

TESTIMONY TO THE COMMITTEE ON COMMERCE
IN SUPPORT OF Raised Bill 5574 ***AN ACT IMPLEMENTING THE
RECOMMENDATIONS OF THE SOUTHEASTERN CONNECTICUT BIOSCIENCE
CAPABILITIES ASSESSMENT REPORT***

March 18, 2014

Senator LeBeau, Representative Perone, and members of the Commerce Committee, I am Jean Schaefer, I reside at 5 South Ridge Road in Niantic and I am here to testify in support of Raised Bill 5574 ***AN ACT IMPLEMENTING THE RECOMMENDATIONS OF THE SOUTHEASTERN CONNECTICUT BIOSCIENCE CAPABILITIES ASSESSMENT REPORT***

I am a scientist and inventor. Currently I am working as a business consultant to large Pharma and Startup Companies.

I co-authored the Southeastern Connecticut Entrepreneur Network (SECTen) proposal last summer to influence the commissioned capabilities assessment report referenced in Bill 5574. Our proposal was attached and submitted along with the capabilities assessment report. I submit our proposal here today as testimony to support the bill #5574.

In addition, I will list the primary actions that we identified in our work:

- Identify and engage entrepreneurs in SECT;
- Continue surveys of local needs;
- Build and maintain an "inventory" of entrepreneurs to match talent to opportunities: we have taken some steps in this direction, but a complete and continually updated inventory of the region's Pharma/Biotech firms and support services (consulting firms, contract research organizations, support laboratories) will be a critical resource to help advance local support of local Pharma/Biotech firms when possible;
- Continue to sponsor speaker events (past events included world class speakers such as Bill Aulet, Managing Director of the Entrepreneur Center at MIT, and in September Dr. Edison Liu, president and CEO of the Jackson Laboratories will be speaking to our group and local entrepreneurs and business leaders in New London). An economic development plan should include provision for honoraria and other costs of sponsoring these types of events on a regular basis;

- Establish formal and informal mentoring partnerships between established and new entrepreneurs in the region;
- Coordinate entrepreneur needs with local suppliers where possible (e.g. match consultants to biotech firms through the inventory as well as provide for other possible incentives to use local support);
- Provide tax and legal advice for entrepreneurs;
- Create a Networking hub;
- Acquire physical space on a permanent or periodic basis for "touch-down" work and to facilitate informal networking, mentoring and education;
- Align, collaborate and leverage State and Regional resources;
- Use formal events and informal networking to connect entrepreneurs with economic development resources on a local level through SECT TECH, Innovation Ecosystem, SBDC, and seCTer, and on a state level through organizations such as CT Tech Council, CURE, and the New Haven Biotech Clubhouse; Provide a liaison between agencies to assure no duplication of efforts and match entrepreneur needs with the resources these organizations provide;
- Identify gaps in assistance these organizations provide and fill them through funding additional programs within these organizations;
- Ensure representation from SECTen on state and regional bioscience councils.

Thank you.

SECTen
Entrepreneur Network and
Emerging Business Council
Proposal
August 2013

COMMITTEE MEMBERS

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SECT PHARMA/BIOTECH

Executive Summary

The State of CT Department of Economic and Community Development (DECD) has been appropriated \$50,000 to prepare a plan supporting Pharma/Biotech initiatives in Southeastern CT (SECT), pursuant to the direction of recently passed HB 5460. The purpose of this proposal is two-fold. First, it provides the DECD with input from a local grassroots organization, the SECT Entrepreneurs Network and Emerging Business Council (SECTen), a group of highly experienced professionals from the Pharma/Biotech industry, economic development and finance – all of whom live and work in SECT. Second, it presents SECTen as the foundation of a local advisory board which should logically be actively involved in the implementation of the plan in SECT.

SECT currently has a highly skilled and educated workforce in the Pharma/Biotech industry and its support services, as well as a small array of small or startup Pharma/Biotech companies. The region also has a good transportation infrastructure and an appealing quality of life. At this critical juncture, when a large company like Pfizer is downsizing and its skilled work-force is leaving the area, we propose several elements that an economic plan for the region should incorporate in order to build a sustainable, robust Pharma/Biotech presence in SECT with the high-skilled and high-paying jobs that it attracts.

We suggest the inclusion of the following key elements in the economic development plan for Pharma/Biotech in SECT:

- Creation of an Bio-science enterprise corridor in the region from New London and Groton to Norwich, similar to the recently created Bio-Science Enterprise Corridor in the Farmington region;
- Identifying and engaging Pharma/Biotech entrepreneurs in the region;
- Supporting the growth of the businesses of these entrepreneurs;
- Forming a networking hub with physical space to facilitate formal and informal interactions;
- Aligning and coordinating local and state/regional organizations¹ to guide the region's entrepreneurs in locating appropriate services, while filling gaps and eliminating redundancies in services proposed or currently being provided.

¹ Organizations include but are not limited to SECT TECH, CTNext, SCORE, seCTer, CTCAT, CURE, SBDC and the New Haven Bioscience Clubhouse

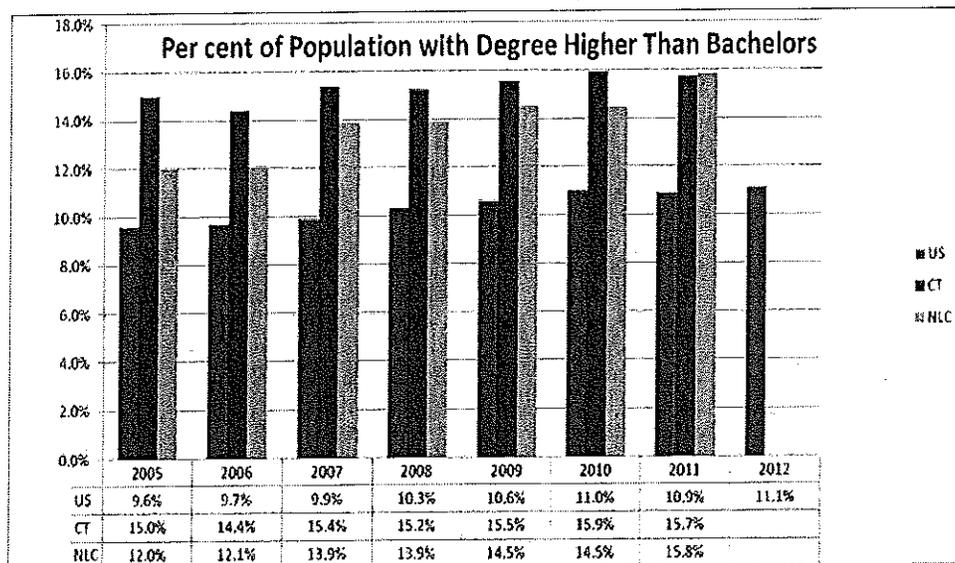
Situational Analysis

The Southeastern CT Enterprise Region (seCTer), the economic development agency for the communities of New London County, has recently been designated as an Economic Development District (EDD) by the Federal Economic Development Administration (EDA). This designation will be instrumental in regional competition for grants from federal agencies, bolstering economic development in the region. SECT has a diverse talent base of highly educated residents who have experienced job losses and continue to suffer from them and from under employment. Therefore, it is poised for new economic development through entrepreneurial initiatives.

Although there is a concentration of experienced Pharma/Biotech talent in the SECT region, a trip to Boston or New York by train is all that is necessary to demonstrate that CT residents are commuting to neighboring states for jobs in the industry that once was a mainstay for the region. Many more highly trained Pharma/Biotech workers have already left the area or are at risk of relocating. Large employers in the area, such as Pfizer, have downsized, and SECT's current Pharma/Biotech industrial base has not grown adequately to take up the slack, much less attract new skilled workers into SECT.

Recent Census and American Community Survey data support what those of us living and working in the region already know. Figure 1 illustrates that the workforce in Southeastern Connecticut is highly educated, on a par with the rest of Connecticut and more advanced than the US as a whole. This remained true as late as 2011 when the latest data are available. The concentration of graduate degrees in the region can be attributed to the density and proximity of high technology companies and the presence of 5 institutions of higher education.²

Figure 1:

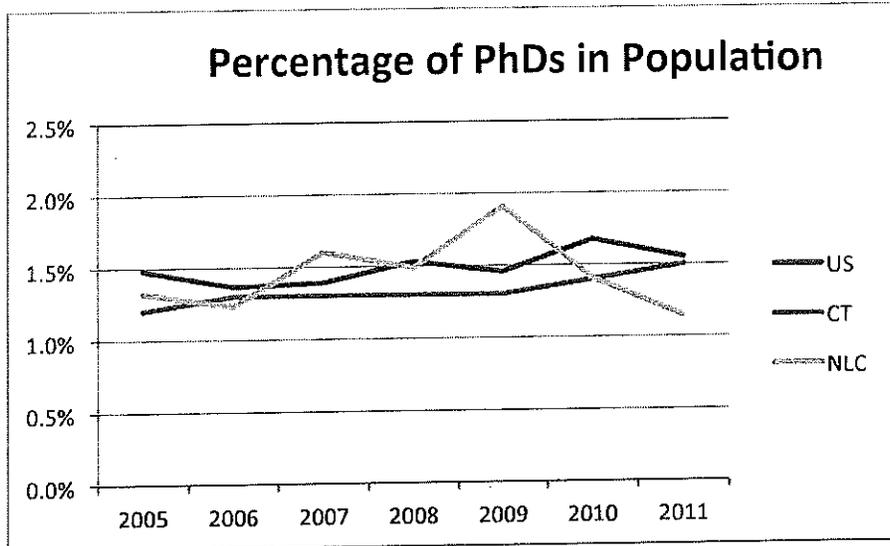


Source: US Census – American Community Survey 2012

² The University of Connecticut at Avery Point, Connecticut College, The US Coast Guard Academy, Mitchell College and the Lyme Academy of Fine Arts. In addition Three Rivers Community College provides post High School associates degrees, certifications and continuing education options.

However, Figure 2 confirms the alarming trend that the number of residents with PhD's, a surrogate for the most highly trained (and highly paid) workers in the area, is declining, moving in lock-step with corporate downsizing in the area in general and Pfizer in particular.

Figure 2:



Source: US Census – American Community Survey 2012

Time is of the essence. We must focus a concerted effort on shoring up, and ideally augmenting, the region's Pharma/Biotech base while this highly skilled workforce is still available. To support that goal, a coordinated, well-executed economic plan should focus on leveraging the availability of this highly educated workforce and the rich infrastructure of the region to not only retain this skilled workforce but to build on it, bringing new high-paying, highly-skilled jobs into the region.

The Biotech industry is rapidly evolving to address a myriad of issues including patent expirations and an increase in regulatory pressures. A strategy now commonly employed is the shared risk approach with smaller innovative companies bringing experimental drugs to proof of concept and then partnering with large traditional pharmaceutical companies for full development (to get marketing approval and then to market the drug). This provides an opportunity for small firms to enter the market with innovative new therapies. There are entrepreneurs in SECT making great strides³ but in the current environment, only the most tenacious with significant internal resources are able to survive. The build-up of a biotech presence in SECT would be riding the wave the Pharma/Biotech industry of the future, rather than turning back the clock to restore an older economic model in the region.

³ Myometrics, New London; Amarin, Mystic/Groton; LifePharms, New London; Aroostook Pure, New London; Sound Analytics, East Lyme, and others in development, Natures Fingerprint, East Lyme

The Southeastern Connecticut Entrepreneur Network (SECTen) was created on March 16, 2012 as a result of a proposed innovation hub to be centered in southeastern Connecticut. The network has grown to 150 members, successfully hosted 6 community events in 2012 and engaged regional leaders and community partners. The mission of the network is to:

- Create a vibrant network and communication vehicles for local consultants and startups
- Direct entrepreneurs to existing resources
- Celebrate local success stories
- Extract and disseminate lessons learned from entrepreneurial experiences
- Gain support of enabling individuals in industry, regional, state, and university economic development
- Develop focused learning sessions to meet member needs
- Improve the regional economy with enhanced entrepreneur productivity

The network has provided a facsimile for a true innovation hub and has served to surface the critical mass that was previously disconnected. Although still quite young, the network has been a success in connecting local talent to new job opportunities and connecting local entrepreneurs to each other. In addition to hosting speakers and panel discussions, the SECT Entrepreneur's Network has been holding monthly meet-ups where local entrepreneurs can informally chat with their peers to keep apprised of news and look for opportunities to collaborate. The meet-ups have been well attended and entrepreneurs have discussed issues like the current status of funding opportunities from the state and roadblocks encountered whilst trying to obtain funding, and ideas for revitalizing the Pharma/Biotech industry in SECT.

Southeastern CT – A Land of Opportunity

SECT represents a unique geo-economic region ideally suited to the establishment, development, and growth of Biotech-related businesses. Quintessentially New England, the collection of charming towns stretching from Old Lyme to Stonington in the south and from Colchester to Voluntown in the north offers a compelling combination of affordable housing stock, strong school systems, breathtaking scenery and supportive, involved communities. A transportation hub connected by Interstate-95, Amtrak, Shore Line East Commuter Rail, Greyhound Bus Lines, and ferries to Long Island, Block Island and Fishers Island, SECT is located roughly halfway between the metropolises of New York City and Boston and is easily accessible from the major cities of Hartford, New Haven and Providence. Yet even with the convenience of access to the art, culture and economic diversity of major urban areas, SECT offers the benefits of connected country living: very little traffic, very low crime, easy access to nature on beaches, rivers and hiking trails and, perhaps most importantly, quiet, privacy and a sense of space and place.

Yet among the backdrop of cathedral forests, white picket fences and sailboat masts are inner cities with blighted neighborhoods, empty store fronts and shuttered warehouses. New London County was designated an Economic Development District by the US Economic Development Agency (EDA) because it is considered an "economically distressed region," with at least one distressed community (New London) and several distressed areas in other communities.⁴ This EDD designation presents an excellent opportunity to focus economic development efforts in Pharma/Biotech through means such as creating a Bioscience enterprise corridor, with attendant tax advantages to companies. In addition, entrepreneurs in the area who have started sole proprietorships or small consulting firms can provide their services to these start-up companies, thereby leveraging each others' products and services.

There is a diversity of regional establishments able to provide support and resources to a biotech infrastructure in SECT (and indeed may participate as well). These include institutions of higher education (noted above and in footnote 2). Additionally, major Colleges and Universities within an hour's drive include the major campus of the University of Connecticut in Storrs, Yale University in New Haven, Trinity College in Hartford, Wesleyan University in Middletown, Quinnipiac University in Hamden, Brown University, Providence College and the Rhode Island School of Design in Providence, and the University of Rhode Island in Kingston – to name a few. Major employers in SECT include General Dynamics Electric Boat, Pfizer and the U.S. Navy Submarine Base, all in Groton. There are also three major hospitals in the area: Lawrence and Memorial Hospitals in New London (which has a wholly-owned affiliated hospital in nearby Westerly, RI), and Backus Hospital in Norwich which recently became affiliated with Hartford Hospital.

In addition to the resources and richness these organizations provide, they also offer a large, well-educated source of potential Biotech employees. Because of layoffs and other attrition from Pfizer, many small entrepreneurial companies have already been started by people from Pfizer and are operating. These companies have expressed interest in organizing for the mutual benefit of their companies and the community. In addition, due to the presence of Pfizer and other professional/

⁴ Federal "Distress" is measured by a higher than average unemployment rate, and a lower than average per capita income. An EDD requires at least one regional town that meets this measurement. State of CT measures of distress include other factors including childhood poverty level and sub-standard/aging housing.

consultants, there is an existing infrastructure of support services, and a supply of necessary laboratory, development and clinical services to the Biotech industry.

The region is a center for Arts and Entertainment, contributing to an attractive quality of life. Foxwoods and Mohegan Sun Casinos offer entertainment from world-class performers, while local music, dance, movies and theatrical productions can be found in parks, plazas and theaters across the region just about every night of the week. There is also a vibrant arts and heritage community, with the Garde Arts Theatre and the Hygienic Artists' Cooperative in New London, The Eugene O'Neill Theatre Center in Waterford, the Mystic Arts Center in Mystic, and the Florence Griswold Museum in Old Lyme. Mystic is also home to world-famous Mystic Seaport, Museum of America and the Sea, and to the Mystic Aquarium, one of the nation's leading aquariums and home of famed ocean explorer Dr. Robert Ballard and his Institute for Exploration.

SECT is a sailor and boaters paradise, with marinas and yacht clubs lining the shore in every town on Long Island and Fishers Island Sounds and the Connecticut, Thames, Mystic and Pawcatuck Rivers. Beaches are accessible in just about every community. For golf enthusiasts, SECT offers a wide selection of both public and private courses with a variety of scenic beauty and challenging terrain. When the weather cools, skiers and boarders have easy access to the mountains of Vermont, New Hampshire and Maine, with smaller ski areas located a short distance away in central Connecticut and central Rhode Island.

For people who want to "get involved," SECT offers dozens of organizations from church groups and Rotary, Lions, Kiwanis and Elks Clubs to neighborhood centers – it's a place where people really care about all the members of their communities. The Farm-to-Table movement is also alive and well in SECT with local farmers markets and community supported agriculture (CSAs) active in nearly every city and town, and Farm-to-Table restaurants springing up to provide year-round customers for local growers.

SECT thus has the infrastructure and culture both to build and to sustain high-paying biotechnology jobs within the region. What is needed is a plan to nurture these attributes, to coordinate existing economic development programs, such as seCTer, SECH Tech, SBDC, etc., in order to build a thriving biotech industry in SECT. Among other things, this effort calls for a unifying body that will help entrepreneurs leverage all available resources to create well-paying technical jobs, address economically distressed areas, and offset losses of jobs as large employers, such as Pfizer, downsize. Ultimately this plan should not only offset previous losses, but serve as an ongoing jobs-creation engine resulting in a net increase in biotech companies and jobs which will attract and retain an ever-growing pool of talent and capital into the region.

Planning for Economic Development

The basis for an economic plan for the region is several-fold:

- 1) A talented workforce exists (although it remains a flight risk) and must be supported, maintained and augmented. Further loss of this highly skilled workforce will result in continued negative economic consequences for SECT.
- 2) The EDD designation for SECT represents an opportunity to establish and register a Biotech Enterprise Corridor Zone for SECT to attract and retain Pharmaceutical and Biotech investment in the region.
- 3) Coordinating the fractured, incomplete and overlapping support provided by current organizations, filling gaps and helping potential entrepreneurs navigate and utilize these assets.

A 2012 survey of local entrepreneurs and small local consulting firms who support them (as well as the Pharma/Biotech industry nationally and globally) indicated that the region requires support and infrastructure development to harness the economic potential that lies within.

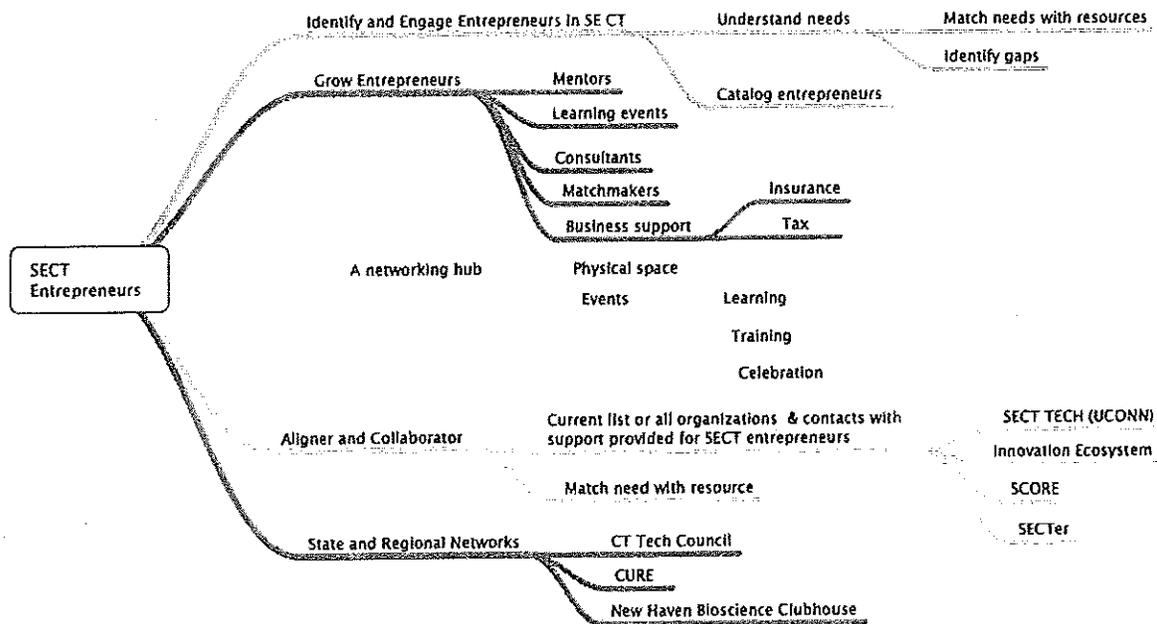
Survey Results: (75 respondents-94% reported living in southeastern CT)

1. 66 would utilize the services of an innovation hub
2. 13 plan to start a new business venture
3. 20 have started a new business venture
4. 51 would be influenced by an innovation hub to start a new business venture
5. 26 responders are interested in low cost co-working office space
6. 11 responders are interested in low cost co-working lab space
7. 26 need to raise capital to reach their short-term goals
8. 17 commute to RI, MA, or New Haven from SECT for business

SECT Pharma/Biotech:

Who we are and what our survey data tells us we need.

Based on this survey, and from what we have learned through our regular meetings and networking with entrepreneurs in the Pharma/Biotech field within the region, we have mapped out some of the key needs and activities that an economic development plan should support



Some additional details, and specific activities associated with the items on the map are listed below. As a full economic development plan is crafted more detail and specificity regarding actions to be taken will be needed.

- Identify and engage entrepreneurs in SECT;
- Continue surveys of local needs;
- Build and maintain an inventory of entrepreneurs to match talent to opportunities: we have taken some steps in this direction, but a complete and continually updated inventory of the region's Pharma/Biotech firms and support services (consulting firms, contract research organizations, support laboratories) will be a critical resource to help advance local support of local Pharma/Biotech firms when possible;
- Grow entrepreneurs;
- Continue to sponsor speaker events (past events included world class speakers such as Bill Aulet, Managing Director of the Entrepreneur Center at MIT, and in September Dr.

Edison Liu, president and CEO of the Jackson Laboratories will be speaking to our group and local entrepreneurs and business leaders in New London). An economic development plan should include provision for honoraria and other costs of sponsoring these types of events on a regular basis;

- Establish formal and informal mentoring partnerships between established and new entrepreneurs in the region;
- Coordinate entrepreneur needs with local suppliers where possible (e.g. match consultants to biotech firms through the inventory as well as provide for other possible incentives to use local support);
- Provide tax and legal advice for entrepreneurs;
- Create a Networking hub;
- Acquire physical space on a permanent or periodic basis for "touch-down" work and to facilitate informal networking, mentoring and education;
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- Identify gaps in assistance these organizations provide and fill them through funding additional programs within these organizations;
- Ensure representation from SECTen on state and regional bioscience councils.

Southeastern Connecticut Entrepreneur's Network



WHY NOW AND WHY IN SECT

Resources

- A talented workforce exists that has a broad set of skills to support biopharma startups and mature companies locally as well as throughout the state.
- The newly announced CURE Incubator on the Pfizer Groton site will be a lynchpin for sustaining a robust bioscience environment in SECT.
- There is a transportation hub, breathtaking coastline with relatively low density and cost of living, excellent schools, and a strong community.

Opportunities

- The EDD designation for SECT represents an opportunity to establish and register a Biotech Enterprise Corridor Zone that will attract and retain Pharmaceutical and Biotech investment in the region.
- There is a need to leverage and strengthen the support provided by current state organizations, filling gaps and helping potential entrepreneurs navigate and utilize these assets successfully.

1

SECTen – WHO WE ARE

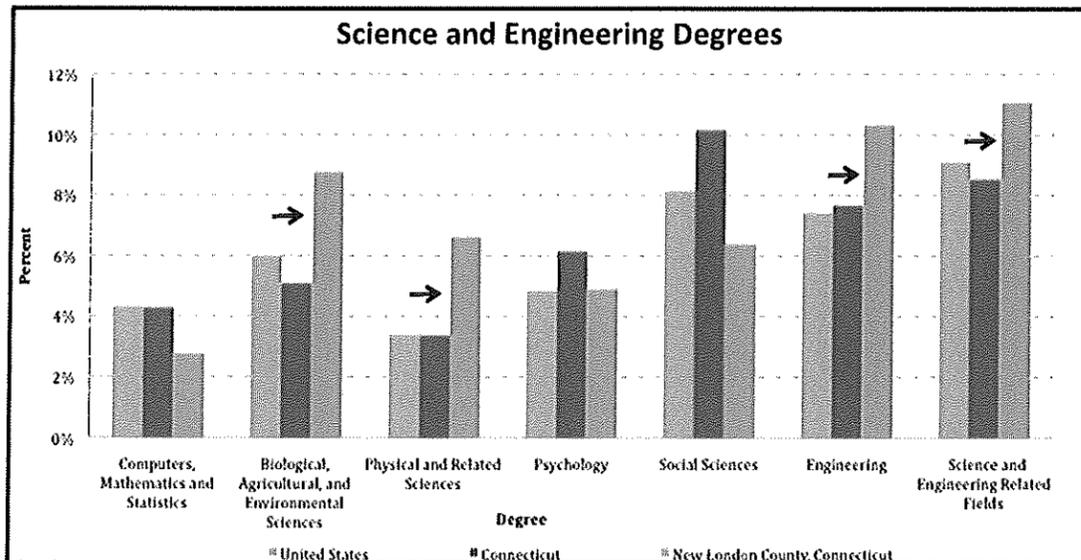
- SECTen, the Southeastern Connecticut Entrepreneurs Network, was formed in 2012 to address the needs of entrepreneurs in SECT.
- Members are highly experienced professionals with roots in SECT. We are:
 - Passionate about helping our community.
 - Have cumulative experience of over 125 years of achievement that spans inventions, over a dozen new drug approvals and representing numerous companies to the FDA.
- We have participated in the start up of numerous new companies, held leadership roles in the establishment of partnerships and alliances, and have portfolio management and finance expertise.
- SECTen goals were developed based on our independent research.
 - Findings are available in the SECTen Entrepreneurs Network and Emerging Business Council Proposal, August, 2013.

2

EDUCATIONAL ATTAINMENT

New London County has a wealth of persons with bachelors degrees in the Science and Engineering fields in comparison to Connecticut and the U.S.

Science and Engineering Degrees



Source: Slide provided by CERC data from US Census Bureau American Community Survey 2012

3

SECT PHARM/BIOTECH FRAMEWORK FOR GROWTH

Create an Bio-science enterprise corridor from New London/Groton to Norwich, similar to the corridor in the Farmington area, to enhance and complement the pending CURE/Pfizer Groton site incubator.

SECTen will actively support the CURE incubator and other state-wide efforts to bring commercially viable innovations to market.

Identify and engage entrepreneurs in the region so that they have opportunities for a robust exchange of technology and ideas, and link them with local resources for required expertise.

SECTen will develop and publish a Bioscience Catalog for SECT that includes an online directory to link entrepreneurs to existing programs and the extensive network of local scientists and consultants who can support their technical needs.

Strengthen business opportunities by forming a networking hub to facilitate formal and informal interactions.

Support the future of Bioscience Connecticut

SECTen will work with CURE as it plans and implements changes in support of the SECT Bioscience Capabilities Assessment Report (HB5460)

SECTen will seek representation on CBIF board to leverage our combined experience and support the overall success of the state bioscience industry.

4