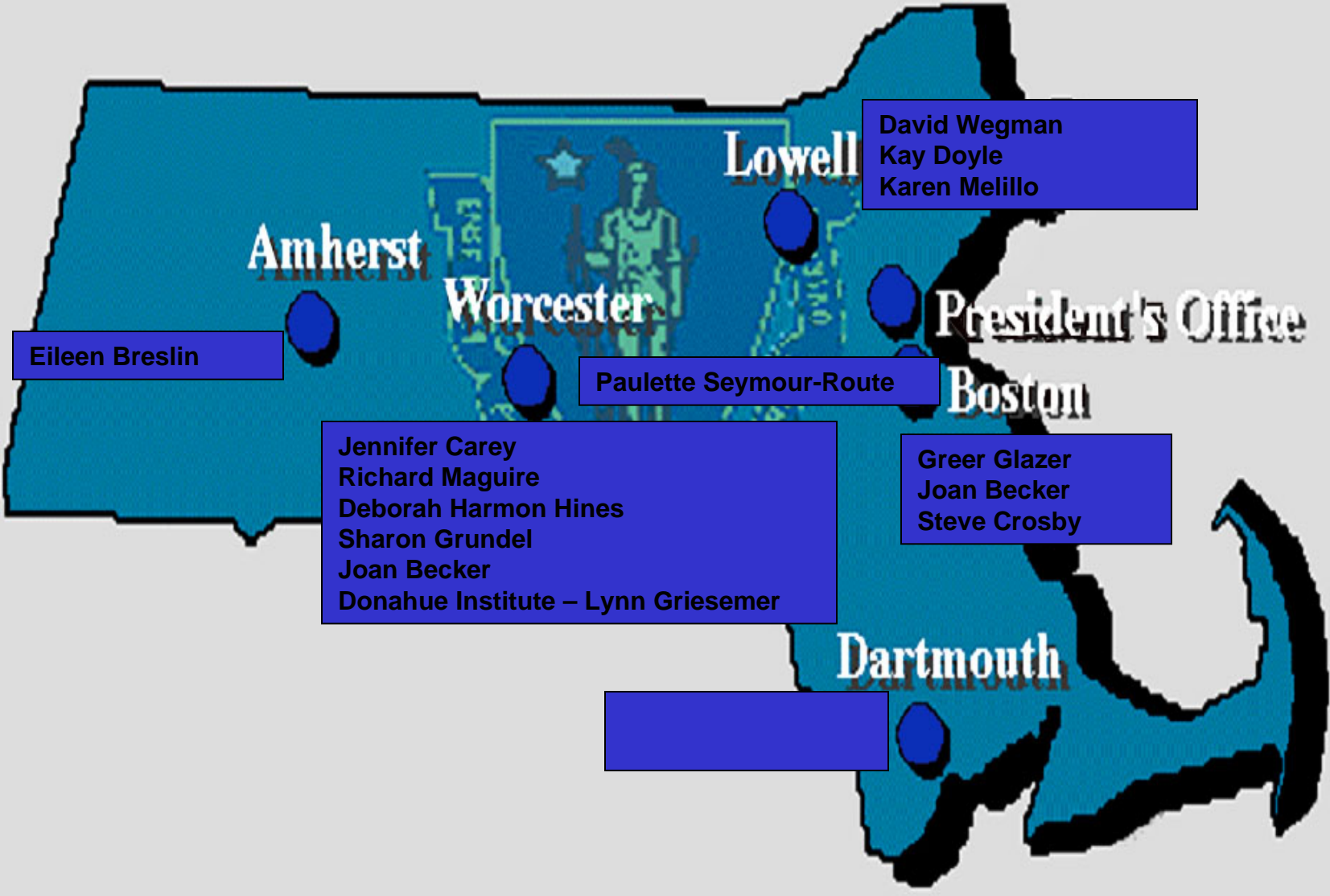


Workforce and Policy Initiative

Working Group Members:



- Workforce & Policy Initiatives
- Human Capital
 - Life Sciences Talent Initiative
 - STEM Efforts
 - Pipeline Programs
 - Nursing and Clinical Education & Research
- Policy
 - Policy Development & Analysis
 - Minority Health & Health Care Disparities
 - Evaluating the State's Investment in the Life Sciences

Workforce and Policy Initiative

Recommendation # 1

- **Increase the number of practitioners and research scientists qualified in select areas critical to life sciences in MA**
 - **Nursing, clinical laboratory scientists, public health, clinical research management, computer science, regulatory engineering and quality control**
 - **Diversity must be a priority in developing this expanded workforce**

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Workforce and Policy Initiative

Recommendation #1

- **Build UMass Capacity by**
 - **Doubling the number of grads in each of these areas over next 5 years**
 - **Establishing program-specific post-doc traineeships**
 - **At least 2 per campus in nursing, clinical laboratory science, public health science and computer science**
 - **Recruiting world-class researchers and practitioners to enable programs to reach objectives**

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Workforce and Policy Initiative

Recommendation #1 Funding

- **Funding should be a balance of state resources, matching funds from industry and health care institutions and foundations**
- **Scholarships and grad assistant stipends sufficient to attract and retain top students at all levels**
 - **Provide summer stipends for undergraduate research experiences**
 - **Provide full tuition, fees and stipends for graduate students approximating NIH or NSF funding levels as appropriate**
- **Post-doc fellowships approximating NIH or NSF funding as appropriate**
- **Funding of new faculty to account for retirement, start-up and department expansion and refinement**
- **Provide sufficient administrative and support to ensure program sustainability and success**

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Workforce and Policy Initiative

Recommendation #2

- **Enhance infrastructure to provide quality education in targeted areas for an expanded student body on all campuses**
 - **Including updated, state-of-the-art laboratory space and equipment, office space and appropriate IT resources for each of the programs**
 - **Renovations whenever possible, but new construction will be required on the Boston and Lowell campuses**

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Workforce and Policy Initiative

Recommendation #3

- **Every student should have the opportunity for a reality-based, hands-on education in each of the targeted fields**
 - **Paid co-ops and internships in the students' designated disciplines funded through industry partners**
 - **Research opportunities for undergraduates and grad students**
 - **Establish incentives to increase public/private partnerships between UMass and industry in state and beyond**

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Workforce and Policy Initiative

Recommendation #4

- **Curriculum in each of the targeted disciplines must be aligned with realities of the life sciences cluster by addressing workforce needs with practice and experience embedded throughout**
 - **Service learning should be utilized whenever possible and should be specifically considered when co-ops, internships and research opportunities are unavailable**
 - **Essential that there are multiple opportunities to engage in research throughout curriculum**

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Workforce and Policy Initiative

Recommendation #5

- **Extend reach of UMass to strengthen K-12 STEM initiatives**
 - **Provide incentives to promote the establishment of community-academic partnerships that:**
 - **promote diversity**
 - **offer academic enrichment programming to ensure academic success**
 - **sponsor work-based experiences with a career development component to middle and high school students in preparation for post-secondary education in STEM and life sciences disciplines**
 - **Support endeavors and incentives that encourage mentoring and community engagement through programs that bridge connections between college students and youth**
 - **Fund best practice models to be replicated across campuses supported through state-municipal and industry**

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Recommendation #6

- **Leader at University level that is responsible for coordination, articulation, evaluation, creation, management for analysis and dissemination of information in databases that facilitate collaboration on the targeted life sciences fields**
- **Establish or access where possible databases for the purpose of tracking life sciences programs as well as STEM programs that address diversity and the students who have participated in them**

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Recommendation #7

- **Build an evaluation component for the overall life sciences that will guide investment decisions and provide feedback to the legislature and Governor on the utility and strategy of future investments**
 - **Resources should be included in the core Life Sciences Initiative funding**

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Workforce and Policy Initiative

Recommendation #8

- **Reduce barriers and create incentives to facilitate seamless articulation between UMass campuses and state and community colleges in order to make efficient use of resources devoted to these initiatives**

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