**Name:** Dr. Ravi Sirdeshmukh

**Designation:** Distinguished Scientist and Associate Director

**Institution Name:** Institute of Bioinformatics, Bangalore

**Institution Address:** Institute of Bioinformatics,

Discoverer Building, 7th Floor   
 International Tech Park   
 Whitefield, Bangalore - 560 066   
 Karnataka, India.

**Date of Birth:** 16th November, 1949

**Sex (M/F):** M

**Academic Qualifications (Post-Graduation onwards)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No.** | **Institution, Place** | **Degree**  **Awarded** | **Year** | **Field of Study** |
| 1 | Osmania University, Hyderabad, India | M.Sc. | 1973 | Biochemistry |
| 2 | Centre for Cellular and Molecular Biology, Hyderabad, India | Ph.D. | 1980 | Biochemistry |

**Positions and Employment**

|  |  |  |
| --- | --- | --- |
| **Duration** | **Designation** | **Institution** |
| Present | Distinguished Scientist and Associate Director | Institute of Bioinformatics,  International Tech Park,  Bangalore, India  (Non-Profit Institute, Current number of  scientists: 50) |
| 2007-2009 | Director Grade Scientist (Scientist G), | Center for Cellular and Molecular Biology (CCMB),  Hyderabad, India |
| 2002-2007 | Scientist F | CCMB, Hyderabad, India |
| 1996-2002 | Scientist E2 | CCMB, Hyderabad, India |
| 1992-1996 | Scientist E1 | CCMB, Hyderabad, India |
| 1987-1992 | Scientist C | CCMB, Hyderabad, India |
| 1982-1987 | Post doctoral fellow | Washington University Medical School, St Louis, MO, USA |

**Recognitions and Memberships**

Member, SAC, Institute Of Cytology and Preventive Medicine, ICMR, Noida

Member, Program Advisory Committee, National Facility for Advanced Proteomics and Protein Research, IICB, Kolkata

Member, SAC, Institute of Pathology, ICMR, New Delhi

Member, Board of Studies in Biotechnology, Osmania University, Hyderabad

Consortium manager of CSIR Proteomics Network for International Collaborations which is dedicated to the promotion and growth of Proteomics Technologies in CSIR and other Indian Labs (2007-2008)

Nodal scientist, EFYP CSIR Plasma Proteomics Network Project

Invited/Elected member of the Council of Human Proteome Organization (HUPO)

Invited member of the Council of Asian Oceanean HUPO (AOHUPO)

Member, Advisory Panel for Protein and Glycoprotein analysis, US Pharmacopeia, USA

Invited as visiting scientist, NINDS, NIH, USA (1996)

Invited as short Term Visiting Scientist, NCI, NIH, USA (2006)

**Editorial Board Member**

*Journal of Proteomics and Bioinformatics*

**Reviewer**

*Proteomics, Annals of Neurology, Proteomics- Clinical Applications, Journal of Proteome Research*

**Publications:**

1: Govekar RB, D'Cruz AK, Alok Pathak K, Agarwal J, Dinshaw KA, Chinoy RF,

Gadewal N, Kannan S, Sirdeshmukh R, Sundaram CS, Malgundkar SA, Kane SV, Zingde

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of new differentially expressed markers. Proteomics Clin Appl. 2009

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2: Peng L, Kapp EA, Fenyö D, Kwon MS, Jiang P, Wu S, Jiang Y, Aguilar MI, Ahmed

N, Baker MS, Cai Z, Chen YJ, Van Chi P, Chung MC, He F, Len AC, Liao PC, Nakamura

K, Ngai SM, Paik YK, Pan TL, Poon TC, Salekdeh GH, Simpson RJ, Sirdeshmukh R,

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3: Gautam P, Shankar J, Madan T, Sirdeshmukh R, Sundaram CS, Gade WN, Basir SF,

Sarma PU. Proteomic and transcriptomic analysis of Aspergillus fumigatus on

exposure to amphotericin B. Antimicrob Agents Chemother. 2008 Dec;52(12):4220-7.

Epub 2008 Oct 6. PubMed PMID: 18838595; PubMed Central PMCID: PMC2592866.

4: Sirdeshmukh R. Proteomics in India: an overview. Mol Cell Proteomics. 2008

Jul;7(7):1406-7. PubMed PMID: 18591694.

5: Mathivanan S, Ahmed M, Ahn NG, Alexandre H, Amanchy R, Andrews PC, Bader JS,

Balgley BM, Bantscheff M, Bennett KL, Björling E, Blagoev B, Bose R, Brahmachari

SK, Burlingame AS, Bustelo XR, Cagney G, Cantin GT, Cardasis HL, Celis JE,

Chaerkady R, Chu F, Cole PA, Costello CE, Cotter RJ, Crockett D, DeLany JP, De

Marzo AM, DeSouza LV, Deutsch EW, Dransfield E, Drewes G, Droit A, Dunn MJ,

Elenitoba-Johnson K, Ewing RM, Van Eyk J, Faca V, Falkner J, Fang X, Fenselau C,

Figeys D, Gagné P, Gelfi C, Gevaert K, Gimble JM, Gnad F, Goel R, Gromov P,

Hanash SM, Hancock WS, Harsha HC, Hart G, Hays F, He F, Hebbar P, Helsens K,

Hermeking H, Hide W, Hjernø K, Hochstrasser DF, Hofmann O, Horn DM, Hruban RH,

Ibarrola N, James P, Jensen ON, Jensen PH, Jung P, Kandasamy K, Kheterpal I,

Kikuno RF, Korf U, Körner R, Kuster B, Kwon MS, Lee HJ, Lee YJ, Lefevre M,

Lehvaslaiho M, Lescuyer P, Levander F, Lim MS, Löbke C, Loo JA, Mann M, Martens

L, Martinez-Heredia J, McComb M, McRedmond J, Mehrle A, Menon R, Miller CA,

Mischak H, Mohan SS, Mohmood R, Molina H, Moran MF, Morgan JD, Moritz R, Morzel

M, Muddiman DC, Nalli A, Navarro JD, Neubert TA, Ohara O, Oliva R, Omenn GS,

Oyama M, Paik YK, Pennington K, Pepperkok R, Periaswamy B, Petricoin EF, Poirier

GG, Prasad TS, Purvine SO, Rahiman BA, Ramachandran P, Ramachandra YL, Rice RH,

Rick J, Ronnholm RH, Salonen J, Sanchez JC, Sayd T, Seshi B, Shankari K, Sheng

SJ, Shetty V, Shivakumar K, Simpson RJ, Sirdeshmukh R, Siu KW, Smith JC, Smith

RD, States DJ, Sugano S, Sullivan M, Superti-Furga G, Takatalo M, Thongboonkerd

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human protein data. Nat Biotechnol. 2008 Feb;26(2):164-7. PubMed PMID: 18259167.

6: Shukla S, Govekar RB, Sirdeshmukh R, Sundaram CS, D'Cruz AK, Pathak KA, Kane

SV, Zingde SM. Tumor antigens eliciting autoantibody response in cancer of

gingivo-buccal complex. Proteomics Clin Appl. 2007 Dec;1(12):1592-604. doi:

10.1002/prca.200700206. PubMed PMID: 21136657.

7: Suhasini AN, Sirdeshmukh R. Onconase action on tRNA(Lys3), the primer for

HIV-1 reverse transcription. Biochem Biophys Res Commun. 2007 Nov

16;363(2):304-9. Epub 2007 Sep 4. PubMed PMID: 17888404.

8: Gautam P, Sundaram CS, Madan T, Gade WN, Shah A, Sirdeshmukh R, Sarma PU.

Identification of novel allergens of Aspergillus fumigatus using immunoproteomics

approach. Clin Exp Allergy. 2007 Aug;37(8):1239-49. PubMed PMID: 17651155.

9: Sirdeshmukh R. Fostering proteomics in India. J Proteome Res. 2006

Nov;5(11):2879. PubMed PMID: 17124772.

10: Sharma S, Sundaram CS, Luthra PM, Singh Y, Sirdeshmukh R, Gade WN. Role of

proteins in resistance mechanism of Pseudomonas fluorescens against heavy metal

induced stress with proteomics approach. J Biotechnol. 2006 Nov 10;126(3):374-82.

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11: Suhasini AN, Sirdeshmukh R. Transfer RNA cleavages by onconase reveal unusual

cleavage sites. J Biol Chem. 2006 May 5;281(18):12201-9. Epub 2006 Feb 23. PubMed

PMID: 16497678.

12: Chumbalkar VC, Subhashini C, Dhople VM, Sundaram CS, Jagannadham MV, Kumar

KN, Srinivas PN, Mythili R, Rao MK, Kulkarni MJ, Hegde S, Hegde AS, Samual C,

Santosh V, Singh L, Sirdeshmukh R. Differential protein expression in human

gliomas and molecular insights. Proteomics. 2005 Mar;5(4):1167-77. PubMed PMID:

15759318.

13: Chandra H, Gupta PK, Sharma K, Mattoo AR, Garg SK, Gade WN, Sirdeshmukh R,

Maithal K, Singh Y. Proteome analysis of mouse macrophages treated with anthrax

lethal toxin. Biochim Biophys Acta. 2005 Mar 14;1747(2):151-9. Epub 2004 Dec 20.

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14: Saxena SK, Sirdeshmukh R, Ardelt W, Mikulski SM, Shogen K, Youle RJ. Entry

into cells and selective degradation of tRNAs by a cytotoxic member of the RNase

A family. J Biol Chem. 2002 Apr 26;277(17):15142-6. Epub 2002 Feb 11. PubMed

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protein RNase inhibitor and substrate on the quaternary structures of bovine

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16: Tharun S, Sirdeshmukh R. Specific endonucleolytic cleavages of mouse albumin

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endogenous RNase inhibitor in rat vaginal epithelial cells on estradiol

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coli 16S rRNA with bacteriophage lambda leader sequences. J Bacteriol. 1987

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processing in Escherichia coli and cultured mammalian cells. Biochem Soc Trans.

1986 Oct;14(5):811-3. PubMed PMID: 3536636.

21: Sirdeshmukh R, Schlessinger D. Why is processing of 23 S ribosomal RNA in

Escherichia coli not obligate for its function? J Mol Biol. 1985 Dec

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22: Sirdeshmukh R, Schlessinger D. Ordered processing of Escherichia coli 23S

rRNA in vitro. Nucleic Acids Res. 1985 Jul 25;13(14):5041-54. PubMed PMID:

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large ribosomal RNAs in Escherichia coli and mouse cells. Bioessays. 1985

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truncated at its 5' terminus. Nucleic Acids Res. 1985 Feb 25;13(4):1185-92.

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maturation but not for function of Escherichia coli pre-23S rRNA. Proc Natl Acad

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cells in suspension prepared by the collagenase method. Indian J Biochem Biophys.

1983 Jun;20(3):121-6. PubMed PMID: 6200424.

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ribonuclease in mechanically prepared rat-liver cells in suspension. Biosci Rep.

1982 Oct;2(10):751-60. PubMed PMID: 7171742.

**List of Projects Implemented**

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| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of Project** | **Funding Agency** | **Role** | **Status** |
| 1. | Identification of New Biomarkers Using Genomics and Proteomics | Council of Scientific and Industrial Research | PI | Completed |
| 2. | Proteomics of the Effect of Alkylating agents on Mouse Liver | Defence Research and Development Organisation | PI | Completed |
| 3. | New Insights in Cancer Biology- Proteomics of Glioma | Council of Scientific and Industrial Research | PI |  |
| 4. | Plasma Proteomics for Health and Disease | Council of Scientific and Industrial Research | PI |  |
| 5. | Medically Important Fungus Aspergillus fumigatus | Department of Science and Technology | Co-PI | Completed |
| 6. | Identification and functional analysis of Genes for yield in Rice | Department of Biotechnology | Co-PI | Completed |