CURRICULUM VITAE

ANURADHA
Department of Pharmacy
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OBJECTIVES

Enthusiastic, hardworking Pharmacology and Toxicology research professional seeking a challenging position providing a professional career growth in pharmaceutical industry.

PROFESSIONAL EXPERIENCE

Birla Institute of Technology and Science, Pilani

- Presently working as Research Scholar at BITS Pilani, Pilani campus, Rajasthan, India
- As a part of teaching practice courses handled for first degree (B. Pharm) and higher degree (M. Pharm) on campus are Dispensing Pharmacy, Pharmaceutical Microbiology, Pharmacology, Quality assurance and regulatory affairs and Natural drugs

ACADEMIC CREDENTIALS

- **Ph. D.** in Pharmacology and Toxicology from Birla Institute of Technology and Science, Pilani (BITS, Pilani), Rajasthan (2014-2017)
- **M. S. Pharm.** (Pharmacology and Toxicology) from Department of Pharmacology & Toxicology, National Institute of Pharmaceutical Education and Research (NIPER), Ahmedabad (2011-2013) (cGPA- 9.35)
- **B. Pharmacy** from K.B. Institute of Pharmaceutical Education and Research, Kadi Sarva Vishwavidyalaya, Gandhinagar, India (2007-2011) (68.00%)
- **XII Class**- Kendriya Vidyalaya No. 1, Harni Road, Baroda (CBSE Board) India (2006-2007) (81.00%)
- **X Class**- Kendriya Vidyalaya No. 2, EME Baroda (CBSE Board) India (2004-2005) (86.00%)

Ph. D. SUMMARY

Title: Role of Epigenetics in Modulating Inflammatory Response Mediated by NF-κB through AT_1 or AT_2 receptors in the Development of Renal Failure under Type 2 Diabetic Condition

Summary: Type 2 diabetes induced renal failure, a chronic inflammatory disease is a major cause of end stage renal failure throughout the world. Despite the important role of renin angiotensin system and its receptors in orchestration of nuclear factor-κB (NF-κB) mediated inflammatory cascade remained mystified. Our study was the first to explain the differential regulation of NF-κB, angiotensin converting enzyme and angiotensin converting enzyme 2 in type 2 diabetic renal failure. The study showed the significance of AT_1 receptor antagonist (Telmisartan) and novel orally active AT_2 receptor agonist (Compound 21) combination for the alleviation of inflammation, fibrosis and apoptosis in type 2 diabetic rats' kidney. Our study also demonstrated that the combination of Telmisartan and C21 showed significant influence on epigenetic mechanisms like posttranslational histone modifications including histone acetylation, methylation and ubiquitination which are extremely important for the alleviation of root cause of type 2 diabetes induced nephropathy. Our study further showed that histone increased H2A lysine 119 monoubiquitination at promoter regions of inflammatory (monocyte chemoattractant protein 1) and fibrotic genes (transforming growth factor beta 1) partially contributed to diabetic nephropathy. Thus, our study came up with a novel therapeutic approach, i.e. combination of Telmisartan and C21 which reduces renal inflammation, fibrosis, apoptosis as well as the aberrations in posttranslational histone modifications in diabetic nephropathy and further clinical studies need to be performed in order to check the effect of this combination on human population.

M. S. PHARM. DISSERTATION SUMMARY

Title: Study of in vitro Pharmacokinetic Parameters of Novel Anti Inflammatory Compound

Summary: Desirable pharmacokinetic and toxicity properties are a must for the compound to be converted into a drug molecule and so development of in vitro techniques is important and essential. The in vitro ADME parameters' determination helps in decreasing the chances of failure of drug in further stages of drug development. The dissertation work was aimed at determination of in vitro pharmacokinetic properties of the anti-inflammatory compound, a bis thiazole moiety, MCD-KV 6, whose in vivo activity has already been studied in PERD centre, so as to determine the reasons for its poor bioavailability and devise ways to improve its anti-inflammatory activity. Also in vitro in vivo correlation was established so as to improvise drug profile and shorten the drug discovery period.

COMPETENCIES

- Development of animal models in rats, mice and rabbits for diabetes, metabolic disorders, inflammation and other disorders
- Biochemical study, histopathology & immunohistochemistry
- Gel electrophoresis, protein & histone isolation, Western-blotting
- Administration of drugs and blood withdrawal from various routes of administration
- Invasive blood pressure measurement and vascular reactivity study

HANDS ON EXPERIENCE ON VARIOUS INSTRUMENTS

- Gel electrophoresis unit & transfer apparatus
- Spectrophotometer and multi-plate reader
- Inverted microscope
- Invasive blood pressure measurement instrument
- Vascular reactivity measurement instrument
- Automated tissue processor
- Rotary microtome
- Plethysmometer
- Biochemical analyzer

COMPUTER PROFICIENCY

- Application software viz. EndNote Plus, Graph pad prism 5, ImageJ, Adobe Photoshop
- Scientific data (articles, patents & clinical trials) retrieval from various internet portals like Science Direct, PubMed, Google Scholar, High Wire, Springer

PUBLICATIONS

1. **Pandey A**, Gaikwad AB (2017). AT_2 receptor agonist Compound 21: A silver lining for diabetic nephropathy. *Eur J Pharmacol*. 815:251-257. [Impact Factor: 2.896]

2. **Pandey A,** Gaikwad AB (2017) "Compound 21 and Telmisartan combination mitigates type 2 diabetic nephropathy through amelioration of caspase mediated apoptosis". *Biochem Biophys Res Commun.* 487(4), 827–833. [Impact Factor: 2.297]

3. **Pandey A**, Goru SK, Kadakol A, Malek V, Sharma N, Gaikwad AB (2016) "H2AK119Ub regulates angiotensin II receptor mediated macrophage infiltration and renal fibrosis in type 2 diabetic rats". *Biochimie.* 131: 68-76. [Impact Factor: 3.112]

4. **Pandey A**, Goru SK, Kadakol A, Malek V, and Gaikwad AB (2015) "Differential Regulation of ACE2 and NF-κB by Ang II Receptor Subtypes in Type 2 Diabetic Kidney". *Biochimie*. 118: 71-81. [Impact Factor: 3.112]

5. Goru SK, Kadakol A, Malek V, **Pandey A**, Sharma N, Gaikwad AB (2017) "Diminazene aceturate prevents type 1 diabetic nephropathy through increasing glomerular ACE2 and AT2 receptor expression". *Br J Pharmacol.* 174, 3118-3130. [Impact Factor: 5.491]

6. Kadakol A, Malek V, Goru SK, **Pandey A**, Sharma N, Gaikwad AB (2017) "Esculetin ameliorates insulin resistance and type 2 diabetic nephropathy through reversal of histone H3 acetylation and H2A lysine 119 monoubiquitination". *J Funct Foods.* 35, 256-266. [Impact Factor: 3.114]

7. **Pandey A**, Priyank R, Goru SK, Kadakol A, Malek V, Sharma N, Gaikwad AB (2017) "Esculetin ameliorates hepatic fibrosis in high fat diet induced non-alcoholic fatty liver disease by regulation of FoxO1 mediated pathway". *Pharmacol Rep.* 69(4), 666-672. [Impact Factor: 2.587]

8. Goru SK, Kadakol A, **Pandey A**, Malek V, Sharma N, Gaikwad AB (2016) "Histone H2AK119 and H2BK120 Monoubiquitination Modulate SET7/9 and SUV39H1 in Type 1 Diabetes Induced Renal Fibrosis". *Biochem J* 473: 3937-3949 [Impact Factor: 3.797]

9. Kadakol A, **Pandey A**, Goru SK, Malek V and Gaikwad AB (2015) "Insulin Sensitizing and Cardioprotective Effects of Esculetin and Telmisartan combination by Attenuating Ang II Mediated Vascular Reactivity and Cardiac Fibrosis". *Eur J Pharmacol.* 765:591-7. [Impact Factor: 2.896]

10. Kadakol A, Malek V, Goru SK, **Pandey A**, and Gaikwad AB (2015) "Esculetin Reverses Histone H2A/H2B Ubiquitination, H3 Dimethylation, Acetylation and Phosphorylation in preventing Type 2 Diabetic Cardiomyopathy". *J Funct Foods.* 17:127–136. [Impact Factor: 3.114]

11. Kadakol A, Malek V, Goru SK, **Pandey A**, Bagal MB and Gaikwad AB (2015) "Esculetin Attenuates Alterations in Ang II and Acetylcholine Mediated Vascular Reactivity Associated with Hyperinsulinemia and Hyperglycemia". *Biochem Biophys Res Commun.* 461(2), 342–347. [Impact Factor: 2.297]

12. Goru SK, **Pandey A**, Gaikwad AB. (2016) "E3 ubquitin ligases as novel therapuetic targets for inflammatory diseases". *Pharmacol Res.* 106: 1–9. [Impact Factor: 4.480]

13. **Pandey A**, Kumar GS, Kadakol A, Malek V, Gaikwad AB. (2016) "FoxO1 inhibitors: The future medicine for metabolic disorders?". Curr Diabetes Rev. 12:1-8.

14. **Pandey A**, Malek V, Prabhakar V, Kulkarni YA, and Gaikwad AB. (2015) "Nanoparticles and Neurotoxicity: A Mechanistic Approach". *CNS & Neurological Disorders - Drug Targets.* 14(10):1317-27. [Impact Factor: 2.506]

15. Gaikwad AB, Vidya S, and **Pandey A**., (2015) "Natural HDAC Inhibitors: Nature's Answer to the Cancer". *J Pharm Sci Tech Manage.* 1(1), 26-36.

16. **Pandey A**, Pooja M, Chandak PG and Gaikwad AB. (2014) "PARG Inhibitors Success: A Long Way To Go! ". *Curr Enzyme Inhib.* 10 (2), 81-93.

Book chapter

17. **Pandey A**, Y.A. Kulkarni, Gaikwad AB, (2016). "Curcumin: The epigenetic therapy. In: Fruits, Vegetables, and Herbs". Academic Press: Elsevier, USA. Pp.105-119.

AWARDS AND ACHIEVEMENTS

- Awarded with DST-INSPIRE Fellowship for pursuing doctoral research work
- Awarded with gold medal for academic brilliance in M.S. Pharm (Pharmacology and Toxicology)
- Qualified NIPER JEE 2011 – All India Rank 108
- Qualified GPAT 2011 - All India Rank 681
- Full tuition fees waiver by BITS, Pilani during doctoral studies

PERSONAL PROFILE

Date of Birth	:7th May, 1990
Gender	:Female
Nationality	:Indian
Hobbies	:Music
Languages known	:English, Hindi, Gujarati
Strengths & Positives	:Self-motivated, enthusiastic, hard-working, honest & self-confident Dedicated to complete the given task & learn from mistakes

REFERENCES

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