

### **Faculty Portfolio**

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#### **Education:**

<b>Year of Graduation</b>	<b>Qualifications (Specializations if any)</b>	<b>University/College, Country</b>
2012	Ph.D. in Pharmaceutical Sciences (Concentration in Medicinal Chemistry)	Temple University School of Pharmacy, Philadelphia, PA, USA
2000	Master of Pharmacy (Pharmaceutical Chemistry)	Birla Institute of Technology, Mesra, Ranchi, Jharkhand, india
1998	Bachelor of Pharmacy	The Tamilnadu Dr.MGR Medical University, Chennai, Tamil nadu, India

#### **Professional experience:**

<b>Year</b>	<b>Positions</b>	<b>University/College, Country</b>
2015 - present	Assistant Professor	College of Pharmacy, King Khalid University, Abha, Saudi Arabia
2017 - 2018	Chairman, Department of Pharmacognosy	College of Pharmacy, King Khalid University, Abha, Saudi Arabia
2014 - 2015	Scientific officer	Izenbio (Contract research organization), Hyderabad, Telangana, India
2012 - 2014	Postdoctoral Research Fellow	Moulder Center for Drug Discovery Research, Temple University School of Pharmacy, Philadelphia, PA, USA

2005 - 2011	Graduate Teaching Assistant	Temple University School of Pharmacy, Philadelphia, PA, USA
2000 - 2004	Lecturer	Sri Ramachandra College of Pharmacy (Sri Ramachandra University), Chennai, Tamilnadu, India
2000 - 2000	Lecturer	Mohamed Sathak A.J. College of Pharmacy, Chennai, Tamilnadu, India

#### Community service activities

Year	Positions & Name of the Project	University/Company, Country
2009-2014	Associate Faculty Member Faculty of 1000 (Post-Publication Peer review)	Temple University School of Pharmacy, Philadelphia, PA

#### Academic/research awards:

Year/Duration of Award	Name of the Award	University/Company, Country
1998-2000	UGC-Junior Research Fellowship	Birla Institute of Technology, Ranchi, Jharkhand, India
2011	Rho Chi Pharmaceutical Honor Society-Beta Lambda Chapter	Temple University School of Pharmacy, Philadelphia, PA
2012 – 2014	Postdoctoral Fellowship-Temple PET/SPET Tracer Initiative	Moulder Center for Drug Discovery Research, Temple University School of Pharmacy, Philadelphia, PA, USA
2016	Certificate of Recognition	College of Pharmacy, King Khalid University, Abha, Saudi Arabia
2019	Best Poster in research Day	College of Pharmacy, King Khalid University, Abha, Saudi Arabia

11/2020	•Second prize in Student Poster session in Research Day	College of Pharmacy, King Khalid University, Abha, Saudi Arabia
05/2022	•First Prize in Student Poster session in Research Day	College of Pharmacy, King Khalid University, Abha, Saudi Arabia

#### Workshops/ Trainings:

Year	Title	University/Company, Country
2002	All India Council for Technical Education (AICTE) sponsored short Term Quality Improvement Programme in 'Advances in Pharmaceutical Chemistry & Drug Research'	KLES College of Pharmacy, Belgaum, India
2002	Workshop on "Molecular Modeling and Pharminformatics"	National Institute of Pharmaceutical Education and Research (NIPER), Chandigarh, India
2003	Indian Society for Technical Education (ISTE) and All India Council for Technical Education (AICTE) sponsored short term training program for Pharmacy teachers on "Drug Development, ADR Management, Importance of Clinical Pharmacist"	Sri Ramachandra College of Pharmacy (Sri Ramachandra University), Chennai, Tamilnadu, India

#### Research interests:

- Privileged structure based approach to identify inhibitors of protein/DNA interaction
- Privileged structure based approach to identify high affinity inhibitors of muscarinic and serotonergic receptors
- Bioactivity guided fractionation
- Isolation and characterization of bioactive constituents.

#### Teaching experience:

- King Khalid University, Abha, Saudi Arabia (2015- present) Course

Course coordinator: PHG 415 (Pharmaceutical Biotechnology);  
PHG 414 (Phytochemistry 2)

Other courses

PHG 321 (Medicinal Chemistry 1)

- PHG 516 (Isolation and identification of natural products)  
 PHG 313 (Phytochemistry 1)  
 PHG 531 (Alternative Medicine)  
 PHTR-548 Mentoring Research project for B.S Pharmacy students
- Graduate Teaching Assistant, Temple University School of Pharmacy, Philadelphia, PA, USA (2005- 2011)

**Pharm.D labs:**

- Pharmaceutics II (Fall 2005 – Spring 2006)  
 Pharmaceutics II & Contemporary Pharmacy Practice (Fall 2006 – Spring 2007)  
 Pharmaceutics I & Contemporary Pharmacy Practice (Fall 2007 – Spring 2008)  
 Pharmaceutics II (including Pharmacogenomics) & Contemporary Pharmacy Practice (Fall 2008 – Spring 2009; Fall 2009 – Spring 2010)  
 Pharmaceutics II (including Pharmacogenomics) and Pharmaceutics I (Fall 2010 – Spring 2011)  
 Pharmaceutics I & II Lab:  
 Graded quizzes and Lab practical exams, gave pre-lab lectures, assisted in lab-prep and proctored exams.  
 Contemporary Pharmacy Practice Lab:  
 Assessed Prescriptions, assisted in lab-prep for parenteral labs, trained students on using HBS software for making prescription labels  
 Pharmacogenomics Lab:  
 Gave pre-lab lectures, assisted in Lab prep, assisted students in DNA quantification.

- Lecturer, Sri Ramachandra College of Pharmacy (Sri Ramachandra University), Chennai, India
- Courses taught:
  - Organic Chemistry II Theory
  - (Chemistry of heterocyclic compounds and Stereochemistry)
  - Organic Chemistry II lab
  - Fundamental Principles of Medicinal Chemistry
  - Chemistry of Natural Products
- Lecturer, Mohamed Sathak A.J. College of Pharmacy, Chennai, India
- Courses taught: Organic Chemistry 1 (Theory and Lab)

**Professional membership:**

Year	Name of the professional Body	Role
2000 - 2004	Association of Pharmaceutical teachers of India	Member

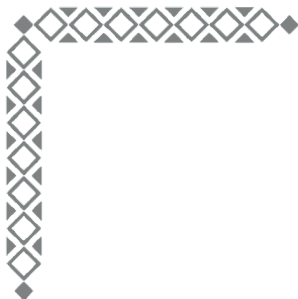
2005 -2014	American Chemical Society	Member
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#### Research grants:

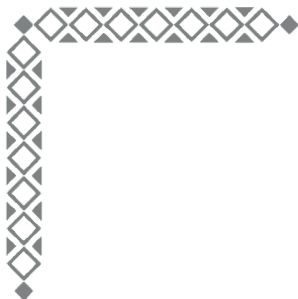
Year/Duration of Grant	Title of the Project	Awarding Body
2023-24	Bioactivity-guided fractionation of <i>Euphorbia Balsamifera</i>	King Khalid University

#### Publications:

<ul style="list-style-type: none"> <li>Annadurai, S., Krynetskaia, Phadke, M.S., Krynetskiy, E., Canney, D.J. Inhibition of sequence independent DNA-binding activity of human recombinant HMGB1 protein with natural triperpines. <i>Der Pharmacia Lettre</i>, 2010, 2(3): 432-443</li> </ul>
<ul style="list-style-type: none"> <li>Annadurai, S., Canney, D.J., Lebo, D., Krynetskaia, N., Krynetskiy, E. Are glycyrrhizin derivatives specific inhibitors of HMGB1/DNA Interactions? <i>Der Pharmacia Lettre</i>, 2011, 3(3):470-477</li> </ul>
<ul style="list-style-type: none"> <li>Annadurai, S., Martinez, R., Dunman, P., Abou-Gharbia, M, Canney, D.J. Design and synthesis of 2-aminothiazole based antimicrobial leads targeting MRSA. <i>Bioorganic &amp; Medicinal Chemistry Letters</i>, 2012, 22, 7719-7725</li> </ul>
<ul style="list-style-type: none"> <li>Butts, A., Koselny, K., Charbier-Rosello, Y., Brown, J., Wang, X., Annadurai, S., Didone, L., Tabroff, J., Childers, W., Abou-gharbia, M., Wellington, M., Cardenas, M., Madhani, H., Heitman, J., Krysan, D., Estrogen receptor antagonists are anti-cryptococcal agents that directly bind EF-hand proteins and synergize with fluconazole in vivo <i>mBio</i>, 2014 5, e0765-13</li> </ul>
<ul style="list-style-type: none"> <li>Annadurai, S., Zhang, M., Gabriel, J, L., Bencheriff, M., Canney, D.J., Ether and carbamate derivatives of quinuclidinols: synthesis and preliminary evaluation as nicotinic ligands, <i>Medicinal Chemistry</i> (Bentham Science), 2016, 12, 1-11</li> </ul>
<ul style="list-style-type: none"> <li>Alsayari, A., Almghaslah., Khaled, A., Annadurai, S., Alkhairy, M.A., Alqahtani, H.A., Alsayed, B.A., Alasiri, R.M., Assiri, A.M., Community Pharmacists' knowledge, attitudes, and practice of herbal medicines in Asir Region, Kingdom of Saudi Arabia, <i>Evidence-Based Complementary and Alternative Medicine</i>, 2018, vol. 18, Article ID 1568139, 7 pages</li> </ul>
<ul style="list-style-type: none"> <li>Alsayari, A., Kopel, L., Salama Ahmed, M., Soliman, S.M.H., Annadurai, S., Halaweish, F.T., Isolation of anticancer constituents from <i>Cucumis prophetarum</i> var. <i>prophetarum</i> through Bioassay-guided fractionation, <i>BMC Complementary and Alternative Medicine</i>, 2018, 18:274</li> </ul>



- Alfaifi, M., Alsayari, A., Gurusamy, N., Louis, J., Elbehairi, SE., Venkatesan, K., Annadurai, S., Asiri, YI., Shati, A., Saleh, K., Alboushnak, H., Handoussa, H., Muhsinah, AB., Motaal, AA. Analgesic, Anti-Inflammatory, Cytotoxic Activity Screening and UPLC-PDA-ESI-MS Metabolites Determination of Bioactive fractions of *Kleinia pendula*. *Molecules*, 2020, 25(2), 418.
- Alsayari A., Muhsinah AB., Almaghaslah D., Annadurai S., Wahab S., Pharmacological Efficacy of Ginseng against Respiratory Tract Infections, *Molecules*, 26, 4095 (July 5, 2021)
- Sanapalli BKR., Yele V., Sigalapalli DK., Gadewal N., Shaik AB., Bhandare RR., Annadurai S., Karri VVSR., Forging of Nicotine for the effective management of diabetic wounds: A hybrid scaffold hopping and molecular dynamics simulation approaches, *Arabian Journal of Chemistry*, 15, 103585 (Available online November 25, 2021)
- Ammaji S., Masthanamma S., Bhandare RR., Annadurai S., Shaik AB., Antitubercular and antioxidant activities of hydroxy and chloro substituted chalcone analogues: Synthesis, biological and computational studies, *Arabian Journal of Chemistry*, 15, 103581 (Available online November 26, 2021)
- Wahab S., Annadurai S., Abullais SS., Das G., Ahmad W., Ahmad MF., Kandasamy G., Vasudevan R., Ali MS., Amir M., Glycyrrhiza glabra (Licorice): A comprehensive Review on its Phytochemistry, Biological Activities, Clinical Evidence and Toxicology, *Plants*, 10, 2751 (December 14, 2021)
- Govindarao K., Srinivasan N., Suresh R., Raheja RK., Annadurai S., Bhandare RR., Shaik AB., Quinoline conjugated 2-azetidinone derivatives as prospective anti-breast cancer agents: In vitro antiproliferative and anti-EGFR activities, molecular docking and in-silico drug likeliness studies, *Journal of Saudi Chemical Society*, 26, 3, 2022, 101471
- Sanapalli BKR., Tyagi R., Shaik AB., Pelluri R., Bhandare RR., Annadurai S., Karri VVSR., L-Glutamic acid loaded collagen chitosan composite scaffold as regenerative medicine for the accelerated healing of diabetic wounds, *Arabian Journal of Chemistry*, 15, 6, 2022, 103841
- Khalid M., Alqarni MH., Wahab S., Annadurai S., Alamri MA., Foudah A.I., Aliarba TM., Akhtar J., Badrudeen Ahmad S., Ameliorative Sexual Behavior and Phosphodiesterase-5 Inhibitory Effects of *Spondias mangifera* Fruit Extract in Rodents: *In Silico, In Vitro and In Vivo Study*, *Journal of Clinical Medicine*, 11, 3732, 2022.
- Chidambaram K., Alqahtani T., Alghazwani Y., Aldahish A., Annadurai S., Venkatesan K., Dhandapani K., Thilagam E., Venkatesan K., Paulsamy P., Vasudevan R., Kandasamy G., Medicinal Plants of *Solanum* Species: The Promising Phyto-Insecticidal Compounds, *Journal of Tropical Medicine*, 4952221 (2022)
- Wahab, S.; Ghazwani, M.; Hani, U.; Hakami, A.R.; Almezizia, A.A.; Ahmad, W.; Ahmad, M.Z.; Alam, P.; Annadurai, S. Nanomaterials-Based Novel Immune Strategies in Clinical Translation for Cancer Therapy. *Molecules* 2023, 28, 1216.
- Dongsar T.S., Dongsar T.T., Molugulu N., Annadurai S., Wahab S., Gupta N., Kesharwani P., Targeted therapy of breast tumor by PLGA-based nanostructures: The versatile function in doxorubicin delivery, *Environmental Research*, 233, 116455, 2023.
- Chandra J., Molugulu N., Annadurai S., Wahab S., Karwasra R., Singh S., Shukla R., Kesharwani P., Hyaluronic acid-functionalized lipoplexes and polyplexes as emerging nanocarriers for receptor-targeted cancer therapy, *Environmental Research*, 233, 116506, 2023



- Abdullatif B.M, Annadurai S., Alharbi MM., Mahnashi M., Abou-Salim MAA., Zaheen MH., Mabkhot Y.N., Synthesis, Biological Evaluation, and in-Silico Molecular Docking Studies of Multifunctional Thiazolidine Derivatives, *Polycyclic Aromatic Compounds* (2023)
- Parveen N., Sheikh A., Molugulu N., Annadurai S., Wahab S., Kesharwani P., Drug permeation enhancement, efficacy, and safety assessment of azelaic acid loaded SNEDDS hydrogel to overcome the treatment barriers of atopic dermatitis, *Environmental Research*, 236, Part 2, 16850 (2023)

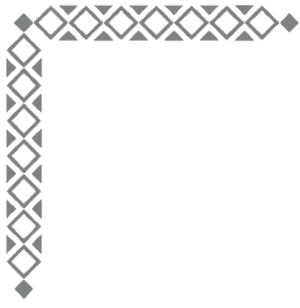
### Conference attendance/presentations:

· Martinez, R., Ramanjulu, M., Siham Y.Q., <b>Annadurai, S.</b> , Ghidu, V., Childers, W., Abou-gharbia, M., Raw Y.N., Is, S., Rasmussen, B., Dunman, P., b-lactam antibiotics – Chemical probes for glutamate subtype 1 transporter, ACS Mid-Atlantic Regional Meeting (MARM), May 31-Jun 2, 2012, Baltimore, MD, USA
· <b>Annadurai, S.</b> , Martinez, R., Dunman, P., Canney, D.J., Abou-Gharbia, M., Lead generation using a privileged structure-based approach, 242nd ACS National Meeting, Aug 28-Sept 1, 2011, Denver, CO, USA (Selected for Sci-Mix interdivisional poster session)
· <b>Annadurai, S.</b> , Krynetskaia, Canney, D. J., Krynetskiy, E. Aggregate based inhibition of HMGB1/double stranded DNA complex formation, AAPS annual meeting and exposition, Nov 8-12, 2009, Los Angeles, CA, USA
· <b>Annadurai, S.</b> , Krynetskaia, N., Krynetskiy, E., Canney, D. J. Design, synthesis and screening of novel inhibitors of HMGB1/DNA complex formation, 235th ACS National Meeting, April 6-10, 2008, New Orleans, LA, USA
· <b>Annadurai, S.</b> , Gao, R., Canney, D.J., Krynetskaia, N., Krynetskiy, E., Development of a Capillary Electrophoresis Mobility Shift Assay (CEMSA) for Screening Inhibitors of DNA/HMGB1 Complex. GRASP, 27th Annual Meeting, June 2007, Piscataway, NJ, USA
· <b>Annadurai, S.</b> , Krynetskaia, N., Krynetskiy, E., Canney, D. J. Glycyrrhetic Acid Derivatives as Inhibitors of HMGB1/DNA Complex Formation, Sixth Annual Dawn B. Marks Research Conference, December, 2006, Temple University, School of Medicine, Philadelphia, PA, USA
· <b>Annadurai, S.</b> , Basu. S.P., Application of Mathematical Models in Drug Research, National Seminar on the application of mathematics in social and industrial sectors in the next millennium, 1999, Birla Institute of technology, India

### GUEST LECTURES/HONOURS

08/2020

- International Virtual Learning Series, Arulmigu Kalasalingam College of Pharmacy, Krishnankoil, Tamilnadu India



- 03/2022 · International E-conference on Recent Advancement in Pharmaceutical and Health Science Domains School of Medical & Allied Sciences, Galgotias University, Uttar Pradesh, India
- 08/2022 · Summer Webinar Series, Periyar College of Pharmaceutical Sciences, Tiruchirappalli, Tamilnadu, India
- 08/2023 · International Conference on the Current Trends in Translational Research, Saveetha College of Pharmacy, Chennai, Tamilnadu, India