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ARTICULATION AGREEMENT
Between
The Florida A&M University
College of Pharmacy and Pharmaceutical Sciences
And Hillsborough Community College

This document establishes an Articulation Agreement between the Florida A&M University College of Pharmacy & Pharmaceutical Sciences (FAMU-COPPS), and Hillsborough Community College (HCC) Associates in Arts program. The agreement provides formal programmatic articulation for the Pharmacy Associates in Arts (AA) track to Florida A&M University for the completion of the Doctor of Pharmacy (Pharm.D) degree through a program entitled, "BRIDGES To The Pharmaceutical Sciences", and includes undergraduate students interested in tracking for graduate studies in pharmaceutical sciences.

The goal of the BRIDGES program is to increase the number of underrepresented minority students who enter career tracks in the pharmaceutical sciences. The objective is to establish a means for providing minority students from the Tampa Bay/Hillsborough County, Florida area with the knowledge base and appropriate skills necessary to attain the Associate in Arts (AA) degree and to successfully compete with others in obtaining the entry-level degrees in the pharmaceutical sciences at Florida A&M University. The program will be instrumental in increasing the chances of successful completion of the curriculum at the FAMU College of Pharmacy and Pharmaceutical Sciences by BRIDGES participants, and may serve to increase the numbers of minorities in post-graduate studies in the biomedical sciences as well. United States citizens and Florida residents will be given priority.

I. Student Pool

The student pool shall be composed of African-American and other minority students presently enrolled in the health and medical sciences, math and natural sciences, physical sciences (Physics, Chemistry, Earth Sciences), biology, and AA general studies at HCC. Information about the BRIDGES Program will be mailed to students from the Tampa Bay surrounding area who were unsuccessful in their application to the FAMU College of Pharmacy. This recruitment effort will be offered to increase their competitiveness for acceptance into the FAMU College of Pharmacy.

II. Admission Requirements

Florida A&M University admission criteria. BRIDGES applicants admitted to the Doctor of Pharmacy program must meet the following criteria:

Submit the original FAMU-COPPS Application Supplement (Duplicates are not accepted), and three letters of recommendation.

A minimum cumulative GPA of 2.5 on a 4.0 scale based on all college work. All previous college work including course loads, withdrawals, repeats, and academic career paths will be considered.

Submit official transcripts from all college/universities ever attended.

If a pharmacy school/college has ever been attended, a letter of recommendation for the dean of the school/college of pharmacy is also required indicating the status of the applicant. The applicant must be in good standing and eligible to return to the pharmacy program in order to be considered; however, a letter does not guarantee admission.

Admission to the Florida A&M University: Qualified HCC BRIDGES students shall be granted admission to Florida A&M University College of Pharmacy & Pharmaceutical Sciences upon completion of all requirements for the Pre-Pharmacy track of the Associates in Arts (AA) degree, with the number of slots for guaranteed admission shall not exceed 5 annually. Students granted admission will meet all of the requirements for the College's competitive applicant pool.

III. Academic Enhancing Activities

Academic Advising: To assure that all BRIDGES participants complete their academic program at HCC with the academic requirements to allow for transition to FAMU, several unique features will be included in the student's curriculum to augment their traditional learning experiences. These features will be aimed at maximizing students chances for success at HCC. Academic counseling will be provided to ensure success at the senior institution by providing general information on career choices. Students may opt to take the Strong-Campbell Test (test results suggest career choices based on student interest) to learn if a career in pharmacy is the field that they would like to consider, or if the curriculum electives that prepares the BRIDGES student for research in the pharmaceutical sciences is his/her best option. Pharmacy practice faculty and basic science faculty will also be scheduled for student career counseling.

A strong academic advising and a strong tutorial support network are essential to successfully increase the number of minority students in two year colleges that make the transition to FAMU. This proposal provides for the development of a tutorial program by advertising the scope of the BRIDGES Program.

A series of meetings and conversations between HCC science faculty and FAMU faculty will be scheduled to review various curriculum strategies to ensure that the students successfully complete the required HCC Pre-Pharmacy (AA) courses. The advisor at HCC will review the selected BRIDGES participant's high school transcript, placement tests and any other scholastic aptitude indicators and will summarize and share his findings with the students. The BRIDGES coordinator will also recommend a charted curriculum for the student. The curriculum may include the pre-pharmacy courses in natural order, or may include prerequisite courses. Prerequisite courses may be required or recommended by the advisor to establish a stronger background or build a foundation for future courses. In addition, any new changes in the general education curriculum as prescribed by the Florida Board of Education will be reflected in the curriculum planning. The advisor will fully explain the curriculum strategy. The student must be willing to follow the advisor's recommendations which will also include a regular tutorial component, and participation in the professional seminar offered at the FAMU Tampa Bay Center.

After the course selection is completed, the advisor will closely monitor progress at different intervals during the course semester. Follow-up with the students instructors is required; a consent for addressing this issue will be a part of the agreement for students that elect to participate in the BRIDGES program.

IV. Tutorial Program

Efforts will be made to attract prospective student tutors from the HCC campus. This will be accomplished by use of flyers, notices, announcements in appropriate classes at HCC, and by advertising in the campus newspaper. Tutors will be solicited from science subjects taught at the College. Applications for tutors will be developed and used in selections. Tutors must have two instructors as references, and will have to have made an "A or B" in the classes they are planning to tutor. BRIDGES students will be assigned to tutors who will work on an approved scheduled.

V. Developing a Pharmacy Student Prospect Group (PSPG)

The goal of increasing the numbers of pharmacy students from the underrepresented minority populations will depend on the degree of support provided to cultivate and encourage the intellectual potential of the BRIDGES Program participants. Support, as presented through this proposal, will have two major components that are strongly interrelated: academic excellence and mentorship.

Support through the academic excellence venue explores and expands the knowledge base, reinforces the desire for excellence, thus building confidence in BRIDGES students to successfully compete academically. This component essentially provides the skills required to make the transition from a two-year college to the rigorous scholastic demands of FAMU's pharmaceutical science curriculum.

The need to establish a forum that provides encouragement to excel academically is important. Therefore, the forum should be informal enough that students are comfortable discussing any extraneous factors related to the long-term goal of this proposal.

While the academic component reinforces scholastic achievement, support from the mentorship venue is equally important. The SPG program will be a group comprised of BRIDGES students, FAMU pharmacy students and faculty assigned to the Tampa Bay Pharmacy Practice Division, and volunteer pharmacy practitioners from the Tampa Bay area.

The practitioners will serve to associate the need for having a strong foundation in the basic sciences in order to develop as competent pharmacists. Summer internships will be arranged with the practitioners for BRIDGES students so that they may gain first-hand knowledge about usual practice issues in hospital pharmacy, community pharmacy, or managed care pharmacy, and to reinforce those issues taught in the PSPG meetings.

The FAMU BRIDGES coordinator will be responsible for scheduling meetings at the Division's campus office or at HCC, arranging for persons skilled in helping to meet the activity goals of the SPG, and for maintaining an environment that fosters academic development and mentorship.

The SPG will meet on a bi-monthly basis. The meetings will allow the BRIDGES participants to discuss their current scholastic track, and address other topics with their peers and mentors. The topics to be addressed will include, but not be limited to the following:

1. Improving Study skills
2. Honing of Interpersonal Skills
3. Development and Improvement of Research Skills
4. Letter Writing Workshop
5. Curriculum Planning Workshop
6. FAMU pre-application process
7. Provide information about Supplemental Financial Aid Resources
8. Opportunities to develop and strengthen leadership skills
9. Public Speaking
10. Library services, the Internet, and other Information Resources.
11. Professional attitude

VI. Academic Program at HCC

Course work: Upon entering HCC, BRIDGES participants will enroll in general education courses. For students to be eligible for transfer to Florida A&M into the College of Pharmacy, they must complete the general education requirements with a grade of "C" or better for the Associates in Arts Degree and satisfy lower level departmental course requirements as stipulated by the BRIDGES Advisory Committee. The general education requirements for students are as follows: Upon entering HCC, BRIDGES participants will enroll in general education courses. For students to be eligible for transfer to Florida A&M into the College of Pharmacy, they must complete the general education requirements with a grade of "C" or better for the Associates in Arts Degree and satisfy lower level departmental course requirements as stipulated by the BRIDGES Advisory Committee. The general education requirements for students are as follows:

Communications	6 semester hours
Humanities	6 semester hours
Mathematics	6 semester hours
Sciences	6 semester hours
Social Sciences	9 semester hours
Personal Development	3 semester hours
General Education	3 semester hours
Electives	23 semester hours

Specifically, the recommended sequence of courses are as follows:

**HCC Recommended Sequence of Courses
Florida A&M University Bridges Program**

YEAR I		FALL TERM	
MAC	1114	Trigonometry	3 cr.
CHM	1045	General College Chemistry I	3 cr.
CHM	1045L	General College Chemistry I Laboratory	1 cr.
ENC	1101	Freshman English I	3 cr.
CGS	1100	Introduction to Computers	3 cr.
Humanities	General Education – HUM 2210		3 cr.
		TOTAL	16 cr.

		SPRING TERM	
MAC	2311	Calculus and Analytic Geometry I	5 cr.
BSC	1010	Biological Science I	3 cr.
BSC	1010L	Biological Science I Laboratory	1 cr.
CHM	1046	General College Chemistry II	3 cr.
CHM	1046L	General College Chemistry II Laboratory	1 cr.
ENC	1102	Freshman English II	3 cr.
		TOTAL	16 cr.

		SUMMER TERM	
BSC	1011	Biological Science II	3 cr.
BSC	1011L	Biological Science II Laboratory	1 cr.
		General Education History – AMH 2091	3 cr.
		TOTAL	7 cr.

YEAR II		FALL TERM	
CHM	2210	Organic Chemistry I	3 cr.
CHM	2210L	Organic Chemistry I Laboratory	1 cr.
PHY	1053	General Physics I	3 cr.
PHY	1053L	General Physics I Laboratory	1 cr.
		Behavioral Science/Political Science/History General Education	3 cr.
		General Education Humanities – HUM 2230	3 cr.
		TOTAL	14 cr.

		SPRING TERM	
SPC	1600	Public Speaking	3 cr.
CHM	2211	Organic Chemistry II	3 cr.
CHM	2211L	Organic Chemistry II Laboratory	1 cr.
PHY	1054	General Physics II	3 cr.
PHY	1054L	General Physics II Laboratory	1 cr.
		Behavioral Science General Education	3 cr.
		TOTAL	14 cr.

SUMMER TERM (TALLAHASSEE)

Summer Research Experience at FAMU

Five BRIDGES students from each class will spend summer internships at FAMU gaining experience in the basic methodologies of research. BRIDGES students will be paired with graduate students and assigned to participating Minority Biomedical Support Research Support (MBRS) or Minority Access to Research Careers (MARC) researchers.

The MBRS program was established in 1972 by the National Institutes of the Health (NIH) Division of Research Resources (DRR). The program was transferred to the National Institute of General Medical Sciences (NIGMS) in 1990. MBRS is designed to correct the under representation of minorities in biomedical research and to eliminate obstacles to their participation. The objective of MBRS is to expand and strengthen the capabilities of Florida A&M University investigators in biomedical research, to provide undergraduate students with hands-on experience in the fundamentals of scientific research and to motivate them to pursue biomedical research in the biomedical sciences with emphasis in pharmacology, medicinal chemistry, biochemistry, molecular biology and toxicology. The research program involves studies using laboratory animals.

The MARC Program was established to increase the numbers of minorities in Ph.D. programs in the pharmaceutical sciences, including pharmacology/toxicology, environmental toxicology, medicinal chemistry, pharmaceuticals, and pharmacy administration (i.e. the psycho-social aspects of drug use and health care). The MARC Program was expanded at FAMU to attract qualified minority students who had chosen pharmacy practice career paths, as well as those who were pursuing careers in the basic sciences, to pursue Ph.D. degrees in the pharmaceutical sciences.

Analytical procedures including spectral determinations (e.g., ultraviolet, infrared, proton NMR, ³¹P NMR, atomic absorption), chromatographic work (e.g., TLC, GC, HPLC) and many pharmacological assays using scintillation counters are routinely conducted in these investigations. Both graduate and undergraduate students will be involved in the planning and execution of the experiments.

VII. Professional (Doctor of Pharmacy) Program at The FAMU College of Pharmacy & Pharmaceutical Sciences

Unified Plan: The former State University System and the Florida State Community College System, presently operating under The Florida Board of Education, developed and implemented an **articulation agreement** which allows graduates from the state's 28 community colleges with the AA degree to be accepted, upon application and meeting established admission criteria, into limited access programs in a state university. The implementation of this agreement is monitored by a State Articulation Coordination Committee, which reports to the State Commissioner of Education.

The procedures below are consistent with the articulation agreement and have been designed to assist the BRIDGES students in transitioning to FAMU during the first

professional year/third academic year in the College of Pharmacy. A letter of support from the Dean of the FAMU College of Pharmacy that guarantees acceptance of not more than five qualified students from the BRIDGES program is attached (Appendix). In addition to meeting and adhering to the guidelines and procedures, all BRIDGES applicants must complete the following:

A) The records of each transitioning BRIDGES student will be reviewed by BRIDGES Coordinator and Student Affairs Office in the College of Pharmacy & Pharmaceutical Sciences (COPPS). Only students who have completed all requirements will be considered for placement. A schedule will be established and mailed to the student prior to his/her arrival on campus.

B) It is expected that students accepted for BRIDGES placement will have completed a summer research methods internship upon completion of the AA degree. The FAMU and HCC faculty will confer regarding this activity, and assist student in the assignment. Academic credit will be awarded for the internship.

C) All transitioning BRIDGES students will be assigned to and counseled by the BRIDGES Coordinator in the COPPS, until such time they are assigned an advisor. The course registration forms should be approved and signed by the BRIDGES counselor.

D) BRIDGES students will attend a specially designed BRIDGES Seminar in Tallahassee where issues related to facilitating academic success at FAMU will be presented. Students will also meet with faculty, student leaders, and mentors at this time.

Through the articulation agreement between HCC and FAMU, BRIDGES students will be permitted to take non-professional summer courses, participate in seminars, and engage in community service activities at the degree granting institution under supervision of the co-coordinators of the BRIDGES program. Faculty at both colleges will give seminars and participate in student instructional activities that will result in enhancing the pre-pharmacy program at HCC, and provide a smooth transition to FAMU.

VIII. Financial Support For BRIDGES Students

Speakers from the Office of Financial Aid at FAMU will be scheduled to make presentations during the orientation sessions for BRIDGES students prior to their transitioning to Tallahassee. During this seminar, students will be told where and how to acquire financial assistance, what the eligibility requirements are, and applications will be made available to them (during their final semester at HCC). The BRIDGES coordinator will ensure the timely processing of applications, and ensure availability of funds for the BRIDGES participants upon registration at FAMU.

IX. Retention and Exposure Plan at FAMU

- A. Mentor Partnering Program (MBRS/MARC):** It is also anticipated that MBRS and MARC students will serve as tutors for the transitioning students. BRIDGES students who are research assistants will make presentations in the annual research colloquium organized by the MBRS/MARC program directors. The BRIDGES office will keep track of the students and monitor their progress. The directors of the MARC and MBRS Programs have provided letters of support for this application.
- B. Professional Meetings/Clinical Symposium Participation:** BRIDGES students will also be encouraged to participate in at least one of the following clinical symposia: Annual Clinical Symposium at FAMU; Poster Presentations at The Florida Society of Health-Systems Pharmacists (FSHP), American Society of Health-System Pharmacists (ASHP), National Pharmaceutical Association (NPhA), American Pharmaceutical Association (APhA); or the Annual Symposium of the Association of Minority Health Professions Schools (AMHPS) Foundation.

X. Student Tracking and Evaluations

- A. Student Performance Tracking** and evaluations will be performed by using all data that will be collected and maintained by the BRIDGES coordinator with assistance from the HCC advisory staff. Data will be summarized and presented to the advisory committee semi-annually or on a periodic basis as determined. The reported data will include student applications, enrollment data, participants accepted into program, student grades, tutorial questionnaire data, instructors' comments, and interview data from students who exit the BRIDGES Program. These data will be used to reduce any attrition rates, and to refine the program's ability to meet its objectives.
- B. Formative Evaluations** typically involves the gathering of information during the early stages of a project or program, with focus on finding out whether the program efforts are unfolding as planned, uncovering any obstacles, barriers to opportunities that may have emerged, and identifying mid-course adjustments and corrections which can help ensure the success of the project. Formative program evaluations will include periodic interviews with BRIDGES students by HCC and FAMU advisors to determine if any problems exist. Any problems that are discovered will be referred to appropriate HCC and FAMU staff. Academic difficulties will be referred to tutors or instructors best able to re-mediate any areas of concern. Non-academic difficulties will be referred to appropriate staff for action.

Formative evaluations will also include assessments of student academic progress. HCC advisors will be in close contact with faculty teaching BRIDGES students. Early detection of impediments to academic progress will assure timely action to address difficulties. Formative evaluations will also include exit interviews with BRIDGES students who are not successful

in the BRIDGES program. Exit interviews will provide data that will be used to judge the effectiveness of the BRIDGES strategies, making corrections that will improve the success of the remaining BRIDGES students. Project staff will meet in the beginning stages of the grant process to design any other formative evaluation strategies that may be necessary to achieve the goals of the grant.

- C. **Summative Evaluation** typically involves the preparation of a formal report outlining the impact of a program. In this case, the summative evaluation will take form of a report which will detail who participated in a program, what activities affected them, and what gains or improvement resulted from their participation. This report will include details regarding what prerequisites or conditions are essential or helpful to the replication of the program, program costs and benefits, and disaggregated results showing findings for specific subgroups of participants. There is no crisp dividing line between formative evaluation and summative evaluation. Much of the information gathered during the formative evaluation activities may be reported in formal summative reports, particularly during the early development of a program to show how the program is responding to challenges and reaching benchmarks and miles stones along the way toward intended outcomes.

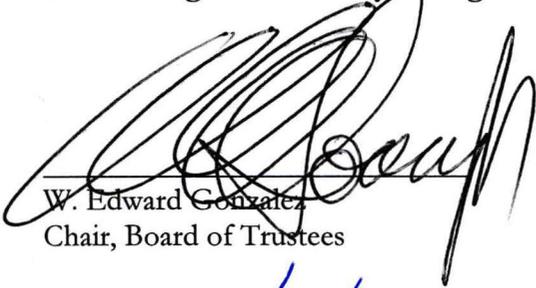
Usually, a compelling case that a program has had a positive impact requires measurement of program targets before, during, and after implementation of the program. This requires careful program planning and early adoption of appropriate data collection methods and a management information database. All these factors will be addressed by the HCC data collection and analysis plan.

The Formative and summative evaluations will be accomplished by HCC and FAMU staff. HCC and FAMU maintain a large, expert evaluation and program planning staff and state of the art facilities for statistical and qualitative analysis, technical writing, and graphic display of findings. In addition to written reports, HCC and FAMU will produce a variety of multimedia presentations of the data, suitable for use in slide shows, publication on the world wide web, etc.

The E-STAR Program will also be used for regular reporting and for use by National Institute of General Medical Sciences (NIGMS) Office for Program Evaluation.

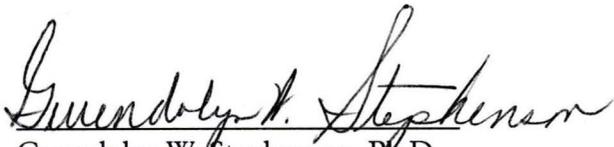
APPROVALS

Hillsborough Community College

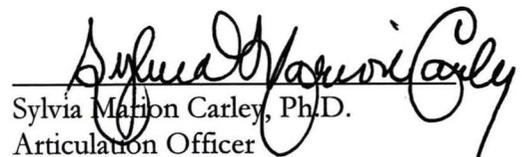


W. Edward Gonzalez
Chair, Board of Trustees

Date: 11/17/04


Gwendolyn W. Stephenson, Ph.D.
President

Date: 11/17/04


Sylvia Marion Carley, Ph.D.
Articulation Officer

Date: 11/17/04

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COLLEGE OF PHARMACY
AND PHARMACEUTICAL SERVICES

Florida A&M University

John J Scrivens, Jr., Ph.D
College of Pharmacy
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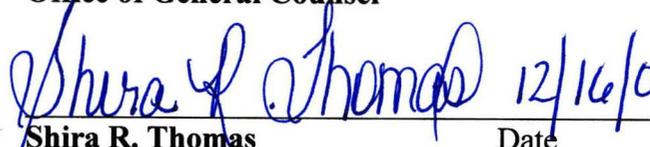
Date: _____


Robert Thomas, Ph.D.
Interim Dean, College of Pharmacy
And Pharmaceutical Sciences

Date: 12/3/04


Larry Robinson, Ph.D. 1/14/05
Provost and Vice-President Academic Affairs

Approved as to form, but Legality
subject to execution by all parties.
Office of General Counsel


Shira R. Thomas 12/16/04
Acting Associate General Counsel