

Department of Pharmaceutical Sciences
Department of Pharmaceutical Sciences

Strategic Plan 2004 - 2009: The Next Level of Excellence



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A. Preamble

The intent of this strategic plan is to capture the current position of the Department* in the continuum of best education and research practices and to define a course that, through its relevance, insight, power, and specifically designed goals, will propel the Department, its programs, and most importantly, its people to the next level of excellence. The Department has enjoyed impressive successes over the past decade in interdisciplinary teaching and learning, in the scope and the peer standing of its basic research programs, and in the visibility and value of its programs inside and outside the university. Through a strategic plan that earns effectiveness through the employment of iterative and inclusive self-assessment, and through the insightful anticipation of professional and societal trends, the Department intends to become recognized as one of the finest within Wayne State University and among its peer departments at other universities. We strive to realize these objectives through a plan that is focused and feasible, with explicit goals, prioritized actions, productive metrics, and enabling benchmarks and milestones.

B. Defining Values and Commitments

The Department will champion, and be led by values and commitments that define its character, principles and standards of its being. They include to:

- Foster appreciation of the critical and unique contributions made by basic pharmaceutical sciences to the professional and graduate pharmacy programs, and to the College of Pharmacy and Health Sciences.
- Enhance the scientific and professional communities within and beyond the university.
- Strive for excellence, through assessment and continuous quality improvement activities.
- Maintain teaching and learning at the cutting edge of knowledge in our specializations.
- Promote and serve as models of life-long learning.
- Champion collaboration and interdisciplinary learning and research.
- Contribute to an atmosphere that supports outstanding communication.
- Pledge to act with honesty and integrity, and adhere to the highest standards of professional behavior.
- Make members and alumni proud of the quality of the department and offerings.

C. Mission

We are a multidisciplinary department providing expertise in the areas of drug discovery, development, and evaluation. We are dedicated to pursuing scholarship that creates new knowledge, to learning that disseminates and preserves knowledge, and to engagement that exchanges knowledge. Our **MISSION** is to:

- Provide an integrated, multidisciplinary education in the pharmaceutical sciences to students enrolled in our professional and graduate programs.
- Maintain innovative research programs in the pharmaceutical sciences which contribute to our understanding of the design, synthesis, delivery, disposition, and action of biologically active compounds.
- Serve as a resource of expertise in these areas to the University and the community at large.

D. Vision

To achieve national recognition as a top 10-ranked program in pharmaceutical sciences research, a leader in teaching and learning, and a valued contributor of service to the profession and community.

*As an academic department of a University, Pharmaceutical Sciences is not merely an organizational structure to which academicians and administrative personnel are assigned to carry out the academic responsibilities of the group. The Department consists of individual scholars and support staff spanning a continuum of expertise, experience and responsibility levels who share professional interests within medicinal chemistry, pharmaceuticals, pharmacology and toxicology. Our professional interactions will contribute to the mutual academic stimulation and professional advancement of each member of the unit.

E. Strategic Goal 1 - Learning Experience

The learning experience for our students encompasses multiple facets including course and program offerings, facilities, and human resources. In the upcoming years there will be numerous pressures to modify our current learning experience at all levels of instruction. These challenges will be met with a commitment to enhance the quality of the program by introducing novel, efficacious and responsive programs and courses, and the development of new revenue streams to provide a more stable platform with which to enhance our post-baccalaureate programs.

Goal 1.1: Maintain and strengthen undergraduate research experiences to increase enrollment in graduate programs in the basic pharmaceutical sciences.

- Identify funding sources to solidify summer research intern program
- Establish relationships with undergraduate Michigan colleges to increase visibility of the graduate programs.

Goal 1.2: Enhance the quality of instruction and the learning experience within the professional pharmacy program through personal understanding and commitment to the profession, and with novel course program enhancements

- Work with Pharmacy Practice to enhance student achievement, progression and learning in a reconfigured P1, P2 and P3 years.
- Attract exceptional PharmD students to an academic or industrial careers.
- Explore and evaluate various instructional modalities to enhance the learning experience.
- Promote recognition of outstanding teaching by professional students and peers.

Goal 1.3: Raise the level of our graduate program to a level commensurate with a top-10 pharmaceutical sciences research program.

- Identify stable funding to provide more students the opportunity to be admitted on non-grant dollars with full GRA or GTA positions.
- Attract exceptional PharmD students to academic or industrial career.
- Allow incoming graduate students the opportunity to experience different research environments prior to selecting a dissertation/thesis topic area.
- Explore the feasibility of a professional non-thesis Master of Science program.
- Promote recognition of outstanding teaching by post-graduate trainees and peers.

Goal 1.4: Ensure departmental post-graduate education achieves professional needs of Post-Doctoral Fellows, Research Assistants and Research Associates

- Review and establish department goals, structures, and programs for the educational and professional advancement of Post-Doctoral Fellows, Research Assistants and Research Associates

Goal 1.5: Expand the teaching faculty to accomplish the goals for enhanced professional and graduate level teaching

- Expand the involvement of part-time faculty within the curriculum to provide specific content instruction.
- Identify non-tenure track research faculty who could also participate in a limited teaching component.

Goal 1.6: Expand the computational resources available to the department to enable information and computation-intensive, hands-on instruction

- Provide resources to allow for integration of proteomic and genomic software into research and teaching programs.
- Provide instruction for graduate students in computer-assisted drug discovery methodology.

METRICS:

- Graduate program visibility among undergraduate students in Michigan
- Success of PharmD students in pharmaceutical sciences-rich courses
- Academic and research career pathways for PharmD students
- Flexibility for first year graduate students in identifying research projects
- Scholarship among students at the Master's degree level.
- Professional environment of post-doctoral fellows
- Research-active and teaching faculty
- Information technology in the pharmaceutical sciences

E. Strategic Goal 2 - Research Excellence

The Department of Pharmaceutical Sciences is a research-intensive unit with active research programs in Medicinal Chemistry, Pharmacology and Pharmaceutics. The Department is recognized Campus-wide as a major contributor to the University's research mission, and is extremely well poised to move into the top 10 NIH-funded Departments nation wide. In terms of funding, intellectual property, facilities and Faculty, the goal of the Department is to strive for consistently increasing research excellence.

Goal 2.1: Become a Top Ten Pharmaceutical Science Department With Respect to Funded Research and Programs

- Provide an atmosphere wherein research active Faculty have release time to seek additional funding
- Increase the number of funded research programs in the Department.
- Provide a sufficient level of administrative support (grant management, infrastructure support) for Department researchers

Goal 2.2: Produce High-Impact Intellectual Property that is Highly Regarded at a National and International Level

- Provide an atmosphere that is highly supportive for research productivity
- Disseminate Departmental scholarship through publication, presentation and patents.
- Maintain state-of-the-art research facilities, equipment and research space
- Identify areas of research strength and focus, and target them for growth
- Increase interdisciplinary collaborations with other units within the College and Department, the University, and with outside institutions.
- Recruit and support the highest quality graduate students and postdoctoral associates

Goal 2.3: Provide Continual Faculty Development for Researchers

- Provide mentoring and development support for all Faculty, particularly pre-tenure faculty
- Facilitate participation of Department Faculty in scientific meetings and societies- Encourage Faculty participation on NIH study sections and journal editorial boards
- Provide a high quality seminar series

METRICS:

- Research dollars per faculty member
- Quality of research support infrastructure
- Number and duration of funded research programs
- Lab space per funded faculty member
- Number of patents and publications

- Percent of publications involving collaborative research.
- Number and placement of graduate students and postdoctoral associates
- Invitations to faculty for speaking engagements
- Professional growth of junior faculty
- Number of faculty involved in study sections, journal review and editorial boards
- Participation in national scientific meetings

E. Strategic Goal 3 - Department Life

We are charged to provide a professional and caring environment that supports the fundamental needs of the department through each of its members, and in so doing, directly and indirectly facilitate achievement of the department, college, and university mission and vision. We strive to achieve a quality and spirit of department life that is so positive and effective that it is acknowledged as an irreplaceable asset, and it serves as a model of interaction among those inside and outside the department.

Goal 3.1: Increase Presence and Appreciation of Community by Department Members

- Continue current activities designed to support and build community, including Fall Welcome Bar-B-Q, Newsletter, Holiday, and Spring Volleyball Picnic.
- Develop new activities: weekly student, post-doctoral fellow, and research staff lunch with faculty, gift exchanges, talent show, professional trip, exercise group, pleasure trip, alumni activity, department chat room, department life web page, dinner for 8, community service projects, etc.

Goal 3.2: Support the safety and well-being of every departmental member

- Actively review safety issues at all faculty meetings
- Solicit safety issues from all departmental members

Goal 3.3: Support the College cultural competency program

- Expand cultural competency program
- Host enrichment speaker program driven by non-faculty

Goal 3.4: Improve the Recognition and Appreciation of Member Achievements

- Continue recognition memos and emails
- Increase communication of accomplishments to college, media relations
- Begin a department research day
- Begin a department awards dinner

METRICS:

- Number, balance, and success of department life activities each year
- Member satisfaction with existing services
- Member satisfaction with department life

E. Strategic Goal 4 - Engagement and Outreach

The engaged Department develops mutually beneficial partnerships with our community that serve as catalysts for social, economic, cultural, and educational enrichment of the region.

Goal 4.1: Expand educational and professional outreach to the non-profit community

- Expand health education activities
- Enhance understanding of drugs in K-12 education
- Partner with Department of Pharmacy Practice and other College and University units in developing a structure for regular outreach into selected communities
- Develop a structured mentoring program by which our graduate students would participate in one or more summer mentoring opportunities for high school students
- Identify and develop key partnerships with selected schools to provide opportunities for students to learn about biomedical research

Goal 4.2: *Expand educational and professional outreach to the private and public sector*

- Identify key individuals within pharmaceutical companies in Michigan to assess the market for individuals with a non-thesis master's degree and/or certificate program
- If assessment indicates market viability, formulate a committee to develop a model curriculum for assessment by stakeholders prior to submission to the Graduate School
- Assess ability to partner with other units in certificate programs having pharmaceutical sciences content

METRICS:

- Involvement in health education in the community
- Involvement of high school students in summer research experience
- Degree and certificate opportunities in pharmaceutical sciences

E. Strategic Goal 5 - Renewal and Advancement

To achieve recognition by peers, prospective students, scientists, practitioners, and alumni, the impact of the collective and individual research service and teaching achievements of the Department of Pharmaceutical Sciences (and its partners) will be described to alumni and stakeholders through a program of internal and external communications designed to cultivate two-way dialog

Goal 5.1: *Operate a Complete and Effective Alumni Database*

- Develop and maintain a database of alumni, selected professional students, and supporters to facilitate hard copy mailings and/or electronic communication.
- Increase the involvement of alumni in the celebration of faculty accomplishments, scientific breakthroughs and teaching innovations.

Goal 5.2: *Improve External Communication with Strategic Target Groups*

- Develop communication platforms including but not limited to newsletters, timely press releases describing high impact discoveries, and e-mail broadcasting.

Goal 5.3: *Expand Networking Activities and Effectiveness*

- Support networking receptions at key national meetings
- Support faculty and graduate student interactions with peer groups

Goal 5.4: *Establish and external advisory group*

- Appoint a Faculty of Pharmacy external advisory board composed of nationally recognized experts to guide planning and provide feedback on direction.

Goal 5.5: *Increase Scientific and Professional Visibility in University*

- Host a Distinguished Seminar series in conjunction with Advisory Board meetings

Goal 5.6: Create endowments that promote the excellence of our teaching, research, and service programs.

METRICS:

- Numbers of research partnerships
- Placement opportunities for department graduates and Post docs
- Referrals of prospective students and post docs.
- Scope of department database of alumni and stakeholders
- Participation of alumni as donors
- Forecast impact of key discoveries on pharmacy practice and the health care industry
- Assessment surveys by alumni and stakeholders

F. Peer Institutions

Scholarship:

The peer group for assessing and benchmarking scholarship is defined in the vision statement of the department as being the top pharmacy programs in the United States. For this purpose, the department selects the top 10-ranked programs as reported annually by the AACP.

In 2002, the top 10 pharmacy school in absolute dollar amount of NIH funding were:

- | | |
|---|-----------------------------|
| 1. University of California - San Francisco | 2. University of Arizona |
| 3. University of Utah | 4. University of Kansas |
| 5. University of Illinois - Chicago | 6. University of Pittsburgh |
| 7. Rutgers University | 8. Florida A & M |
| 9. University of Southern California | 10. Purdue University |

In 2002, the top 10 pharmacy schools ranked by relative amount of NIH funding per PhD faculty member were:

- | | |
|---|--------------------------------------|
| 1. University of California - San Francisco | 2. University of Arizona |
| 3. University of Kansas | 4. University of Washington |
| 5. Rutgers University | 6. University of Utah |
| 7. University of Pittsburgh | 8. University of Southern California |
| 9. Florida A & M | 10. University of Texas - Austin |

Compensation:

For the purpose of compensation, a panel of peer institutions is based on scholarship, but extends to other fiscal considerations including urban setting, urban mission, institution size, and cost of living. For compensation assessment, the following pharmacy programs have been used in requesting compensation data from AACP.

- | | |
|------------------------------------|--------------------------------------|
| Rutgers University | SUNY at Buffalo |
| University of Maryland - Baltimore | University of Michigan - Ann Arbor |
| University of Wisconsin - Madison | University of California - San Diego |

G. Actions

Strategic Goal 1 - Learning Experience

Goal 1.1 Undergraduate Education

- 1.1.1 - Identify 10 undergraduate Michigan schools with the greatest potential to supply graduate students.

Identify key contacts and provide onsite recruitment presentations / research presentations.

1.1.2 - Develop proposal to ASPET and other organizations to support SURF program.

Goal 1.2 Professional Education

1.2.1 - Establish PSC Sub-committee to the Pharmacy Curriculum Committee to develop proposals to establish research / academic tracks within PharmD, potentially including a PharmD / PhD program.

1.2.2 - Use the PSC Sub-committee to the Curriculum Committee to configure basic science-rich courses to include the Patient Simulator, recitation sections and enhancement of basic science content in problem based learning courses.

1.2.3 - Develop proposal to fund 3 GTAs to provide support for the Patient Simulator exercises and recitation sections.

Goal 1.3 Graduate Education

1.3.1 - Develop NIH training grant proposal based on Departmentally based research areas of excellence but including other research units of the University.

1.3.2 - Continue activities in the Departmental Curriculum Committee to revamp the Master's program to include option with or without extensive thesis research.

Goal 1.4 Post-doctoral Fellow and Research Assistant/Associate Education

1.4.1 - Survey post-doctoral fellows to determine the type of educational opportunities desired, along with programs available at other research intensive universities.

Goal 1.5 Learning Resources

1.5.1 - Establish departmental computation resources committee to assess and recommend improvements in overall computational hardware and services.

1.5.2 - Identify computation hardware and software required to provide genomic and proteomic research support for faculty research and teaching. Identify funding sources to acquire needed infrastructure

Strategic Goal 2 - Research Excellence

Goal 2.1 Top Ten Pharmaceutical Science Department

2.1.1 - Increase the annual dollar amount of research funding per FTE by 20%

2.1.2 - Move Department into top 10 research departments

2.1.3 - Increase number of funded research programs with goal of creating greater critical mass

2.1.4 - Facilitate placement of graduate students and postdoctoral associates in high quality positions

2.1.5 - Use critical mass to support center, training and program project submissions

2.1.6 - Establish Committee to identify areas of research expansion. Develop a plan to recruit non-tenure track research faculty that will enhance the training of graduate students and postdoctoral fellows.

2.1.7 - Establish grant pre- and post-award administrative support

2.1.8 - Develop Endowed faculty positions.

Goal 2.2 High-Impact Intellectual Property

2.2.1 - Increase annual peer-reviewed publications per FTE by 20%.

2.2.2 - Increase invention disclosures and awarded patents per FTE by 20%.

2.2.3 - Increase publication number and percent of publications involving other University units

2.2.4 - Increase invitations for Faculty speaking engagements

Goal 2.3 Faculty Development for Researchers

2.3.1 - Increase scholarly publications by Faculty, particularly those who have not yet attained tenure

2.3.2 - Increase faculty serving on study sections

2.3.3 - Increase the memberships on journal review and/or advisory boards

2.3.4 - Increase faculty participation in National scientific meetings

Strategic Goal 3 - Department Life

Goal 3.1 Community

3.1.1 - Members will participate in at least 2 community activities

3.1.2 - Members will rate Community activities at least very satisfactory

Goal 3.2 Safety and Well Being

3.2.1 - Actively solicit and review the safety of all Department members.

Goal 3.3 Cultural Competence

3.3.1 - Expand cultural competence and enrichment programs

Goal 3.4 Achievement

3.4.1 - Members will rate department recognition of achievements as very satisfactory.

Strategic Goal 4 - Engagement and Outreach

Goal 4.1 Outreach to Non-Profit Community

4.1.1 - Increase the number of faculty involved in enhancing drug education in K-12 education.

4.1.2 - Partner with the Department of Pharmacy Practice and other college and university units in developing a structure for regular outreach into selected communities.

4.1.3 - Develop a structured mentoring program by which our graduate students would participate in one or more mentoring opportunities for high school students

4.1.4 - Identify and develop key partnerships with selected schools to provide opportunities for students to learn about biomedical research.

Goal 4.2 Outreach to Private and Public Sector

4.2.1 - Work with Michigan Pharmaceutical companies to determine the value of non-thesis Master's / certificate programs.

4.2.2 - If assessment indicates market viability, formulate a committee to develop a model curriculum for assessment by stakeholders prior to submission to the Graduate School.

4.2.3 - Assess the ability to partner with other units of the University in certificate programs having pharmaceutical sciences content.

4.2.4 - Provide consultant information relating to pharmaceutical sciences to outside agencies on request

Strategic Goal 5 - Renewal and Advancement

Goal 5.1 Alumni and Stakeholder Databases

5.1.1 - Develop and maintain accurate Alumni and stakeholder databases, and add electronic communication capability by 2004

Goal 5.2 External Communications

5.2.1 - Distribute two additional communications per year to Alumni and Stakeholders

Goal 5.3 Networking

5.3.1 - Host one Alumni/Stakeholder reception either locally or at a national meeting in 2004

Goal 5.4 Advisory Board

5.4.1 - Schedule Pharmacy Advisory Board before the end of 2004

Goal 5.5 Distinguished Seminar Series

5.5.1 - Host Distinguished Seminar with Pharmacy Advisory Board meeting in 2004

H. Accountability

We close by acknowledging the significant commitment made by members of the Department of Pharmaceutical Sciences in preparing an inclusive and forward-looking strategic plan, one with the capacity to direct our programs to the next level of excellence. Given the resources and efforts committed to this process, it is the desire of the department that the strategic plan not signify a goal accomplished, but that it serve as an active roadmap to our future, guiding our evolution and increasing our successes. This cannot occur unless two outcomes are achieved. First, equal effort cannot be committed to all action items, nor can equal progress be made. It is key to prioritize action items as part of an action plan that also takes into account factors including budget, personnel, and other internal and external forces that affect the feasibility, need and desirability of accomplishing individual action items. Not more than five short-term and five longer-term action items will be identified to receive preferential priority.

Second, it is critical that a mechanism be set in motion for regular re-evaluation and adjustment of the strategic plan to assure that it continues to serve the needs and interests of the department. This strategic plan must become a living document that is used, regularly revisited, appropriately revised, and acted upon. Progress on priority action items must be assessed continuously, the same way that progress is assessed in successful quality improvement programs. To achieve this, the strategic plan normally will be reviewed by the department and stakeholders after 24 months. A progress report will be prepared after 24 months, and every 24 months thereafter. Re-evaluation will occur every 12 months. Select lists of Immediate, 2-Year and 5-Year priority action items will be established. These action items will be accorded the highest priority for activity in immediate, 2-year and 5-year periods.

I. Priorities

1. Immediate Priority

Establish grant pre- and post-award administrative support

2. Priorities for 2004 - 2006

- a. Develop proposal to ASPET and other organizations to support SURF program and enhance professional education.
- b. Use the PSC Sub-committee to the Curriculum Committee to configure basic science-rich courses to include the Patient Simulator and recitation sections
- c. Increase annual peer-reviewed publications per FTE by 20%.

3. Priorities for 2004 - 2009

- a. Increase number of funded research programs, with the goal of moving the department into the top 10 research departments .
- b. Enhance basic science content of the professional program, including in problem based learning courses
- c. Develop NIH training grant proposal based on Departmentally-based research areas of excellence but including other research units of the University.
- d. Develop Endowed faculty positions.

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