

# WILSON SONSINI

## Payal Vyas

PATENT AGENT

Patents and  
Innovations  
*Boston*

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## FOCUS AREAS

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Intellectual Property  
Life Sciences  
Patents and Innovations

## EXPERIENCE

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Dr. Payal Vyas is a patent agent in the Boston office of Wilson Sonsini Goodrich & Rosati, where she is a member of the patents and innovations practice. Payal has diverse scientific expertise in a variety of fields and emerging technologies including molecular and cell biology, gene editing and therapy, biochemistry, biophysics, microbiology, microscopy, cancer biology, and cardiovascular sciences.

Payal completed her postdoctoral training at The Center for Interdisciplinary Cardiovascular Sciences (CICS) at Harvard Medical School and the Brigham and Women's Hospital, where she led research projects focused on discovery of therapeutic targets and drug development for cardiac calcification using high throughput proteomic and transcriptomic approaches.

Before joining CICS, Payal was a research fellow at Massachusetts General Hospital, Broad institute, and Harvard Medical School. In this role, she studied drug resistance and dormancy in solid tumors. Payal was part of the patent law and technology commercialization internship program at Partners HealthCare Innovation, where she assessed patentability and commercialization potential of technologies developed at Harvard Medical School and affiliated hospitals.

Prior to joining the firm, Payal was a patent specialist in the Boston office of Nixon Peabody LLP. In this role, she gained experience in drafting and prosecution of patent applications related to CRISPR-Cas9, RNA interference, cancer biology, stem cells, immunotherapy, tissue regeneration, and the discovery of diagnostics and therapeutics using machine learning. During her doctoral studies, she studied chromatin structure and function and developed live-cell imaging approaches to visualize and measure histone dynamics.

## CREDENTIALS

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### Education

- Postdoctoral Fellowship, Cardiovascular Sciences, Harvard Medical School, Brigham and Women's Hospital in collaboration with Kowa Biopharmaceuticals Ltd, 2015
- Research Fellowship, Cancer Biology, Harvard Medical School, Massachusetts General Hospital and Broad Institute, 2013
- Ph.D., Biochemistry, University of Mississippi Medical Center, 2012
- M.S., Biophysics, University of Mumbai, India, 2004
- B.S., Microbiology, University of Mumbai, India, 2001

### Admissions

- U.S. Patent and Trademark Office

## INSIGHTS

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### Select Publications

- Co-author, "Calcific Aortic Valve Disease: Pathobiology, Basic Mechanisms, and Clinical Strategies," *In: Sacks M., Liao J. (eds) Advances in Heart Valve Biomechanics. Springer, Cham* 153-179, 2018
- Co-author, "Spatiotemporal multi-omics mapping generates a molecular atlas of the aortic valve and reveals networks driving disease," 138 (4) *Circulation* 377-93, 2018
- Co-author, "Quantification of calcified particles in human valve tissue reveals asymmetry of calcific aortic valve disease development," 3(44) *frontiers in Cardiovascular Medicine* 1-10, 2016
- Co-author, "The N- and C-terminal domains determine the differential nucleosomal binding geometry and affinity of linker histone isoforms H1<sup>0</sup> and H1c," 287(15) *Journal of Biological Chemistry* 11778-87, 2012