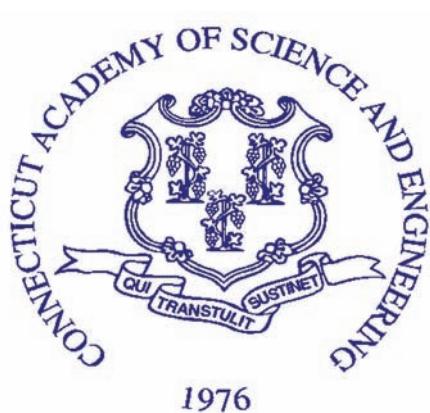


GUIDELINES FOR DEVELOPING A STRATEGIC PLAN FOR CONNECTICUT'S STEM CELL RESEARCH PROGRAM

MAY 2007

A REPORT BY
**THE CONNECTICUT
ACADEMY OF SCIENCE
AND ENGINEERING**



FOR
**THE CONNECTICUT STEM CELL RESEARCH
ADVISORY COMMITTEE**
**THE CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH**

GUIDELINES FOR DEVELOPING A STRATEGIC PLAN FOR CONNECTICUT'S STEM CELL RESEARCH PROGRAM

A REPORT BY
**THE CONNECTICUT ACADEMY
OF SCIENCE AND ENGINEERING**

ORIGIN OF INQUIRY: THE CONNECTICUT STEM CELL RESEARCH
ADVISORY COMMITTEE
THE CONNECTICUT DEPARTMENT OF
PUBLIC HEALTH

DATE INQUIRY
ESTABLISHED: MARCH 19, 2007

DATE RESPONSE
RELEASED: MAY 24, 2007

**GUIDELINES FOR DEVELOPING A STRATEGIC PLAN FOR
CONNECTICUT'S STEM CELL RESEARCH PROGRAM**

This study was initiated at the request of the Connecticut Department of Public Health and the Connecticut Stem Cell Research Advisory Committee on March 19, 2007. The project was conducted by an Academy Study Committee with the support of Bonnie Kaplan, PhD, Project Study Manager and PricewaterhouseCoopers, Project Consultant. The content of this report lies within the province of the Academy's Public Health and Economic Development Technical Boards. The report has been reviewed by Academy Members William H. Koster, PhD and Dieter Söll, PhD. Martha Sherman, the Academy's Managing Editor, edited the report. The report is hereby released with the approval of the Academy Council.

Richard H. Strauss
Executive Director

GUIDELINES FOR DEVELOPING A STRATEGIC PLAN FOR
CONNECTICUT'S STEM CELL RESEARCH PROGRAM

**MEMBERS OF THE
CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING
STUDY COMMITTEE ON
GUIDELINES FOR DEVELOPING A STRATEGIC PLAN FOR
CONNECTICUT'S STEM CELL RESEARCH PROGRAM**

Treena L. Arinze, PhD

Assistant Professor of Biomedical Engineering
New Jersey Institute of Technology

Gerard N. Burrow, MD (Academy Member)

President & CEO
Sea Research Foundation

Lisa C. Dierker, PhD

Associate Professor of Psychology
Wesleyan University

Marilyn Fishbone

Patient Advocate
Founder, JDRF, Greater New Haven Chapter

George Miller, Jr., MD (Academy Member)

John F. Enders Professor of Pediatric Infectious
Diseases & Professor of Epidemiology,
Molecular Biophysics and Biochemistry
Yale University School of Medicine

Paul R. Pescatello, JD, PhD

President & CEO
CURE

Thomas A. Steitz, PhD (Academy Member)

Sterling Professor of Molecular Biophysics &
Biochemistry
Yale University

Carol L. Stone, PhD

Epidemiologist, Maternal and Child Health
Program
Connecticut Department of Public Health

Sandra K. Weller, PhD (Academy Member)

Chairperson, Study Committee
Professor and Chair, Molecular, Microbial &
Structural Biology
University of Connecticut Health Center

RESEARCH TEAM

PROJECT CONSULTANT

PricewaterhouseCoopers LLP
Gerry McDougall
Project Engagement Partner

Tony Pillari
Project Manager

Andrew Valen
Associate

STUDY MANAGER

Bonnie Kaplan, PhD
Lecturer in Medical Informatics, Yale School of
Medicine; and Lecturer, Yale College

ACADEMY PROJECT STAFF

Richard H. Strauss
Academy Executive Director

**GUIDELINES FOR DEVELOPING A STRATEGIC PLAN FOR
CONNECTICUT'S STEM CELL RESEARCH PROGRAM**

GUIDELINES FOR DEVELOPING A STRATEGIC PLAN FOR
CONNECTICUT'S STEM CELL RESEARCH PROGRAM
EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

According to the National Academies, new stem cell treatments potentially could help people suffering from diseases such as cancer, diabetes, cardiovascular disease, spinal cord injuries, Parkinson's Disease, and many other disorders that are incurable now.

Connecticut became the third state to fund stem cell research when Governor M. Jodi Rell signed into law, on June 15, 2005, an act appropriating \$20 million for grants-in-aid for embryonic or human adult stem cell research. This act also allocated a total of \$80 million (\$10 million per year for each of the fiscal years ending June 30, 2008 – June 30, 2015) from the state's Tobacco Settlement Fund to support additional research through the Stem Cell Research Fund.

The act established the Connecticut Stem Cell Research Advisory (SCRAC) Committee. Its primary focus has been awarding grants-in-aids to eligible institutions. After completing the initial research grant award process, the SCRAC began preparing for the next request for proposals (RFP) for awards, slated for August 2007.

Both rapidly expanding state and international investments in stem cell research highlight the importance of Connecticut's focusing its resources as effectively as possible and adapting the program as necessary to achieve optimal results. Consequently, the SCRAC identified the need to develop a strategic plan to ensure the long-term viability and sustainability of Connecticut as an International Center of Excellence for Stem Cell Research so that, by the end of the funding period, Connecticut should

- have become recognized as having made significant contributions to stem cell science;
- be ready for testing new therapies through clinical trials;
- have established a solid research infrastructure, including human capital;
- become a Center of Excellence for stem cell research.

The first stage of the strategic planning initiative, the focus of this study, addresses the following questions of immediate concern with respect to the types of research to support and how best to do so:

- Should the State continue to fund a mix of small and large grants?
- Should the State mandate disease-specific research through the RFP process?
- Should the State focus more on specific research areas, such as nuclear transfer?
- Should the State target clinical research, translational research or private sector research?
- Should the State approach stem cell research as a stand-alone activity, or as part of the larger biotechnology or nanotechnology sectors?

**GUIDELINES FOR DEVELOPING A STRATEGIC PLAN FOR
CONNECTICUT'S STEM CELL RESEARCH PROGRAM
EXECUTIVE SUMMARY**

The second stage of the strategic planning initiative will address other important strategic issues, such as development of a communication and collaboration strategy and the administration of the stem cell research program, including identifying an administrative structure and the resources that are needed to administer and support the program.

The Department of Public Health (DPH) requested the Connecticut Academy of Science and Engineering (CASE) to provide guidance and advice in developing the strategic plan. CASE engaged PricewaterhouseCoopers LLP (PwC) as its project consultant and convened a Study Committee to oversee PwC's work and to develop suggestions for the SCRAC's consideration.

PwC interviewed thirty pre-selected stakeholders in the stem cell research community regarding strategic priorities for ongoing public funding of stem cell research. The Study Committee developed its suggestions and findings based on a review of PwC's analysis of the survey interviews, additional stakeholder comments, and the summary of the Stem Cell Research Stakeholder Forum.

The Study Committee suggests that consideration be given to creating a scientific and research support strategy that incorporates continuous process improvement and periodic re-assessment (possibly every two years) to ensure that the best research and research mix drives the SCRAC's decision-making process. PwC's study indicated the strong preference of scientists, administrators, clinicians, patient advocates, and industry representatives for a bottom-up process in which

- the best science, not targeted research niches, drives funding decisions and is carried through as emphasis changes over time from basic to translational to clinical research; and
- collaboration and communication are encouraged among all researchers, industry, advocacy groups, and the public.

Key to this plan is the need for flexible, efficient, and effective mechanisms for a science-driven process of

- funding the best science rather than targeting niches, and striving to achieve a balance among kinds of grants;
- periodically evaluating and assessing research mix;
- encouraging researchers new to the field and junior researchers;
- adequate funding of the cores and accelerated annual program funding;
- implementing continuous process improvement;
- maintaining grantee accountability;
- encouraging greater involvement in the RFP process of those outside major academic research institutions, such as local hospitals, industry, and patient advocacy groups;
- streamlining the contracting process and making it more flexible;

GUIDELINES FOR DEVELOPING A STRATEGIC PLAN FOR
CONNECTICUT'S STEM CELL RESEARCH PROGRAM
EXECUTIVE SUMMARY

- providing sufficient numbers of qualified reviewers of funding applications;
- facilitating collaboration and communication among researchers, industry, patient advocacy groups, and the public.