Connecticut Innovations Snapshot

First Quarter Fiscal 2015

connecticut innovations
What's next starts here.

Snapshot: September 30, 2014

Assets — $215 million

Total Portfolio COMPANIES* — 594

Total Connecticut JOBS** — 20,678

- 99 Equity/risk capital companies — 974 Connecticut jobs
- 185 Companies receiving debt/other financial assistance — 19,704 Connecticut jobs
- 330 Companies receiving innovation/collaboration support

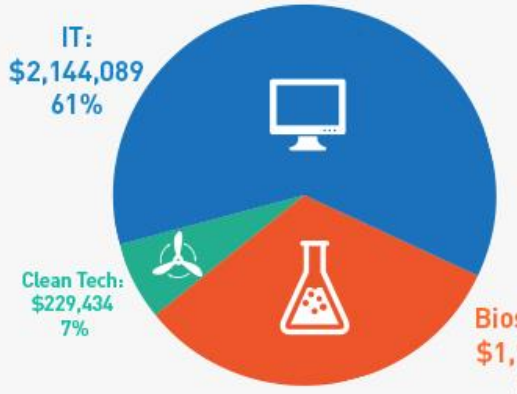
* Adjusted for overlap between funding/support sources
** Portfolio company job counts are predominently as of June 30, 2014. Total does not include SBI company jobs.

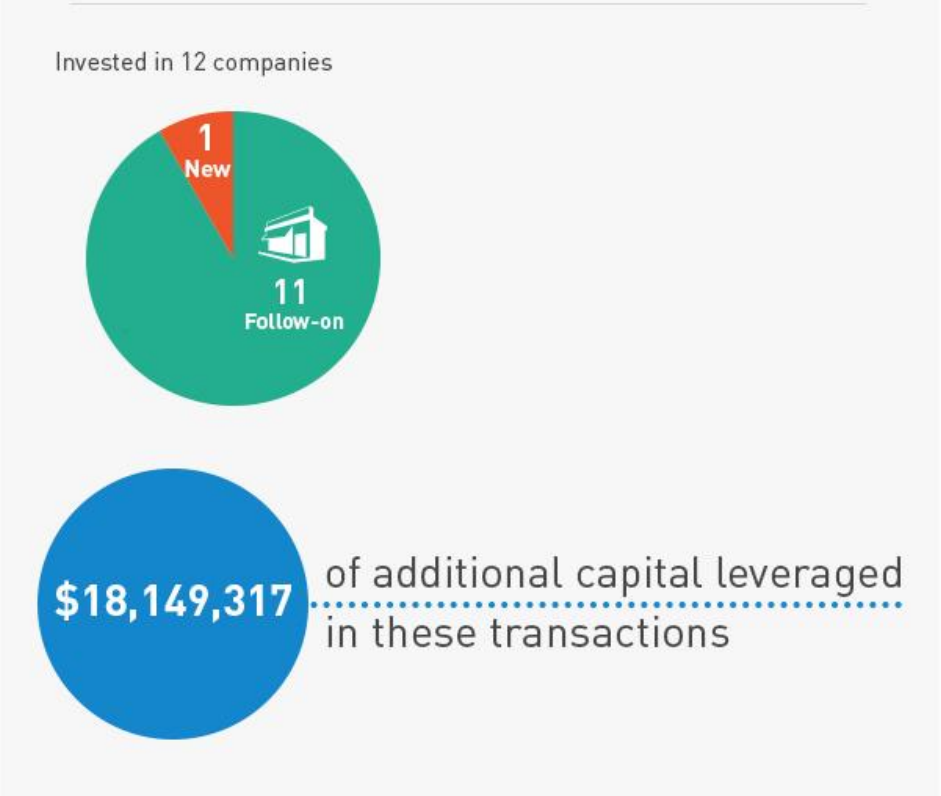
YTD Fiscal 2015 (July - September 2014)

[NOTE: The availability of state bond funds during this period affected funding activity levels.]

FUNDING ACTIVITY

Equity and Risk Capital Investments — $3,503,104





Featured Company:

Arvinas Inc. (New Haven, CT)

Arvinas is taking a unique approach to combating cancer and other diseases. This New Haven-based pharmaceutical company believes it has found a better approach to drug development: instead of inhibiting proteins, the company aims to degrade and remove them from the system entirely. The company's core technology is licensed from Yale University and based on the work by founder Craig Crews, the Lewis B. Cullman Professor of Molecular, Cellular and Developmental Biology at Yale University.

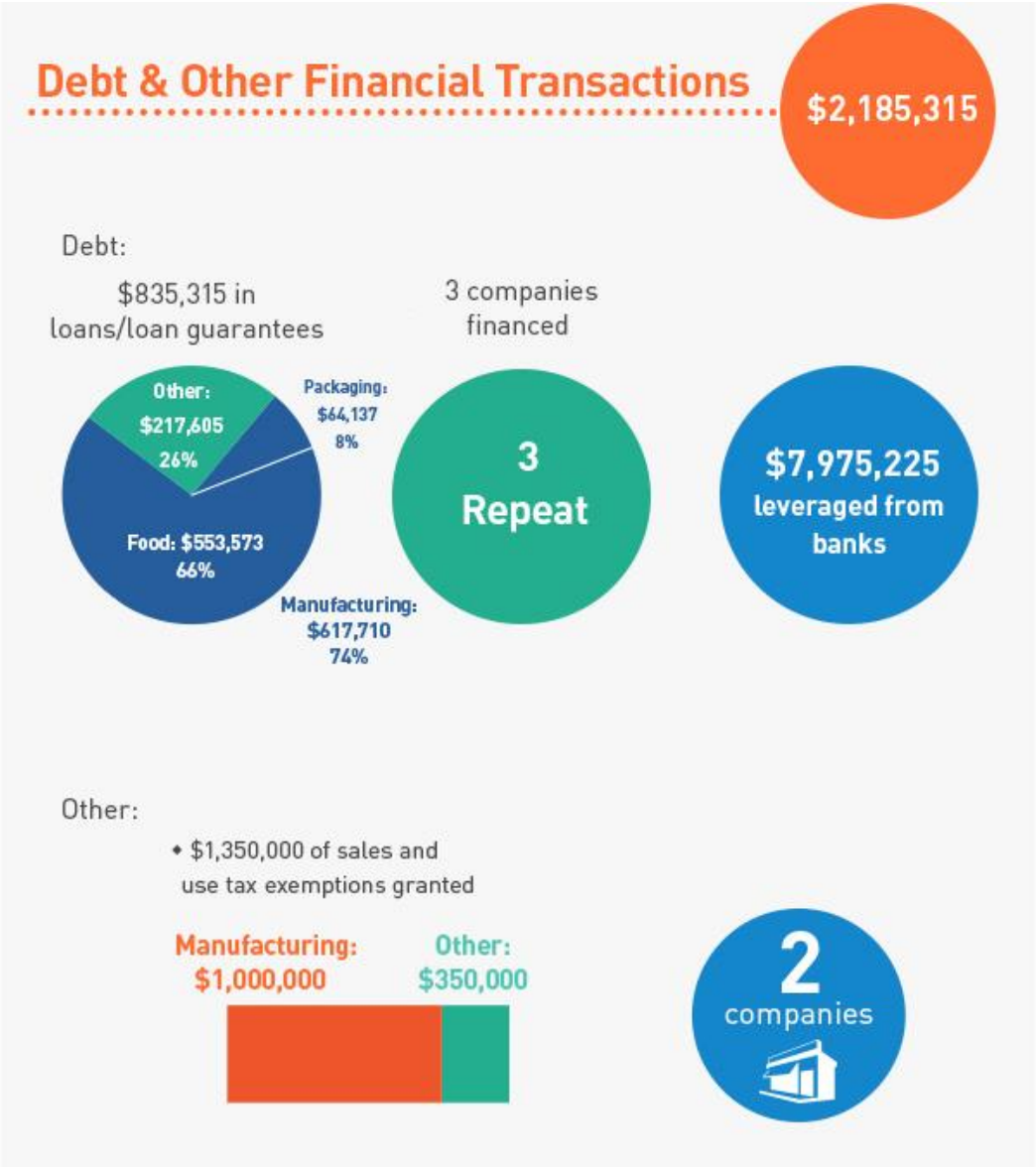
Arvinas's technology is designed to harness proteasomes to degrade proteins. Proteasomes are cylindrical protein complexes that exist inside the nucleus and cytoplasm of all eukaryotic cells and are part of a basic mechanism that controls the amount of proteins within a cell and also clears out improperly formed proteins. Arvinas's platform entails attaching an enzyme, known as ubiquitin ligase, to a protein of interest, thus marking that protein for degradation by proteasomes.

The Arvinas protein degradation platform is applicable to a wide range of disease-causing proteins, including proteins that cannot be targeted with existing small molecules, such as ras and beta-catenin. Arvinas's initial efforts are on those well-understood proteins where efforts have shown that inhibiting the proteins is beneficial and that a degradation approach may

provide a superior benefit. Arvinas is currently working on multiple programs that may be applicable in several types of cancers and expects to be in human clinical trials in 2016.

Such research and development requires significant funding. Last year Arvinas sought and secured an infusion of $18.55 million, consisting of a $15.3 million Series A investment round and $3.25 million in loan financing. Excited by the startup's technology and founding team, Connecticut Innovations participated alongside private venture capital firms in the Series A round, supporting the company with a $1 million equity investment. CI also provided a $750,000 loan to enable the purchase of vital laboratory equipment. Additionally, Connecticut's Department of Economic and Community Development stepped in with a $2.5 million loan to support the company's research and development.

Arvinas is making great strides, fueled by the recent financing infusion. It has hired its first 20 employees, including researchers and key members of the management team. It continues to work closely with Yale University scientists and is exploring diverse strategic partnering opportunities.



Featured Company:

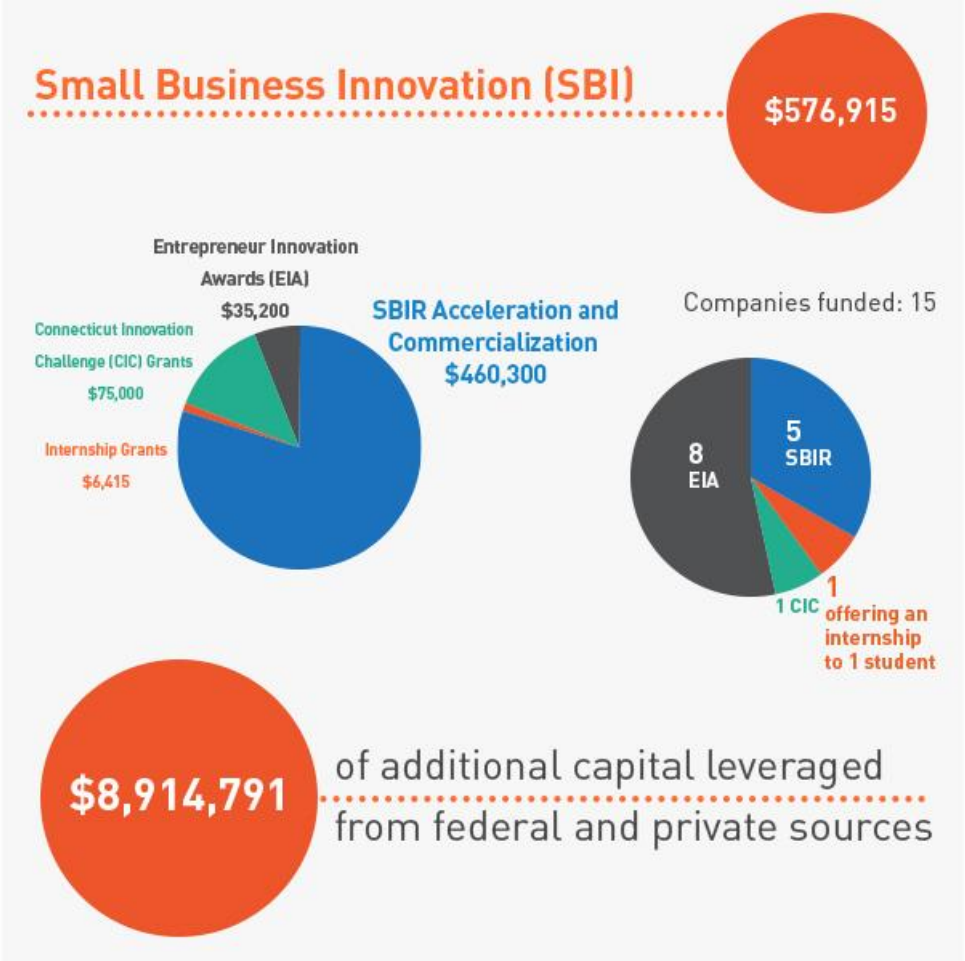
Connecticut Mulch Distributors Inc. (Enfield, CT)

A well-established family-owned business making mulch, soil mix and compost and providing biomass for customers in the Northeast, Connecticut Mulch Distributors Inc. was in search of new ways to improve efficiencies and expand its product offerings. This year, with support from Connecticut Innovations, the company is implementing a plan to achieve those goals.

For several years, Connecticut Mulch had been driving its empty trucks to its supplier of bark (a paper mill), then loading the trucks and transporting the bark back to the company's Enfield production site. This routine had worked well for Connecticut Mulch but was not optimally efficient, as the outgoing trucks were empty (i.e., nonproductive). The company's management arrived at a solution: invest in the production of a chip mill facility that could produce pulp-quality wood chips for use in paper production. That way, Connecticut Mulch could send trucks filled with wood chips to its bark supplier, sell the supplier those chips for use in that company's paper production and eliminate the "empty truck" inefficiency.

Connecticut Mulch purchased a parcel of land adjacent to its existing property to be the chip mill site. It then needed funding of approximately $3.1 million to construct and equip the industrial buildings for the mill. While the company's lender was able to finance a large portion of that sum, supplemental funding from Connecticut Innovations as well as loan and grant funding from the Connecticut Department of Economic and Community Development were needed to fulfill Connecticut Mulch's funding requirements. In April 2014, CI provided Connecticut Mulch with a direct loan of $600,000.

With the necessary funding in hand, Connecticut Mulch initiated construction and fit-out, and in June it began operations of the new chip mill. This expansion project has resulted in nine new full-time jobs at Connecticut Mulch and is enabling the company to sell chips not only for paper production but also for animal bedding and for use as a sustainable source for greenhouse heating and as residential heating fuel in the form of wood pellets. Over the next several years, Connecticut Mulch anticipates the project will create a total of 28 new full-time jobs.



Featured Company:

Biorasis Inc. (Storrs, CT)

Biorasis, Inc.

Gone will be the days when diabetes patients must endure routine finger pricks to monitor their glucose levels! Biorasis is developing an innovative solution. It is a tiny glucose sensor, called the Glucowizzard™, that can be implanted in a diabetes patient's skin to continuously monitor his or her glucose levels. The sensor sends data wirelessly to wearable technology on the patient's wrist, which displays the glucose levels in real time.

The company was formed around research performed at the University of Connecticut. That research focused on discovering a way to ensure long-term acceptance of an implant within a patient's body. UConn researchers found that a combination of a small sensor and a proprietary sensor coating was crucial to achieving this outcome. In 2007, Biorasis acquired an exclusive license to this UConn technology and was incorporated.

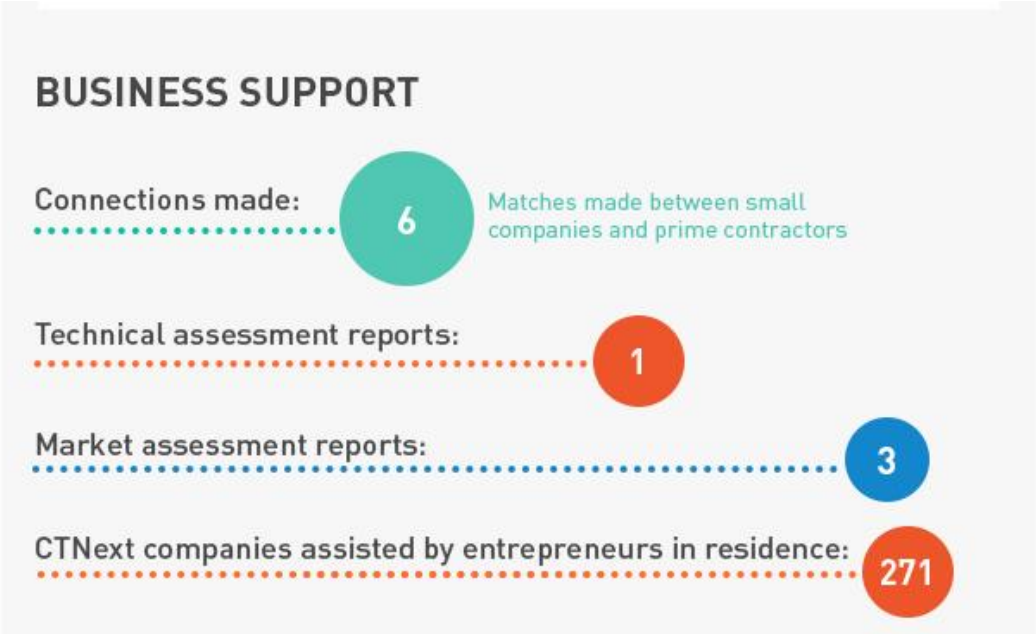
Since then, the company has been off and running. In the past five years, Biorasis has won federal Small Business Innovation Research (SBIR) grants from the National Institutes of Health

and National Science Foundation (NSF) to advance its technology. Today, with the help of UConn researchers and the UConn Technology Incubation Program, Biorasis has developed a prototype, and device testing in animals is under way.

Connecticut Innovations' assistance began in 2012 with a $25,000 award to Biorasis from CI's SBIR Acceleration and Commercialization Program – funds that helped Biorasis purchase equipment needed for its Glucowizzard™ research. Later, the company decided that having summer interns would accelerate the progress of its research. Biorasis turned to CI's Technology Talent Bridge Program (TTB), which provided $22,800, enabling it to hire three UConn summer interns (two undergraduates and one graduate student) in June 2014. At the end of the summer, Biorasis hired one of those interns as a permanent, full-time employee.

Most recently, in September 2014, CI provided funding of $150,000 to Biorasis through the SBIR Acceleration and Commercialization Program. This support has allowed the company to apply for $75,000 in matching funds from NSF under the agency's SBIR Phase IIB initiative. Biorasis is using CI's funds to expedite pilot-scale production of the Glucowizzard™ prototype and validate the effectiveness of the sensor in several research facilities. Some of this work is being accomplished under a subcontract with the University of Connecticut – providing students an opportunity to benefit from valuable training in the area of bio/nano sensing.

The future is bright for Biorasis, as the company's unique platform may be expanded into monitoring of other medical conditions as well as obtaining data from research animals during the drug development process.



OTHER INITIATIVES

Angel Investor Tax Credit Program

- 9 angels made a total of $485,000 of investments in 5 companies

The Jackson Laboratory

- Project completed; operations commenced
- Total advanced to date is $140.1 million

MILESTONES

- CI portfolio company CyVek Inc. was acquired by global life sciences company Bio-Techne Corporation, yielding a 3x return on CI's investment.
- The Connecticut Bioscience Innovation Fund (CBIF) announced its first investments in July 2014.
- Developed a cost-share financing model that the National Science Foundation is using as a national model for its SBIR/STTR program.

Historical Data/Impact

EQUITY/RISK CAPITAL (since FY-1995)

- **Invested**: $263.5 million
- **Leveraged**: Over $1 billion (5x our investment)
- **Companies invested in:** 205
- **Companies recruited:** 26
- **Exits:** 48 (8 IPOs and 40 acquisitions)

DEBT & OTHER FINANCIAL Transactions (since FY-1992)

- **Loaned**: $462 million
- **Guaranteed**: $242 million
- **Leveraged**: $2.0 billion
- **Loss rate:** below 2.5%
- **Sales and use tax exemptions provided:** $167 million
- **Companies assisted:** 1,624

SBI (since FY-2009)

- **Companies funded**: 231
- **Internships**: $935,757 issued to 72 companies; leveraged $612,600
- **SBIDP**: $547,787 issued to 25 companies; leveraged $3.5 million
- **SBIR Acceleration and Commercialization Program:** $2.56 million committed to 54 companies since the program was launched in March 2012; leveraged $27.7 million
- **Federal SBIR dollars captured by Connecticut companies:** $203 million captured by 133 companies
- **Connecticut Innovation Challenge:** $375,000 issued to three companies