, the establishment of such an alliance with its education and training
42 facilities strategically located across the State, will enable a significant portion of the
43 State's current agricultural base, specifically in tobacco, corn, and other readily

1 manipulatable crops, to convert to engineered bioproducts that will provide the raw
2 material of numerous bioprocessing plants throughout the State; and

3 Whereas, this unique alliance among the State's universities, community
4 colleges, and biomanufacturing companies will provide citizens of all educational levels
5 and work levels with access to the large-scale, realistic experience needed to enter into
6 this field, no matter where the citizen resides within the State, from the high school
7 educated textile worker who is retooling to change industries to the microbiologist with
8 a doctoral degree who wants to change careers and enter the biomanufacturing world;

9 Now, therefore,

10 The General Assembly of North Carolina enacts:

11 **SECTION 1.** There is appropriated from the General Fund to the Board of
12 Governors of The University of North Carolina the sum of thirty-five million dollars
13 (\$35,000,000) for the 2003-2004 fiscal year to be used for the capital and operating
14 expenses of establishing the main biomanufacturing training center in the triangle area.

15 **SECTION 2.** There is appropriated from the General Fund to the
16 Community College System Office the sum of ten million dollars (\$10,000,000) for the
17 2003-2004 fiscal year to assist with the capital and operating expenses of establishing
18 six additional regional biomanufacturing training centers at regional community
19 colleges, one in each of the remaining regional economic development regions areas.

20 **SECTION 3.** This act becomes effective July 1, 2003.