

Sanjay L. Dholakiya

Department of Pharmaceutical sciences
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Educational Summary:

Ph.D., Pharmacology, Pharmaceutical Sciences Department, St. John's University, NY **2010 – 2015**

- Dissertation title: "Morphine sulfate concomitantly alters mouse stem cells neuronal differentiation and opioid receptor expression."

M.S., Pharmacology and Toxicology, Long Island University, NY **2008 – 2010**

- Dissertation title: "Protective effect of diosmin on lipopolysaccharide-induced PC12 cell death."

B.S., Pharmacy, Rajiv Gandhi University, KA, India **2002 – 2006**

Research Experience:

Doctoral Research: St. John's University, 2010 – 2015 (research advisor: Dr. Frank A. Barile).

- Initiated projects to differentiate mouse embryonic stem cells into neuronal cells, to determine the impact of opioids on neuronal differentiation in stem cells, to investigate developmental regulation of opioid receptors during neuronal differentiation, and to determine molecular mechanisms and regulation of opioid receptor signaling during neuronal development.

Masters Research: Long Island University, 2008 - 2010 (research advisor: Dr. Kenza E. benzeroual)

- Determined mechanism of various anti-inflammatory drugs helpful in neuroinflammation, oxidative stress and neuronal apoptosis mediated neurodegenerative diseases like Alzheimer's disease and Parkinson's disease.
- Discovered anti-oxidant and anti-inflammatory effects of flavonoids in neurodegenerative diseases

Publications:

1. **Dholakiya, S.L.**, Aliberti A., Barile, F.A. Morphine sulfate concomitantly alters neuronal differentiation and opioid receptor expression in mouse embryonic stem cells. *Toxicology Letters* (2016), doi:10.1016/j.toxlet.2016.01.010.
2. Sharma, L., Wu, W., **Dholakiya, S.L.**, Gorasiya, S., Wu, J., Sitapara, R., Patel, V., Wang, M., Zur, M., Reddy, S., Siegelau, N., Bamba, K., Barile, F.A., Mantell, LL. Assessment of phagocytic activity of cultured macrophages using fluorescence microscopy and flow cytometry. *Cytokine Bioassays. Methods in Molecular Biology* (2014), Volume 1172, pp 137-145.

Sanjay L. Dholakiya

3. **Dholakiya, S.L.**, Barile, F.A. Alternative methods for ocular toxicology testing: validation, applications and troubleshooting. *Expert Opinion on Drug Metabolism and Toxicology* (2013), doi: 10.1517/17425255.2013.783013.
4. **Dholakiya, S.L.**, Benzeroual, K.E. Protective effect of diosmin on LPS-induced apoptosis in PC12 cells and inhibition of TNF- α expression. *Toxicol. in Vitro* (2011), doi:10.1016/j.tiv.2011.04.003.

Poster presentations:

1. Dholakiya, S.L., Barile, F.A. Morphine sulfate concomitantly alters mouse stem cell differentiation and opioid receptor gene expression. Society Of Toxicology (SOT), 53rd Annual Meeting, 2014, Phoenix, AZ.
2. Dholakiya, S.L., Benzeroual, K.E. Protective effect of diosmin on LPS-induced apoptosis in PC12 cell death. *The FASEB journal*, 2011; 25, 1004.8.

Work Experience:

Research Scientist, Boehringer Ingelheim Pharmaceuticals, Inc. Ridgefield, CT **June, 2015 – Present**

- Independently plans, executes, troubleshoots and transfers high throughput screening and ADME/Tox assays, or automated systems, evaluates new technologies and proposes solutions to assay or liquid handling problems.

Graduate Teaching Fellow, St. John's University, Queens, NY **July, 2014 – Present**

- Teach in various disciplines of pharmaceutical sciences. Prepare curricular material and deliver numerous lectures on topics related to pharmacology, toxicology, biochemistry, molecular biology and pharmaceuticals to undergraduate Pharm D, Biotechnology, and Toxicology students.

Graduate Teaching Assistant, St. John's University, Queens, NY **Sep, 2011 – May, 2014**

- Trained undergraduate pharmacology/toxicology students in basic cell and tissue culture techniques, immuno-blotting, rodent injections, and pharmacological data interpretation.

Teaching Assistant/Laboratory Instructor, Long Island University, Brooklyn, NY **Jan, 2008 – Aug, 2010**

- Worked as a graduate assistant and laboratory instructor for Pharm D. students.

An intern in R and D department, Unique Pharmaceutical laboratories, India **June, 2007 – Sep. 2007**

- Trained for different molecular techniques such as gel electrophoresis and western blot.

Sanjay L. Dholakiya

- Assisted in preparing and modifying regulatory documents as per the law.

Specialties:

- Cell biology, assay development, high throughput and high-content screening
- *In Vitro* Bioassays: Cell cycle assays, Cell proliferation assays, Competitive assays, Mode of action assays (apoptosis, c-AMP assay), Bioassays including stem cells and protein expression systems for large-scale tissue culture.
- Biochemical Assays: LanthaScreen® Eu Kinase Binding/Activity Assay, TR-FRET assay
- Bioassay Technology: Colorimetry, Electrophoresis, Elisa, Flow Cytometry (BD Accuri® C6 and LSRFortessa with FlowJo analysis software), Immunoprecipitation, Immunohistochemistry, Luminescence, RT-PCR, Western Blot, Time-Resolved Fluorescence.
- Label-free screening technology for cell-based and biochemical assays: UPLC, LC-MS/MS, Corning® Epic® BT System
- Detailed knowledge of PK/PD modeling principles and statistics with experience in modeling and simulation software (e.g., NONMEM)
- Detailed knowledge and experience of the principles and application of separation science including Triple Quadrupole mass spectrometers (Sciex API 5000, QTRAP® 5500, QTRAP® 6500 and Agilent 6530 iFunnel Q-TOF), High Performance Liquid Chromatography (HPLC) and Ultra Performance Liquid Chromatography (Waters Acquity™ UPLC)
- Genome alteration: Gene knockdown/knockout, transfection and transformation studies using *E. Coli*, isolation of nucleic acid and determination of purity, simulated restriction digest studies using *NEB cutter*, genotyping and phenotype assessment
- *in vivo*: experimental study design
- Small animal handling (mice, rat, hamster), routes of administration (i.p., p.o., s.c., i.m.)
- *ex vivo* tissue dose-response studies

Professional Associations:

Member of international panel of advisors – Elsevier; 2016 - present

Member of the Rho Chi Society-Pharmaceutical Honor Society

Graduate Student member of Society of Toxicology (**SOT**)

Graduate Student member of American Society for Pharmacology and Experimental Therapeutics (**ASPET**)

Graduate student member of the New York academy of Sciences (**NYAS**)

Sanjay L. Dholakiya

Reviewer, Toxicology *In vitro* Journal – Elsevier; 2012 - present

Reviewer, Drug metabolism and Pharmacokinetics Journal – Elsevier; 2015 - present

Reviewer, STEM CELLS Journal; 2016 - present

Reviewer, European Journal of Pharmacology – Elsevier; 2016 – present

Reviewer, Journal of Pharmacokinetics & Experimental Therapeutics; 2016 - present

Honors, Awards, and Offices Held:

Outstanding reviewer – Toxicology in vitro

June, 2015

Society of Toxicology Graduate Student Travel Award

March, 2015

Graduate Teaching Fellowship, St. John’s University, Queens, NY

2014 - 2015

Graduate Teaching Assistant, St. John’s University, Queens, NY

2011 - 2014

Teaching Assistant, Long Island University, Brooklyn, NY

2008 - 2010

Member of Beta Theta Chapter - The Rho Chi Society, Long Island University.

April, 2009

Ranked 3rd in Final year of B.S, Rajiv Gandhi University, KA, INDIA

Sept., 2006