

AMENDMENT IN THE NATURE OF A SUBSTITUTE
TO H.R. _____
OFFERED BY M. _____

Strike all after the enacting clause and insert the following:

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “National Centers of
3 Excellence in Advanced and Continuous Pharmaceutical
4 Manufacturing Act of 2021”.

5 **SEC. 2. NATIONAL CENTERS OF EXCELLENCE IN AD-**
6 **VANCED AND CONTINUOUS PHARMA-**
7 **CEUTICAL MANUFACTURING.**

8 (a) IN GENERAL.—Section 3016 of the 21st Century
9 Cures Act (21 U.S.C. 399h) is amended to read as follows:

10 **“SEC. 3016. NATIONAL CENTERS OF EXCELLENCE IN AD-**
11 **VANCED AND CONTINUOUS PHARMA-**
12 **CEUTICAL MANUFACTURING.**

13 “(a) IN GENERAL.—The Secretary of Health and
14 Human Services, acting through the Commissioner of
15 Food and Drugs—

16 “(1) shall solicit and, beginning not later than
17 one year after the date of enactment of the National
18 Centers of Excellence in Advanced and Continuous

1 Pharmaceutical Manufacturing Act of 2021, receive
2 requests from institutions of higher education, or
3 consortia of institutions of higher education, to be
4 designated as a National Center of Excellence in Ad-
5 vanced and Continuous Pharmaceutical Manufac-
6 turing (in this section referred to as a ‘National
7 Center of Excellence’) to support the advancement,
8 development, and implementation of advanced and
9 continuous pharmaceutical manufacturing; and

10 “(2) shall so designate not more than 5 institu-
11 tions of higher education or consortia of such insti-
12 tutions that—

13 “(A) request such designation; and

14 “(B) meet the criteria specified in sub-
15 section (c).

16 “(b) REQUEST FOR DESIGNATION.—A request for
17 designation under subsection (a) shall be made to the Sec-
18 retary at such time, in such manner, and containing such
19 information as the Secretary may require. Any such re-
20 quest shall include a description of how the institution of
21 higher education, or consortium of institutions of higher
22 education, meets or plans to meet each of the criteria spec-
23 ified in subsection (c).

24 “(c) CRITERIA FOR DESIGNATION DESCRIBED.—The
25 criteria specified in this subsection with respect to an in-

1 stitution of higher education, or consortium of institutions
2 of higher education, are that the institution or consortium
3 has, as of the date of the submission of a request under
4 subsection (a) by such institution or consortium—

5 “(1) physical and technical capacity for re-
6 search, development, implementation, and dem-
7 onstration of advanced and continuous pharma-
8 ceutical manufacturing;

9 “(2) manufacturing knowledge-sharing net-
10 works with other institutions of higher education,
11 large and small pharmaceutical manufacturers, ge-
12 neric and nonprescription manufacturers, contract
13 manufacturers, and other relevant entities;

14 “(3) proven capacity to design, develop, imple-
15 ment, and demonstrate new, highly effective tech-
16 nologies for use in advanced and continuous phar-
17 maceutical manufacturing;

18 “(4) a track record for creating, preserving,
19 and transferring knowledge with respect to advanced
20 and continuous pharmaceutical manufacturing;

21 “(5) the proven ability to facilitate training of
22 an adequate future workforce for research on, and
23 implementation of, advanced and continuous phar-
24 maceutical manufacturing; and

1 “(6) experience in participating in and leading
2 advanced and continuous pharmaceutical manufac-
3 turing technology partnerships with other institu-
4 tions of higher education, large and small pharma-
5 ceutical manufacturers, generic and nonprescription
6 manufacturers, contract manufacturers, and other
7 relevant entities—

8 “(A) to support companies seeking to im-
9 plement advanced and continuous pharma-
10 ceutical manufacturing in the United States;

11 “(B) to support Federal agencies with
12 technical assistance and employee training,
13 which may include regulatory and quality met-
14 ric guidance as applicable, and hands-on train-
15 ing, for advanced and continuous pharma-
16 ceutical manufacturing;

17 “(C) with respect to advanced and contin-
18 uous pharmaceutical manufacturing, to orga-
19 nize and conduct research and development ac-
20 tivities needed to create new and more effective
21 technology, develop and share knowledge, create
22 intellectual property, and maintain technological
23 leadership;

1 “(D) to develop best practices for design-
2 ing and implementing advanced and continuous
3 pharmaceutical manufacturing processes; and

4 “(E) to assess and respond to the national
5 workforce needs for advanced and continuous
6 pharmaceutical manufacturing, including the
7 development and implementing of training pro-
8 grams.

9 “(d) TERMINATION OF DESIGNATION.—The Sec-
10 retary may terminate the designation of any National Cen-
11 ter of Excellence designated under this section if the Sec-
12 retary determines such National Center of Excellence no
13 longer meets the criteria specified in subsection (c). Not
14 later than 90 days before the effective date of such a ter-
15 mination, the Secretary shall provide written notice to the
16 National Center of Excellence, including the rationale for
17 such termination.

18 “(e) CONDITIONS FOR DESIGNATION.—As a condi-
19 tion of designation as a National Center of Excellence
20 under this section, the Secretary shall require that an in-
21 stitution of higher education or consortium of institutions
22 of higher education enter into an agreement with the Sec-
23 retary under which the institution or consortium agrees—

1 “(1) to collaborate directly with the Food and
2 Drug Administration to publish the reports required
3 by subsection (g);

4 “(2) to share data with the Food and Drug Ad-
5 ministration regarding best practices and research
6 generated through the funding under subsection (f);

7 “(3) to develop, along with industry partners
8 (which may include large and small biopharma-
9 ceutical manufacturers, generic and nonprescription
10 manufacturers, and contract research organizations
11 or contract manufacturers that carry out drug devel-
12 opment and manufacturing activities) and another
13 institution or consortium designated under this sec-
14 tion, if any, a roadmap for developing an advanced
15 and continuous pharmaceutical manufacturing work-
16 force;

17 “(4) to develop, along with industry partners
18 and other institutions or consortia of such institu-
19 tions designated under this section, a roadmap for
20 strengthening existing, and developing new, relation-
21 ships with other institutions of higher education or
22 consortia thereof; and

23 “(5) to provide an annual report to the Food
24 and Drug Administration regarding the institution’s
25 or consortium’s activities under this section, includ-

1 ing a description of how the institution or consor-
2 tium continues to meet and make progress on the
3 criteria specified in subsection (e).

4 “(f) FUNDING.—

5 “(1) IN GENERAL.—The Secretary shall award
6 funding, through grants, contracts, or cooperative
7 agreements, to the National Centers of Excellence
8 designated under this section for the purpose of
9 studying and recommending improvements to ad-
10 vanced and continuous pharmaceutical manufac-
11 turing, including such improvements as may enable
12 the Centers—

13 “(A) to continue to meet the conditions
14 specified in subsection (e);

15 “(B) to expand capacity for research on,
16 and development of, advanced and continuous
17 pharmaceutical manufacturing; and

18 “(C) to implement research infrastructure
19 in advanced and continuous pharmaceutical
20 manufacturing suitable for accelerating the de-
21 velopment of drug products needed to respond
22 to emerging medical threats, such as emerging
23 drug shortages, quality issues disrupting the
24 supply chain, epidemics and pandemics, and
25 other such situations requiring the rapid devel-

1 opment of new products or new manufacturing
2 processes.

3 “(2) CONSISTENCY WITH FDA MISSION.—As a
4 condition on receipt of funding under this sub-
5 section, a National Center of Excellence shall agree
6 to consider any input from the Secretary regarding
7 the use of funding that would—

8 “(A) help to further the advancement of
9 advanced and continuous pharmaceutical manu-
10 facturing through the National Center of Excel-
11 lence; and

12 “(B) be relevant to the mission of the
13 Food and Drug Administration.

14 “(3) AUTHORIZATION OF APPROPRIATIONS.—
15 There is authorized to be appropriated to carry out
16 this subsection \$100,000,000 for the period of fiscal
17 years 2022 through 2026.

18 “(4) RULE OF CONSTRUCTION.—Nothing in
19 this section shall be construed as precluding a Na-
20 tional Center for Excellence designated under this
21 section from receiving funds under any other provi-
22 sion of this Act or any other Federal law.

23 “(g) ANNUAL REVIEW AND REPORTS.—

24 “(1) ANNUAL REPORT.—Beginning not later
25 than one year after the date on which the first des-

1 ignation is made under subsection (a), and annually
2 thereafter, the Secretary shall—

3 “(A) submit to Congress a report describ-
4 ing the activities, partnerships and collabora-
5 tions, Federal policy recommendations, previous
6 and continuing funding, and findings of, and
7 any other applicable information from, the Na-
8 tional Centers of Excellence designated under
9 this section; and

10 “(B) make such report available to the
11 public in an easily accessible electronic format
12 on the website of the Food and Drug Adminis-
13 tration.

14 “(2) REVIEW OF NATIONAL CENTERS OF EX-
15 CELLENCE AND POTENTIAL DESIGNEES.—The Sec-
16 retary shall periodically review the National Centers
17 of Excellence designated under this section to ensure
18 that such National Centers of Excellence continue to
19 meet the criteria for designation under this section.

20 “(3) REPORT ON LONG-TERM VISION OF FDA
21 ROLE.—Not later than 2 years after the date on
22 which the first designation is made under subsection
23 (a), the Secretary, in consultation with the National
24 Centers of Excellence designated under this section,
25 shall submit a report to the Congress on the long-

1 term vision of the Department of Health and
2 Human Services on the role of the Food and Drug
3 Administration in supporting advanced and contin-
4 uous pharmaceutical manufacturing, including—

5 “(A) a national framework of principles re-
6 lated to the implementation and regulation of
7 advanced and continuous pharmaceutical manu-
8 facturing;

9 “(B) a plan for the development of Federal
10 regulations and guidance for how advanced and
11 continuous pharmaceutical manufacturing can
12 be incorporated into the development of phar-
13 maceuticals and regulatory responsibilities of
14 the Food and Drug Administration;

15 “(C) a plan for development of Federal
16 regulations or guidance for how advanced and
17 continuous pharmaceutical manufacturing will
18 be reviewed by the Food and Drug Administra-
19 tion; and

20 “(D) appropriate feedback solicited from
21 the public, which may include other institutions
22 of higher education, large and small biopharma-
23 ceutical manufacturers, generic and non-
24 prescription manufacturers, and contract manu-
25 facturers.

1 “(h) DEFINITIONS.—In this section:

2 “(1) ADVANCED.—The term ‘advanced’, with
3 respect to pharmaceutical manufacturing, refers to
4 an approach that incorporates novel technology, or
5 uses an established technique or technology in a new
6 or innovative way, that enhances drug quality or im-
7 proves the performance of a manufacturing process.

8 “(2) CONTINUOUS.—The term ‘continuous’,
9 with respect to pharmaceutical manufacturing, re-
10 fers to a process—

11 “(A) where the input materials are con-
12 tinuously fed into and transformed within the
13 process, and the processed output materials are
14 continuously removed from the system; and

15 “(B) that consists of an integrated process
16 that consists of a series of two or more simulta-
17 neous unit operations.

18 “(3) INSTITUTION OF HIGHER EDUCATION.—
19 The term ‘institution of higher education’ has the
20 meaning given such term in section 101(a) of the
21 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

22 “(4) SECRETARY.—The term ‘Secretary’ means
23 the Secretary of Health and Human Services, acting
24 through the Commissioner of Food and Drugs.”.

1 (b) TRANSITION RULE.—Section 3016 of the 21st
2 Century Cures Act (21 U.S.C. 399h), as in effect on the
3 day before the date of the enactment of this section, shall
4 apply with respect to grants awarded under such section
5 before such date of enactment.

Amend the title of the bill to read as follows: “A bill to amend the 21st Century Cures Act to provide for designation of institutions of higher education that provide research, data, and leadership on advanced and continuous pharmaceutical manufacturing as National Centers of Excellence in Advanced and Continuous Pharmaceutical Manufacturing, and for other purposes.”

