

Central New Jersey



The competition to create the world's next truly viable life science regional cluster is fierce. Despite the huge public and private investment in biotechnology since the late 1970s, only a very small group of regions have become self sustaining high-skill ecosystems, and only a handful of other regions have the potential to become the next viable life science cluster. Central New Jersey (CNJ) is one of them.

In 2006, New Jersey was identified by Battelle and the Biotechnology Industry Organization as the only state with world-class specialization in all four bioscience sub clusters: pharmaceuticals, research testing, medical devices and chemicals. New Jersey was the birthplace for the pharmaceutical industry. Over the last two decades, the costs of drug development have skyrocketed, the pipelines of new products have dried up and the profitability of the sector has fallen, producing consolidation and job loss.

A recent study notes New Jersey's share of pharmaceutical activity is rapidly eroding. WIRED funding is critical to reversing that trend and creating an industry-driven transformation of the workforce to attract new companies and to help retain US leadership in this vital sector. A focus on life sciences, however, can have a massive impact on CNJ's regional economy beyond pharmaceuticals. Shahi (2004) estimates that biotechnology will transform over 25 percent of global GDP during the course of the 21st Century. A distinctive element of CNJ's life sciences cluster will be fostering innovation and developing talent across a wide range of industries that the biotechnology industry is affecting: from biomedical and agriculture to energy, industrial and environmental.

The WIRED grant will be used to transform the rich array of existing bioscience education and training and economic development initiatives into a cohesive workforce development system. The Middlesex County WIB will spearhead the 5 County BIO-1 partnership, named for the Route 1 corridor from Rutgers to Princeton around which most of CNJ's biotech firms are clustered.

The BIO-1's partnership includes:

- The region's Workforce Investment Boards, The State's Department of Labor and Workforce Development, Commission on Higher Education and the Economic Development Authority.
- Bioscience Firms – New Jersey's two main employer organizations in the sector – the Healthcare Institute of NJ (HINJ) and the Biotech Council of NJ (BCNJ) – along with leading individual firms.

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- Universities – Rutgers, the State University of New Jersey; Princeton University; Robert Wood Johnson Medical School; University of Medicine and Dentistry NJ; The Cancer Institute of NJ; the Stem Cell Institute of NJ; Monmouth University; Rider University; and the College of NJ.
- Community Colleges, Middle and High Schools. BIO-1 partners will leverage \$200 million in resources dedicated to specific initiatives in bioscience, education and training and the development of new knowledge and enterprises in the bioscience sector.

BIO-1's intended outcomes include:

- An enhanced biotechnology curriculum for K-12 students across the region, with expanded programs targeted at under-represented groups;
- Clear articulation agreements created by a new biotech educator's consortium to enable smooth student progression through different levels of the education system;
- A one-stop bioscience career site that allows companies and individuals to quickly identify bioscience internship, mentoring, job and education and training opportunities along with the latest labor market information on the sector;
- Industry-focused bioscience and education from middle school through graduate education, including expanded internships and cooperative education;
- A new set of professional master's degrees tailored to the needs of bioscience workers;
- A retraining program – Flak Jackets to Lab Coats – to enable returning veterans to prepare for careers in the bioscience sector;
- Services to support bio-entrepreneurs, including development of business plans, free customized training, specialized incubation facilities and access to finance;
- Enhanced global partnerships and attraction of international bioscience companies to establish a US presence in CNJ, close to its world-leading pharmaceutical firms.