DEPARTMENT OF BIOPHARMACEUTICAL SCIENCES

2013/2014 NEWSLETTER

- Curriculum Revision and Student Learning
- Improving Teaching Pedagogy
- Planning New Programs
- Faculty and Summer Students Research
- Community Engagement
- International Visiting Research Scholars
- Social Justice and Community Service

ROOSEVELT UNIVERSITY
COLLEGE OF PHARMACY
Dear Colleagues:

2013/2014 has been a tasking but exciting year for the Biopharmaceutical Sciences (BPS) department and the college. All BPS faculty worked tirelessly in the different committees and cohorts as we prepared for our full accreditation. It is gratifying that the efforts were recognized by the full accreditation of the PharmD curriculum that the college received in July 2014. I would like to say thank you for the team efforts. The faculty members were heavily involved in various activities highlighted below.

**Curriculum Revision and Improvement of Teaching Pedagogy:** The PharmD curriculum committee spent a lot of time on respective revisions in our curriculum. A member of the committee and a BPS faculty led the discussion on various aspects of the curriculum revision. The outcomes of these efforts are the following: 1) change of the Pharmaceutics lecture series from a three-term series to a four-term series to allow for effective student learning and 2) removal of the Molecular Biology and Genetics with a plan to introduce Pharmacogenomics into the curriculum either in the first year or at specific points across the curriculum and 3) the removal of the Drug of Abuse and Toxicology with a plan to emphasize on toxicology across the curriculum and then develop an elective course in Toxicology. Along with the revision of the curriculum, faculty members were involved in faculty development activities to enhance their teaching effectiveness of our students.

**Summer Research:** A total of twenty one students registered for a research elective and participated in various research projects with BPS faculty. As we continue to build the department’s research enterprise, more faculty members participated in the 2014 summer research projects.

**Academic Research Engagement and Relationship Building:** As part of enhancing the department’s research outcomes, the Chair initiated fee-for-service relationship with Northwestern University NUANCE labs for use of research lab equipment and instruments. Through our AbbVie (formerly Abbott) affiliate faculty members, we’re growing a relationship which was fostered for student research and faculty collaboration. Our relationship with Harper Community College was also enhanced through visits and discussion for future research collaboration and use of respective analytical instruments.

**Planning of Online Graduate Programs:** The department has been planning on development of industry-relevant graduate programs. The department sought the advice of the Research Advisory Council, made up of affiliate faculty that are mostly from the pharmaceutical industry. The first online program in Pharmaceutical Development will be launched in 2015.

**Schaumburg Campus Research Collaboration:** In continued pursuit of collaboration between BPS and the Department of Biology, Chemistry and Physical Sciences (DBCPS), the 2013/2014 year has been a year where such pursuit is materializing. Faculty members were involved in four collaborative graduate student projects with four DBCPS faculty. This is a sign of the times as we build stronger graduate biomedical education at the Schaumburg campus.

**International Scholarly Research:** A William J. Fulbright faculty scholar from the University of Ibadan had a six-month visit to one of our laboratories as part of the international research outreach of the university and college. A graduate student scholar from the University of West Indies in Mona also had a six-month visit to the department to conduct research in complementary alternative medicine.

**Social Justice and Community Services:** Several BPS faculty continued their involvement in career building activities with the local high schools and international non-profit organizations and in media presentation of public access to drugs.

As we look forward to the future and continue to build our teaching and research enterprises, I say thank you again to our faculty and affiliate faculty for their dogged determination in these efforts.

Professionally,

**CM Adeyeye**

Moji Christianah Adeyeye, Ph.D, FAAPS, Senior Fulbright Scholar
Department Chair
Professor of Pharmaceutics and Drug Product Evaluation
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Doug Knerr, Ph.D
Executive Vice President
University Provost

George E. MacKinnon III, Ph.D, RPh, FASHP
Founding Dean, College of Pharmacy
Vice-Provost for Health Sciences

Charles R. Middleton, Ph.D
University President
LIST OF BPS FACULTY, AFFILIATE FACULTY AND STAFF

BPS FACULTY

Moji Christianah Adeyeye, PhD
Department Chair, Professor of Pharmaceutics and Manufacturing Science

Amusa Adebayo, PhD
Associate Professor for Biopharmaceutics/Pharmacokinetics and Pharmacometrics

Balwant Chauhan, MD, PhD
Assistant Professor of Anatomy, Physiology, and Pathophysiology

Subrata Deb, PhD
Assistant Professor of Pharmacology

Arun Jadhav, PhD
Professor of Pharmacology

Paiboon Jungsuwadee, PhD
Assistant Professor of Pharmacology

Sonali Kurup, PhD
Assistant Professor of Medicinal Chemistry

Paul Ornstein, PhD
Associate Professor of Medicinal Chemistry

Ravi Panakanti, PhD
Assistant Professor of Pharmaceutics

Larry Potempa, PhD
Associate Professor of Biochemistry and Immunology

BPS AFFILIATE FACULTY

Ruth Adewuya, MD
Affiliate Assistant Professor of Pharmaceutics

Thomas Catalano, PhD
Affiliate Associate Professor of Pharmaceutical Sciences
President, PharmChem Analytical Consultants LLC

Panos Constantinides, PhD
Affiliate Professor of Pharmaceutical Sciences
Founder and Principal, Biopharmaceutical & Drug Delivery Consulting, LLC

Ivana Cvetanovich, MD, PhD
Affiliate Assistant Professor of Pharmaceutical Sciences
Consultant, Pepid Inc & Academic Pharmaceuticals Inc.

Matthew Dieter, PhD
Affiliate Associate Professor of Pharmacology
Principal Research Scientist, Toxicology, AbbVie Global Pharmaceutical R&D

Nkere Ebube, PhD
Affiliate Professor of Pharmaceutics
Morton Grove Pharmaceuticals (MGP) and Wockhardt USA, LLC (WUSA)

Gerald Fox, PhD
Affiliate Professor of Pharmaceutical Sciences
Director of Translational Sciences, Director of Integrated Sciences & Technology, AbbVie Global Pharmaceutical R&D

Thomas Hudzik, PhD
Affiliate Associate Professor of Pharmaceutical Sciences
Associate Scientific Director II, Operations Manager, Imaging Research, Integrated Sciences and Technology Global Pharmaceutical Research and Development AbbVie Global Pharmaceutical R&D

Peer Jacobson, PhD
Affiliate Professor of Pharmaceutical Sciences
Scientific and Education Advisory Council National Institute of Pharmaceutical Technology Education and AbbVie Global Pharmaceutical R&D

Tzuchi R Ju, PhD
Affiliate Associate Professor of Pharmaceutical Sciences
Scientific and Education Advisory Council National Institute of Pharmaceutical Technology Education and AbbVie Global Pharmaceutical R&D

Lou Jungheim, PhD
Affiliate Associate Professor of Medicinal Chemistry
Principal, LNJ Consulting

Fatima Khaja, PhD
Affiliate Assistant Professor of Pharmaceutical Sciences
Pharmacist and Scientist, Holy Family Plaza Pharmacy
LIST OF BPS FACULTY, AFFILIATE FACULTY AND STAFF

BPS AFFILIATE FACULTY

**Michael Kort, PhD**
Affiliate Associate Professor of Pharmaceutical Sciences
Project Director, Neuroscience Research
AbbVie Global Pharmaceutical R&D

**Anthony Lee, PhD**
Affiliate Associate Professor of Pharmaceutical Sciences
Senior Group Leader Drug Metabolism and Pharmacokinetics, AbbVie Global Pharmaceutical R&D

**Debra Luffer-Atlas, PhD**
Affiliate Associate Professor of Pharmaceutical Sciences
Research Fellow, Lilly Research Laboratories

**Angela Lynch, PhD**
Affiliate Assistant Professor of Pharmaceutical Sciences
Director, Chemical Products and Technology Division of the American Chemistry Council

**Steven R. Nowicki, M.Sc., R.Ph.**
Affiliate Assistant Professor of Pharmaceutical Sciences
Vice President, Manufacturing & Quality Control – North America
APP Pharmaceuticals, LLC. Fresenius-Kabi

**Carmen Popescu, PhD**
Affiliate Associate Professor of Pharmaceutical Sciences
Senior Project Coordinator Pharmaceutical Applications, Roquette America Inc.

**Mazen Qato, PhD**
Affiliate Professor of Pharmacology
Department of Medical Education, College of Medicine, Majmaa, Saudi Arabia

**James Radosevich, PhD**
Affiliate Professor of Pharmaceutical Sciences
Professor (tenured)/Staff Research Scientist, University of Illinois – Dental College and Cancer Center/VA Chicago Health Care System

**Katherine Sheehan, PhD**
Affiliate Assistant Professor of Biological Sciences
Principal, Sheehan Scientific Consulting

**Frank Sorgi, PhD, MBA**
Affiliate Associate Professor of Pharmaceutical Sciences
President & CEO at FLAG Therapeutics Inc.

**Jay Trivedi, PhD, MBA**
Affiliate Associate Professor of Pharmaceutical Sciences
Senior Director, Product Development & Licensing, Patrin Pharma

**Surendera Tyagi, PhD, RAC**
Affiliate Associate Professor of Pharmaceutical Sciences
Vice President, Oncology Business Unit Executive Vice President
IV Generics, APP Pharmaceuticals, LLC., Fresenius-Kabi

**Mark Weber, PhD**
Affiliate Associate Professor of Pharmaceutical Sciences
President and Senior Investigator, Fermalogic

**Roy Wesley, PhD**
Affiliate Associate Professor of Pharmaceutical Sciences
Chief Operating Office and Senior Investigator, Fermalogic

Staff

**Jennifer Mohyde**
Executive Secretary

**Ruth Adewuya, PhD**
Pharmaceutics Laboratory Manager
Affiliate Assistant Professor of Pharmaceutics

TBA
Research Lab Manager
CURRICULUM REVISION AND DELIVERY

The continuous quality improvement with the goal of building a robust curriculum resulted in changes that took place during this past year in curriculum development as highlighted below.

CURRICULUM REVISION

Four-term Sequence of Pharmaceutics Courses: For three years, the Pharmaceutics series was taught as a three-term sequence - Pharmaceutics Drug Delivery I and II (4 cr each), and Pharmaceutics III: Biopharmaceutics & Pharmacokinetics (3 cr). Based on students’ evaluation and continuous quality monitoring along with a proposal by the course instructors, the Curriculum Committee and Faculty Council changed the course series into a four-term sequence. Pharmaceutics is comprised of broad categories of contents and concepts, which need to be properly understood by the students in order to become competent pharmaceutical professionals and scientists. The technical difficulty of the course contents informs the students’ challenges in grasping them under the tight and fast-paced delivery schedule that we have in the CoP accelerated PharmD curriculum.

Spacing out these courses and sequencing them as the course instructors recommended to the Curriculum Committee would allow the students more time to learn, understand and internalize the various preceding concepts before the more complex and relatively difficult ones are delivered. In addition, proper sequencing will facilitate the seamlessness in students learning and integration of concepts not only within “pharmaceutics” courses but also with other foundational and clinical courses in the curriculum. The new sequence is made up of Pharmaceutical Calculations (2 cr), Pharmaceutics Drug Delivery I (4 cr) and II (3 cr), and Pharmaceutics III: Biopharmaceutics & Pharmacokinetics (3 cr). For example, the placement of Pharmaceutics III in Term 4 or Spring Term would allow for the delivery in one term closer to the Therapeutic Drug monitoring in Term 9, de-emphasize its ranking as a basic or foundational course but rather feature it as a course with more of a clinical application.

Course Development Teams: As part of the college-wide efforts to design strong course syllabi that involves basic pharmaceutical and clinical sciences, the Course Development Team (CDT) initiative was instituted for BPS-based courses and Integrated Sequence courses. The roles of the CDT team are highlighted below. These roles will be tailored to the evolving need of the College.

- Intellectual contribution or advisory
- Holds a meeting (initiated by the course coordinator) at least once during the term that precedes the term when the course will be offered, the goal is to discuss the syllabus and other course quality improvement issues
- Holds at least one meeting during the term when course is being offered to discuss either progress or/and performance at the end of the term

FACULTY DEVELOPMENT IN TEACHING PEDAGOGY AND FEATURED FACULTY

Several faculty members have taken part in various activities in order to improve teaching and learning outcomes for our students. Some of the faculty members are featured below.

Dr. Jungsuwadee and Improving the Delivery of Integrated Sequences:

Dr. Jungsuwadee joined the RUCoP in 2012 as an assistant professor of Pharmacology. He teaches the following Integrated Sequences (IS): Infectious Diseases, Disorders of Gastrointestinal and Hepatobiliary Systems, Musculoskeletal and Immune System Diseases, Psychiatric and Behavioral Conditions, as well as Hematologic and Oncologic Disorders. Last year, he was appointed as the director of Integrated Sequences course series. As the Director, he oversees all eleven IS course series. He has led the discussion with IS faculty toward improvements in teaching of the IS courses. Due to the intensity and nature of the IS courses, additional classroom activities such as, student presentation, peer-to-peer education, patient case scenarios, and literature evaluations have been implemented and incorporated into each IS course. The goal is to educate student pharmacists to all levels of Bloom taxonomy and ultimately prepare them for the Advanced Pharmacy Practice Experiences (APPE). His current research is to develop...
pharmacological approaches that could suppress the expression of efflux transport proteins involved in acquired chemotherapeutic resistance i.e., MRP1, P-glycoprotein and Breast cancer resistance protein (BCRP).

Dr. Ornstein and Use of Technology Tools in the Classroom
“I think the use of electronic tools and searchable databases are important foundational elements in teaching medicinal chemistry to pharmacy students. Their use also reinforces good practices for their future endeavors. I design my lectures not only to relate useful information today, but also serve as a useful reference tool throughout the student’s career. I denote both generic and brand names of drugs that I describe in my lectures, and embed the drug label (from the FDA Access Data site) as a hyperlink in the PowerPoint slides. I use my iPad as a presenter tool in the classroom. Given the unique design of our classrooms, and the dual projection system, using the iPad allows me to move out from behind the podium so that I am able to wander the classroom while I’m lecturing. It also allows me to point at both screens at the same time, something that is impossible to do with a more traditional laser pointer. By being more mobile in the classroom, I can more directly engage through eye contact with individual students, and they can see and hear me from a variety of angles. My latest tool I’ve brought to the classroom is a means for students to ask me questions by texting me to my Google Voice number, which ports to my cellphone and then sends an alert to my Pebble smartwatch. This allows students to ask me questions in a less public manner anytime between 9 am and 10 pm each day.”

Dr. Adebayo on Innovative Teaching and Use of Eno Board: He participated in the Innovative Teaching forum organized by Dr. Donna Kiel and Dr. Kimberly Ruffin where he was reminded that for faculty technocrats, content expertise does not mean pedagogy expertise. “I learnt the importance of understanding students’ demographic and learning style characteristics. Emphasis was placed on concepts and how student assessment can be used to support teaching and engender learning using best practices in educational technology”. Taking inventory of my input to teaching as a way of keeping track of what I am doing in class through portfolio development in Google sites was another take-away point that I got from the forum. Other perks of the trainings were how to help students organize their learning technologies and platforms. Symbaloo, a personal learning environment (PLE) was introduced. It is a third party platform that enables students from several participating institutions to collaborate and share contents which otherwise can only be done with students from their respective institutions.

Eno Board: “The very versatile Eno Board, a fun and engaging device has been hanging on the wall since I first entered Room 265. After a short demonstration session held in 2011/12 academic year and a further demonstration by Dr. Donna Kiel and Dr. Barbara Anderson, the useful but hitherto idle technology was reactivated and applied in one of my classrooms (with some hiccups first time of course)!”. 

SUMMER RESEARCH ELECTIVE
Twenty one students participated in various research projects from May to August 2014 in the College of Pharmacy (CoP). The students included eighteen from the 2016 PharmD class, a student from the Department of Biological, Chemical and Physical Sciences involved in a STEM program, a graduate intern from Slippery Rock University in Pennsylvania and a University of Wisconsin student. The students were mentored by seven College of Pharmacy faculty – Drs. Kahaleh, Adebayo, Chauhan, Adeyeeye, Jungsuwadee, Panakanti and Kurup. The research projects spanned the different pharmaceutical sciences disciplines – pharmacy administration, medicinal chemistry, pharmacology, pharmaceutical drug product development and translational complementary alternative medicine (CAM). The PharmD students undertook various projects as a research elective course, a part of the CoP curriculum. The student presenters, mentors and research topics are shown in the table on the following page.
It is remarkable that 18 out of 65 students registered for the research elective, seizing the opportunity to explore various pharmacy disciplines as means to better understand more the profession from a different perspective. To emphasize lab safety, all the students took an online safety training that is embedded in the research elective course aside from the on-site lab safety training organized by Dr. Adewuya. A couple of students that worked on the CAM also took an online module from the Center for Disease Control (CDC) in Basic Microbiology that was suggested by Dr. McKinley of DBCPS, a collaborator on the project. As part of established community engagement, a few of the research methods were conducted at Harper Community College in Hoffman Estates, IL and at Roquette Corporation in Geneva, IL.

On August 18 and 19, 2014 students presented their summer research as podium presentations attended by faculty, staff and other students at the Schaumburg campus. The Office of the Provost made part of the implementation of the research projects possible through intra-mural summer research grants awarded to the respective faculty members.
RECOGNITION FOR TEACHING

Faculty Awards Class 2016
Biggest Heart: Dr. Adebayo
Most Creative Teaching Style: Dr. Kurup
Most Enthusiastic Professor: Dr. Potempa

Faculty Awards Class of 2015
Most Creative Teaching Style: Dr. Ornstein
Most Enthusiastic Professor: Dr. Jungsuwadee
ACADEMIC RESEARCH AND COMMUNITY ENGAGEMENTS

Department’s Research Forum: A monthly Faculty Research Forum was established about three years ago to promote College - and University - wide awareness of independent research activities and interests of BPS faculty. Dr. Lawrence Potempa coordinates the meetings. The goals of the forum are to stimulate discussions, identify areas of overlap and possible collaboration, help identify areas of strengths and needs, and promote creative discovery so as to maximize our faculty’s efforts as independent researchers. Furthermore, these meetings are focused on helping each faculty provide a supportive laboratory environment that can be used to attract PharmD and other students to independent research elective opportunities. The discussions have focused on novel research activities and data, or relevant publications related to faculty member’s research program. The group meets once a month on the last Friday of each month. All faculty members are expected to lead a discussion once a year. Representative topics of past year’s discussions are shown below.

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<th>Topic/Title</th>
<th>Lead Discussant</th>
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<td>A Collective Discussion of Experimental Systems, Accomplishments, Needs and Possible Areas of Collaboration</td>
<td>All BPS Faculty &amp; staff</td>
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<tr>
<td>Combating cutaneous T-cell lymphomas resistance, hypothetically</td>
<td>Dr. Paiboon Jungsuwadee</td>
</tr>
<tr>
<td>Design and evaluation of anti-hypertensive immediate release combination tablets</td>
<td>Dr. Amusa S Adebayo</td>
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<tr>
<td>Interdisciplinary Investigation of Pediatric Anti-Sickling Fixed Dose Combination (FDC) Complementary and Alternative Medicine- CAM and Product Optimization</td>
<td>Dr. Moji Adeyeye</td>
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<td>Ideas for novel therapies to treat Human Immunodeficiency virus (HIV) infection</td>
<td>Dr. Sonali Kurup</td>
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<td>High sensitivity C-Reactive Protein testing</td>
<td>Dr. Larry Potempa</td>
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<tr>
<td>Novel brain-function drugs – right idea, wrong time</td>
<td>Dr. Paul Ornstein</td>
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Research Forum Topics

2013 Research Advisory Council: The Research Advisory Council is composed of department’s faculty members and Affiliate faculty from Chicago metropolis and Indianapolis met on September 24, 2013. The Chair presented a proposal for future graduate programs and asked for suggestions. The members made useful suggestions about niche programs and potential student enrollment. A sub-committee composed of Drs. Rob Ju, Nkere Ebube and Tom Catalano was formed for further discussion. The consensus was that the focus of the planned graduate program should be on the strength of the department and capacity that they noted, as Pharmaceutics/pharmaceutical development/pediatric drug delivery. Another useful suggestion that came out of the meeting was to start a graduate program in Regulatory Affairs based on the fact that some companies may want their employees trained in that discipline. The attendees are shown below in Picture 2.

Northwestern University: The department continues to develop research relations with academic institutions in the Northwest of Chicago. The Chair of department arranged for a fee-for-service use of various analytical instruments at NUANCE Labs of Northwestern University in Evanston. The arrangement is needed due to the instrument or equipment-intensive research in several disciplines in the department. Respective faculty, interested in the use of the service would undergo a safety training plus training on the use of the instruments.
**Harper Community College:** The Chair of department also initiated interaction with Harper Community College through a visit on May 12, 2014. The goal is to foster collaboration in research, possible shared student summer research and use of several pieces of equipment. Dr. Adeyeye met with the Chairs of Chemistry and Biology – Dr. Dan Stanford and Dr. Jace Robinson respectively; and the then Dean of Math and Sciences – Dr. Julie Ellefson-Kuehn, at Harper College. One of the PharmD summer research students, Ms. Ashley Brown (PharmD Class of 2015,) did NMR and FTIR analysis of some samples under the supervision of Dr. Adeyeye.

**AbbVie Global Pharmaceuticals – RU Mentoring Program:** On November 5, 2013, The Chair and Dr. Paul Ornstein visited AbbVie to continue the discussion on mentoring and future placement of student for industry and research experience as an elective CoP Advanced Pharmacy Practice Experience (APPE) course. Several AbbVie scientists expressed interest in the Mentoring program and were given affiliate faculty status after screening by the Affiliate Faculty Committee. The student experience will be the focus of the APPE research elective, an option that is available for CoP students. The overall objectives of the program include the following:

- To introduce students to careers in the pharmaceutical industry, academia, and regulatory agencies
- To expose students to pharmaceutical research in DMPK and pharmaceutics, pre-clinical drug safety, translational medicine, imaging, and behavioral pharmacology
- To emphasize the importance of data mining, synthesis of research objectives, and presentation of experimental protocols
- To guide students in development of research methodologies, building a research hypothesis, and interpretation of data and time management
- To help students appreciate the importance of team spirit, time management, and deadlines
On July 18, 2014, five AbbVie scientists (CoP Affiliate faculty members) visited the department to continue the conversation on mentoring and collaborative research. Dr. Michael Kort led the AbbVie colleagues. The visiting team was enthusiastic about the student placement. The Director of Experiential Education - Mrs. Joan Hardman - was part of the meeting. Other possible future points of interactions included in the discussion are listed below:

- Co-sponsorship of research projects
- Status of use of AbbVie instrumentation fee-for-service on existing MOU
- Participation by AbbVie scientists in lecture/seminar program at RU
- Topical lectures/workshops by RU faculty at AbbVie
- Access to AbbVie Investment Recovery for equipment/instrument purchase
- Sabbatical programs for AbbVie employees at RU

ONLINE MASTER OF SCIENCE GRADUATE PROGRAM

Using the collective reasoning of the Research Advisory Council, the future growth of the CoP and collaboration with a RAC member, Dr. Jay Trivedi, Dr. Adeyeye proposed a future online Master of Science Program with a minimum of 10 modules or 30 credits. The lecture contact hours will be 4 hours/week. The first program planned is Pharmaceutical Development that will be directed by Dr. Adeyeye. Students may be awarded a certificate for 5 modules or 15 credits if there is a demand for such after the first year or phase one in the Master’s program. The duration for each module is 10 weeks. The program is going through the University Graduate Council approval process.

SCHAUMBURG CAMPUS RESEARCH COLLABORATIONS

Several collaborations on research and student mentoring are taking place between the Department of Biology, Chemistry and Physical Sciences (DBCPS), institutions outside Illinois and the Biopharmaceutical Sciences Department.

Dr. Ornstein and Dr. Kelly Wentz-Hunter (DBCPS) – 2013/2014
Co-supervised Conor Heffernan (Masters candidate in the MS Biotechnology program) from DBCPS department: The project title is “Discovery and characterization of compounds from natural sources to inhibit cancer cell growth”.

Dr. Adeyeye, Dr. Panakanti, Dr. Adebayo and Dr. Seiser (DBCPS) – 2013/2014
Dr. Adeyeye and Dr. Helen Asemota of UWI led the research collaboration that involved graduate student (Ms. Sasha Gay-Wright) from the University of West Indies (UWI), Mona Campus. The project title, Phytochemical Screening, In Vitro Analysis and Synergistic Cytotoxicity of Dioscorea Cayenensis and Beta Vulgaris in Human Prostate Cancer Cells” was supervised at Roosevelt University by Drs. Adeyeye, Panakanti, Adebayo and Seiser who also formed the research committee.

Dr. Adeyeye, BPS Faculty and Dr. Vickie Mckinley (DBCPS) - 2014
A new research project on sickle cell anemia and the evaluation of a complementary alternative medicine – Faradin -is underway in the department. The international collaborators are Dr. Daniel Gbadero of Bowen University Teaching Hospital and Mr. Lawrence Farayola of Atipo Ventures, the inventor of Faradin.

Dr. Vickie McKinley of DBCPS and most of the faculty members in the department are involved in different phases of the project. The leading investigator – Dr. Adeyeye has divided the investigation into three major areas as shown below.

- Phytochemistry, Anti-sickling and Anti-Inflammatory Effects of the CAM
- Antibacterial and Anti-Cancer Effects of Faradin
- Development of Solid Dosage Form and Solid State Characterization of the CAM
- Chemical Characterization of Faradin

The faculty involved in different phases of the ongoing project are: Dr. Adeyeye, Dr. Potempa, Dr. Adewuya, Dr. McKinley, Dr. Chauhan, Dr. Junsuwanadee, Dr. Panakanti, Dr. Adebayo, Dr. Kurup and Dr. Ornstein

Dr. Adeyeye and Dr. Alex George (Texas Children's Hematology Center (TCHC) - 2014
Collaboration on the anti-sickling studies of faradin was initiated with Dr. George of TCHC, Baylor College of Medicine. Dr. George will provide the clinical samples and suggestions during the study. Approved Institutional Review Board (IRB) was exchanged between the two institutions.
MEETINGS, PRESENTATIONS AND ACCEPTED ABSTRACTS

MEETINGS
Dr. Adewuya
Comprehensive Compounding Course, Professional Compounding Centers of America. Houston, TX. July 2014

Dr. Ornstein
- 247th ACS National Meeting, Dallas, TX, March 15-18, 2014 (Long Range Planning Committee, ACS Division of Medicinal Chemistry)
- Gordon Research Conference on Heterocyclic Compounds, Salve Regina University, Newport, RI, June 15-20, 2014
- Eli Lilly Tuberculosis Drug Discovery Initiative, Scientific Advisory Board Meeting, Seattle, WA, Sept 16-17, 2014

Dr. Adeyeye

PRESENTATIONS (Presenting author in bold)
Dr. Panakanti

Dr. Chauhan
Plenary Lecture: Predicting risk of breast cancer. International symposium on environmental pollution, nutrition & genetics (IEPNG) Nellore (India), December 2013

Dr. Potempa
Advantages of mCRP over pCRP in diagnosis of autoimmune diseases, Aye Mu Myint AY, Berghmans R. and Lawrence Potempa, Baltimore 2014

Dr. Adeyeye
- Perspectives in Fixed Dose Combination Drug Products Development, University of Technology, Kingston, Jamaica September 17, 2013
- International Collaborative Research Opportunities, Biotechnology Centre, Department of Basic Medical Sciences, University of West Indies, Mona Campus, Jamaica, September 17, 2013
- Recent Advances in Pediatric Formulation and Dosage Form Design, Symposium, AAPS Annual Meeting and Exposition. San Antonio, TX. November 12, 2013

Dr. Jadhav
Update of commonly used psychiatric medications, Allendale Association, Lake Villa, IL. June 2014

ACCEPTED ABSTRACTS


**FUNDED GRANTS AND SUBMITTED PROPOSALS**

The Graduate Research Office awarded several grants to BPS faculty (listed below) following a competitive review process. This was a result of the response of the Executive Vice President (Dr. Doug Knerr) and the Dean of the Graduate School (Dr. Kim Ruffin) to faculty concerns about intra-mural funding to promote research and facilitated the funding.

**FUNDED GRANTS**

**Dr. Adebayo**

Amusa Adebayo, The Quality, Stability and Beyond-Use Dating of Compounded Atenolol, Enalapril & Hydrochlorothiazide Combination Antihypertensive Pediatric Product. Intra-mural Funding RU Office of Graduate Studies. May 2014

Design and evaluation of chronopharmaceutics drug delivery system for the circadian real-time management of asthma, RU's NSF-STEP funded undergraduate research program. May 2014

**Dr. Kurup,** Design, Synthesis and evaluation of novel ATP competitive NEK2 inhibitors Intra-mural Funding, RU Office of Graduate Studies. May 2014.

**Dr. Adeyeye,** Study of an Anti-Sickling Complementary Alternative Medicine (CAM) - Faradin – Intended for Pediatric Use in Sickle Cell Anemia, Intra-mural Funding RU Office of Graduate Studies. May 2014.

**Dr. Panakanti,** Combinatorial therapy of Betacellulin and GLP-1 in attenuating diabetes, Intra-mural Funding RU Office of Graduate Studies. May 2014.

**SUBMITTED GRANT PROPOSALS**

**Subrata Deb:** Modulation of drug- and carcinogen-metabolizing enzymes by neem extracts in humans. AACP New Investigator. Pending

**Balwant Chauhan:** An in vitro study : Screening for the anti-adipogenic property of Fenugreek (Trigonella foenum) and Okra (Abelmoschus esculentus,L.) extracts in 3T3-L1 adipocytes. Pending

**Ravikiran Panakanti:** Combinatorial Therapy of Diabetes Mellitus using Betacellulin and HGF. AACP New Investigator Award. Pending

**Paiboon Jungsuwadee:** Promethazine induces apoptosis and downregulates ATP-binding cassette transporter proteins in Sézary cells. Cutaneous Lymphoma Foundation. Pending
PUBLICATIONS (Corresponding author in bold)

Dr. Amusa Adebayo

Dr. Potempa

Dr. Chauhan

Dr. Adeyeye


Dr. Deb


EXTERNAL EXAMINERSHIP

Dr. Adeyeye
September 15-17, 2013 - Meetings and Perusal of Examination Scripts for Undergraduate and Graduate Programs, College of Health Sciences, School of Pharmacy, University of Technology, Jamaica

September 8, 2014, Masters Thesis Defense, Extraction, Characterisation and Stability Kinetics of Annato Coloring Fractions with Potentials for Application as Pharmaceutical Colourant. Modupeola Abayomi (Graduate Student). College of Health Sciences, School of Pharmacy, University of Technology, Jamaica
GRADUATE STUDENT or POST-DOCTORAL SUPERVISION and INTERNATIONAL COLLABORATION

Dr. Adeyeye
Graduate Student Scholar from Jamaica
In December 2013, a student scholar from the University of West Indies, Ms. Sasha Gay-Wright, joined Dr. Adeyeye’s lab for six months to conduct MPhil research titled “Phytochemical Screening, In Vitro Analysis And Synergistic Cytotoxicity of Dioscorea Cayenensis and Beta Vulgaris in Human Prostate Cancer Cells”. Supervisors: Prof. Helen Asemota, Prof. Moji Adeyeye and Dr. William Aiken. Research Committee: Prof. Helen Asemota, Prof. Moji Adeyeye and Dr. William Aiken, Dr. Adebayo, Dr. Bob Seiser (from DBCPS) and Dr. Ravi Panakanti. Ms. Wright made two research presentations to the committee during her stay at Roosevelt University. She is in the process of obtaining her Master of Philosophy at UWI and tracking into the PhD program. Sasha is shown in the picture with Dr. Amusa Adebayo, Dr. Panakanti and Dr. Adeyeye.

Hosting of Fulbright Scholar from Nigeria
In September 2013, a Fulbright Scholar - Dr. Adenike Okunlola, an Assistant Professor at the University of Ibadan in Ibadan, Oyo State, Nigeria started a six-month visit in the lab of Dr. Adeyeye. Part of her research was facilitated through the pay-for-service relationship with Northwestern University NUANCE Lab. Project title: Development of an anti-diabetic dosage form using modified starches. Supervisor: Dr. Moji Adeyeye. Collaborator: Dr. Amusa Adebayo

Dr. Adebayo

Tieca Harris, MPhil Thesis titled “Assessment of the current practices involving the use of re-formulated adult drug products in the management of children with heart disease at a major pediatric hospital in Jamaica” (Mentors: Amusa Sarafadeen Adebayo, B. Pharm, MSC (Pharmaceutics), PhD, MBA; Deon Bennett, PhD in Chemistry, M.B.B.S, D.M; Oluwayomi Olugbuyi, Consultant Paediatrician, M.B.B.S, D.M; Charmaine Scott, Paediatric Cardiologist, M.B.B.S, D.M., Completed, awaiting oral exam

COMMUNITY SERVICE AND SOCIAL JUSTICE

Dr. Chauhan

Dr. Adewuya
1. Forest View Educational Center – ‘Ready to Learn’
2. District 211 High School Career Trek Sessions
4. Teen Reach Adventure Camp
Dr. Adeyeye
2. Care for HIV/AIDS Children at Sarah Orphan Homes. Nigeria (Ongoing)
   February 2014 - Gene Siskel Center in Chicago and Co-Panelist with movie producer.
   The documentary is about lack of access to HIV/AIDS drugs and the consequent deaths of millions of Africans in
   the late 1990s and early 2000.
4. Screening of Fire in the Blood at Roosevelt University – September 23 and 24, October 8, 2014
5. Incorporating the screening into College of Pharmacy courses as a social justice interest
   a. Pharmaceutics I: Drug Delivery – Instructors: Dr. Panakanti, Dr. Adebayo and Dr. Adeyeye
   b. Public Health and Health Policy – Instructor: Dr. Aruru

Part of the focus of the screening is to train socially conscious students that are competent, committed and
compassionate pharmacists who understand the importance of access to drugs in therapeutics outcomes and public
health. Mr. James Love and Mr. Bill Haddad, who are contributors to the documentary, joined Dr. Adeyeye via Skype as
panelists during the questions and answers session at the end of each screening.

Mr. Love is the Director of Knowledge Ecology International (KEI), a Washington- and Geneva-based organization which deals with intellectual property- and access to knowledge issues, and has been involved in the fight against AIDS since the 1990s.

Mr. Haddad is resourceful investigative journalist and innovative political strategist, who fought and advocated for low-cost generic drugs and campaigner for access to essential medicine for almost half a century. He is the founder and longtime Chairman of the Generic Pharmaceutical Industry Association (now Generic Pharmaceutical Association, or GPhA) in the US. He initiated and negotiated the landmark Drug Price Competition and Patent Restoration (Hatch-Waxman) Act of 1984. A cross-section of the students was captured at the movie as seen in the picture to the right.
http://www.roosevelt.edu/Pharmacy/Academics/BPS.aspx

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