BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Dinshaw J. Patel	Abby Rockefeller Mauze Chair in Experimental Therapeutics, Structural Biology Program, MSKCC

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Bombay, India	B.Sc.	1961	Chemistry
California Institute of Technology	M.S.	1963	Chemistry
New York University	Ph.D.	1968	Chemistry

A. Positions and Honors

Postdoctoral Training:

1967	Postdoc	Biochemistry	New York Univ. Medical School
1968 - 1969	Postdoc	Biophysics	AT&T Bell Laboratories

Appointments:

1970 - 1984	Member of Technical Staff, Polymer Chemistry Department, AT&T Bell Laboratories, Murray Hill, NJ
1984 - 1992	Professor of Biochemistry & Molecular Biophysics, College of Physicians & Surgeons, Columbia University, New York, NY
1992 -	Member, Structural Biology Program Memorial Sloan-Kettering Cancer Center (MSKCC), New York, New York
1994 -	Professor, Graduate Program in Biochemistry & Structural Biology, Weill School of Medical Sciences, Cornell University, New York, NY

Honors:

1961 - 1963	Jamshetjee N. Tata Fellow
1983	AT&T Bell Laboratories Distinguished Technical Staff Award
1992 -	Abby Rockefeller Mauzé Chair in Experimental Therapeutics (MSKCC)
1997	Distinguished Alumnus Award, New York University
1997 - 1999	Harvey Society (Vice-President 97-98; President 98-99)
2009	Member, National Academy of Sciences, USA

External Review Committees:

1984 -	National Institutes of Health, Bethesda, MD • Member, Molecular and Cellular Biophysics Study Section (84-88) • National Cancer Institute, Board of Scientific Counselors-B (00-05)
1989 - 1996	Howard Hughes Medical Institute, Chevy Chase, MD • Member, Scientific Review Board - Structural Biology (89-92) • Member, Medical Advisory Board (93-96)
2009 -	European Institute of Chemistry & Biology, Bordeaux, France

B. Selected publications: (from over 375 papers and reviews)

Ye, K., Malinina, L. & Patel, D. J. (2003). Recognition of siRNA by a viral suppressor of RNA silencing. ***Nature*** 426, 874-878.

Ma, J-B., Ye, K. & Patel, D. J. (2004). Structural basis for overhang-specific small interfering RNA recognition by the PAZ domain. ***Nature*** 429, 318-322.

Malinina, L., Malakhova, M. L., Teplov, A., Brown, R. E. & Patel, D. J. (2004). Structural basis for glycosphingolipid transfer specificity. ***Nature*** 430, 1048-1053.

Ma, J. B., Yuan, Y. R., Meister, G., Pei, Y., Tuschl, T. & Patel, D. J. (2005). Structural basis for 5'-end-specific recognition of the guide RNA strand by the *A. fugidus* PIWI protein. ***Nature*** 434, 666-670.

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Phan, A. T., Kuryavyi, V., Gaw, H. Y. & Patel, D. J. (2005). Targeting anticancer drugs to a parallel-stranded snapback G-quadruplex formed by five-guanine tracts of the human c-myc promotor**.** ***Nature Chem. Biol*****.** 1, 167-173.

Yuan, Y. R., Ma, J. B., Kuryavyi, V., Pei, Y., Zhadina, M., Meister, G., Chen, H. Y., Dauter, Z., Tuschl, T. & Patel, D. J. (2005). Crystal structure of *Aquifex aeolicus* Argonaute provides unique perspectives into the mechanism of guide strand-mediated mRNA cleavage. ***Mol. Cell*** 19, 405-419.

Serganov, A., Polonskaia, A., Phan, A. T., Breaker, R. R. & Patel, D. J. (2006). Structural basis for gene regulation by a riboswitch that senses thiamine pyrophosphate. ***Nature*** 441, 1167-1171.

Li, H., Ilin, S., Wang, W. K., Wysocka, J., Allis, C. D. & Patel, D. J. (2006). Molecular basis for site-specific readout of H3 lysine 4 trimethylation by the BPTF PHD finger. ***Nature*** 442, 91-95.

Teplova, M., Yuan, Y. R., Phan, A. T., Malinina, L., Ilin, S., Teplov, A. & Patel, D. J. (2006). Structural basis for recognition and sequestration of UUU_{OH} 3'-terminii of nascent mRNA polymerase III transcripts by La autoantigen. ***Mol. Cell*** 21, 75-85.

Rechkoblit, O., Malinina, L., Cheng, Y., Kuryavyi, V., Broyde, S., Geacintov, N. & Patel, D. J. (2006). Stepwise translocation of Dpo4 polymerase during error-free bypass of oxoG lesion. ***PLoS Biology*** 4, 25-42.

Ruthenberg, A. J., Wang, W., Graybosch, D. M., Li, H., Allis, C. D., Patel, D. J. & Verdine, G. L. (2006). Histone H3 lysine 4 methylation state recognition and presentation by the WDR5 module of the MLL1 complex. ***Nature Struct. Mol. Biol*****.** 13, 704-712.

Malinina, L., Malakhova, M. L., Kanack, A. T., Brown, R. E. & Patel, D. J. (2006). The liganding mode of glycolipid transfer protein is controlled by glycolipid acyl structure. ***PLoS Biol*** 4, 1996-2011.

Taverna, S. D., Illin, S., Rogers, R. S., Tanny, J. C., Lavender, H., Li, H., Baker, L., Boyle, J., Blair, L. P., Chait, B., Patel, D. J., Aitchison, J. D., Tackett, A. J. & Allis, C. D. (2006). Yng1 PHD finger binding to H3 trimethylated at K4 targets promotes NuA3 HAT activity at K14 of H3 and transcription at a subset of targeted ORFs. ***Mol. Cell*** 24, 785-796.

Zhang, X., Yuan, Y-R., Pei, Y., Tuschl, T., Patel, D. J. & Chua, N-H. (2006). Cucumber mosaic virus-encoded 2b suppressor inhibits *Arabidopsis* AGO1 cleavage activity to counter plant defense. ***Genes Dev*****.** 20, 3255-3268.

Bailor, M. H., Musselman, C., Hansen, A. L., Gulati, K., Patel, D. J. & Al-Hashimi, H. M. (2007). Characterizing the relative orientation and dynamics of RNA A-form helices using NMR residual dipolar couplings. ***Nature Protocols*** 2, 1536-1546.

Li, H., Wang, W. K., Fischle, W., Duncan, E. M., Liang, L., Allis, C. D. & Patel, D. J. (2007). Structural basis for lower lysine methylation state-specific readout by MBT repeats and an engineered PHD finger module. ***Mol. Cell*** 28, 677-691.

Taverna, S. D., Li, H., Ruthenburg, A. J., Allis, C. D. & Patel, D. J. (2007). How chromatin-binding modules interpret histone modifications: Lessons from professional pocket pickers. ***Nature Struct. Mol. Biol*****.** 14, 1025-1040.

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Ruthenburg, A. J., Li, H., Patel, D. J. & Allis, C. D. (2007). Multivalent engagement of chromatin modifications by linked binding modules. ***Nature Rev. Mol. Cell Biol.*** 8, 983-994.

Serganov, A., Huang, L. & Patel, D. J. (2008). Structural insights into amino acid binding and gene control by a lysine riboswitch. ***Nature*** 455, 1263-1267.

Wang, Y., Sheng, G., Juranek, S., Tuschl, T. & Patel, D. J. (2008). Structure of the guide-strand-containing Argonaute silencing complex. ***Nature*** 456, 209-213.

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Wang, G. G., Song, J., Wang, Z., Dormann, H. L., Casadio, F., Luo, J., Patel, D. J. & Allis, C. D. (2009). Haematopoietic malignancies initiated by dysregulation of a chromatin-binding PHD fineger. ***Nature*** **459**, 847-851.

Zhao, Q., Rank, G., Tan, Y. T., Li, H., Moritz, R. L., Simpson, R. J., Cerruti, L., Curtis, D. J., Patel, D. J., Allis, C. D., Cunningham, J. M. & Jane, S. M. (2009). PRMT5-mediated methylation of histone H4R3 recruits DNMT3A coupling histone and DNA methylation in gene silencing. ***Nat. Struct. Mol. Biol*****.** 16, 304-311.

Li, H., Motamedi, M., Yip, C. K., Wang, Z., Waql, T., Patel, D. J. & Moazed, D. (2009), An alpha motif of Tas3 C-terminus mediated RITS cis-spreading and promotes heterochromatin gene silencing. ***Mol. Cell*** 34, 155-167.