

## **Consultants Report**

### **Feasibility of establishing a new school of pharmacy at Elizabeth City State University**

#### **Consultants:**

- **William H. Riffe, Ph.D., Associate Provost, University of Florida and Dean of Pharmacy**
- **Johnnie Early, II, Ph.D., Dean, College of Pharmacy, The University of Toledo**
- **Alan McKay, Ph.D., Dean, School of Pharmacy, Shenandoah University**

A team of consultants was assembled by Dr. Gretchen Bataille to provide a report for her office regarding legislation that asked for a feasibility study of the establishment of a school of pharmacy at Elizabeth City State University. A series of questions was sent to the consultants to form the basis of the report and to serve as a reference in determining the requested feasibility study. The report consists of data that will help the readers of this document understand the human, physical and financial resources necessary to implement a full-scale school of pharmacy. An assumption used when considering these data was that the proposed school of pharmacy would have a primary mission of teaching in addition to a modest research agenda.

Establishing a new program of the size and complexity of a school of pharmacy may appear daunting at first glance. Certainly a number of factors must coincide for a program to become successful in the eyes of the profession, students and the accrediting body. This last aspect may become increasingly critical as the proposed number of new pharmacy schools grows and the prospect that the American Council on Pharmaceutical Education (ACPE) takes a cautious approach to their review and ultimate accreditation. Even though the ACPE has adopted new standards that focus on strategic planning over process, they are and will continue to view financial planning as an important part, if not the most important part, of the entire process.

A school must have a physical presence and an identity. It would be difficult, given the intensity of the curricular requirements, to spread a school over an entire campus and still retain the cohesion expected of a faculty and students in a health professions program. The following analysis of physical facilities is based on building projects that have occurred at both Shenandoah University and the University of Florida and relate to Pharmacy programs. A physical facility to completely house much of the proposed pharmacy school would require approximately 50,000 to 70,000 net square feet of space depending on how much additional appropriate space would be currently available on campus (e.g. excess student capacity). At the Shenandoah University site, not all of the space was needed immediately and there have been significant advantages to designing the entire facility, but completing only 75% with the balance being retained as shell space. Shell space could be completed later as the need for additional classrooms, offices and research facilities. When analyzing the cost of Pharmacy education-based facilities at Shenandoah University and the University of Florida, we estimate the cost of a facility that would accommodate the needs of a program at ECSU would be between \$7 and \$10 million.

In assessing the feasibility of any potential site for a college/school of pharmacy, consultants must ascertain the following information:

- Faculty with expertise in the subject areas essential to pre-pharmacy education as well as the professional education curriculum,
- Physical facilities available to house a new program (classrooms, laboratories as well as clinical experiential sites),

- Administrative support for a new initiative
- Evidence that pharmacy education is a priority at that institution
- Fiscal viability of the institution

Elizabeth City State University is a liberal arts institution with approximately 2000 students on campus. The institution has on-campus housing and some excess capacity for more students. The primary lack of space is in the research area, which is a priority for basic science faculty at that institution. There appears to be faculty with adequate expertise in the basic science and general education areas within the institution for populating the necessary courses within a pre-pharmacy curriculum. There does not appear to be significant numbers of basic science faculty with expertise in the basic pharmaceutical sciences nor are there any pharmacy-based clinical scientists currently on faculty. It is the opinion of the consultants that a minimum of 25 to 30 faculty would be needed with approximately 10 of those faculty being Pharm.D., clinical scientists with fellowship training, another 5 to 10 faculty who serve in drug information centers, informatics, clinical coordinators and experiential coordinators. An additional 10 faculty would be distributed among the basic pharmaceutical sciences. In addition to the faculty, support staff will be required. Twelve to 15 non-faculty staff would most likely be required to provide adequate support for the faculty required. An approximate cost for non-faculty staff would range from \$375,000 to \$470,000 (plus fringe benefits).

#### Other Considerations in Recruitment of Faculty for ECSU

Academic pharmacy is challenged by the need to recruit faculty during a time of high salaries for practitioners, and departure of faculty for pharmaceutical industry positions. These observations are not fully applicable to ECSU given its historical classification, and the tendency of its graduates.

As a Historically Black institution, ECSU holds a very special attraction to those who received education at the institution. As with the African American community in general, persons who have special skills, knowledge and training look with favor on opportunities to give back to the community. The ECSU Fact book (p. 37) shows that 27.7% of employees are alumni, thus alumni are attracted in significant numbers.

The phenomenon was most recently observed on the founding of the fifth Historically Black College of Pharmacy, Hampton University, Hampton, Virginia. Basic science (Ph.D.) and clinical faculty (Pharm.D.) were attracted from majority and minority institutions to populate the faculty. This cohort included experienced faculty who assumed leadership roles, and recent graduates. Persons who brought a total of more than 40 years in academic pharmacy filled the dean and associate dean positions.

The above and the site visit presentation of lists of ECSU graduates in the basic and health sciences gives rise to confidence in its ability to attract faculty to staff a Pharm.D. degree program. This inventory includes persons who have completed or who are enrolled in the following relevant degree programs.

- ☐ Pharm.D.
- ☐ Physician assistant program
- ☐ Toxicology
- ☐ Public health
- ☐ Biomedical sciences

This pool is further enhanced by the productivity of Historically Black Colleges and Universities (HBCU) that offer graduate and pharmacy degrees, and residencies. The five established HBCU Colleges of Pharmacy (Florida A&M, Hampton, Howard, Texas Southern and Xavier) offer the Pharm.D. degree. Florida A&M offers a residency program, and the Ph.D. in the pharmaceutical sciences. In the latter, Florida A&M is responsible for about one-half of all African-Americans who earn the Ph.D. degree. Meharry Medical College and Morehouse School of Medicine are other possible sources of basic science faculty.

#### Potential Impact of ECSU in Academic Pharmacy

HBCU Colleges of Pharmacy are responsible for 55% of African-Americans enrolled in four-year Pharm.D. programs (AACP, 2000), and are similarly productive in the number entering practice. In Florida, Florida A&M University has been responsible for as many as 96% of all African-Americans who earned a degree (B.S., Pharm.D.) in pharmacy. This role can be assumed by ECSU in pharmacy and/or the pharmaceutical sciences to the benefit of North Carolina.

At this writing, the total African-American enrollment of both Campbell and the University of North Carolina totaled 41, or 0.48% African-American (AACP, 2000).

#### Data Concerning Human Resources

Estimates for faculty size for a new school of pharmacy can be compared to actual data collected for colleges/schools of pharmacy from 19 Research universities across the U.S. Approximately a \$6.5 million budget is the average budget for these 19 institutions (fringe benefits would have to be added to this figure for any institution developing cost models). In most cases, this budget is necessary for the infrastructure associated with the instructional program (faculty and staff costs as well as operating budgets). In most cases approximately 80% of the budget is in personnel. Looking across these same institutions mentioned above, there is a remarkable similarity in the number of faculty, averaging 52 per institution. The average salary needed can be determined from the handbook on faculty available from the American Association of Colleges of Pharmacy which ranks faculty by discipline, number of years by rank and public or private. It could be estimated that the average salary for entering faculty (Ph.D.'s or Pharm.D.) is a minimum of \$75,000 to \$80,000. Associate and Full Professors are paid at a higher rate, with some full professors averaging over \$100,000 per year. The startup packages for research faculty are in the \$200,000 to \$400,000 range depending on the discipline. This latter expense would be incurred if the institution were involved in research rather than having a primary mission of teaching. If the mission includes significant basic science and clinical research, one must add operations and facility cost to these estimates. It is the consultants opinion, and as stated previously, based upon recent recruitment across the U.S., that there is a great concern about the lack of Ph.D. and Pharm.D. (fellowship trained) clinical science faculty available to populate new Colleges/Schools of Pharmacy. Recruitment is difficult even for established programs due to competition from industry.

Using the data just described and an estimate of 25 to 30 faculty for a startup school of pharmacy, a \$3 to \$3.5 million dollar faculty salary budget would be suggested (approximately ½ of the \$6.5 million cited in the previous paragraph. Faculty start up costs for an institution with a modest research agenda must also be calculated. In addition, faculty cultural issues must be addressed early. For example, hiring a significant number of Pharmacy faculty at the salaries currently being offered, creates a

significant culture clash on campuses where there are primarily liberal arts faculty earning considerably lower salaries.

### Physical Facilities

Most new programs (in the last several years) have started with class sizes around 50. Any new pharmacy program will have to analyze current space on campus and determine if there is enough excess capacity to house the classrooms and laboratories needed for a pharmacy program.

A College or University must have all of the prerequisite areas necessary for a professional Pharmacy program. Those prerequisites are essentially those that would be necessary for a pre-medical curriculum (chemistry through organic, calculus, physics and physiology plus general education courses). Several outstanding Colleges/Schools of Pharmacy exist on a campus without human or veterinary medicine colleges. Having at least one or two other health professions is synergistic for a pharmacy program, however.

All Colleges/Schools of Pharmacy must have adequate pharmacy practice sites for early and advanced pharmacy practice experiences. These sites must be of sufficient quality and patient capacity to provide well-rounded pharmacy practice opportunities. It is often the case that a major hospital is located in the city where a College or School of Pharmacy is located. Early practice sites must have patient populations that allow various aspects of health care to present themselves. Most Colleges/Schools of Pharmacy have minimum requirements for these sites that can be shared with an institution for self-evaluation of those capabilities. For the advanced pharmacy practice experiences, most Colleges/Schools of Pharmacy expect students to travel to distant sites usually within the state where the institution is located so those sites need not be exclusively local. In North Carolina, the AHEC system is the most advanced of any of the states. These systems provide the practice sites needed for many of the early and advanced experiences. The systems also provide financial reimbursement per student month at each site. Should a new school of pharmacy be developed, the AHEC system budgets would have to be increased to meet these financial goals.

Factors that will determine the timeline will include (not necessarily in this order): identification and recruitment of a dean; identification of a facility to house the program; development of a curriculum and approval of the accrediting agency; time required to recruit a faculty for at least the first and second year of the curriculum while continuing to add faculty for years 3 and 4; purchasing and implementing the furniture and equipment necessary to operate; and adequate time to recruit the first entering class of students.

The consultants suggest that in addition to the consideration of implementation of a stand-alone school of pharmacy at ECSU, alternative feasibility models be considered. The consultants agree that while Elizabeth City State University could provide a logical base for the development of a new school, other established resources should be brought to bear to fully implement a new school. The University of North Carolina at Chapel Hill School of Pharmacy is consistently ranked within the top 10 schools/colleges of pharmacy in the U.S. The extensive Area Health Education Center network within North Carolina and its very strong relationship to the quality of health care education is also recognized. The consultant team met with the Dean of the School of Pharmacy, UNC Chapel Hill, the AHEC Director and the Executive Director of the North Carolina Pharmacy Association the first night of their

visit. The following day, the consultants visited the AHEC headquarters located on the campus of East Carolina University and met with faculty and the Chancellor as well as other senior administrators. Later that day the consultants met with faculty, the Chancellor and other senior administrators of Elizabeth City State University. During the time at the AHEC headquarters, the team took the opportunity to discuss our charge with administrators of ECU. The proximity of the health science center at ECU to Elizabeth City State University was of interest to the team as we assessed the pharmacy practice and other health care environment in Northeastern North Carolina.

The consultants suggest three possible responses to the feasibility study for establishing a new school of pharmacy at ECSU.

- The first would be to establish a fully staffed stand-alone school of pharmacy at ECSU with all of the attendant estimated costs involved.

Faculty	\$3,000,000 - \$3,500,000 (recurring)
Staff	\$375,000 - \$470,000 (recurring)
Operations	\$675,000 - \$794,000 (recurring)
Technology	\$100,000 (recurring)
AHEC funding	\$125,000 (recurring)
Library Costs	\$100,000 (recurring)
<b>Total Recurring</b>	<b>\$4,375,000 - \$5,089,000 (recurring)</b>
Faculty Start Up Costs	\$200,000 (for primarily clinical science faculty)
Physical facilities	\$7,000,000 - \$10,000,000

- The second would be a joint Pharm.D. degree program offered by East Carolina University and Elizabeth City State University. The division of the resources reflects ECU's ability to effectively mount a recruitment effort for basic pharmaceutical science faculty to its Medical Center faculty.

Faculty	\$1,000,000 - \$1,166,667 (recurring; ECSU)
Faculty	\$2,000,000 - \$2,333,333 (recurring; ECU)
Staff	\$125,000 - \$156,667 (recurring; ECSU)
Staff	\$250,000 - \$313,333 (recurring; ECU)
Operations	\$225,000 - \$264,267 (recurring; ECSU)
Operations	\$450,000 - \$528,532 (recurring; ECU)
Technology	\$100,000 (recurring ECSU and ECU)
AHEC funding	\$125,000 (recurring)
Library Costs	\$100,000 (recurring)
<b>Total Recurring</b>	<b>\$4,375,000 - \$5,089,000 (recurring)</b>
Faculty Start Up Costs	\$200,000 (ECSU; primarily clinical faculty)
Faculty Start Up Costs	\$3,000,000 (ECU; needed for pharmaceutical sciences research-based faculty)
Physical facilities	\$2,333,333 - \$3,333,333 (ECSU)
Physical facilities	\$4,666,667 - \$6,666,667 (ECU)

- The third would be the establishment of a cooperative program in which students entering the pharmacy program at Elizabeth City State University would be co-admitted to the University of North Carolina pharmacy program. The students would take their prepharmacy coursework at Elizabeth City State University. Assuming satisfactory academic progress during the pre-pharmacy curriculum, students would be formally admitted to the UNC at Chapel Hill School of Pharmacy professional program. During the fourth and fifth years, pharmaceutical science courses could be taken via technology-based delivery from the University of North Carolina at Chapel Hill while clinical science courses (e.g. pharmacotherapy) could be taught by pharmacy practice faculty who are part of the ECSU faculty within the new school of pharmacy. During the sixth year, the students would participate in the AHEC advanced clinical practice sites located primarily in Northeastern North Carolina. At the completion of all pharmacy requirements, the students would be awarded a Pharm.D. degree the University of North Carolina, Chapel Hill. The attendant estimated costs of such a program would be:

Faculty	\$1,000,000 - \$1.500,000 (ECSU; recurring)
Faculty	\$300,000 (UNC, Chapel Hill, recurring)
Staff	\$125,000 - \$160,000 (ECSU, recurring)
Operating	\$285,000 - \$331,000
Technology	\$100,000 (ECSU recurring)
Technology	\$400,000 (UNC, Chapel Hill, recurring)
AHEC funding	\$125,000 (recurring)
Faculty Start Up Costs	\$200,000 (ECSU; primarily clinical faculty)
Library Costs	\$100,000 (recurring)
<b>Total recurring</b>	<b>\$2,635,000 - \$3,216,000 (recurring)</b>
Physical facilities	\$2,333,333- \$3,333,333 (ECSU)

It should be noted, as well, that the consultants suggest the faculties of ECSU and UNC investigate the possibility of a Baccalaureate of Science in Pharmaceutical Sciences ( a non-pharmacy practice degree) following the successful completion of four years after students enter ECSU as freshman. ECSU may desire these students to take a few extra courses in their areas of particular academic strength (marine biology or molecular biology). Such a degree would be very marketable for those students who desire to stop at that point and enter the job market.