

**Abdullah K. Alshememry, B. Pharm, PMP, Ph.D.**

Vice Dean for Admission Affairs - Deanship of Admission and Registration

Assistant Professor of Pharmaceutical Biotechnology

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**Education**

- 2012 – 2018      **Doctor of Philosophy (Ph.D.)**, faculty of pharmacy and pharmaceutical sciences, university of Alberta, Edmonton, Canada.  
**Thesis title:** “*Recombinant stimulus-responsive biomaterials to target hypoxic/ischemic perinatal brain injury.*” Supervisors: Dr. Larry D Unsworth and Dr. Ayman El-kadi.
- 2006- 2011      Bachelor of Pharmaceutical Sciences (B. Pharm), college of pharmacy, king Saud university, Riyadh, Saudi Arabia.
- 2008- 2010      Fellowship in Entrepreneurship, king Salman institute for entrepreneurship, king Saud university, Riyadh, Saudi Arabia.

**Professional Experience**

- 2018- date      **Assistant Professor**, Department of Pharmaceutics, College of Pharmacy, King Saud University, Riyadh, Saudi Arabia
- 2012- 2018      **Visiting scientist**, national research council, national institute for nanotechnology (NRC-NANO), Edmonton, Canada.
- 2011- 2018      **Teaching Assistant**, Department of Pharmaceutics, College of Pharmacy, King Saud University, Riyadh, Saudi Arabia

**Professional certifications**

- 2020              Certified **Project Management Professional (PMP)®**, Project Management Institute

**Administrative experience**

- **Vice Dean for Admission Affairs**, Deanship of Admission and Registration, King Saud University (March 2021 to date)
- **Director of Nanobiotechnology Unit**, College of Pharmacy, King Saud University (September 2019 to date)
- **Member of the Advisory Committee for Generic and Bioequivalence**, Saudi Food and Drug Authority (March 2021 to date)
- **Advisor to the Deanship of Admission and Registration Affairs**, King Saud University (January 2021 to March 2021)
- **Assistant Vice Dean for Academic and Educational Affairs**, College of Pharmacy, King Saud University (September 2020 to March 2020)

- **Chairmen of the Scientific Committee at the Center of Excellence in Biotechnology Research**, King Saud University (September 2020 to date)
- **Member of the Executive Committee at the Center of Excellence in Biotechnology Research**, King Saud University (September 2020 to date)
- **Coordinator of the Examination Conduct Committee**, College of Pharmacy, King Saud University (December 2020)
- **Member of the Founding Committee of the Master program in Nanoscience and Applied Nanotechnology**, King Saud University (September 2019 to date)
- **Pharmaceutics department council secretary** (January 2020 to March 2021)
- **Coordinator of the Teaching Load Committee**, Department of Pharmaceutics, College of Pharmacy, King Saud University (September 2020 to March 2021).
- **Coordinator of the Master Program Committee**, Department of Pharmaceutics, College of Pharmacy, King Saud University (September 2019 to January 2020).
- **Member of Proposals Review Committee**, Department of Pharmaceutics, College of Pharmacy, King Saud University (January 2019 to date).
- **Member of Teaching Assistants and Scholars Affairs Committee**, Department of Pharmaceutics, College of Pharmacy, King Saud University (September 2019 to date).
- **Academic Advisor of College of pharmacy Students Clubs**, College of Pharmacy, King Saud University (September 2019 to September 2020).

### **Research experience and skills:**

- **DNA cloning** – cloned and generated an assortment of genes encoding for elastin-like polypeptides using DNA concatemerization method
- **Protein expression and purification** – expressed and optimized expression yields of recombinant proteins in several bacterial species using bacterial transformation. Purified proteins using chromatographic and non-chromatographic methods and developed a patent-pending protocol to express and purify marginally soluble, short elastin-like polypeptides with yields 10-20 times higher than existing yields for comparable proteins in literature
- **In vivo phage display high throughput screening technology** - Screened and successfully identified peptides homing for ischemic core and penumbral vasculatures in hypoxic/ischemic rat model
- Nanoparticle self-assembly and disassembly characterization – using dynamic light scattering
- Developed a stimulus-responsive biopolymer platform technology with potential applications including biosensing, protein purification and drug delivery

### **Professional training**

- 2010 *Clinical Training*, King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia
- 2008, 2009 *Summer Intern*, Merck Sharp & Dohme Company, Riyadh, Saudi Arabia
- 2009 *Summer Intern*, community pharmacy (Alhozaimi pharmacy), Riyadh, Saudi Arabia

### Publications

- Design and Development of D- $\alpha$ -Tocopheryl Polyethylene Glycol Succinate-block-Poly( $\epsilon$ -Caprolactone) (TPGS-b-PCL) Nanocarriers for Solubilization and Controlled Release of Paclitaxel. By: Osman Yusuf, Raisuddin Ali, Abdullah H. Alomrani, Aws Alshamsan, **Abdullah K. Alshememry**, Abdulaziz M. Almalik, Afsaneh Lavasanifar, Ziyad Binkhathlan  
**Molecules**  
**Published: May 2021**
- Ceramide expression in relation to breast cancer molecular subtypes in Saudi women. By: Almomen, A.A., Arafah, M., Alwhaibi, M., Alsaigh, N., **Alshememry, A.**, Alsaleh, N.B., Alrabeeah, D., Al Saleh, K., Alshamsan, A., Alkholief, M.  
**SAUDI PHARMACEUTICAL JOURNAL**  
**Published: April 2021**
- UPLC-MS/MS assay of Tedizolid in rabbit aqueous humor: Application to ocular pharmacokinetic study. By: Mohd Abul Kalam, Muzaffar Iqbal, **Abdullah Alshememry**, Musaed Alkholief, Aws Alshamsan  
**Journal of Chromatography B**  
**Published MAR 2021**
- The influence of demographics on influenza vaccine awareness and hesitancy among adults visiting educational hospital in Saudi Arabia. By: Abdullah A Alzeer, Lina A. Alfantoukh, Abdulrahman Theneyan, Fawaz Bin Eid, Thamer A Almangour, **Abdullah K. Alshememry**, Abdulaziz M. Alhossan  
**SAUDI PHARMACEUTICAL JOURNAL**  
**Published: FEB 2021**
- Thermo-responsive sol-gel improves ocular bioavailability of Dipivefrin hydrochloride and potentially reduces the elevated intraocular pressure in vivo. By: Alkholief, Musaed; Abul Kalam, Mohd; Almomen, Aliyah, **Alshememry, Abdullah K.**, Aws Alshamsan  
**SAUDI PHARMACEUTICAL JOURNAL**  
**Published: AUG 2020**
- Co-encapsulation of metformin hydrochloride and reserpine into flexible liposomes: Characterization and comparison of in vitro release profile. By: Abul Kalam, Mohd; Alkholief, Musaed; Badran, Mohamed, **Alshememry, Abdullah K.**  
**JOURNAL OF DRUG DELIVERY SCIENCE AND TECHNOLOGY**  
**Published: JUN 2020**
- Human plasma protein adsorption to elastinlike polypeptide nanoparticles. By: Bahniuk, Markian S; **Alshememry, Abdullah K**; Unsworth, Larry D.  
**Biointerphases**  
**Published: MAR 2020**
- Self-assembly/disassembly hysteresis of nanoparticles composed of marginally soluble, short elastin-like polypeptides. By: Bahniuk, Markian S.; **Alshememry, Abdullah K.**; Elgersma, Scott V.; Unsworth, Larry D.  
**JOURNAL OF NANOBIO TECHNOLOGY**  
**Published: FEB 2018**
- Using Properties of Tumor Microenvironments for Controlling Local, On-Demand Delivery from Biopolymer-Based Nanocarriers. By: **Alshememry, Abdullah K.**; El-Tokhy, Suleiman S.; Unsworth, Larry D.  
**CURRENT PHARMACEUTICAL DESIGN**

**Published: MAY 2017**

- High-yield recombinant expression and purification of marginally soluble, short elastin-like polypeptides. By: Bahniuk, Markian S.; **Alshememry, Abdullah K.**; Unsworth, Larry D.

**BIOTECHNIQUES**

**Published: DEC 2016**

### **Abstracts and posters**

- ***“Developing Self-assembling Elastin-like Polypeptide Nanoparticles Using Medium-length Sequences: Ramifications of Chain Length and Guest Amino Acid Hydrophobicity on Assembly and Disassembly Conditions”***  
Markian Bahniuk, **Abdullah K Alshememry**, Larry D Unsworth.  
Poster and published abstract presented at the 10<sup>th</sup> World Biomaterials Congress (WBC), Montreal, Québec, Canada May 17-22, 2016
- ***“Self-assembling Elastin-like Polypeptide Nanoparticles; Effect of Chain Length and Guest Amino Acid Hydrophobicity on Assembly and Disassembly Conditions”***  
**Abdullah K Alshememry**, Markian Bahniuk, Larry D Unsworth.  
Poster presented at the research day, Faculty of pharmacy and pharmaceutical sciences, University of Alberta, Edmonton, November 2015
- ***“Developing Recombinant Protein Therapeutics For Targeting The Penumbra In An Ischemic/ Hypoxic Rat Model: A Platform For Therapeutic Intervention In Perinatal Brain Injury”***  
**Abdullah K Alshememry**, Markian Bahniuk, Larry D Unsworth.  
Poster presented at the research day, Faculty of pharmacy and pharmaceutical sciences, University of Alberta, Edmonton, March 2014
- ***“Enhancement of Meloxicam Dissolution Using Binary and Ternary Solid Dispersion Systems”***  
**Abdullah Alshememry**, Jabran Harthi, Saeed Alqahtani, and Abdullah Alomrani  
Poster presented at the 1<sup>st</sup> research day, Faculty of pharmacy and pharmaceutical sciences, King Saud University, Riyadh, February 2011

### **Oral presentations**

- ***“Recombinant stimulus-responsive biomaterials to target hypoxic/ischemic perinatal brain injury.”***  
Presented at the faculty of pharmacy and pharmaceutical sciences, University of Alberta, Edmonton, September 2018
- ***“Developing Recombinant Protein Therapeutics for Targeting the Penumbra in An Ischemic/ Hypoxic Rat Model: A Platform for Therapeutic Intervention in Perinatal Brain Injury”***  
Presented at the faculty of pharmacy and pharmaceutical sciences, University of Alberta, Edmonton, March 2015

**Grants**

<b>Project title</b>	<b>Funding agency</b>	<b>Role</b>	<b>Period</b>	<b>Status</b>
Stabilization of Recombinant Protective Antigen (rPA) for use as a vaccine against <i>Bacillus anthracis</i>	Ministry of Education, Saudi Arabia	Co-PI	2019-2022	Approved
Development and Characterization of a Novel Nano-sized Formulation for Oral Delivery of Paclitaxel	King Abdullah University of Science and Technology (KAUST)	Co-PI	2020-2022	Approved
Development of MERS-CoV Papain Like Protease (PLpro) inhibitors using High Throughput Screening Methodology	King Abdullah University of Science and Technology (KAUST)	Co-PI	2020-2022	Approved

**Editorial experience**

- **Review Editor** for Bioengineering and Biotechnology at Frontiers (November 2019 – date)
- **Review Editor** for Materials at Frontiers (November 2019 – date)

**Extracurricular activity**

- Graduate Student Representative at the Faculty council for the academic year 2017/2018, Pharmacy Graduate Students Association (PGSA), Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta
- Head of the media team at the Saudi Student Association in Edmonton for the 2018/2019 academic year
- Vice president of the Saudi Student Association in Edmonton for the 2017/2018 academic year
- Acting president of Saudi Student Association in Edmonton, June-August 2016
- Graduate Student Representative at the Graduate Committee for the academic year 2016/2017, Pharmacy Graduate Students Association (PGSA), Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta
- Semi-finalist at the University of Alberta Three Minute Thesis (3MT) competition, (campus wide), March 2016
- President of the Canadian biomaterials society- Alberta student chapter for 2015/2016 academic year
- Graduate Student Representative at the Faculty/Staff Awards Committee for the academic year 2015/2016, Pharmacy Graduate Students Association (PGSA), Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta
- Treasurer of the Canadian biomaterials society- Alberta student chapter for 2014/2015 academic year
- Communication Director of the Canadian biomaterials society- Alberta student chapter for 2013/2014 academic year

**Professional Affiliations:**

- Member of the Canadian Society for pharmaceutical sciences (CSPS) Since 2012
- Member of the Canadian Biomaterials Society (CBS) Since 2012
- Member of the Canadian Society of chemistry (CSC) Since 2013
- Member of the Saudi Pharmaceutical Society, Riyadh. Since 2007

**Honors & Awards:**

- A recipient of a scholarship from the government of Saudi Arabia administered by the Saudi Arabian Cultural Bureau in Canada - 2012
- Award for superior academic achievement from the Saudi Cultural Bureau – 2013
- Invited member to Golden Key International Honour Society. (Membership into Golden Key is offered to undergraduate and graduate students recognized to be among the top 15% of their class by GPA) - 2013
- Graduated from college with Second Class Honor – 2011
- Best-poster award, 1st research day, college of pharmacy, King Saud university – 2011
- Excellence Reward from King Saud University – 2011
- Excellence Reward from King Saud University – 2008

**References:**

Available upon request.