

NIKULKUMAR SONI

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## Curriculum Vitae

### Research interest

Metabolomics, Cancer biology, Molecular biology, Genomics, Proteomics, and Drug discovery

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### Education

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| 2010 – 2011 | <b>Skövde University, Sweden</b><br>Masters in Molecular Biology (VG)                                    |
| 2002 – 2005 | <b>Christ College, Saurashtra University, Gujarat, India</b><br>Bachelors in Biotechnology (FIRST CLASS) |
| 2000 – 2002 | <b>Vardhman Sarvajanic vidhyalaya, Mehsana, India</b><br>Higher Secondary Studies (PASS)                 |
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### Research experience

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| <b>Master Dissertation</b>   | <b>Research Assistant at Division of Molecular Genome Analysis, 2011</b>   |
| Supervisor                   | <b>Dr Ulrike Korf, Head Quantitative Proteomics</b><br>Deutsches Krebsforschungszentrum, DKFZ, Heidelberg, Germany   |
| Title                        | Systematic analysis of fatty acid and Betaine - induced alterations of intracellular signaling pathway in HepG2 cells  |
| Description                  | Previous studies have demonstrated that type II diabetes and obesity are inter-related with hepatic steatosis. Non-alcoholic fatty liver disease (NAFLD) may further progress to non-alcoholic steatohepatitis (NASH) leading to cirrhosis and liver cancer. The disease is reversible until cirrhosis has developed. The mechanism behind progression as well as reversion is still poorly understood. Recent studies have suggested that pro-inflammatory cytokines, inflammation of liver or accumulation of free fatty acids in liver causes insulin resistance, which plays a major role in the disease progression. My project was aimed towards determining the alteration of intracellular pathways induced by fatty acid (Palmitic acid), Betaine, EGF and Insulin on HepG2 cells |
| <b>Bachelor Dissertation</b> | Department of Biotechnology, Christ College Rajkot, India, 2005  |
| Supervisor                   | <b>Padma Ambalam, PhD, Post-Doctoral Fellow</b> , Labmedicin, Klinisk Microbiologi, Lund University, Sweden  |
| Title                        | Biological clock   |
| Description                  | My bachelor thesis result in an unpublished review report on the effect of light on living organism and harmony with the rhythms of nature. Also the protein responsible for such effect on the metabolic pathway as well as the major and minor changes in the rhythms of biological clock  |
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## Techniques learnt

### Molecular Biology :

1. Microspot immune assay (MIA),
2. Reverse phase protein microarray (RPPA),
3. Sequence data processing and analysis,
4. Purification and isolation of plasmid DNA,
5. Transfection, RNA isolation,
6. Western blot analysis wet and semi-dry (fluorescence/ Infra-red)

### IT & Bioinformatics Skills :

- Software based on **R**- language for Micro Array data analysis in proteomics,
- QuantPro Reloaded v5.0 and GenePix Pro software,
- Tools for Gene prediction, Annotation and Fragment assembly,
- Quick Change Mutagenesis II XL,
- Graph Pad Prism

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## Internships

Training in techniques like PCR, FISH and Flow Cytometry at **Gujarat Cancer Research Institute (GCRI)**, Ahmedabad Civil Hospital in August 2004.

Training in DNA Genotyping to solve Criminal Cases at the Biology, Serology and **DNA Division of Forensic Science Laboratory (FSL)** – Gujarat, Gandhinagar, in September 2004

Basic techniques in mammalian cell culture at **Cancer Hospital, Rajkot** in December 2003.

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## Conferences / Workshops

State level science Symposium by Christ College, Rajkot; 25<sup>th</sup> January 2004

National level conference at Rajkot, on "50 Years of DNA Double Helix" sponsored by U.G.C. and taken by Dr., Lalji Singh, Director CCMB, Hyderabad; 11<sup>th</sup> October 2004

National level conference on "Basic Aspects of Bioinformatics" at Christ College, Rajkot; 17<sup>th</sup> January 2005

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## References

<p><b>Dr Ulrike Korf (Supervisor master's thesis)</b> Group Leader Quantitative Proteomics Division of Molecular Genome Analysis B050 DKFZ Heidelberg Im Neuenheimer Feld 580 D-69120 Heidelberg, Germany phone: + 49 (0) 6221 42 4765 fax: + 49 (0) 6221 42 3454</p> <p><b>e-mail:</b> <a href="mailto:U.Korf@DKFZ.de">U.Korf@DKFZ.de</a></p>	<p><b>Dr Ramesh Ummani (Supervisor master's thesis)</b> Senior Scientist Division of Molecular Genome Analysis B050 DKFZ Heidelberg Im Neuenheimer Feld 580 D-69120 Heidelberg, Germany phone: + 49 (0) 6221 42 4740</p> <p><b>e-mail: r.ummani@DKFZ.de</b></p>
<p><b>Dr Mikael Ejdebäck, PhD (Course co-ordinator)</b> Assistant Professor, Research Group Leader Systems Biology - Molecular Biology Program Director, Cell and Molecular Biology School of Life Sciences, Skövde University, Box 408, SE-54128, Skövde, Sweden. Phone: +46 (0) 500 448610 Fax: +46 (0) 500 448499</p> <p><b>e-mail: mikael.ejdeback@his.se</b></p>	<p><b>Padma Ambalam, PhD</b> Post-Doctoral Fellow Labmedicin, Klinisk Mikrobiologi Sölvegatan 23, S-223 62, Lund, Sweden. Mobile No: +46-736691928 University of Lund 221 84 Lund Sweden</p> <p><b>e-mail: ambalam.padma@gmail.com</b></p>

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