

FAKHRUL AHSAN, Ph.D.

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Keywords: Pulmonary arterial hypertension (PAH), 3D printing, bio-printing, microfluidics, and tissue chip models for PAH, drug delivery, lung, respiratory, inhalation, microparticles, nanoparticles, liposomes, pulmonary arterial hypertension, PLGA, pharmacokinetics, preclinical, drug development, biopharmaceutics, and bioequivalence,.

EMPLOYMENT

Chief Scientific Officer (Jan. 2023-Present): California Northstate University: Responsible for overseeing University's research program and establishing pharmaceutical manufacturing facility.

Program Director (Jan. 2023-Present): Doctoral Program in Pharmaceutical and Biomedical Sciences, California Northstate University.

University Distinguished Professor (Nov. 2020-Present): Department of Pharmaceutical and Biomedical Sciences, College of Pharmacy, California Northstate University.

Professor (Sept. 2016–November 2020): Department of Pharmaceutical Sciences, School of Pharmacy, Texas Tech University Health Sciences Center.

University Distinguished Professor (September 2015–November 2020): Department of Pharmaceutical Sciences, School of Pharmacy, Texas Tech University Health Sciences Center.

Graduate Program Director (February 2013 – November 2020): Graduate Program in Pharmaceutical Sciences, School of Pharmacy, Texas Tech University Health Sciences Center.

Associate Professor of Pharmaceutics with Tenure (September 2008 –August 2016): Department of Pharmaceutical Sciences, School of Pharmacy, Texas Tech University Health Sciences Center.

Assistant Professor of Pharmaceutics (September 2001 - August 2008): Department of Pharmaceutical Sciences, School of Pharmacy, Texas Tech University Health Sciences Center.

Postdoctoral Research Scholar (December 1999 - August 2001): School of Medicine, University of Alabama at Birmingham.

Postdoctoral mentor: Dr. Dennis Pillion, Professor, Department of Pharmacology and Toxicology. Field of study: Nasal delivery of peptide drugs

Formulation Scientist (June 1992 - September 1994): Beximco Pharmaceuticals Ltd, the largest pharmaceutical company in Bangladesh.

Research Fellow (October 1994- September 1995): Department of Pharmaceutical Technology, School of Pharmacy, Madrid University.

Field of study: Formulations of poorly soluble drugs

Mentor: Dr. Maria D. Veiga

Funding: Spanish Government

EDUCATION

Ph.D. in Pharmaceutics, 1999; Department of Pharmaceutical Technology, School of Pharmacy, University of Madrid (Universidad Complutense De Madrid)

*Grade received: *summa cum laude**

Mentor: Dr. Maria D. Veiga

Funding: Spanish Government

Ph.D. Dissertation title: Preparation and characterization of inclusion complex of tolbutamide and chlorpropamide with β -cyclodextrin: Influence of different surfactants on the phenomenon of inclusion.

Master of Pharmacy (Research group), 1992; University of Dhaka, Dhaka, Bangladesh

Grade received: First Class standing (equivalent to GPA of 4.0)

M. Pharm. Dissertation title: Microencapsulation of diclofenac sodium and the in-vitro release profiles of the microcapsules

Bachelor of Pharmacy (Honors) 1990; University of Dhaka, Dhaka, Bangladesh

Grade received: First Class standing (equivalent to GPA of 4.0)

LICENSES AND CERTIFICATIONS

Passed the Foreign Pharmacy Graduate Equivalency Exam (FPGE) offered by the NABP. Florida Pharmacy Board Certified Pharmacy Graduate Intern

AWARDS AND HONORS

- [1]. Member, Teaching Team of the Year Drug Delivery System, voted by the first-year pharmacy students, 2020
- [2]. Member, Teaching Team of the Year Basic Pharmacokinetics, voted by the 2nd -year pharmacy students, 2020
- [3]. Chair: DOD Covid-19 grant review panel 2020
- [4]. Co-Chair: NIH SBIR and STTR Study Section 2017, 2019, 2020
- [5]. Review Panel Member: DOD Respiratory Study Section, 2015, 2016, 2017, 2018, 2019
- [6]. Member, Teaching Team of the Year, voted by the first-year pharmacy students, 2019
- [7]. Member, Teaching Team of the Year, voted by the first-year pharmacy students, 2014
- [8]. Mentor of the Year, elected by the Pharmaceutical Science Graduate students, 2012
- [9]. Team Leader of the Teaching Team of the Year, voted by the first-year pharmacy students, 2010
- [10]. NIH Ad-hoc reviewer (2009-present)
- [11]. NHLBI GO TRIP Study Section, 2009
- [12]. Review Panel Member: American Heart Association, Study Section, 2012-2014
- [13]. Review Panel Member: DOD Nano-medicine, Study Section, 2010
- [14]. Editorial board member: *Journal of Drug Targeting*, 2009-2011
- [15]. Associate Editor: *Journal of Drug Targeting*, January 2011-2015
- [16]. Editorial Board Member: *European Journal of Pharmaceutical Sciences*, June 2011 - present
- [17]. Editorial Board Member: *Journal of Pharmacy and Pharmaceutical Sciences*, June 2011 - present
- [18]. Recipient of the JSPS (Japanese Society for the Promotion of Science) Invitation Fellowship, 2005
- [19]. Recipient of the Texas Tech University Health Sciences Center President's Young Investigator Award, 2004
- [20]. Recipient of the University of Alabama Postdoctoral Career Enhancement Award, 2001
- [21]. Recipient of an International Scholarship from the Spanish Government for doctoral studies at the University of Madrid, Madrid, Spain, 1994-1999

INVITED ORAL PRESENTATIONS

- [1]. Targeted inhalable nanoparticles for pulmonary arterial hypertension (PAH), presented at Regeneron Inc. Feb. 22, 2023.
- [2]. Novel Drug Delivery and Microfluidic Systems for Better Therapy, Diagnosis and Understanding of PAH, Presented at Annual Research Day, Oklahoma University School of Pharmacy, May 17th, 2021
- [3]. Microfluidic Devices to Better Understand the Pathophysiology of and to Use as a Diagnostic tool for PAH, Webinar for International Society for Aerosol Medicine, July 10, 2020.
- [4]. Repurposing rosiglitazone, a PPAR- γ agonist and oral antidiabetic, as an inhaled formulation, for the treatment of PAH, 22nd Congress of the International Society for Aerosol Medicine (May 26-29, 2019)
- [5]. Microfluidic tissue chips for pulmonary vascular diseases, 22nd Congress of the International Society for Aerosol Medicine (May 26-29, 2019)
- [6]. PAH on a chip and respiratory drug delivery, Department of Internal Medicine, University of Alabama at Birmingham (October 13, 2018)
- [7]. Microfluidic tissue chips for studying PAH pathophysiology and therapy, China Heart Congress 2018, Beijing, China (August 3-5, 2018).
- [8]. Microfluidic tissue chips for the pathophysiology, therapy and diagnosis of PAH, Division of Pediatric, University of Colorado in Denver (June 4, 2018).

- [9]. Inhalational drug delivery: Principle and device, presented at Maternity and Children Pharmaceutical Care Symposium, Jeddah, Kingdom of Saudi Arabia (April 27-29, 2016).
- [10]. Targeted inhalable nanoparticles for pulmonary arterial hypertension (PAH), presented at The Perelman School of Medicine, University of Pennsylvania (February 16, 2016).
- [11]. Targetable inhaled drug delivery systems for respiratory disorders: presented at the School of Pharmacy, Prince Sattam Bin Abdul Aziz University, Al-Kharj, Saudi Arabia (May 3, 2015).
- [12]. Pharmaceutical engineering of fasudil for the treatment of PAH: presented at Respiratory Drug Delivery (RDD) Europe 2013, Berlin, Germany (May 21-24, 2013).
- [13]. Inhaled drug therapy for pulmonary hypertension: presented at the Long March Asia-Pacific Congress of Pulmonary Circulation and Thromboembolic Diseases, Beijing, China (May 10-12, 2013).
- [14]. Macrophage uptake, important to avoid: presented at the Nanotoxicology and Nanomedicine Symposium at the 19th Congress of the International Society for Aerosol Medicine 2013, School of Medicine, University of North Carolina at Chapel Hill, NC (April 6, 2013).
- [15]. Targeted and inhalational delivery of fasudil for the treatment of pulmonary arterial hypertension: presented at the PharmaTech International Conference and Exhibition 2012, Kuala Lumpur, Malaysia (November 22, 2012).
- [16]. Principles and practice of pulmonary drug delivery: presented to the Graduate Students at Seoul National University under the World-Class University Program (September 13-15, 2010).
- [17]. Absorption of insulin from the respiratory route: presented at the Symposium on Pulmonary Absorption of Macromolecules at the Novo Nordisk Pharmaceutical Company in Copenhagen, Denmark (January 18, 2007).
- [18]. Long circulating formulations of low molecular weight heparins: presented at the International Symposium for Nano-bio Drug Delivery Systems. Seoul National University, Seoul, South Korea (September 1, 2006).
- [19]. Teaching, Learning and Research, the American Way: presented at the Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo, Japan (July 18, 2005).
- [20]. Alkylglycoside mediated delivery of low molecular weight heparins via the respiratory route: presented at the Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo, Japan (July 11, 2005).
- [21]. Cyclodextrins and alkylglycosides in nasal drug delivery: presented at the TTUHSC School of Pharmacy upon invitation of the Associate Dean for Research (April 4, 2003).

ORAL PRESENTATIONS AT SCIENTIFIC MEETINGS:

- [1]. A two-compartment tissue-chip to recapitulate the right ventricle and pulmonary artery as a single functional unit for studying PAH-induced RVH and to optimize PAH therapy, Biomedical Engineering Society (BMES), Philadelphia, PA (October 16-19, 2019).
- [2]. Circulating endothelial cells (CECs) as a diagnostic and prognostic marker for pulmonary arterial hypertension (PAH): a proof of concept study in PAH patients, American Association of Pharmaceutical Scientists (AAPS), San Antonio, TX (November 3-6, 2019).
- [3]. Multi-purposable filaments of HPMC for 3D printing of medications with tailored drug release and timed-absorption, the Annual Meeting of EUFEPS, Athens, Greece (May 24-26, 2018)
- [4]. Inhaled PLGA Particles of Rosiglitazone, oral antidiabetic, and SNAP, Nitric oxide donor as a promising targeted therapy for PAH, The Saudi Association for Pulmonary Hypertension, Dubai, UAE (April 5-7, 2018).
- [5]. Two-compartment tissue-chip for studying right ventricular hypertrophy induced by pulmonary arterial hypertension, BMES Annual Meeting, Atlanta, GA (October 17-20, 2018).
- [6]. Capturing, Counting and Identifying CECs: A potential diagnostic marker for patients with Pulmonary Arterial Hypertension, AAPS Annual Meeting, Washington, DC (November 4-7, 2018).
- [7]. On demand and point-of-care printing of tablets for sustained drug delivery and personalized dosing: Inside 3D Printing, San Diego, CA (December 4-5, 2017).
- [8]. Engineered PLGA particles of montelukast plus heparin for combination therapy in asthma: 20th Congress of the International Society of Aerosols in Medicine, Munich, Germany (May 30 - June 3, 2015).
- [9]. A cocktail of superoxide dismutase and fasudil encapsulated in targeted inhalable liposomes prevents PAH progression at a reduced dosing frequency: AAPS Annual Meeting and Exposition San Diego, CA (November 2-6, 2014).

- [10]. Aerosolized targeted nano-erythroosomes containing fasudil, a rho-kinase inhibitor, for the treatment of pulmonary arterial hypertension: Drug Delivery to the Lungs - DDL24, Edinburgh, Scotland (December 11-13, 2013).
- [11]. Thrombus targeted nanocarriers attenuate bleeding complications associated with conventional thrombolytic therapy: AAPS Annual Meeting and Exposition, San Antonio, TX (November 10-14, 2013).
- [12]. Efficacy testing of montelukast loaded large porous particles in an allergen-induced rat asthma model: 40th Annual Meeting of the Controlled Release Society, Honolulu, HI (July 21-24, 2013).
- [13]. Feasibility testing of low molecular weight heparin (LMWH)-loaded large porous PEG-PLGA microparticles for the treatment of asthma: 19th Congress of the International Society of Aerosols in Medicine, Chapel Hill, NC (April 7-10, 2014).
- [14]. Prolonged pulmonary vasodilation by inhaled liposomes of fasudil in monocrotaline (MCT)-induced rat model of PAH: Annual Meeting & Exposition of the Controlled Release Society National Harbor, MD (July 30 - August 3, 2011).

GRANTSMANSHIP

Current Research Support:

- [1]. R42HL151045 (Mann) 9/2020-8/2023: \$113,997.00, \$352,113, \$352,404 in 1st, 2nd and 3rd years
Title: Inhaled Fasudil and DETA NONOate CAR-Targeted Liposomes for PAH
Objective: Conduct IND-enabling studies for an inhalable and targetable liposomal formulation of two anti-PAH drugs: fasudil and DETA NONOate.
Role: PI
- [2]. 1R01HL144590-01, NIH 02/2019-01/2023 \$356,000/Year for four years
Title: Recapitulating of sex-disparity in PAH on a microfluidic device and elucidation of the differences and similarities in the development, progression and therapy of PAH male versus female patients.
Objective: Assess the differences between male and female regarding PAH disease development, progression, and response to therapy.
Role: PI
- [3]. Cardiovascular Medical Research and Education Funds 05/2021-05/2023, \$50,00/year for three years
Title: Inhalable siRNA-loaded-targeted-liposomes for silencing genes implicated in PAH pathogenesis
Objective: Develop inhalable siRNA-based therapy for PAH
Role: Principal Investigator
- [4]. Cardiovascular Medical Research and Education Funds 05/2021-05/2023, \$55,00/year for two years
Title: Feasibility study for mass production of polymethyl methacrylate (PMMA)-based "PAH-on-a-Chip" for investigators engaged in PAH research.
Objective: Scale up PAH on a chip fabrication process
Role: Principal Investigator

Completed Research Supports

- [1]. 1R01HL114677-01A1, NIH 4/2015-3/2021 (NCE) \$271,000/Year for four years
Title: Targetable and inhalable nanoparticle-based combination therapy for PAH
Objective: To develop combination therapy for PAH using targeted delivery systems
Role: Principal Investigator
- [2]. Cardiovascular Medical Research and Education Funds 05/2017-08/2021 \$54,046/year for three years
Title: PAH-mimicking chip to elucidate sex-based pathogenesis to develop gender-specific therapy
Objective: To understand why PAH afflicts more women than men and explain why PAH-afflicted women live longer than PAH-afflicted men
Role: Principal Investigator
- [3]. H122006, TTUHSC Internal Grant 01/2016-12/2021 \$75,000/year for 4 years
Title: Medication shelf-life extension program

Objective: To develop a scientific basis, based on experimental data that can be used to extend the shelf-lives of frequently used drugs beyond the standard 16-20 months.

Role: Principal Investigator

- [4]. Topadur Pharma Inc., Switzerland (01/01/2020-12/31/2020) \$6,500 for the entire project
Title: Conduct dose-response study for therapeutic efficacy of an investigational drugs in PAH animals
Objective: Assess the feasibility of using a patented drug as an alternative to currently used sildenafil.
Role: PI
- [5]. Beacon Pharm, Dhaka, Bangladesh (01/01/2020-12/31/2020) \$7,500 for the entire project.
Title: Conduct biopharmaceutical studies for calcium tablets in rat models
Objective: Evaluate whether calcium tablets produced by Beacon Pharma have better bioavailability than commercially available calcium tablets.
Role: PI
- [6]. The International Foundation for Ethical Research (01/2019-6/2020)
Title: A micropattern-engraved two-compartment tissue-chip as a non-animal model for studying right-ventricular hypertrophy induced by pulmonary arterial hypertension
Objective: To develop a tissue chip for right ventricular hypertrophy induced by PAH that encapsulates the salient features of the pathology of various subclasses PAH of world health organization (WHO) Class I.
Role: Faculty Sponsor
- [7]. RP130266, CPRIT, Texas: 12/2013-9/2016 \$777,268 for the entire project
Title: Rational redox-driven non-toxic therapeutic strategies for pediatric brain cancer
Objective: To develop intranasal delivery systems for redox-driven therapeutic agents to treat pediatric brain cancer
Role: Co-Investigator
- [8]. Neofluidics LLC (Lubbock, TX): 9/2014-12/2015 \$25,000 for the entire project period
Title: NeoPlate: a nanoliter volume drug screening device
Objective: To validate a drug screening chip
Role: Principal Investigator
- [9]. 13PRE17030004, AHA 7/13-6/15 \$25,000/year for two years
Title: Stealth delivery system for targeted and triggered release of tissue plasminogen activator
Objective: To develop a heparin-triggered delivery system for thrombolytic macromolecules to attenuate hemorrhagic complication associated with current therapeutic regimen
Role: Faculty Sponsor
- [10]. 1R15HL103431-01, NIH 4/2010-3/2013 \$100,000/year for three years
Title: Anti-PAH drugs in inhalable nanoparticles for sustained pulmonary vasodilation
Objective: To develop nanoparticles for delivery of anti-PAH drugs that will produce selective vasodilation of pulmonary arteries
Role: Principal Investigator
- [11]. R15 HL07133-02, NIH 07/2006-06/2008 \$75,000/year for two years
Title: Long circulating low molecular weight heparins for pulmonary delivery
Objective: To develop a pulmonary formulation of low molecular weight heparin with long duration of action that can be administered non-invasively via the pulmonary route
Role: Principal Investigator
- [12]. R15 HL07133-02, NIH, 7/2004-6/2006 \$75,000/year for two years
Title: Alkylglycoside mediated pulmonary delivery of low molecular weight heparins
Objective: To conduct a feasibility study for pulmonary formulations of low molecular weight heparins for the prevention and treatment of deep vein thrombosis and pulmonary embolism
Role: Principal Investigator
- [13]. 0265182Y, AHA, 7/2004-6/2006 \$75,000/year for two years

Title: Nasal delivery of low molecular weight heparins

Objective: To develop a nasal formulation of low molecular weight heparins using various absorption enhancers.

Role: Principal Investigator

TEACHING EXPERIENCE

- [1]. Pharmacokinetics and Bio-Pharmaceutics
- [2]. Drug Delivery Systems Course Sequence of Pharm.D. Curriculum at Texas Tech Health Sciences Center. Taught all courses either as a team member or team leader of the Drug Delivery Systems course series: DDS I, DDS II and DDS III
- [3]. Advanced Pharmaceutics at the graduate level
- [4]. Drug Development and Discovery
- [5]. Regulatory Affairs
- [6]. Advanced Biopharmaceutics at the graduate level
- [7]. Graduate Pharmaceutics Parts I and II
- [8]. Scientific writing
- [9]. Case Studies I

Current Research Team:

- [1]. Tanoy Sakar, B.E., December 2021-Present
- [2]. Sakib Moinuddin, PhD. Feb. 2022-Present
- [3]. Ariful Islam, Ph.D. April 2023-Present

GRADUATE STUDENTS, POSTDOCTORAL FELLOWS AND VISITING SCIENTISTS TRAINED

Previous graduate students

- [1]. Ali Keshavarz, Ph.D. Graduated in spring 2020
Ph.D. Dissertation: Microfluidic devices for the pathophysiology, diagnosis, therapeutic response in PAH.
- [2]. Ahmed Alobiada, Ph.D. Graduated in spring 2020
Ph.D. Dissertation: Nitric oxide donors (NOD) and an antimalarial drug as a combination therapy for the treatment of pulmonary arterial hypertension
- [3]. Jahidur Rashid, Ph.D. Graduated in summer 2016
Ph.D. Dissertation: PLGA based inhalable particles of sildenafil and rosiglitazone for combination therapy in pulmonary arterial hypertension.
Current employment: Senior Scientist, Pharmacometrics, Clinical Pharmacology at Halozyme Therapeutics, Inc., San Diego, CA
- [4]. Nilesh Gupta, Ph.D. (Graduated in fall 2014; Recipient of the GSBS 2014-2015 Outstanding Graduate Student Award)
Ph.D. Thesis: Homing peptide equipped with cellular and lipidic carriers for inhalational delivery of anti-pulmonary arterial hypertensive drugs
Current employment: Chief Scientific Officer and Co-Founder of Neofluidics LLC, San Diego, CA
- [5]. Kamrun Nahar, Ph.D. (Graduated Fall 2014)
Ph.D. Dissertation: Respirable and targetable particulate delivery systems for PAH therapy
Current Employment: Pharmacologist, US FDA, Washington DC
- [6]. Brijesh Patel, Ph.D. (Graduated in Spring 2014)
Ph.D. Thesis: Inhalable dual drug delivery systems for the treatment of asthma
Current employment: Chief R&D Officer, Advanced Bioderma Inc., Boca Raton, FL
- [7]. Shahriarul Absar Ph.D. (Graduated in spring 2014; Recipient of the GSBS 2013-2014 Outstanding Graduate Student Award)
Ph.D. Thesis: Targeted/triggered delivery of thrombolytic macromolecules for localized clot lysis
Current employment: Director, Regulatory Affairs, Astra Zenneca, MD
- [8]. Vivek Gupta, Ph.D. (Graduated in fall 2010; Recipient of the GSBS 2010-2011 Outstanding Graduate Student Award)

Ph.D. Thesis: Inhalable formulations of PGE₁ for sustained vasodilation in PAH
Current employment: Assistant Professor, St. John's University School of Pharmacy, New York.

- [9]. Chandan Thomas, Ph.D. (Graduated in spring 2009; Recipient of the GSBS 2009-2010 Outstanding Graduate Student Award)
Ph.D. Thesis: Respirable particles for pulmonary delivery of hepatitis B vaccine
Current employment: Consumer Safety Officer, US FDA, Washington DC
- [10]. Shuhua Bai, Ph.D. (Graduated Summer 2008)
Ph.D. Thesis: Inhalable long acting formulations of low molecular weight heparins
Current employment: Professor, Husson University, Bangor, ME
- [11]. Alamdar Hussain, Ph.D. (Graduated in fall 2005; Recipient of the GSBS 2005-2006 Outstanding Graduate Student Award)
Ph.D. Thesis: The safety and efficacy of inhaled insulin formulated with alkylglycosides
Current employment: Associate Professor, American Health Sciences University, Long Beach, CA, OK
- [12]. Fatima Mustafa, M.S. (Graduated in summer 2004)
M.S. Dissertation: Nasal delivery of low molecular weight heparins: In vitro and in vivo evaluations
Current employment: Pharmacist, RiteAid Pharmacy

Post-Doctoral Fellows:

- [1]. Parhiban Rajan, Ph.D. March 2019-Nov. 2019; Current Employment: Postdoctoral fellow UNC Biomedical Department
- [2]. Taslim A. Al-Hilal: Sep. 2015-Jan. 2019; Current Employment: Assistant Professor, University of Texas El Paso, El Paso, TX
- [3]. Farzana Alam: January 2016-December 2018; Current Employment: Assistant Professor, Texas Tech University Health Sciences Center, EL Paso, Texas.
- [4]. Amit Rawat, Ph.D. (Sept. 2006 – Feb. 2008); Current Employment: Sr. Scientist, DPI Pharmaceuticals, San Antonio, TX
- [5]. Tianzhi Yang, Ph.D. (July 2002 – June 2004); Current Employment: Professor, Husson University, Bangor, ME
- [6]. Abdel Azim Zaghloul, Ph.D. (Sept. 2001 – Oct. 2002); Current Employment: Associate Professor, Kuwait University, Kuwait

Research Assistant Professors:

- [1]. Nazir Hussain, Ph.D. Jan. 2021- Decmeber 2021. Current Employment: *Fischer Scientific, Philadelphia, PA*
- [2]. Trieu Ngyuen, Ph.D. June 2021- July 2023; Current Employment: *Unknown*

International Visiting Scientists:

- [1]. Hossamaldeen Abdelrahman, B.Pharm. (Fall-Spring 2016~2017); Teaching and Research Assistant, College of Pharmacy, Al-Azhar University, Cairo, Egypt
- [2]. Samia Hammouda, B.Pharm. (Summer-Fall 2015); Graduate Student, American University in Cairo, Cairo, Egypt
- [3]. Ana Maria Fernandez, Ph.D. (Summer 2015); Assistant Professor, School of Pharmacy, Universidad Complutense de Madrid, Madrid, Spain
- [4]. Hany M Ibrahim, Ph.D. (March 2014 – August 2014); Lecturer, Al-Azhar University, Cairo, Egypt
- [5]. Ramadan Al-Shdefat, Ph.D. (Summer 2014); Dean, School of Pharmacy, Jadara University, Jordan

Summer Interns:

- [1]. Nadin Sultana, MS, summer 2019
- [2]. Jacob Biggers, summer 2018
- [3]. Sanjana Gangane, summer 2017
- [4]. Marwa Abdel-Maguid, summer 2017
- [5]. Lisa Langahan, summer 2016
- [6]. Sanjay Venugopal, summer 2015
- [7]. Shyanne Page, BS, summer 2014
- [8]. Kara Wilhelm, BS, summer 2014

- [9]. Hezhen Wang, Ph.D., summer 2010
- [10]. Sarah Willis, MS, summer 2010

DISSERTATION COMMITTEES SERVED

- [1]. Hussaini Syed Sha Qhattal, Graduated Spring 2013
- [2]. Snehal Padheya, Graduated Spring 2012
- [3]. Sunny Guin, Graduated Summer 2010
- [4]. Fancy Thomas, Graduated Fall 2008
- [5]. Jiukuan Hao, Ph.D., Graduated Spring 2008
- [6]. Sang Kyoon Kim, Ph.D. Graduated Spring 2007 from Gwangju Institute of Science and Technology (GIST), South Korea
- [7]. Seulki Lee, Ph.D., Graduated in fall 2005 from the Gwangju Institute of Science and Technology (GIST), South Korea
- [8]. Kyeongsoon Park, Ph.D. Graduated Fall 2005 from Gwangju Institute of Science and Technology (GIST), South Korea
- [9]. Ragini Vuppugala, Ph.D., Graduated Spring 2005
- [10]. Anitha Palamakula, Ph.D., Graduated Spring 2004
- [11]. Mohammed Nutan, Ph.D., Graduated Summer 2004
- [12]. Rakhi Shah, Ph.D., Graduated Spring 2004

ACADEMIC COMMITTEES SERVED

- [1]. Chair, California Northstate College of Pharmacy Promotion and Review Committee
- [2] Member, TTUHSC Faculty Senate (2014-2016)
- [2]. Member, TTUHSC SOP Dean's Executive Committee (2014-2016)
- [3]. Chair, Research Advisory Committee (2011-2012)
- [4]. Chair, Search Committee for Medicinal Chemistry (Spring 2012)
- [5]. Chair, Search Committee for Instructor Pharmaceutics (Spring 2010 and Fall 2010)
- [6]. Chair, Faculty Affairs Committee (2010-2011)
- [7]. Member, Faculty Affairs Committee (2009-2012)
- [8]. Member, Peer Committee for Promotion and Tenure (2009-present)
- [9]. Member, Search Committee for Chair of Department of Pharmaceutical Sciences (Spring 2009 - 2012)
- [10] Member, Search Committee for Instructor of Pharmaceutics (Spring 2009)
- [11]. Chair, Search Committee for Associate Dean for Faculty Development (2008-2009)
- [12]. Chair, Faculty Development Committee (2008-2010)
- [13]. Member, Graduate Program Committee (2009-present)
- [14]. Member, Search Committee for Assistant/Associate/Full Professor of Pharmacology (2008-present)
- [15]. Chair, Search Committee for Assistant/Associate/Full Professor of Pharmaceutics (2006-2008)
- [16]. Chair and Member, Faculty Development Committee (2004-2006)
- [17]. Member, Student Affairs Committee (2002-2004)
- [18]. Member, Graduate Program Committee (2004-2006)
- [19]. Member, Search Committee for Drug Delivery Laboratory Instructor (2002-2003)
- [20]. Member, Search Committee for Assistant Professor in Drug Metabolism (2002-2003)

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

- [1]. American Association for Cancer Research (AACR), 2016-present
- [2]. Biomedical Engineering Society (BMES), 2013-present
- [3]. American Association of Pharmaceutical Scientist (AAPS), 2000-present
- [4]. International Society for Aerosol Medicine, 2008-present
- [5]. Royal Chemical Society 2017-Present

PUBLICATIONS

Research Articles

- [1]. Sarkar T, Nguyen T, Moinuddin SM, Stenmark KR, Nozik ES, Saha D, **Ahsan F***. (2022) A protocol for fabrication and on-chip cell culture to recreate PAH-afflicted pulmonary artery on a microfluidic device. *Micromachines*,13(9):1483. doi: 10.3390/mi13091483. PMID: 36144106; PMCID: PMC9504537.

- [2]. Nguyen T, Ho L, Moinuddin SM, Sarkar T, Saha D, **Ahsan F*** (2022) Multicellular cell seeding on a chip: new design and optimization towards commercialization. *Biosensors* (8):587. doi: 10.3390/bios12080587. PMID: 36004984; PMCID: PMC9405756.
- [3]. Nguyen T, Sarkar T, Tran T, Moinuddin SM, Saha D, **Ahsan F***. (2022) Multilayer soft photolithography fabrication of microfluidic devices using a custom-built wafer-scale PDMS slab aligner and cost-efficient equipment. *Micromachines*, 13(8):1357. doi: 10.3390/mi13081357. PMID: 36014279; PMCID: PMC9412704.
- [4]. Al-Hilal TA, Hossain MA, Alobaida A, Alam F, Keshavarz A, Nozik-Grayck E, Stenmark KR, German NA, **Ahsan F*** (2021) Design, synthesis and biological evaluations of a hypoxia-activated prodrug of fasudil, a ROCK inhibitor, to reduce its systemic side-effects. *Journal of Controlled Release*, 334:237-247.
- [5]. Al-Hilal TA, Keshavarz A, Kadry H, Lahooti B, Al-Obaida A, Ding Z, Li W, Kamm R, McMurtry IVF, Lahm T, Nozik-Grayck E, Stenmark KR, **Ahsan F*** (2020) Pulmonary-arterial-hypertension (PAH)-on-a-chip: fabrication, validation and application. *Lab on a Chip*, 20:3334-3345.
- [6]. Keshavarz A, Alobaida A, McMurtry IF, Nozik-Grayck E, Stenmark KR, **Ahsan F*** (2019) CAR, a homing peptide, prolongs pulmonary preferential vasodilation by increasing pulmonary retention and reducing systemic absorption of liposomal fasudil. *Molecular Pharmaceutics*, 16:3414-3419.
- [7]. Kadry H, Wadnap S, Xu C, **Ahsan F*** (2019) Digital light processing (DLP) 3D-printing technology and photoreactive polymers in fabrication of modified-release tablets. *European Journal of Pharmaceutical Sciences (EJPS)*, 135:60-67. Selected as the Best Research Paper of the Year 2019 of all manuscripts published in EJPS.
- [8]. Rashid J, Nozik-Grayck E, McMurtry IF, Stenmark K, **Ahsan F*** (2019) Inhaled combination of sildenafil and rosiglitazone improves pulmonary hemodynamics, cardiac function, and arterial remodeling. *American Journal of Physiology Lung Cellular and Molecular Physiology*. 316: L119-L130.
- [9]. Rashid J, Alobaida A, Al-Hilal TA, Hammouda S, McMurtry IF, Grayck EN, Stenmark KR, **Ahsan F*** (2018) Repurposing rosiglitazone, a PPAR- γ agonist and oral antidiabetic, as an inhaled formulation, for the treatment of PAH. *Journal of Controlled Release*, 280:113-123.
- [10]. Kadry H, Al-Hilal TA, Keshavarz A, Alam F, Xu C, Joy A, **Ahsan F*** (2018) Multi-purposable filaments of HPMC for 3D printing of medications with tailored drug release and timed absorption. *International Journal of Pharmaceutics*, 544: 285-296.
- [11]. Rashid J, Nahar K, Raut S, Keshavarz A, **Ahsan F*** (2018) Fasudil and DETA NONOate, loaded in a peptide-modified liposomal carrier, slow PAH progression upon pulmonary delivery. *Molecular Pharmaceutics*, 15: 1755-1765.
- [12]. Hanson S, Terry M, Power G, Wilson S, Alam F, **Ahsan F**, Blood A, Giri P (2018) Inhaled fasudil lacks pulmonary selectivity in a thromboxane-induced acute pulmonary hypertension model of newborn lambs, *Journal of Cardiovascular Pharmacology and Therapeutics*, 5: 472-480.
- [13]. Patel B, Rashid J, Gupta N, **Ahsan F*** (2017) Low molecular weight heparin-coated and montelukast-filled inhalable particles: a dual-drug delivery system for combination therapy in asthma. *Journal of Pharmaceutical Science*, 106:1124-1135.
- [14]. Rashid J, Patel B, Grayck EN, McMurtry IF, Stenmark KR, **Ahsan F*** (2017) Inhaled sildenafil as an alternative to oral sildenafil in the treatment of pulmonary arterial hypertension (PAH). *Journal of Control Release*, 250:96-106.
- [15]. Gupta N, Rashid J, Nozik-Grayck E, McMurtry IF, Stenmark KR, **Ahsan F*** (2017) Cocktail of superoxide dismutase and fasudil encapsulated in targeted liposomes slows PAH Progression at a reduced dosing frequency. *Molecular Pharmaceutics* 14:830-841.
- [16]. Patel B, Rashid J, **Ahsan F*** (2016) Aerosolizable modified-release particles of montelukast improve retention and availability of the drug in the lungs. *European Journal of Pharmaceutical Sciences*. 96:560-70.
- [17]. Rashid J, **Ahsan F*** (2016). A highly sensitive LC-MS/MS method for concurrent determination of sildenafil and rosiglitazone in rat plasma. *Journal of Pharmaceutical and Biomedical Analysis*. 129: 21-27.
- [18]. Nahar K, Rashid J, Absar S, Al-Saikhan FI, **Ahsan F*** (2016) Liposomal aerosols of nitric oxide (NO) donor as a long-acting substitute for the ultra-short-acting inhaled NO in the treatment of PAH. *Pharmaceutical Research*. 33: 1696-1710.
- [19]. Al-Hilal T, Chung SW, Choi JU, Alam F, Park J, Kim SW, Kim SY, **Ahsan, F**, Kim IS, Youngro B (2016) Targeting prion-like protein doppel selectively suppresses tumor angiogenesis. *The Journal of Clinical Investigation*. 126:1251-1266.

- [20]. Gupta N, Al-Saikhan FI, Patel B, Rashid J, **Ahsan F*** (2015) Fasudil and SOD packaged in peptide-studded-liposomes: properties, pharmacokinetics and ex-vivo targeting to isolated perfused rat lungs. *International Journal of Pharmaceutics*, 488:33-43.
- [21]. Gupta N, Patel B, **Ahsan F*** (2014) Nano-engineered erythrocyte ghosts as inhalational carriers for delivery of fasudil: preparation and characterization. *Pharmaceutical Research*, 31:1553-65.
- [22]. Gupta N, Patel B, Nahar K, Komatsu M, **Ahsan F*** (2014) Cell permeable peptide conjugated nanoerythrocytes of fasudil prolong vasodilation in PAH rats. *European Journal of Pharmaceutics and Bio-Pharmaceutics*, 88:1046-55.
- [23]. Gupta N, Ibrahim HM, **Ahsan F*** (2014) Peptide-micelle hybrids containing fasudil for targeted delivery to the pulmonary arteries and arterioles to treat pulmonary arterial hypertension. *Journal of Pharmaceutical Sciences*, 103:3743-53.
- [24]. Patel B, Gupta N, **Ahsan F*** (2014) Aerosolized montelukast polymeric particles - an alternative to oral montelukast-alleviate symptoms of asthma in a rodent model. *Pharmaceutical Research*, 31: 3095-105.
- [25]. Nahar K, Absar S, Gupta N, Kotamraju VR, McMurtry IF, Oka M, Komatsu M, Grayck EN, **Ahsan F*** (2014) Peptide-coated liposomal fasudil enhances site specific vasodilation in pulmonary arterial hypertension. *Molecular Pharmaceutics*, 11:4374-84.
- [26]. Absar S, Nahar K, Choi S, **Ahsan F**, Yang VC, Kwon YM (2014) Serum albumin-protamine conjugate for biocompatible platform for targeted delivery of therapeutic macromolecules. *Journal of Biomedical Materials Research*, 102:2481-2490.
- [27]. Absar S, Kwon YM, **Ahsan, F*** (2014) Bio-responsive delivery of tissue plasminogen activator for localized thrombolysis. *Journal of Controlled Release*, 177:42-50.
- [28]. Nahar, K, Absar S, Patel B, **Ahsan F*** (2014) Starch-coated magnetite liposomes as inhalable carriers for accumulating fasudil in the pulmonary vasculature. *International Journal of Pharmaceutics*, 464:185-195.
- [29]. Patel B, Gupta N, **Ahsan F*** (2014) Low molecular weight heparin (LMWH)-loaded large porous PEG-PLGA particles for the treatment of asthma. *Journal of Aerosol Medicine and Pulmonary Drug Delivery*, 27:12-20.
- [30]. Gupta V, Gupta N, Shaik IH, Mehvar R, McMurtry IF, Oka M, Nozik-Grayck E, Komatsu M, **Ahsan F*** (2013) Inhaled PLGA particles of prostaglandin E₁ ameliorate symptoms and progression of pulmonary hypertension at a reduced dosing frequency. *Molecular Pharmaceutics*, 10:1655-1667.
- [31]. Absar S, Nahar K, **Ahsan F*** (2013) Thrombus-targeted nanocarrier attenuates bleeding complications associated with conventional thrombolytic therapy. *Pharmaceutical Research*, 30:1663-1676
- [32]. Gupta V, Gupta N, Shaik IH, Mehvar R, McMurtry IF, Oka M, Nozik-Grayck E, Komatsu M, **Ahsan F*** (2013) Liposomal fasudil, a Rho-Kinase Inhibitor, for prolonged pulmonary preferential vasodilation in pulmonary arterial hypertension, *Journal of Controlled Release*, 167:189-199.
- [33]. Absar S, Choi S, **Ahsan F**, Cobos E, Yang VC, Kwon YM (2013) Preparation and characterization of anionic oligopeptide-modified tissue plasminogen activator for triggered delivery: an approach for localized thrombolysis. *Thrombosis Research*, 131: 91-99.
- [34]. Patel B, Gupta V, **Ahsan F*** (2012) PEG-PLGA based large porous particles for pulmonary delivery of a highly soluble drug, low molecular weight heparin. *Journal of Controlled Release*, 160:310-320.
- [35]. Gupta V and **Ahsan F*** (2011) Influence of PEI as a core modifying agent on PLGA microspheres of PGE₁: A pulmonary selective vasodilator. *International Journal of Pharmaceutics*, 413:51-62.
- [36]. Gupta V, Davis M, Hope-Weeks LJ, **Ahsan F*** (2011) PLGA Microparticles encapsulating prostaglandin E₁-hydroxypropyl- β -cyclodextrin (PGE₁-HP β CD) complex for the treatment of pulmonary arterial hypertension (PAH). *Pharmaceutical Research*, 28:1733-1749.
- [37]. Thomas C, Rawat A, Hope-Weeks L, **Ahsan F*** (2011) Aerosolized PLA and PLGA nanoparticles enhance humoral, mucosal and cytokine responses to hepatitis B vaccine. *Molecular Pharmaceutics*, 8:405-415.
- [38]. Bai S and **Ahsan F*** (2010) Inhalable liposomes of low molecular weight heparin for the treatment of venous thromboembolism. *Journal of Pharmaceutical Sciences*, 99:1774-1789.
- [39]. Thomas C, Gupta V, **Ahsan F*** (2010) Particle size influences the immune response produced by hepatitis B vaccine formulated in inhalable particles. *Pharmaceutical Research*, 27:905-919.
- [40]. Bai S, Gupta V, **Ahsan F*** (2010) Inhalable lactose-based dry powder formulations of low molecular weight heparin. *Journal of Aerosol Medicine and Pulmonary Drug Delivery*, 23:97-104.

- [41]. Gupta V, Rawat A, **Ahsan F*** (2010) Feasibility study of aerosolized prostaglandin E₁ microspheres as a non-invasive therapy for pulmonary arterial hypertension. *Journal of Pharmaceutical Sciences*, 99:1774-1789.
- [42]. Bai S, Gupta V, **Ahsan F*** (2009) Cationic liposomes as carriers for aerosolized formulations of an anionic drug: safety and efficacy study. *European Journal of Pharmaceutical Sciences*, 38:165-171.
- [43]. Thomas C, Gupta V, **Ahsan F*** (2009) Influence of surface charge of PLGA particles of recombinant hepatitis B surface antigen in enhancing systemic and mucosal immune responses. *International Journal of Pharmaceutics*, 379:41-50.
- [44]. Bai S, **Ahsan F*** (2009) Synthesis and evaluation of pegylated dendrimeric nanocarrier for pulmonary delivery of low molecular weight heparin. *Pharmaceutical Research*, 26:539-548.
- [45]. Rawat A, Majumder QH, **Ahsan F*** (2008) Inhalable large porous microspheres of low molecular weight heparin: *in vitro* and *in vivo* evaluation. *Journal of Controlled Release*, 128:224-232.
- [46]. Rawat A, Yang T, Hussain A, **Ahsan F*** (2008) Complexation of a poly-L-arginine with low molecular weight heparin enhances pulmonary absorption of the drug. *Pharmaceutical Research*, 25:936-948.
- [47]. Thomas C, Rawat A, Bai S, **Ahsan F*** (2008) Feasibility study of inhaled hepatitis B vaccine formulated with tetradecylmaltoside. *Journal of Pharmaceutical Sciences*, 97:1213-1223.
- [48]. Bai S, Yang T, Abbruscato TJ, **Ahsan F*** (2008) Evaluation of human nasal RPMI 2650 cells grown at an air-liquid interface as a model for nasal drug transport studies. *Journal of Pharmaceutical Sciences*, 97:1165-1178.
- [49]. Bai S, Thomas C, **Ahsan F*** (2007) Dendrimers as a carrier for pulmonary delivery of enoxaparin, a low molecular weight heparin. *Journal of Pharmaceutical Sciences*, 96:2090-2106.
- [50]. Yang T, Hussain A, Bai S, Khalil IA, Harashima H, **Ahsan F*** (2006) Positively charged polyethylenimines enhance nasal absorption of the negatively charged drug, low molecular weight heparin. *Journal of Controlled Release*, 115:289-297.
- [51]. Hussain A, **Ahsan F*** (2006) Indication of transcytotic movement of insulin across human bronchial epithelial cells. *Journal of Drug Targeting*, 14:181-190.
- [52]. Hussain A, Majumder QH, **Ahsan F*** (2006) Inhaled insulin is better absorbed when administered as a dry powder compared to solution in the presence or absence of alkylglycosides. *Pharmaceutical Research*, 23:138-147.
- [53]. Hussain A, **Ahsan F*** (2005) State of insulin self-association does not affect its absorption from the pulmonary route. *European Journal of Pharmaceutical Sciences*, 25:289-298.
- [54]. **Ahsan F***, Klein J (2005) Microarray analysis and response of the lungs to inhaled insulin. *Diabetes technology and therapeutics*, 7: 525-527.
- [55]. Yang T, Arnold JJ, **Ahsan F*** (2005) Tetradecylmaltoside (TDM) enhances *in vitro* and *in vivo* intestinal absorption of enoxaparin, a low molecular weight heparin. *Journal of Drug Targeting*, 13:29-38.
- [56]. Yang T, Mustafa F, Bai S, **Ahsan F*** (2004) Pulmonary delivery of low molecular weight heparins. *Pharmaceutical Research*, 21:2009-2016.
- [57]. Yang T, Mustafa F, **Ahsan F*** (2004) Alkanoylsucroses in nasal delivery of low molecular weight heparins: in-vivo absorption and reversibility studies in rats. *Journal of Pharmacy and Pharmacology*, 56:53-60.
- [58]. Mustafa F, Yang T, Khan MA, **Ahsan F*** (2004) Chain length-dependent effects of alkylmaltosides on nasal absorption of enoxaparin. *Journal of Pharmaceutical Sciences*, 93:675-683.
- [59]. Yang T, Hussain A, Paulson J, Abbruscato TJ, **Ahsan F*** (2004) Cyclodextrins in nasal delivery of low molecular weight heparins: *in vivo* and *in vitro* studies. *Pharmaceutical Research*, 21:1127-1136.
- [60]. Arnold J, **Ahsan F**, Meezan E, Pillion DJ (2004) Correlation of tetradecylmaltoside induced increases in nasal peptide drug delivery with morphological changes in nasal epithelial cells. *Journal of Pharmaceutical Sciences*, 93:2205-2213.
- [61]. Hussain A, Yang T, Zaghoul AA, **Ahsan F*** (2003) Pulmonary absorption of insulin mediated by tetradecyl- β -D-maltoside and dimethyl- β -cyclodextrin. *Pharmaceutical Research*, 20:1551-1557.
- [62]. **Ahsan F**, Arnold JJ, Yang T, Meezan E, Schiewbert E, Pillion DJ (2003) Effects of permeability enhancers, tetradecylmaltoside and dimethyl- β -cyclodextrin, on insulin movement across human bronchial epithelial cells (16HBE14o⁺). *European Journal of Pharmaceutical Sciences*, 20:27-34.

- [63]. Zaghloul AA, Hussain A, Khan MA, **Ahsan F*** (2003) Development of a HPLC method for the determination of cyclosporin-A in human and rat blood and plasma using naproxen as an internal standard. *Journal of Pharmaceutical and Biomedical Analysis*, 31:1101-1107.
- [64]. **Ahsan F**, Arnold JJ, Meezan E, Pillion DJ (2003) Sucrose cocoate, a component of cosmetic preparations, enhances nasal and ocular peptide absorption. *International Journal of Pharmaceutics*, 251:195-203.
- [65]. Arnold JJ, **Ahsan F**, Meezan E, Pillion DJ (2002) Nasal administration of low molecular weight heparin. *Journal of Pharmaceutical Sciences*, 91:1707-1714.
- [66]. Pillion DJ, **Ahsan F**, Arnold JJ, Balusubramanian BM, Piraner O, Meezan E (2002) Synthetic long-chain alkyl maltosides and alkyl sucrose esters as enhancers of nasal insulin absorption. *Journal of Pharmaceutical Sciences*, 91:1456-1462.
- [67]. **Ahsan F**, Arnold J, Meezan E, Pillion DJ (2001) Enhanced bioavailability of calcitonin formulated with alkylglycosides following nasal and ocular administration in rats. *Pharmaceutical Research*, 18:1742-1746.
- [68]. **Ahsan F**, Arnold JJ, Meezan E, Pillion DJ (2001) Mutual inhibition of the insulin absorption-enhancing properties of dodecylmaltoside and dimethyl- β -cyclodextrin following nasal administration. *Pharmaceutical Research*, 18:608-614.
- [69]. Veiga MD, **Ahsan F** (2000) Tolbutamide-hydroxypropyl- γ -cyclodextrin interaction in solution and solid state. *Chemical and Pharmaceutical Bulletin*, 48:793-797.
- [70]. Veiga MD, **Ahsan F** (2000) Influence of surfactants (present in the dissolution media) over the release behavior of tolbutamide from its inclusion complex with β -cyclodextrin. *European Journal of Pharmaceutical Sciences*, 9:291-299.
- [71]. Veiga MD, **Ahsan F** (1998) Solubility study of tolbutamide in monocomponent and dicomponent solutions of water. *International Journal of Pharmaceutics*, 160:43-49.
- [72]. Veiga MD, Díaz PJ, **Ahsan F** (1998) Interactions of griseofulvin with cyclodextrins in solid binary system. *Journal of Pharmaceutical Sciences*, 87:891-900.
- [73]. Veiga MD, **Ahsan F** (1997) Influence of surfactants over the dissolution of mequitazine. *Drug Development and Industrial Pharmacy*, 23:717-719.
- [74]. Veiga MD, **Ahsan F** (1997) Study of surfactants/ β -cyclodextrin interactions over mequitazine dissolution. *Drug Development and Industrial Pharmacy*, 23:721-725.

Review Articles

- [75]. Hye T, Hossain MR, Saha D, Foyez T, **Ahsan F*** (2023). Emerging biologics for the treatment of pulmonary arterial hypertension. *J Drug Target*. 2023;1-15. doi:10.1080/1061186X.2023.2199351
- [76]. Hye T, Moinuddin SM, Sarkar T, Nguyen T, Saha D, and **Ahsan F*** (2023) An evolving perspective on novel modified release drug delivery systems for inhalational therapy, *Expert Opinion on Drug Delivery*, 20:3, 335-348, DOI: 10.1080/17425247.2023.2175814.
- [77]. Shi Q, Wang Y, Moinuddin SM, Feng X, **Ahsan F***. Co-amorphous Drug Delivery Systems: a Review of Physical Stability, In Vitro and In Vivo Performance (2022) *AAPS PharmSciTech*. 23:259. doi: 10.1208/s12249-022-02421-7. PMID: 36123515.
- [78]. Shi Q, Moinuddin SM, Wang Y, **Ahsan F***, Li F (2022) Physical stability and dissolution behaviors of amorphous pharmaceutical solids: Role of surface and interface effects. *Int J Pharm*. 25;625:122098. doi: 10.1016/j.ijpharm.2022.122098
- [79]. Kassem T, Sarkar T, Nguyen T, Saha D, **Ahsan, F*** (2022) 3D Printing in Solid Dosage Forms and Organ-on-Chip Applications. *Biosensors*, 12 (4), 186.
- [80]. Ho L, Hossen N, Nguyen T, Vo A, **Ahsan F***(2022) Epigenetic mechanisms as emerging therapeutic targets and microfluidic chips application in pulmonary arterial hypertension. *Biomedicines*.10(1):170.
- [81]. Hye T, Dwivedi P, Li W, Lahm T, Nozik E, Stenmark KR, **Ahsan F*** (2021) Newer insights into the pathobiological and pharmacological basis of the sex disparity in patients with pulmonary arterial hypertension. *Am J Physiol Lung Cell Mol Physiol* 320:L1025-L1037.
- [82]. Keshavarz A, Kadry H, Alobaida A, **Ahsan F*** (2020) Newer approaches and novel drugs for inhalational therapy for pulmonary arterial hypertension, *Expert Opinion on Drug Delivery*, 17: 439-461.
- [83]. Absar S, Gupta N, Nahar K, **Ahsan F*** (2015) Engineering of plasminogen activators for targeting to thrombus and heightening thrombolytic efficacy. *Journal of Thrombosis Haemostasis*. 13: 1545-1556.

- [84]. Patel B, Gupta N, **Ahsan F*** (2015) Particle engineering to enhance or lessen uptake by alveolar macrophages and to influence therapeutic outcomes. *European Journal of Pharmaceutics and Biopharmaceutics*, 89: 163-174.
- [85]. Rashid J, Absar S, Nahar K, Gupta N, **Ahsan F*** (2015) Newer devices and improved formulations of inhaled insulin. *Expert Opinion on Drug Delivery*. 12:917-928.
- [86]. Nahar K, Gupta N, Gauvin R, Absar S, Patel B, Gupta V, Khademhosseini A, **Ahsan F*** (2013) In vitro, in vivo and ex vivo models to study particle deposition and drug absorption of inhalable pharmaceuticals. *European Journal of Pharmaceutical Sciences*, 49: 805-818.
- [87]. Patel B, Gauvin R, Absar S, Gupta V, Gupta N, Nahar K, Khademhosseini A, **Ahsan F*** (2012) Computational and bioengineered lungs as alternatives to whole animal, isolated organ and cell-based lung models. *American Journal of Physiology: Lung Cellular and Molecular Physiology*, 303: L733-747.
- [88]. Gupta V and **Ahsan F*** (2010) Inhalational therapy for pulmonary arterial hypertension: current status and future prospects. *CRC Critical Reviews in Therapeutic Drug Carrier Systems*, 27:13-370.
- [89]. Bai S, Thomas C, Rawat A, **Ahsan F*** (2006) Recent progress in dendrimer-based nanocarriers. *Critical Reviews in Therapeutic Drug Carrier Systems*, 23:437-495.
- [90]. Hussain A, **Ahsan F*** (2005) The vagina as a route for systemic drug delivery. *Journal of Controlled Release*, 103:301-313.
- [91]. Hussain A, Arnold JJ, Khan MA, **Ahsan F*** (2004) Absorption enhancers in pulmonary protein delivery. *Journal of Controlled Release*, 94:15-24.
- [92]. **Ahsan F***, Rivas IP, Khan MA, Torres-Suárez AI (2002) Targeting to macrophages: role of physicochemical properties of particulate carriers-liposomes and microspheres - on the phagocytosis by macrophages. *Journal of Controlled Release*, 79:29-40.
- [93]. Shah RB, **Ahsan F**, Khan MA (2002) Oral Delivery of Proteins: Progress and Prognostication. *Critical Reviews in Therapeutic Drug Carrier Systems*, 19:135-169.

Book Chapters

- [94]. Hossen N, Hye T, and **Ahsan, F*** (2022) Biopharmaceutics, Pharmacokinetics, and Pharmacodynamics of Biological Products. In Feng et al, Eds, *Biologics and Biosimilars*, CRC Press, pp. 121-136
- [95]. Gupta, N, Patel, B, **Ahsan, F*** (2014) "Pulmonary and nasal drug delivery" in Ashim K. Mitra Eds., *Drug Delivery*, Jones and Bartlett Learning LLC, Burlington, MA, 1:305-334.
- [96]. Patel B, Gupta, N, **Ahsan, F*** (2014) "Barriers that inhaled particles encounter" in ISAM Textbook of Aerosol Medicine, Mary Ann Liebert Inc., New Rochelle, NY.
- [97]. Gupta N, Patel B, Nahar K, Absar S, McMurtry IF, Oka M, Komatsu M, **Ahsan F*** (2013) "Pharmaceutical engineering of fasudil, a rho-kinase inhibitor, for the treatment of pulmonary arterial hypertension". *RDD Europe*, 1:23-34.
- [98]. Gupta V, Thomas C, **Ahsan F*** (2010) "Principles and practices of pulmonary drug delivery" in *Targeted Delivery of Small and Macromolecular Drugs: Problems Faced and Approaches Taken* (Narang AS & Mahato RI Ed.) Taylor and Francis Group, LLC, New York, NY, pp. 371-419.
- [99]. Thomas C, **Ahsan F*** (2009). "Dendrimers: as a carrier for delivery of biopharmaceuticals" in *Delivery Technologies for Biopharmaceuticals: Peptides, Proteins, Nucleic Acids and Vaccines* (Hanne Moerck Nielsen & Lene Jørgensen Ed.) *John Wiley & Sons, Southern Gate, Chichester, UK*, pp. 149-168.
- [100]. Thomas C, **Ahsan F*** (2008) "Nasal delivery of peptide and nonpeptide drugs" in *SC Gad ed. Pharmaceutical Manufacturing Handbook: Production and Process*, John Wiley & Sons, Hoboken, NJ, pp. 591-681.
- [101]. Khan MA and **Ahsan F** (2005) "Formulation and route of administration – influencing drug permeability and absorption" in *Rogge and Taft eds. Preclinical Drug Development*, Marcel Dekker, NY, pp. 221-250.

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POSTER PRESENTATIONS AT NATIONAL AND INTERNATIONAL CONFERENCES:

- [1]. Keshavarz A, Al-Hilal TA, Li W, **Ahsan F** (2019) Capturing, counting and identifying CECs: A potential diagnostic marker for patients with pulmonary arterial hypertension, AAPS Annual Meeting 2019, November 3-6, San Antonio, TX (**Selected as one the three best abstracts submitted to AAPS 2019 meeting**)

- [2]. Rajan P, Shaik A, **Ahsan F** (2019) A microfluidic device with multiple vertical channels separated by porous PDMS membranes to model tissues comprising of three or more layers of cells, BMES 2019 Annual Meeting, October 16-19, Philadelphia, PA.
- [3]. Alobaida AA, **Ahsan, F** (2019). Repurposing artesunate, an antimalarial drug for the treatment of PAH, AAPS Annual Meeting 2019, November 3-6, San Antonio, Texas.
- [4]. Alobaida AA, **Ahsan, F** (2019) Inhaled PLGA Particles of spermine Nonoate, nitric oxide donor, as a promising targeted therapy to reduce pulmonary arterial pressure in PAH, American Thoracic Society 2019 International Meeting, May 17-22, Dallas, TX
- [5]. Keshavarz A, Alobaida AA, **Ahsan, F** (2019) CAR, a homing peptide, prolongs pulmonary preferential vasodilation by increasing pulmonary retention and reducing systemic absorption of liposomal, American Thoracic Society 2019 International Meeting, May 17-22, Dallas, TX
- [6]. Kadry H, Wadnap S, Al-Hilal TA, Xu C, **Ahsan F** (2018) On-demand and point-of-care printing of tablets for sustained drug delivery and personalized dosing” AAPS Annual Meeting 2018, November 4-7, Washington, DC.
- [7]. Raut S, Lahooti B, Keshavarz A, Al-Hilal TA, **Ahsan F** (2018) A tissue chip model mimicking pulmonary sarcoidosis, a rare lung disease. BMES 2018 Annual Meeting, October 17-20, Atlanta, GA.
- [8]. Alobaida A, Al-Hilal TA, **Ahsan F** (2018) Long-acting PLGA microparticles of SNAP, a NO donor, for a protracted reduction of pulmonary arterial pressure in PAH. The AAPS Annual Meeting 2018, November 4-7, Washington, D.C.
- [9]. Alam F, Al-Hilal TA, Alobaida A, Kadry H, Keshavarz A, **Ahsan F** (2018) Development of a scientific framework for extension of medication shelf-lives beyond declared expiration dates. The AAPS Annual Meeting 2018, November 4-7, Washington, D.C.
- [10]. Keshavarz A, Alobaida A, Al-Hilal TA, and **Ahsan F** (2018) An isolated perfused rat lung model for studying controlled and targeted release of fasudil, an anti-PAH drug, from peptide grafted liposomal formulations. AAPS Annual Meeting, November 4-7, Washington, DC.
- [11]. Al-Hilal TA, Keshavarz A, Li W, Stenmark K and **Ahsan F** (2018) A tissue-chip to model the age and sex dependent PAH pathophysiology and develop personalized therapy. 6th World Symposium on Pulmonary Hypertension, Feb 27-March 1, Nice, France.
- [12]. Al-Hilal TA, Keshavarz A, Li W, and **Ahsan F** (2017) Multi-channel chips to simulate pulmonary arterial hypertension (PAH) pathophysiology and screen anti-PAH drugs. 21st International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2017), October 22-26, Savannah, GA.
- [13]. Alobaida A, Al-Hilal TA, **Ahsan F** (2017) Inhaled S-nitroso-N-acetylpenicillamine (SNAP), a nitric oxide donor, for pulmonary preferential reduction of arterial pressure in PAH. 21st International Society for Aerosols in Medicine, June 3-7, Santa Fe, NM.
- [14]. Alobaida A, Rashid J, Al-Hilal TA, **Ahsan F** (2017) Inhaled PLGA particles of rosiglitazone as a promising targeted therapy for PAH. American Association of Pharmaceutical Scientists AAPS conference, November 12-15, 2017, San Diego, CA.
- [15]. Keshavarz A, Al-Hilal TA, **Ahsan F** (2017) Design and fabrication of microfluidic chip mimicking bronchial bifurcations for studying the deposition and effect of anti-asthmatic drugs. 21st International Society for Aerosols in Medicine, June 3-7, Santa Fe, NM.
- [16]. Alam F, Al-Hilal TA, **Ahsan F** (2017) Orally active low molecular weight heparin taurocholate and deoxycholate conjugate for the inhibition of the progression of metastatic ovarian cancer. 11th Biennial Ovarian Cancer Research Symposium, September 12-13, University of Washington Seattle, WA.
- [17]. Al-Hilal TA, Choi JU, Kim IS, Byun Y, **Ahsan F** (2016) De-clotting tumor to improve the perfusion, distribution and efficacy of chemotherapy and nanotherapeutics. Engineering and Physical Sciences in Oncology. June 25-28, Boston, MA
- [18]. Al-Hilal TA, Yang Y, Kim IS, Byun Y, **Ahsan F** (2016) Prion-like protein doppel is a selective therapeutic target for tumoral angiogenesis. AACR Annual Meeting, Apr 16-20, New Orleans, LA.
- [19]. Rashid J, **Ahsan F** (2015) Repurposing of oral sildenafil for inhalational therapy in pulmonary arterial hypertension. AAPS Annual Meeting and Exposition, October 24-30, Orlando, FL.
- [20]. Hasan A, **Ahsan F** (2015) Masitinib—a potential candidate to be an anti-fibrotic drug. AAPS Annual Meeting and Exposition, October 24-30, Orlando, FL.
- [21]. Gupta N, Ibrahim HM, **Ahsan F** (2014) A cocktail of superoxide dismutase and fasudil encapsulated in targeted inhalable liposomes prevent PAH progression at a reduced dosing frequency. AAPS Annual Meeting and Exposition, November 2-6, San Diego, CA.

- [22]. Rashid J, Nahar K, **Ahsan F** (2014) Combination of rho-kinase inhibitor and nitric oxide donor for the treatment of pulmonary arterial hypertension. AAPS Annual Meeting and Exposition, November 2-6, San Diego, CA.
- [23]. Nahar K, Absar S, Rashid J, **Ahsan F** (2014) Peptide decorated inhalable nanocarriers of denta nonoate, a long acting nitric oxide donor, for the treatment of pulmonary arterial hypertension. AAPS Annual Meeting and Exposition, November 2-6, San Diego, California.
- [24]. Gupta N, Woods C, Grayck EN, **Ahsan F** (2014) Targeted liposomes reduce chronic symptoms in PAH rats. Biomedical Engineering Society Annual Meeting, October 22-25, San Antonio, TX.
- [25]. Gupta N, Patel B, **Ahsan F** (2014) Targeted inhalable liposomes containing SOD and fasudil ameliorate symptoms and progression of PAH. AAPS National Biotechnology Conference, May 17-22, San Diego, CA.
- [26]. Gupta N, **Ahsan F** (2014) Nanolipogels containing superoxide dismutase and fasudil: a novel dual drug delivery approach for the treatment of PAH. American Thoracic Society International Conference, May 16-21, San Diego, CA.
- [27]. Patel B, Gupta N, **Ahsan F** (2013) PEG-PLGA Particles of montelukast and heparin for enhanced anti-inflammatory effects in asthma. AAPS Annual Meeting and Exposition, November 10-14, San Antonio, TX.
- [28]. Gupta N, Patel B, **Ahsan F** (2013) Targeted stealth micelles for inhalational delivery of fasudil, a rho-kinase inhibitor. AAPS Annual Meeting and Exposition, November 10-14, San Antonio, TX.
- [29]. Nahar K, Absar S, **Ahsan F** (2013) Inhalable formulation of DETA NONOate, a long acting nitric oxide donor, for the treatment of pulmonary arterial hypertension. AAPS Annual Meeting and Exposition, November 10-14, San Antonio, TX.
- [30]. Absar S, Nahar K, **Ahsan F** (2013) Stealth lipid-based nano-construct for targeted delivery of plasminogen activators: evaluation of burst effect and localized thrombolysis. AAPS Annual Meeting and Exposition, November 10-14, San Antonio, TX.
- [31]. Gupta N, Patel B, Absar S, **Ahsan F** (2013) Targeted inhalable pegylated lipidic nanomicelles containing fasudil: formulation and characterization. Biomedical Engineering Society Annual Meeting, September 25-28, Seattle, WA.
- [32]. Gupta N, Patel B, **Ahsan F** (2013) Targetable and inhalable nanoerythroosomes containing fasudil, a rho-kinase inhibitor, for the treatment of pulmonary arterial hypertension. Annual Meeting of Controlled Release Society, July 21-24, Honolulu, HI.
- [33]. Nahar K, **Ahsan F** (2013) Peptide conjugated liposomes for the targeted and localized delivery of fasudil for the treatment of pulmonary arterial hypertension. Annual Meeting of Controlled Release Society, July 21-24, Honolulu, HI.
- [34]. Absar S, **Ahsan F** (2013) Camouflaged and thrombin-triggered delivery of tissue plasminogen activator for targeted thrombolysis (accepted as the best pharmaceutical paper 2013). Annual Meeting of Controlled Release Society, July 21-24, Honolulu, HI.
- [35]. Gupta N, Patel B, **Ahsan F** (2013) Aerosolized peptide conjugated nanoerythroosomes containing fasudil for the treatment of non-small cell lung cancer. Nineteenth Congress of the International Society of Aerosols in Medicine, April 7-10, Chapel Hill, NC.
- [36]. Absar S, **Ahsan F** (2012) Enzyme cleavable delivery systems for tissue plasminogen activator for site-specific clot busting. AAPS Annual Meeting and Exposition, October 14-18, Chicago, IL.
- [37]. Patel B, **Ahsan F** (2012) Pulmonary delivery of montelukast: in vitro, in vivo an ex vivo evaluation. AAPS Annual Meeting and Exposition, October 14-18, Chicago, IL.
- [38]. Patel B, **Ahsan F** (2012) PEG-PLGA based large porous particles for pulmonary delivery of a highly soluble drug, low molecular weight heparin. AAPS Annual Meeting and Exposition, October 14-18, Chicago, IL.
- [39]. Gupta N, **Ahsan F** (2012) Nanoerythroosomal fasudil exhibits selective cytotoxicity toward cancer cells. AAPS Annual Meeting and Exposition, October 14-18, Chicago, IL.
- [40]. Nahar K, **Ahsan F** (2012) Formulation and characterization of magnetic liposomes containing fasudil, a rho-kinase inhibitor for pulmonary arterial hypertension. AAPS Annual Meeting and Exposition, October 14-18, Chicago, IL.
- [41]. Absar S, **Ahsan F** (2012) Peptide-linked targetable nanoparticles of tissue plasminogen activators for localized thrombolysis. Annual Meeting & Exposition of the Controlled Release Society, July 15-18, Quebec City, Canada.
- [42]. Nahar K, Gupta N, **Ahsan F** (2012) Inhaled PLGA particles of erlotinib as an alternative to oral erlotinib for the treatment of non-small cell lung cancer. Annual Meeting & Exposition of the Controlled Release Society, July 15-18, Quebec City, Canada.

- [43]. Gupta N, Vanapalli SA, **Ahsan F** (2012) Inhalable engineered erythroosomes as natural nano-reservoirs of a rho-kinase inhibitor, fasudil. Annual Meeting & Exposition of the Controlled Release Society, July 15-18, Quebec City, Canada.
- [44]. Nahar K, **Ahsan F** (2011) Magnetic liposomes for targeting to pulmonary arterial hypertension. AAPS Annual Meeting and Exposition, October 23-27, Washington, DC.
- [45]. Gupta N, **Ahsan F** (2011) Shape engineered erythrocytes as micro-reservoirs of fasudil, a novel Rho-kinase Inhibitor. AAPS Annual Meeting and Exposition, October 23-27, Washington, DC.
- [46]. Gupta V, **Ahsan F** (2011) Inhalable microparticulate formulations of PGE1 for sustained and selective vasodilation in PAH. AAPS Annual Meeting and Exposition, October 23-27, Washington, DC.
- [47]. Patel B, **Ahsan F** (2011) PLA and PLGA microparticulate systems for pulmonary delivery of montelukast, a cysteinyl-leukotrine inhibitor. AAPS Annual Meeting and Exposition, October 23-27, Washington, DC.
- [48]. Absar S, Choi S, **Ahsan F**, Kwon YM (2011) Serum albumin-protamine conjugate: a novel carrier for delivery of therapeutic macromolecules. AAPS Annual Meeting and Exposition, October 23-27, Washington, DC.
- [49]. Patel B, **Ahsan F** (2011) Modified heparin reduces HIT as a function of the chain length of chemical moieties conjugated to native heparin. Annual Meeting & Exposition of the Controlled Release Society, July 30-August 3, National Harbor, MD.
- [50]. Gupta V, Gupta N, **Ahsan F** (2011) Inhalable formulations of PGE1 for sustained and pulmonary selective vasodilation in PAH-induced rats. 18th Congress of International Society for Aerosols in Medicines. June 18-22, Rotterdam, Netherlands.
- [51]. Patel B, Wang H, **Ahsan F** (2011) Modification of heparin reduces the incidences of heparin-induced thrombocytopenia. International Symposium on Recent Advances in Drug Delivery Systems, February 13-16, Salt Lake City, UT.
- [52]. Gupta V, **Ahsan F** (2010) Prostaglandin E₁ (PGE₁) encapsulated large porous microparticles – an approach for sustained pulmonary vasodilation. AAPS Annual Meeting and Exposition, November 14-18, New Orleans, LA.
- [53]. **Ahsan F** (2010) Design and evaluation of PGE₁ loaded PLGA nanoparticles by modified nanoprecipitation method for pulmonary arterial hypertension (PAH) treatment. Nanomedicine and Drug Delivery Symposium (NanoDDS), October 3-5, Omaha, NE.
- [54]. Gupta V, **Ahsan F** (2010) Inhalable liposomes of fasudil – a novel rho-kinase inhibitor for the treatment of PAH. Annual Meeting & Exposition of the Controlled Release Society, July 10-14, Portland, OR.
- [55]. Patel B, **Ahsan F** (2010) PEG-PLGA block copolymer microparticles of low molecular weight heparins (LMWH) for pulmonary delivery. Annual Meeting & Exposition of the Controlled Release Society, July 10-14, Portland, OR.
- [56]. Gupta V, **Ahsan F** (2009) Respirable PLGA microspheres of prostaglandin E1-hydroxypropyl- β -cyclodextrin (PGE1-HP- β -CD) Complex for Pulmonary Arterial Hypertension (PAH) Treatment. AAPS Annual Meeting and Exposition, November 8-12, Los Angeles, CA.
- [57]. Gupta V, **Ahsan F** (2009) Core modified PGE1 microspheres as non-invasive approach for pulmonary arterial hypertension (PAH) treatment. International Society for Aerosols in Medicine (ISAM) Biannual Congress, May 10-14, Monterey, CA.
- [58]. Gupta V, Rawat A, **Ahsan F** (2008) Inhalable cationic porous microspheres of PGE1 for treatment of pulmonary arterial hypertension (PAH). AAPS Annual Meeting and Exposition, November 16-20, Atlanta, GA.
- [59]. Thomas C, **Ahsan F** (2008) Surface-modified respirable PLGA microspheres for pulmonary delivery of hepatitis B vaccine. AAPS Annual Meeting and Exposition, November 16-20, Atlanta, GA.
- [60]. Thomas C, **Ahsan F** (2008) Preparation and characterization of porous PLA and PLGA nanoparticles for pulmonary delivery of hepatitis B vaccine. AAPS Annual Meeting and Exposition, November 16-20, Atlanta, GA.
- [61]. Thomas C, **Ahsan F** (2008) Frog palate model as a tool for studying the effect of pharmaceutical excipients on the mucociliary transport rate. AAPS Annual Meeting and Exposition, November 16-20, Atlanta, GA.
- [62]. Bai S, Gupta V, Quamrul M, **Ahsan F** (2008) Lactose-based dry powder formulations of low molecular weight heparin for pulmonary delivery. AAPS Annual Meeting and Exposition. November 16-20, Atlanta, GA.

- [63]. Gupta V, Rawat A, **Ahsan F** (2008) PGE₁ microparticles for the treatment of pulmonary arterial hypertension. Annual Meeting & Exposition of the Controlled Release Society, July 12-16, New York City, NY.
- [64]. Thomas C, Rawat A, **Ahsan F** (2008) Respirable PLGA-microspheres for pulmonary delivery of hepatitis B vaccine. Annual Meeting & Exposition of the Controlled Release Society, July 12-16, New York, NY.
- [65]. Bai S, **Ahsan F** (2008) Inhaled cationic liposomes of low molecular weight heparin in the treatment of venous thromboembolism. Annual Meeting & Exposition of the Controlled Release Society, July 12-16, New York, NY.
- [66]. Bai S, **Ahsan F** (2007) Development and characterization of RGD anchored liposomes for targeting of low molecular weight heparin to venous thromboemboli. AAPS Annual Meeting and Exposition, November 11-15, San Diego, CA.
- [67]. Bai S, **Ahsan F** (2007) Pegylated dendrimeric micelles enhance pulmonary absorption and circulation time of low molecular weight heparin. AAPS Annual Meeting and Exposition, November 11-15, San Diego, CA.
- [68]. Gupta V, **Ahsan F** (2007) Polyethylenimine based formulations for increasing bioavailability and half-life of prostaglandin E1 (PGE₁) via the pulmonary route. AAPS Annual Meeting and Exposition, November 11-15, San Diego, CA.
- [69]. Rawat A, **Ahsan F** (2007) Novel core modified large porous microspheres for sustained delivery of low molecular weight heparin via the pulmonary route. AAPS Annual Meeting and Exposition, November 11-15, San Diego, CA.
- [70]. Rawat A, **Ahsan F** (2007) Nanosized non-ionic surfactant vesicles (niosomes) for enhanced absorption of low molecular weight heparin via the pulmonary route. Annual Meeting & Exposition of the Controlled Release Society, July 7-11, Long Beach, CA.
- [71]. Bai S, **Ahsan F** (2006) In vivo and in vitro characterization of pegylated liposomes for pulmonary delivery of low molecular weight heparin. AAPS Annual Meeting and Exposition, October 29-November 2, San Antonio, TX.
- [72]. Thomas C, Bai S, Byun Y, **Ahsan F** (2006) Deoxycholic acid-conjugated low molecular weight heparin for pulmonary delivery. AAPS Annual Meeting and Exposition, October 29-November 2, San Antonio, TX.
- [73]. Bai S, **Ahsan F** (2006) Long circulating formulation of low molecular weight heparin for pulmonary delivery. Annual Meeting & Exposition of the Controlled Release Society, July 22-26, Vienna, Austria.
- [74]. Bai S, Thomas C, **Ahsan F** (2006) Tetradecyl- β -maltoside mediated pulmonary delivery of hepatitis B vaccine. Annual Meeting & Exposition of the Controlled Release Society, July 22-26, Vienna, Austria.
- [75]. Bai S, Thomas C, **Ahsan F** (2005) Dendrimer-LMWH complex enhances pulmonary absorption of LMWH and prevents deep vein thrombosis. AAPS Annual Meeting and Exposition, November 6-9, Nashville, TN.
- [76]. Bai S, Yang T, Abbruscato TJ, **Ahsan F** (2005) Characterization of RPMI 2650 cell line as a model for nasal drug delivery. AAPS Annual Meeting and Exposition, November 6-9, Nashville, TN.
- [77]. Bai S, **Ahsan F** (2005) Pulmonary absorption of tissue plasminogen activator mediated by tetradecyl maltoside and poly(amidoamine)-succinamic acid dendrimer. Annual Meeting & Exposition of the Controlled Release Society, June 18-22, Miami, FL.
- [78]. Hussain A, **Ahsan F** (2005) Pulmonary delivery of insulin: solution vs. dry powder formulation. Annual Meeting & Exposition of the Controlled Release Society, June 18-22, Miami, FL.
- [79]. Zaghoul AZ, Nutan M, Khan MA, **Ahsan F** (2004) Hydrophilic polymer and particle size control to improve solubility and dissolution of cyclosporine A. AAPS Conference on Pharmaceuticals and Drug Delivery, June 7-9, Philadelphia, PA.
- [80]. Mustafa F, **Ahsan F** (2004). Alkylmaltosides enhance permeability of LMWH across human bronchial epithelial cells. AAPS Conference on Pharmaceuticals and Drug Delivery, June 7-9, Philadelphia, PA.
- [81]. Yang T, **Ahsan F** (2004) Polyethylene amines in nasal delivery of LMWH, enoxaparin. AAPS Conference on Pharmaceuticals and Drug Delivery, Jun 7-9, Philadelphia, Pennsylvania
- [82]. Yang T, Bai S, Mustafa F, **Ahsan F** (2004) Pulmonary delivery of low molecular weight heparins: in vitro and in vivo evaluations. AAPS Annual Meeting and Exposition, November 7-11, Baltimore, MD.
- [83]. Yang T, Hussain A, **Ahsan F** (2004) Poly-L-arginine in pulmonary delivery of low molecular weight heparin, enoxaparin. AAPS Annual Meeting and Exposition, November 7-11, Baltimore, MD

- [84]. Hussain A, Yang T, **Ahsan F** (2004) Evaluation of pulmonary toxicity of alkylmaltosides in rats. AAPS Annual Meeting and Exposition, November 7-11, Baltimore, MD.
- [85]. Hussain A, **Ahsan F** (2004) Comparable absorption profiles of monomeric and hexameric insulin following pulmonary delivery. AAPS Annual Meeting and Exposition, November 7-11, Baltimore, MD.
- [86]. Mustafa F, Yang T, **Ahsan F** (2003) Time-dependent effects of alkylmaltosides on nasal absorption of enoxaparin, a low molecular weight heparin. AAPS Annual Meeting and Exposition, October 26-30, Salt Lake City, UT.
- [87]. Yang T, Hussain A, Mustafa F, **Ahsan F** (2003) Nasal absorption of low molecular weight heparin mediated by cyclodextrins. AAPS Annual Meeting and Exposition, October 26-30, Salt Lake City, UT.
- [88]. Yang T, Mustafa F, Hussain A, **Ahsan F** (2003) Alkylmaltosides in enhancing permeability across Caco-2 cells. AAPS Annual Meeting and Exposition, October 26-30, Salt Lake City, UT.
- [89]. Hussain A, Mustafa F, Yang T, **Ahsan F** (2003) Additive effect of dodecyl- β -maltoside and chitosan in enhancing colonic absorption of insulin in rats. AAPS Annual Meeting and Exposition, October 26-30, Salt Lake City, UT.
- [90]. Yang T, **Ahsan F** (2003) Transfection of bronchial epithelial cells by cationic polyplex and liposomes. Sixth Annual Meeting of the American Society of the Gene Therapy, June 4-8, Washington, DC.
- [91]. Mustafa F, Yang T, Hussain A, Khan MA, **Ahsan F** (2003) Alkylmaltosides as absorption enhancers of nasally administered low molecular weight heparin, enoxaparin. Winter Symposium & 11th International Symposium on Recent Advances in Drug Delivery Systems, March 3-6, Salt Lake City, UT.
- [92]. Arnold J, Meezan E, Pillion D, **Ahsan F** (2002) Rapidly reversible enhancement of nasal permeability to the recombinant growth hormone, Somatropin, formulated with alkylglycosides. AAPS Annual Meeting and Exposition, November 10-14, Toronto, Canada.
- [93]. Hussain A, Zaghloul AA, Pillion D, **Ahsan F** (2002) Intratracheal delivery of insulin formulated with alkylglycosides and modified cyclodextrins. AAPS Annual Meeting and Exposition, November 10-14, Toronto, Canada.
- [94]. Arnold J, **Ahsan F**, Pillion D, Meezan E. (2001) Nasal delivery of enoxaparin, a low molecular weight heparin. AAPS Annual Meeting and Exposition, October 21-25, Denver, CO.
- [95]. **Ahsan F**, Arnold JJ, Pillion D, Meezan E (2001) Sucrose esters of coconut acid (sucrose cocoate) enhance absorption of peptide drugs after nasal and ocular administration. AAPS Annual Meeting and Exposition, October 21-25, Denver, CO.
- [96]. **Ahsan F**, Pillion D, Meezan E (2000) Enhancement of the bioavailability of nasally administered calcitonin formulated with alkylglycoside. AAPS Annual Meeting and Exposition, October 29-November 02, Indianapolis, IN.
- [97]. **Ahsan F**, Mattison LK, Arnold JJ, Pillion D (2000) Interaction between dodecylmaltoside and dimethyl- β -cyclodextrin in a nasal formulation of insulin. The 10th International Symposium on Cyclodextrins, May 21-24, Ann Arbor, MI.
- [98]. Veiga MD, **Ahsan F**, Merino M (1998) Differential scanning calorimetry as an analytical tool in determining the interaction between drug and cyclodextrin. The Ninth International Symposium on Cyclodextrins, May 31-June 3, Santiago de Compostella, Spain.
- [99]. Veiga MD, **Ahsan F** (1998) Hydroxypropyl gamma cyclodextrin as a solubiliser and dissolution-enhancing agent: The case of tolbutamide, a poorly water-soluble drug. The Ninth International Symposium on Cyclodextrins, May 31-June 3, Santiago de Compostella, Spain.
- [100]. MD Veiga, **Ahsan F** (1998) Interactions of surfactants with tolbutamide/ β -cyclodextrin inclusion compound: The consequence in drug dissolution. The Ninth International Symposium on Cyclodextrins, May 31-June 3, Santiago de Compostella, Spain.
- [101]. Veiga MD, **Ahsan F** (1997) Influence of the presence of a third substance over drug/ β -CD inclusion phenomenon. Pharmaceutical Applications of Cyclodextrin Conference, June 29-July 03, Lawrence, Kansas.
- [102]. Veiga MD, **Ahsan F** (1997) Study of some bicomponent and tricomponent solid dispersion of β -CD and two other hydrophilic carriers. Pharmaceutical Applications of Cyclodextrin Conference, June 29-July 03, Lawrence, Kansas.
- [103]. Veiga MD, Diaz PJ, **Ahsan F** (1997) Characterization and evaluation of griseofulvin/cyclodextrin kneaded systems. Pharmaceutical Applications of Cyclodextrin Conference, June 29-July 03, Lawrence, Kansas.

- [104]. Veiga MD, Diaz PJ, **Ahsan F** (1997) Influence of drying technique over mequitazine/ β -cyclodextrin kneaded systems. Pharmaceutical Applications of Cyclodextrin Conference, June 29-July 03, Lawrence, Kansas.
- [105]. Veiga MD, **Ahsan F** (1996) Influence of possible interaction of surfactants and β -cyclodextrin over the solubility of tolbutamide. European Symposium on the Formulation of Poorly Available Drugs, February 5-6, Paris, France.
- [106]. Veiga MD, **Ahsan F** (1995) Dissolution study of mequitazine in several dissolution media with sodium lauryl sulphate, Tween 20 and β -cyclodextrin. First World Meeting of APGI (France) & APV (Germany) on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, May 9-11, Budapest, Hungary.
- [107]. Veiga MD, **Ahsan F**, A.I. Bellever, R. De Miguel (1995) Thermal analysis (DSC, HSM) in the characterization of solid dosage forms. Multidisciplinary Scientific meeting: 150th Anniversary of the Faculty of Pharmacy, December 11-15, Complutense University of Madrid, Spain.
- [108]. Veiga MD, **Ahsan F** (1995) Influence of surfactants over the dissolution of tolbutamide. Fifth Conference on Pharmaceutical Sciences, November 15-18, Madrid, Spain.
- [109]. Veiga MD, Diaz PJ, **Ahsan F** (1995) Preparation and dissolution study of the solid dispersion of Mequitazine with β -cyclodextrin. Second Conference of the Association of the Spanish Professors of Pharmaceutics, February 23-25, Seville, Spain.