

AMUSA S. ADEBAYO

224-619-6811 (C) • CommAdel@hotmail.com • 4 West Golf Road, Hoffman Estates, IL60169

PHARMACEUTICAL & IT SCIENTIST

Summary: A versatile, highly talented and resource-oriented professional with over 20 years of teaching and research in pharmaceutical sciences, tertiary education department leader and experienced presentation skills in basic and applied pharmaceutical contents, research, and project implementation. Recently trained in health informatics and computer programming for advanced data analytics & visualization. Seeking career transition to mid-level and senior cadre career in healthcare data analytics for actionable insights and business intelligence.

EDUCATION

- Northwestern University, Evanston, Illinois – December 2020 – June 2021-Data Visualization Bootcamp
- University of Illinois, Chicago-05/2020-Health Informatics
- University of Ibadan, Nigeria-Ph. D. 8/2001-Pharmaceutics (Pharmaceutical Technology)
- Obafemi Awolowo University, Nigeria -MBA 6/1999-Master of Business Administration
- Obafemi Awolowo University, Nigeria -M. Sc. 4/1995-Pharmaceutics
- Obafemi Awolowo University, Nigeria – B. Pharm. 6/1989-Pharmacy

Software-IT

- Data analytics & visualization toolbox: Python, Pandas, Matplotlib, SQL, SQL Alchemy; Github, CSS & Bootstrapping; MongoDB, Web scraping & Flask app, ETL; Javascript, D3.js, Geomapping & Leaflet.js; BI with Tableau; Machine learning, and Big Data ETL & Analysis
- Design of Experiment (DoE with FusionOne®)
- PK modeling & simulation software (Phoenix WinNonlin®, Gastroplus®),
- Statistical/Analytic apps (SPSS, Minitab, R, Relational Data Base), Expert System design (Exsys Corvid®).
- MS office Suite (Share point, Excel, Words, Power Point, Outlook, One note).

Software-CLINICAL

Framework LTC/Framework ECM

ACADEMIC WORK EXPERIENCE

Experience 2018-2019 Sullivan University Louisville, Kentucky: Prof. Pharm. Sciences

- Developed learning and lab materials for Pharmaceutics & Compounding lab.
- Served on Student progression Committee
- Completed ongoing research & published manuscript

2011-2018 Roosevelt University Schaumburg, IL: Associate Prof. Biopharmaceutics & Pharmacokinetics

- Developed & continuously improved learning and lab materials
- Provided exceptional instructions & mentorship that consistently returned >99% student progression
- Secured PK modeling/simulation software licenses as grants-in-aid that saved college >\$62,000 annually on learning material

- Established research lab in Formulation Design & Analysis, executed funded research projects
- Published >10 manuscripts in 5 years and presented papers at >15 scientific meetings/conferences.
- Effectively performed other traditional roles of faculty including teaching, research and services to colleges, university, and society.

2010-2011 University of The West Indies St. Augustine, Trinidad & Tobago: Senior Lecturer in Pharmaceutics

- Created and secured seamless approval for proposal to create Master of Science degree programs in pharmaceutical sciences across Pharmaceutics, Medicinal Chemistry, Pharmacology and Pharmacognosy.
- Progressed a MPhil Pharmaceutics' student to PhD within a year of taking over his mentoring.
- Developed course materials and delivered exceptional instruction to BPharm students.
- Secure intramural grant and successfully conducted research project in pediatric compounding in hospital across 3 of the nation's 4 regional health authorities.

2002 - 2007 University of Technology, Jamaica. Kingston, Jamaica, W.I.: Lecturer in Pharmaceutics/Associate Prof. of Pharmaceutics/Head, School of Pharmacy & Health Sciences

- Led a team of faculty and staff to successively transitioned the mega School of Pharmacy & health Sciences into 4 independent schools of Public Health & Health Technology, School of Nursing, School of Dental Technology & School of Pharmacy within 2 years of leadership, using data-driven and intelligent programs innovation.
- Created and launched data-driven MPhil in Pharmaceutics program, and successively launched PharmD program that recorded historical enrollment figures and highly referred graduates.
- Taught, mentored, progressed, and graduated several cohorts of post-Diploma and regular BS in Pharmacy students.
- Applied and won the Jamaican Government bid to create Dialysis and Pharmacy Technician programs that fulfilled the urgent need by the nation's healthcare system.
- Effectively performed other traditional roles of faculty including teaching, research and services to colleges, university, and professional organizations.

PROFESSIONAL WORK EXPERIENCE

March 2020- February 2021 IV Infusion Operations, MACRX Long Term care Pharmacy, 2307 S. Mount Prospect Road, Des Plaines, IL

Job functions

- Performed IV order entry using Framework LTC and Framework ECM applications.
- Performed Aseptic Compounding in Compounding Aseptic Isolator.
- Performed general Clean Room (ISO 5 & 7) operations,
- Compounded High-risk therapy
- Reviewed patient cases, medication history & lab results for therapeutic drug monitoring.
- Contributed to drug product inventory monitoring and control.

May 1996 – September 2002 University representative on consultancy services to the Jolliter Industries, Ltd., Lagos, Nigeria.

Job functions:

- Developed alcohol-free paracetamol pediatric oral liquid formulation (Registered as Jollidol®)

- Developed low sugar pediatric chloroquine syrup formulation (Registered as Jollimal®)
- Supervised plant design and process flow of operations
- Supervised water processing system qualification and approval
- Progressed production batches of the two liquid products (scale-up) from trial batches of 12 L to 1000 L
- Prepared dossier for the regulatory submission and secured manufacturing plant registration by the Pharmacy Council and NAFDAC (National Agency for Food & Drug Control & Administration)
- Secured product marketing authorization and licensure for Jollidol® & Jollimal® in 2002.

Sept. 1991 – Aug. 1992 Hospital Pharmacists, Obafemi Awolowo University Teaching Hospital, Ile-Ife, Nigeria (Supervisor: Mrs. M. A. Ayoola)

Job functions:

- Performed prescription and drug use review
- Compounded and dispensed medications following prescriptions
- Contributed to inventory management
- Supported ward round with physicians, nurses and other members of health team,
- Participated in patient cases and drug literature review seminars.
- Prepared high-risk pharmacy emergency pack for the obstetrics and gynaecology surgical wards.

Sept. 1990 – Aug. 1991 Hospital Pharmacists, General Hospital, Batsari, Katsina State, Nigeria (Supervisor: Dr. K. Gorbadiya)

Job functions

- Reviewed prescriptions
- Prepared and/or compounded and dispensed medications following prescriptions
- Participated in inventory management: placed orders and received drug and other products into the hospital store.
- Went on ward round with physicians, nurses, and other members of health team

Sept. 1989 – Aug. 1990 Hospital Pharmacist, Obafemi Awolowo Health Center; Obafemi Awolowo University, Ile-Ife, Nigeria (Supervisor: Mrs. F. Olayemi)

Job functions

- Conducted prescription review and dispensing
- Performed special IV admixture preparation
- Compounded medications following prescriptions
- Participated in drug use review
- Went on ward round with physicians, nurses, and other members of health team
- Participated and presented in patient cases review and drug literature seminars
- Worked with the physicians and nurses in diabetes and hypertension clinic wards

ADMINISTRATIVE/LEADERSHIP EXPERIENCE

2009 – 2010	Head, School of Pharmacy, College of Health Sciences, Univ. of Technology, Jamaica
2007 – 2009	Head, School of Pharmacy and Health Sciences, Faculty of Health & Applied Science, University of Technology, Jamaica

- 2006 – 2009 Member, Academic Misconduct Investigation Appeal Panel, University of Technology, Jamaica
- 2006 - 2009 Reviewer, Product registration dossiers and adviser to the Standards & Registration Division, Ministry of Health, Jamaica
- 2007 – 2009 Member, Education Committee of the Pharmaceutical Society of Jamaica
- 2006 – 2008 Chair, Faculty of Health & Applied Science Research Committee & Faculty Representative on the University Research Committee
- 2006 -2007 Member, University's Appointments & Promotions Steering Committee
- 2006 – 2007 Member, Committee that reviewed the University Research Policy document, University of Technology, Jamaica
- 2005 – 2006 Member, 46th Anniversary Planning Committee
- 2005 – 2006 Member, Balanced-Scorecard Analysis and Septennial Review Committee
- 2005 – 2006 Chair, Faculty of Health & Applied Science Postgraduate Committee & Faculty Representative on the University Post Graduate Committee
- 1992 – 2002 Pharmacist-in-charge of Conventional Drug Manufacturing, OAU, Ife, Nigeria
- 2001 – 2002 Member, Science and Technology Park Development Committee, OAU, Ife, Nigeria
- 1995 – 2002 Faculty of Pharmacy Representative on the Board of Management of the Institute of Cultural Studies, OAU, Ife, Nigeria
- 1995 – 2002 Faculty Representative on the Board of Management of the Institute of Public Health, OAU, Ife, Nigeria

RESEARCH GRANTS, AWARDS & PROJECTS

- 2017 Combination Therapy with Targeted Agents to Augment Anticancer Effects - \$12,500/cycle (Total \$25,000.00) (Kurup, Tambe, Adebayo, Sakharkar, Majerczyk, Panakanti and Deb, renewable 2016 - 2018)
- 2016 Gastroplus from Simulations Plus, Inc., CA. \$12,500.00 (ongoing support with research software, activated every 6 months.
- 2015 Niosome encapsulation and in vitro antibacterial effect of Clarithromycin and Levofloxacin (Intramural research grant for, \$3000)
- 2010 Cost-benefit, safety and efficacy of using prefabricated adult drug products for obtaining child's dose of medication not available for children in Trinidad and Tobago (TT\$84,000.00)
- 2008 Equipment Grant by Johnson and Johnson (Canada) Ltd. to the University of Technology, Jamaica (US\$5million)
- 2008 Research Award for the Development of Ackee oil as Pharmaceutical Base, Univ. of Tech., Jamaica (J\$500,000.00)
- 2007 PAHO Sponsorship to the PAHO/WHO Workshop on "Training in High Performance Liquid Chromatography (HPLC) and Dissolution Test in Quality Control of Antiretroviral Drugs" Caribbean Regional Drug Testing Laboratory, Kingston, Jamaica
- 2006 IDRC Research Grant to Investigate Anti-competitive practices in Pharmaceuticals Distribution in Jamaica - Joint Award to UTech and Fair-Trading Commission, Jamaica by the IDRC, Canada 2006 (Ca\$45,000.00)

- 2005 President's Research Initiative Award UTech, Jamaica (2005) (J\$100,000 + plaque)
- 2005 CARIMED Ja. LIMITED Support/travel grant to the Particulate processes in the Pharmaceutical Industry Conference, Montreal, Canada, organized by the Engineering Conference International, Brooklyn, USA (June 26-30, 2005) (US\$500.00)
- 2003 Research Development Award for the development of Polysaccharides from Breadfruit (Artocarpus sp). as Tablet ingredient, UTech, Jamaica, 2003 (J\$ J\$ 982,583.00)

Intramural Grants for Undergraduate/Graduate Students Training in Research

- 2014 Design and Evaluation of Dosage Form for the Circadian Rhythmic Delivery of Drugs, NSF-STEP Summer 2014 (\$500)
- 2014 Quality, Stability and Beyond-Use Dating of Compounded Atenolol, Enalapril & Hydrochlorothiazide Combination Antihypertensive Pediatric Product (Summer 2014, \$2500)
- 2013 - Dose metformin tablet formulation for immediate / controlled release - contracted by Roquette America Inc. (\$5000)
- 2012 - Development of antiretroviral formulations for treating children with AIDS (\$1200)
- 2012 - Design and Evaluation of Dosage Form for the Circadian Rhythmic Delivery of Drugs, NIH Bridge project, Summer 2012, 2013 (\$2400)

PROFESSIONAL AFFILIATIONS/MEMBERSHIP

- Passed FPGE, undergoing certification by NABP
- Registered Pharmacist, Pharmacy Council of Nigeria, Lagos, Nigeria, since Sep. 1990
- Pharmaceutical Society of Nigeria, Lagos, Nigeria, since Nov. 1990
- International Pharmaceutical Federation (FIP, Reg. #26347), the Netherlands Since Jan. 2005
- America Association of Colleges of Pharmacy (since 2011)
- America Association of Pharmaceutical Scientists (since 2012)
- International Academy of Compounding Pharmacists (since 2014)

Professional Services

- 2004 – 2009 Annual Medical Outreach Program Coordinator, Association of Nigerians in Jamaica
- 2004 – 2007 Secretary, Association of Nigerians in Jamaica
- 2004 – 2009 Consultant to The Scientific Research Council, Jamaica in formulation research & product development
- 2005 – 2009 Technical Assessor, Jamaica National Accreditation (JAANAC) Committee of the Bureau of Standards, Jamaica
- 1996 – 2001 Consultant Pharmaceutical Formulation Development and Manufacturing Scientist to JOLLITERS INDUSTRY LIMITED, Lagos Nigeria
- 1999 – 2002 Secretary, Osun State Pharmacist's Multipurpose Co-operative Society, Osogbo, Osun State
- 1995 – 2001 Resource Person to the North American African Company (NAAFCO), Lagos Nigeria on Quality Assurance, proof-of-concept and application of new analytical equipment

Editorial Services

- International Journal of Pharmacy Practice*
- AAPS PharmSciTech (Reviewer)*
- AAPS Pharm Research (Reviewer)*
- USP 34 - General Chapter (1118)

- E3 Journal of Biotechnology and Pharmaceutical Research (reviewer)
- Starch/Starke (Reviewer)
- The Caribbean Teaching Scholar (Editorial Board Member)
- Drug Development & Industrial Pharmacy (Reviewer)
- West Indian Medical Journal (Reviewer)
- West African Journal of Pharmacy (Reviewer)
- Journal of Pharmaceutical Technology & Drug Research (Reviewer)
- Scientific Journal International (SJI) (Editorial Board Member)

**Current/ongoing services*

COMMUNITY OUTREACH/SERVICES

- 2004 – 2009 Consultant to the Scientific Research Council, Jamaica in formulation research & product development
- 2004 – 2009 Annual Medical Outreach Program Coordinator, Association of Nigerians in Jamaica
- 2004 – 2007 Secretary, Association of Nigerians in Jamaica
- 2005 – 2009 Technical Assessor, Jamaica National Accreditation (JAANAC) Committee of the Bureau of Standards, Jamaica
- 1996 – 2001 **Consultant Pharmaceutical Formulation Development and Manufacturing Scientist** to JOLLITERS INDUSTRY LIMITED, Lagos Nigeria
- 1999 – 2002 **Secretary, Osun State Pharmacist's Multipurpose Co-operative Society**, Osogbo, Osun State
- 1995 – 2001 **Resource Person** to the North American African Company (NAAFCO), Lagos Nigeria on Quality Assurance, proof-of-concept and application of new analytical equipment

RESEARCH FOCUS

- Meta-analysis of healthcare & clinical data for actionable and business intelligence insights (current)
- Dosage form design, Bioavailability/Bioequivalence & Pharmacokinetic studies

Selected Peer-reviewed publications

Pharmaceutics/Biopharmaceutics

1. **Harris, T. T.**, Adebayo, A. S., Bennett, D., Olugbuyi, O. Scott, C. (2018). European Journal of Clinical Pharmaceutics, 20 (4) Jul-Aug. 2018.
2. **Pryce, N.A.**, Adebayo, A.S., Bennett, D.A. and Brown-Myrie, E. (2017). Design and evaluation of a new fixed-dose immediate release capsule of atenolol, enalapril maleate and hydrochlorothiazide. Journal of Pharmaceutical Research International 20(1): 1-16.
3. **Okunlola A.**, Adebayo A.S., Adeyeye M. C. (2016). Development of repaglinide microspheres using novel acetylated starches of bitter and Chinese yams as polymers. International Journal of Biological Macromolecules (2017), 94, 544-553. <http://dx.doi.org/10.1016/j.ijbiomac.2016.10.032>
4. **Adebayo A. S.** and McFarlane N. (2014) Model-Based Bioequivalence assessment of a commercial Azithromycin Capsule against Pfizer Zithromax Tablet marketed in Jamaica. Journal of Applied Pharmaceutical Science, 4 (10), 062-068 <http://www.japsonline.com>

5. Jankie, S., **Adebayo, A. S.**, Pillai, G. (2012) In Vitro Activities of Fluoroquinolones Entrapped in Non-ionic Surfactant Vesicles against Ciprofloxacin-Resistant Bacteria Strains Journal of Pharmaceutical Technology & Drug Research <http://www.hoajonline.com/jptdr/content/pdf/5.pdf>
6. Anderson N., **Adebayo A. S.**, Smith N. (2012) Physicochemical properties of Blighia sapida (Ackee) oil extract and its potential application as emulsion base, Afr. J. Pharm. and Pharmacol. 6(3): 200-210 (<http://www.academicjournals.org/AJPP> DOI: 10.5897/AJPP11.696)
7. **Riley C. K.** and Adebayo A. S. (2010) A comparative investigation of the packing and flow properties of sweet potato (Ipomoea batatas) starches and their potential use in solid dosage formulations Starch - Stärke, 62: 285-293.
8. **Adebayo, A. S.**, Brown-Myrie, E and Itiola, O. A. (2008) Comparative disintegrant activities of breadfruit starch and official corn starch Powder Technology (USA), 181: 98 - 103
9. Riley, C. K., **Adebayo, A. S.**, Wheatley, A. O. and Asemota, H. N. (2008) The interplay between yam (Dioscorea sp.) starch botanic source, micromeritics and functionality in paracetamol granules for reconstitution. European Journal of Pharmaceutics & Biopharmaceutics 70: 326 - 334
10. **Riley, C.K.**, Adebayo, A. S., Wheatley, A. O. & Asemota. H. N. (2008) Surface properties of yam (Dioscorea sp.) starch powders and potential for use as binders and disintegrants in drug formulations. Powder Technology 185: 280 - 285
11. **Riley, C. K.**, Adebayo, A. S., Wheatley, A. O. and Asemota, H. N. (2006) Fundamental and Derived Properties of Yam (Dioscorea Spp.) Starch Powders and Implications in Tablet and Capsule Formulation Starch/Starke (Germany) 58: 418-424.
12. **Adebayo, A. S.** and Akala, E. O. (2005) Kinetics model for the in vitro release of an hydrophilic drug (Amodiaquine) from fat-based Suppositories Journal of Arts, Science and Technology 2: 1 - 11.
13. **Babalola, C. P.**, Adebayo, A. S., Omotosho, A. & Oyeyinka, A. (2004) Comparative bioavailability study of a new quinine suppository and oral quinine in healthy volunteers Tropical Journal of Pharmaceutical Research 3 (1): 291-297
14. **Adebayo, A. S.** and Itiola, O. A. (2003) Effects of Breadfruit and cocoyam Starch Mucilage Binders on Disintegration and Dissolution Behaviors of Paracetamol Tablet Formulations Pharmaceutical Technology (USA) (www.pharmtech.com), March: 78 - 90.
15. **Adebayo, A. S.** and Itiola, O. A. Compression behavior of breadfruit and cocoyam starches and the mechanical properties of their compacts. West African Journal of Pharmacy 16 (1): 42 - 50 (2002)
16. **Onyeji, C. O.**, Adebayo, A. S. and Babalola, C. P. (1999) Effects of absorption enhancers in chloroquine suppository formulations I: In vitro release characteristics Euro. J. Pharm. Sc. (Europe) 9: 131-136
17. **Adebayo, A.S** and Itiola, O. A. (1998) Evaluation of Breadfruit and Cocoyam starches as Exo-disintegrant in a Paracetamol Tablet Formulation Pharm. Pharmacol. Commun. (London) 4: 385-389

1. Jankie S., Jenelle J., Pereira L. P., Akpaka P., Pillai G., Adebayo A. S. (2016) Determining the infective dose of *Staphylococcus aureus* (ATCC 29213) and *Pseudomonas aeruginosa* (ATCC 27853) when injected intraperitoneally in Sprague Dawley rats, *British J. Pharm. Research* 14(2): 1-9.
2. **Jankie S.**, Jenelle J., Lexley P. P., Adebayo A. S., Gopalakrishna P. (2016) Acute toxicity of sorbitan monostearate (span 60) non-ionic surfactant vesicles (niosomes) in Sprague Dawley rats, *British J. Pharm. Res.*14(1): 1-11, 2016.
3. **Okunlola A.**, Adebayo AS and Adeyeye M.C. (2014) Solid State Characterization of Two Tropical Starches Modified by Pregelatinization and Acetylation: Potential as Excipients in Pharmaceutical Formulations. *British Journal of Pharmaceutical Research*, 5 (1): 2231-2919
4. Abayomi M., **Adebayo A. S.**, Bennett D. A., Porter R., Shelly-Campbell J. and Dawkin G. (2014) Phytochemical Testing and In vitro Antibacterial Activity of *Bixa orellana* (Annatto) Seed Extract. *British Journal of Pharmaceutical Research* 4(11): 1387-1399
5. **Abayomi, M.**, Adebayo, A. S., Bennett, D., (2013) In vitro antioxidant activity of *Bixa orellana* (Annatto) Seed Extract" *Journal of Applied Pharmaceutical Science*, 4(02): 101 - 106
6. Harvey A. C., **Adebayo A. S.**, Wheatley A. O, Asemota H. N., Riley C. K. (2012) Effects of Acetylation on the Micromeritics of Yam (*Dioscorea* sp.) Starch Powder for Pharmaceutical Application *West African Journal of Pharmacy* (2012) 23 (2) 40 - 50
7. **Adesina, S. K.**, Adebayo, A. S, Adesina, S. K. O., and Groning, R. (2003) New constituents of Piper guineense fruit and leaf *Die Pharmazie* (The Netherlands) 58: 423 - 425.
8. **Adesina, S. K.**, Adebayo, A. S, Adesina, S. K. O., and Groning, R (2002) GC/MS Investigations of the minor constituents of Piper guineense stem. *Die Pharmazie* (The Netherlands) 57: 622 - 627
9. **Adebayo, A. S.**, Gbadamosi, I. A., Adewunmi, C. O. and Adesina, S. K. (2001) Influence of Herbal Materials on Soap Foaming and Organolepsis *Nig. J. Nat. Prod. & Med.* 05: 41 - 44
10. **Adebayo, A. S.** and Itiola, O. A. (1998) Properties of Starches obtained from *Colocasia esculenta* and *Artocarpus communis* *Nig. J. Nat. Prod. & Med.* (Nigeria) 02: 29-33

Pharmacy Practice

Gossel-Williams, M. & Adebayo, A. S. (2008) The "PharmWatch" Programme: Challenges to engaging the Community Pharmacists in Jamaica *Pharm. Practice*. Oct-Dec 6 (4): 187 - 190

Book Chapter

Moji C. Adeyeye and Amusa Adebayo (2018). Hard Shell Capsules in Clinical Trials. In Larry L. Augsburg & Stephen W. Hoag (Eds.). *Pharmaceutical Dosage Forms: Capsules*. ISBN: 9781351620390

**Corresponding author is highlighted in bold.*
