

## D. DEEPA

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### **Current Position**

**Project Assistant**, Bioinformatics Centre, Indian Institute of Science, Bangalore. (September 2006 to date)  
Responsibilities: Development of *Integrated Lectin Database* for animal, plant, fungi, bacterial and viral lectins (<http://proline.physics.iisc.ernet.in/lectindb>), which basically involves data curation, database development and programming using PERL, MySQL and CGI.

Supervisor: Dr. Nagasuma Chandra, Principal Research Scientist, Indian Institute of Science, Bangalore.

### **Educational Details**

- Master of Science - Bioinformatics, Percentage: 83.09  
Bharathiar University, Coimbatore, India, June 2004 - April 2006
- Bachelor of Science - Food Science and Nutrition & Biochemistry, Percentage: 73.63  
Avinashilingam Deemed University, Coimbatore, India, June 2001 - May 2004
- Higher Secondary Course, Percentage: 77.83  
Ideal Matriculation and Higher Secondary School, Coimbatore, May 2000 - March 2001
- Matriculation Examination (Standard X), Percentage: 86.45  
Ideal Matriculation and Higher Secondary School, Coimbatore, May 1998 - March 1999

### **Research Experience**

Working on the database "*AnimalLectinDB*"

Completed the project on, "*CancerLectinDB*"

- Developed a lectin database for the disease cancer with appropriate analytical tools for lectins relevant for any aspect of cancer, by collating and integrating diverse data. <http://proline.physics.iisc.ernet.in/cancerdb>
- Supervisor: Dr. Nagasuma Chandra, Indian Institute of Science, Bangalore (December 2006 - August 2007)

Worked on the project, "*Haplotype Specific Vaccine Design: An Immunoinformatics Approach for Rational Subunit Vaccine Development for Mycobacterium tuberculosis*"

- Developed Tuberculosis Vaccino Genomics Database, for analyzing the nonameric peptides of *tuberculosis*
- Supervisor: Prof. R. Nayak, Indian Institute of Science, Bangalore (December 2005 - April 2006)

Worked on the project, "*Development of Pharmacogenomic Database for HIV*"

- Developed Drug Table, Gene Table and Protein Table for the database
- Supervisor: Dr. B. K. Malik, Institute of Genomics and Integrative Biology, New Delhi (May - July 2005)

Initiated and worked on the project, "*Pathway Modelling for Mycobacterium tuberculosis*"

- Modeled the metabolic, regulatory and infectious pathways of *Mycobacterium tuberculosis*
- Supervisor: Dr. B. K. Malik, Institute of Genomics and Integrative Biology, New Delhi (May - July 2005)

Completed the project on, "*Development of Web Interface for Pharmacogenomic Database*"

- Developed a web interface for accessing the Pharmacogenomic Database online
- Supervisor: Dr. B. K. Malik, Institute of Genomics and Integrative Biology, New Delhi (May - July 2005)

Participated in "*Job Oriented Vocational Training*" conducted by PSG Institute of Medical Sciences and Research, Coimbatore, to get acquainted with the basic techniques of Clinical Biochemistry (May 2003)

### **Publications**

- *Deepa Damodaran*, Justin Jeyakani, Alok Chauhan, Nirmal Kumar, Nagasuma R Chandra, Avadhesh Surolia (2007). "**CancerLectinDB: A database of lectins relevant to cancer**", Glycoconj J., **in press**. (<http://proline.physics.iisc.ernet.in/cancerdb>)
- *Deepa D* and Karthik A, "**Drug Designing for Insulin Dependent Diabetes Mellitus**," Journal of Bioinformatics India, vol. III, no. 3, 2005.

### **Technical Presentations and Reports**

- "Drug designing for Insulin Dependent Diabetes Mellitus", State Level technical students symposium, Bharath Institute of Higher Education and Research on 22.02.05
- "Transgenic Animals" (Xenotransplantation), a State level Seminar on Animal Biotechnology at PSG College of Arts And Science from 24.09.03 to 26.09.03

### **Software Skills**

Languages	C, C++, Perl, CGI, HTML, JavaScript
Backend	MySQL, MS Access
Platforms	Linux, Solaris, Windows 9X/XP/2000
Interface Design	Visual Basic 6.0
Multimedia	Adobe Photoshop CS2, Macromedia Flash 2004 & Dreamweaver 2004, Microsoft FrontPage
<b>Bioinformatics Tools and Related Software</b>	
Molecular Visualization Tools	Rasmol, Pymol, SwissPdbviewer
Docking Software	Hex, GRAMM
Alignment Tools	Blast, Fasta, Clustal package, Multalign, Threader v3
Packages	Modeller, GCG
Chemical drawing Tool	ISIS Draw, Viewer Pro
Databases	SWISS-PROT/TrEMBL, PIR, EMBL, GenBank, DDBJ, PDB, SCOP, KEGG, Chemfinder

- Designed a personal webpage - <http://www.geocities.com/ddeepa03/>
- Designed a webpage for "**Drug Design Workshop**", DDW07, to be held from 30<sup>th</sup> July – 3<sup>rd</sup> August 2007 (<http://proline.physics.iisc.ernet.in/~ddw07>)
- Designed a webpage for, "**Computational Insights into Biological Systems**", CIBS 2006, Satellite Meeting of InCoB 2006
- Developed a software tool for computing Central Dogma of Molecular Biology using VB 6.0 & Oracle

### **Additional academic and career achievements**

- Won the SWISS-QUIZ competition sponsored by Geneva Bioinformatics.
- Organized and participated in "**Computational Insights into Biological Systems**", CIBS 2006, Indian Institute of Science, Bangalore from December 26 - 28, 2006.
- Organized and participated in **Motif** 2004, a National level Symposium on Bioinformatics, Department of Botany, Bharathiar University on October 5, 2004.

### **Co-Curricular Activities**

- Recognized as **Lance Corporal** by National Cadet Corps (NCC), Ministry of Defence, Govt. of India and received the Certificate 'B' and 'C' in 2003 and 2004 respectively.
- Active participant in the workshop "**Restoration of Noyyal River Basin**" organized by the Department of Environmental Sciences, Bharathiar University, Coimbatore in March 2005.

## ***References***

### **Dr. R. Nayak**

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Department of Microbiology and Cell Biology,  
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### **Dr. P. Shanmughavel**

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### **Dr. Nagasuma Chandra**

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