

I502	Information Management	Fall 2006	10
I505	Project Management	Fall 2006	11
I692	Thesis in Bioinformatics	Fall 2006	2
I501	Introduction to Informatics	Spring 2007	12
I502	Information Management	Spring 2007	16
I552	Independent Study in Bioinformatics	Spring 2007	2
I692	Thesis in Bioinformatics	Spring 2007	1
I552	Independent Study in Bioinformatics	Summer 2007	1
I501	Introduction to Informatics	Fall 2007	15
I505	Project Management	Fall 2007	7
I692	Thesis in Bioinformatics	Fall 2007	3
I699	Independent Study in Informatics	Fall 2007	1
I492	Senior Thesis	Spring 2008	1
I501	Introduction to Informatics	Spring 2008	18
I690	Topics in Informatics	Spring 2008	6
I692	Thesis in Bioinformatics	Spring 2008	2
I890	PhD Thesis Research	Spring 2008	1
I493	Senior Thesis	Summer 2008	1
I501	Introduction to Informatics	Fall 2008	29
I505	Project Management	Fall 2008	6
I692	Thesis in Bioinformatics	Fall 2008	1
I890	PhD Thesis Research	Fall 2008	2

PROFESSIONAL SERVICE

Teaching

- Program committee, Bioinformatics Curriculum Collaboration (2007)
- Book reviewer, Project Management books (2007)
- Book reviewer, Project Management books (2008)

Research

- Reviewer, Annual ACM Symposium on Applied Computing – Bioinformatics Track (2004 - 08)
- Reviewer, Weed Science Journal (2007)
- Reviewer, Nucleic Acids Research Journal (2008)

Service

- Reviewer, Microsoft Fellowship, Office for Professional Development, IUPUI (2005)
- Book reviewer, Briefings in Bioinformatics (2007)

UNIVERSITY SERVICE

School Level

- Member, Budgetary Affairs Committee (2005 – 07)
- Member, Faculty Affairs Committee (2006 - Present)
- Member, Technology and Library Committee (2007 - Present)
- Member, Graduate Student Selection Committee (2002 – Present)
- Member, Undergraduate Curriculum Committee, IU Bloomington (2001 – 02)

Campus Level

- Member, Academic Handbook Committee (2007 - Present)

OTHER PROFESSIONAL ACTIVITIES

Invited Talks

Computational Biology Workshop, Center for Genomics and Bioinformatics, Indiana University, Bloomington, February 28, 2002

Department of Biology, University of Missouri-Rolla, Rolla, Missouri, May 2, 2002

School of Computing, National University of Singapore (NUS), July 22, 2002

Department of Computer Science, Indiana University-Purdue University at Indianapolis, November 15, 2002

Division of Biostatistics, School of Medicine, Indiana University, Indianapolis, April 10, 2003

Eli Lilly and Company, Indianapolis, April 29, 2005

School of Informatics, Indiana University-Purdue University Indianapolis, I532 Seminar in Bioinformatics course, January 22, 2007

Department of Microbiology and Immunology, School of Medicine, Indiana University, Indianapolis, November 29, 2007

National Centre for Biological Sciences, Bangalore, India, August 1, 2008

School of Informatics, Indiana University-Purdue University Indianapolis, Bioinformatics graduate students, September 5, 2008

Department of Biology, Indiana University-Purdue University Indianapolis, March 27, 2009

Poster Presentations

Perumal, N. B., and Minkley, E. G. Jr. (1982) Covalent Modification of the F Sex Factor *traT* Gene Product: Signal Sequence Cleavage and Diglyceride Addition. Poster presented at the ASM annual meeting, Atlanta, Georgia.

Harker, D., Jones, C., **Perumal, N.**, Wong, A., and Vora, S. (1987) Muscle- and Liver-Type Phosphofructokinase Gene Loci Map to Homologous Chromosomes in Man and Chimpanzees. Poster presented at the ASHG annual meeting, San Diego, California.

Perumal, N. B., Kenniston, T. W., Weng, Y., Peschon, J., and Appasamy, P. M. (1995) TCR Γ Gene Rearrangements Require An Intact Interleukin 7 (IL-7) Receptor. Poster presented at the 9th International Congress of Immunology, San Francisco, California.

Sankula, R., **Perumal, N.**, and Li, L. (2003) Evolution of Toll Genes from the Perspective of Transcriptional Regulatory Regions. Poster presented at the 11th International Conference on Intelligent Systems for Molecular Biology, Brisbane, Australia.

Childress, P. J., and **Perumal, N. B.** (2005) LymphTF-DB: A Database of Transcription Factors involved in Lymphocyte Development. Poster presented at the 13th International Conference on Intelligent Systems for Molecular Biology, Detroit, Michigan.

Liu, J., **Perumal, N. B.**, Uversky, V. N., and Dunker, A. K. (2005) Natively Unstructured Regions in Transcription Factors. Poster presented at the 13th International Conference on Intelligent Systems for Molecular Biology, Detroit, Michigan.

Perumal, N. B., and Singh, V. (2005) Computational Detection of Transcriptional Control Elements in Lymphocyte Development. Poster presented at the 13th International Conference on Intelligent Systems for Molecular Biology, Detroit, Michigan.

Shenoy, N., Burtschi, D. J., and **Perumal, N. B.** (2006) Computational Identification and Analysis of Transcriptional Control Elements Involved in the Differentiation and Maturation of Dendritic Cells. Poster presented at the CSHL meeting on Gene Expression & Signaling in the Immune System, Cold Spring Harbor, New York.

Perumal, N., Chilukuri, S., Sullivan Jr. W. J., Harris, A., Guenther, B. (2007) Microtubule-binding Proteins As Novel Drug Targets In Pathogens. Poster presented at the 5th Annual American Society for Microbiology Biodefense and Emerging Diseases Research Meeting, Washington, D.C.

Good, S. R., Thieu, V., Kaplan, M. H., and **Perumal, N. B.** (2007) Bioinformatic Analysis of Stat4 Target genes in Th1 Development. Poster presented at the Gordon Research Conference on Bioinformatics: Interface Between Computation and Experiment, Andover, New Hampshire.

Perumal, N., Cheng, B., and Mooney, S. (2007) Bioinformatics Curriculum Collaboration. Poster presented at the Gordon Research Conference on Bioinformatics: Interface Between Computation and Experiment, Andover, New Hampshire.

Kollipara, R. K., and **Perumal, N. B.** (2008) Bioinformatic Analysis of Conserved Transcriptional Regulatory Motifs in TLR Genes. Poster presented at the CSHL meeting on Gene Expression & Signaling in the Immune System, Cold Spring Harbor, New York.

Kollipara, R. K., Janardhanam, S. B., Srinivasan, M., and **Perumal, N. B.** (2009) Bioinformatic and Genetic Analysis for Biomarkers in a Chronic Oral Mucosal Inflammatory Condition. Poster presented at the CTSI First Annual Conference, Indianapolis, Indiana.

Student Theses

Title	Student Name	Year
<i>MS</i> Security of Our Personal Genome.	Greg Smith	2003
Toll Evolution: A Perspective from		

Regulatory Regions	Rajakumar Sankula	2004
Prediction of Disorder in Transcription Factors	Jiangang Liu	2005
LymphTF-DB: A Database of Transcription Factors involved in Lymphocyte Development	Paul Childress	2005
Bioinformatic Analysis of Microtubule Associated Proteins (Co-advisor with Brian Guenther)	Narmada Shenoy	2005
Computational Detection and Analysis of Transcriptional Control Elements in Lymphocyte Development	Vandana Singh	2006
BS		
Geographic Information Systems and Remote Sensing Technologies and Their Impact on the Fight Against West Nile Virus	James Dine	2005
Bioinformatic Methods Used For Comparative Genomics of Human and Animal Models in Genetic Studies of Osteoporosis	Yuriy Strashovskiy	2005

GRANTS AND FELLOWSHIPS

Summer Research Fellowship, Office for Professional Development, IUPUI, Summer 2003.

Role: Principal Investigator

Title: Computational Identification of Transcriptional Control Elements in Lymphocytic Development.

Amount: \$7,000

Research Support Funds Grant, Research and Sponsored Programs, IUPUI, 2006 – 07.

Role: Principal Investigator

Title: Informatics Approaches to Drug discovery with Microtubule Associated Proteins.

Amount: \$30,000

IUPUI Signature Center Initiative, Office of the Executive Vice Chancellor and Dean of Faculties, 2008 – 10.

Role: Co-Investigator

Title: The Indiana Center for Systems Biology and Personalized Medicine.

Amount: \$75,000

Release Time for Research Grant, Office of the Vice Chancellor for Research, IUPUI, Summer 2008.

Role: Principal Investigator

Title: Summer Salary Request for NSF CAREER Grant Preparation.

Amount: \$10,000

International Projects and Activities Grant, Office of the Vice President for International Affairs, IU, 2008.

Role: Principal Investigator

Title: Serotonin 2A receptor-induced Transcriptional Regulatory Networks Targeted by Antipsychotics: Implications in Psychosis

Amount: \$1,500

Multidisciplinary Undergraduate Research Institute (MURI) Grant, IUPUI, Fall 2008.

Role: Co-PI

Title: Extracting protein-protein interactions from text using prediction by Partial Matching

Amount: \$500

NIH Asthma & Allergic Disease Cooperative Research Center, Austin, TX, 2009.

Role: Co-PI

Title: Epigenetic Modification of Genes in Atopic Dermatitis Non-lesion Skin

Amount: \$10,000

PRINT AND ELECTRONIC PUBLICATIONS

Teaching

Non-Referred

Perumal, N.B. (2001) Computational Management of Biological Information. Web course published at http://darwin.nmsu.edu/molb_resources/tutorials/comp-bio/test.htm.

Research

Refereed (All in Journals)

Mo, C., Chearwae, W., O'Malley, J. T., Adams, S. M., Kanakasabai, S., Walline, C. C., Stritesky, G. L., Good, S. R., **Perumal, N. B.**, Kaplan, M. H., and Bright, J. J. (2008) Stat4 Isoforms Differentially Regulate Inflammation and Demyelination in Experimental Allergic Encephalomyelitis. *J Immunol.* **181**, 5681-5690.

Childress, P. J., Fletcher, R. L., and **Perumal, N. B.** (2007) LymphTF-DB: A Database of Transcription Factors involved in Lymphocyte Development. *Genes and Immunity*, **8**, 360 - 365.

Liu, J., **Perumal, N. B.**, Oldfield, C. J., Su, E. W., Uversky, V. N., and Dunker, A. K. (2006) Intrinsic Disorder in Transcription Factors. *Biochemistry*, **45**, 6873 – 6888. **Most cited article in 2006 from the fields of Biochemistry and Molecular Biology.**

Perumal, N. B., Kenniston, T. W., Tweardy, D. J., Dyer, K. F., Hoffman, R., Peschon, J., and Appasamy, P. M. (1997) TCR Γ Genes Are Rearranged but Not Transcribed in IL-7R α Deficient Mice. *J. Immunol.* **158**, 5744-5750.

Appasamy, P. M., Dhawan, M., Kenniston, T. W., and **Perumal, N.** (1996) Interleukin 7 Responsive Genes in Pre-B Cells Identified By Differential Display PCR. *FASEB J.* **10**, 926 (Federation of American Societies for Experimental Biology).

Perumal, N. B., and Appasamy, P. M. (1996) A Transfection System to Study the Regulation of TCR Gamma Genes. *FASEB J.* **10**, 248 (Federation of American Societies for Experimental Biology).

Perumal, N. B., McMaster, J. H., and Novak, J. F. (1993) Isolation and Characterization of a Monoclonal Antibody Recognizing a Murine Osteosarcoma Cell-Surface Antigen. *Frontiers in Osteosarcoma Research*, pp. 167-170, Hogrefe-Huber Publishers, Seattle.

Perumal, N. B., McMaster, J. H., and Novak, J. F. (1991) Isolation and Characterization of a Monoclonal Antibody Against a Cell-Surface Antigen of C3HOS Osteosarcoma. *FASEB J.* **5**, A464.

Perumal, N. B., and Minkley, E. G. Jr. (1984) The Product of the F Sex Factor *traT* Surface Exclusion Gene is a Lipoprotein. *J. Biol. Chem.* **259**, 5357-5360.

Non-Referred

Childress, P. J., and Perumal, N. B. (2005) LymphTF Database. Web site published at <http://www.iupui.edu/~tfinterx>.

Invited Book Reviews (In Journal)

Perumal, N. (2008) Cardiac Gene Expression: Methods and Protocols. Edited by Jun Zhang and Gregg Rokosh. *Brief Bioinform.* **9**, 254 - 255.

Work in Progress

Good, S. R., Thieu, V. T., Mathur, A. N., O'Malley, J. T., **Perumal, N. B.**, and Kaplan, M. H. (2008) Temporal induction patterns of STAT4 target genes defines potential for Th1 lineage-specific programming. Manuscript Submitted.

Perumal, N. B., Shenoy, N., William, A., and Guenther, B. Biochemical analysis and similarity search on two microtubule-binding domains from Ensconsin. Manuscript in preparation.

Kollipara, R. K., and **Perumal, N. B.** Distinguishing anti-bacterial vs. pro-inflammatory macrophage genes upon LPS stimulation. Manuscript in preparation.

Ranganathan Ganakammal, S., Good, S. R., Kaplan, M. H., and **Perumal, N. B.** Identification and Analysis of Co-regulators of Stat4 in Th1 Development. Manuscript in preparation.

Perumal, N. B., Chilukuri, S., and Guenther, B. Microtubule binding proteins in perturbing microbial pathogenesis. Manuscript in preparation.