

Stanford



Deendayal Dinakarpanid

Clinical Associate Professor, Medicine - Biomedical Informatics Research

Bio

ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Medicine - Biomedical Informatics Research

PROFESSIONAL EDUCATION

- M.S., University of Missouri-Kansas City , Computer Science (2002)
- Postdoctoral Fellow, University of Kansas Medical Center , Molecular Modeling (2001)
- Ph.D., Case Western Reserve University , Biochemistry (1999)
- M.D., JIPMER , Biochemistry (1993)
- M.B.B.S, Jawaharlal Institute of Post-Graduate Medical Education and Research (JIPMER) , Medicine (1990)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Method development and insightful informatics based on my training as a physician, biochemist and computer scientist: Methods for representing, capturing and integrating emerging or expert biomedical knowledge to improve computational predictions of biological and clinical relevance. Methods for evaluating predictions based on machine learning. Interventional and causal predictions. Informatics research on problems in oncology, radiology and allergy/immunology.

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biomedical Informatics (Phd Program)
- Biomedical Informatics (Masters Program)

Publications

PUBLICATIONS

- **Informatics Analysis of Cross-Reactivity of Food Allergens in South Asian Cuisine**
Agusala, V., Dinakar, C., Dinakarpanid, D.
MOSBY-ELSEVIER.2019: AB238
- **Exposure to NO₂, CO, and PM_{2.5} is linked to regional DNA methylation differences in asthma** *CLINICAL EPIGENETICS*
Prunicki, M., Stell, L., Dinakarpanid, D., de Planell-Saguer, M., Lucas, R. W., Hammond, S., Balmes, J. R., Zhou, X., Paglino, T., Sabatti, C., Miller, R. L., Nadeau, K. C.
2018; 10: 2

- **TOCSOC: A temporal ontology for comparing the survival outcomes of clinical trials in oncology** *International Conference on Biological Ontology*
Dinakarbandian, D., Dinakar, B., Liedtke, M., Musen, M.
CEUR Workshop Proceedings Vol. 2285.2018
- **Automated Prediction of Hepatic Arterial Stenosis.** *AMIA Joint Summits on Translational Science proceedings. AMIA Joint Summits on Translational Science*
Baraboo, J. J., Dinakarbandian, D., Chan, S. S.
2017; 2017: 58–65
- **Evaluating proteins for potential allergenicity using bioinformatic approaches.** *Annals of allergy, asthma & immunology : official publication of the American College of Allergy, Asthma, & Immunology*
Dinakarbandian, D., Dinakar, C.
2017; 119 (3): 197–98
- **Engineered Tissue Inhibitor of Metalloproteinases-3 Variants Resistant to Endocytosis Have Prolonged Chondroprotective Activity.** *journal of biological chemistry*
Doherty, C. M., Visse, R., Dinakarbandian, D., Strickland, D. K., Nagase, H., Troeberg, L.
2016; 291 (42): 22160-22172
- **Association of tree nut and coconut sensitizations.** *Annals of allergy, asthma & immunology : official publication of the American College of Allergy, Asthma, & Immunology*
Polk, B. I., Dinakarbandian, D., Nanda, M., Barnes, C., Dinakar, C.
2016; 117 (4): 412-416
- **Constellation: a tool for rapid, automated phenotype assignment of a highly polymorphic pharmacogene, CYP2D6, from whole-genome sequences** *NPJ GENOMIC MEDICINE*
Twist, G. P., Gaedigk, A., Miller, N. A., Farrow, E. G., Willig, L. K., Dinwiddie, D. L., Petrikin, J. E., Soden, S. E., Herd, S., Gibson, M., Cakici, J. A., Riffel, A. K., Leeder, et al
2016; 1: 15007
- **A Semantic Framework for Intelligent Matchmaking for Clinical Trial Eligibility Criteria** *ACM TRANSACTIONS ON INTELLIGENT SYSTEMS AND TECHNOLOGY*
Lee, Y., Krishnamoorthy, S., Dinakarbandian, D.
2013; 4 (4)
- **Finding disease similarity based on implicit semantic similarity** *JOURNAL OF BIOMEDICAL INFORMATICS*
Mathur, S., Dinakarbandian, D.
2012; 45 (2): 363-371
- **Drug repositioning using disease associated biological processes and network analysis of drug targets.** *AMIA ... Annual Symposium proceedings. AMIA Symposium*
Mathur, S., Dinakarbandian, D.
2011; 2011: 305-311
- **Automated ontological gene annotation for computing disease similarity.** *AMIA Joint Summits on Translational Science proceedings. AMIA Joint Summits on Translational Science*
Mathur, S., Dinakarbandian, D.
2010; 2010: 12-16
- **MachineProse: An ontological framework for scientific assertions** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
Dinakarbandian, D., Lee, Y., Vishwanath, K., Lingambhotla, R.
2006; 13 (2): 220-232
- **Ontological modeling of transformation in heart defect diagrams.** *AMIA ... Annual Symposium proceedings. AMIA Symposium*
Viswanath, V., Tong, T., Dinakarbandian, D., Lee, Y.
2006: 799-803
- **Tandem machine learning for the identification of genes regulated by transcription factors** *BMC BIOINFORMATICS*
Dinakarbandian, D., Raheja, V., Mehta, S., Schuetz, E. G., Rogan, P. K.
2005; 6
- **ConsDiff: an algorithm for the detection of conserved differences between protein sequences**

Mehta, S., Dinakarpanian, D.
ELSEVIER SCIENCE BV.2005: 31–43

- **An informatics search for the low-molecular weight chromium-binding peptide.** *BMC chemical biology*
Dinakarpanian, D., Morrisette, V., Chaudhary, S., Amini, K., Bennett, B., Van Horn, J. D.
2004; 4 (1): 2-?
- **Collagenase unwinds triple-helical collagen prior to peptide bond hydrolysis** *EMBO JOURNAL*
Chung, L. D., Dinakarpanian, D., Yoshida, N., Lauer-Fields, J. L., Fields, G. B., Visse, R., Nagase, H.
2004; 23 (15): 3020-3030
- **Identification of the (RWTNNFREY191)-R-183 region as a critical segment of matrix metalloproteinase 1 for the expression of collagenolytic activity** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Chung, L., Shimokawa, K., Dinakarpanian, D., Grams, F., Fields, G. B., Nagase, H.
2000; 275 (38): 29610-29617
- **Tissue inhibitors of metalloproteinases: evolution, structure and function** *BIOCHIMICA ET BIOPHYSICA ACTA-PROTEIN STRUCTURE AND MOLECULAR ENZYMOLOGY*
Brew, K., Dinakarpanian, D., Nagase, H.
2000; 1477 (1-2): 267-283
- **Variable-Temperature Mount for a Microliter-Raman Cell** *Applied Spectroscopy*
Dinakarpanian, D., Dong, J., Carey, P.
2000; 54 (1): 153-154
- **Electric fields in active sites: substrate switching from null to strong fields in thiol- and selenol-subtilisins.** *Biochemistry*
Dinakarpanian, D., Shenoy, B. C., Hilvert, D., McRee, D. E., McTigue, M., Carey, P. R.
1999; 38 (20): 6659–67
- **Molecular structure of 5-methyl thiophene acryloyl ethyl thiolester: a vibrational spectroscopic and density functional theory study.** *Biospectroscopy*
Dinakarpanian, D., Carey, P. R.
1999; 5 (4): 201–18
- **Extending the Raman analysis of biological samples to the 100 micromolar concentration range** *Applied Spectroscopy*
Dong, J., Dinakarpanian, D., Carey, P. R.
1998; 52 (8): 1117-1121
- **Active site properties of the 3C proteinase from hepatitis A virus (a hybrid cysteine/serine protease) probed by Raman spectroscopy.** *Biochemistry*
Dinakarpanian, D., Shenoy, B., Pusztai-Carey, M., Malcolm, B. A., Carey, P. R.
1997; 36 (16): 4943–48