

Statement of Research Interests

Bell Raj Eapen

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As a dermatologist and bioinformatician my research mainly involves application of bioinformatics techniques and tools in dermatological conditions. My research interests are varied as I am interested in a wide range of theoretical and practical issues in dermatology. I have conducted most of my research as an independent researcher with no academic or industry affiliation. However I have worked for two years as an Asst. professor in a Harvard Medical International associated research institute in India. My CV is available online at <http://www.gulfdactor.net/resume.htm> .

[Numbers in square bracket refers to the concerned publication in the list below]

- Clinical Dermatology. [12, 13, 14, 15]

Clinical practice in two countries (India & United Arab Emirates) has given me good exposure to all skin types. During my post graduation, I have done research on patch test in footwear dermatitis and treatment options for SLE.

- Artificial intelligence and its clinical applications [4, 9, 23]

I have always been fascinated by artificial intelligence algorithms like Bayesian belief networks and neural networks for which I have found applications in dermatological conditions. I have also developed a domain specific ontology called ONTO Derm.

- Genomics and Systems Biology [1, 2, 3, 5, 8, 22, 25]

I have extensively studied the genomic and systems biology aspects of several dermatological conditions and I have published several interesting findings.

- Microarray analysis[3]
- Immunology [27]
- Mathematical modeling and computer programming.[26]

These areas are also of great interest to me, although I have done only limited research in it so far.

- Structural bioinformatics and drug interactions [7, 24]

Ongoing work with Dr. Dedee Murrell (NSW, Australia) structural consequences of keratin mutations in Epidermolysis Bullosa Simplex.

List of Publications:

(Not in chronological order)

Online: <http://www.gulfdactor.net/publi.htm>

- (1.) Eapen BR. A new insight into the pathogenesis of Reiter's syndrome using bioinformatics tools. *International Journal of Dermatology* March-2003. 42 (3); 242-243. [[Pubmed Citation](#)]
- (2.) Eapen BR. Photosensitivity in Smith-Lemli-Opitz syndrome: A flux balance analysis of altered metabolism. *Bioinformatics* 2 (2):78-82 (2007) [[Full Text](#)] [[Pubmed](#)] [[Details](#)]
- (3) Eapen BR. Myeloid differentiation factor 88 (MyD88): An innocent bystander or an active player - Pathway level analysis of expression data in psoriasis. *Journal of Investigative Dermatology (Suppl)*. 2008; 128: S132 [[Abstract - #787 \[pdf\]](#)]
- (4) Eapen BR. Malignancy in dermatomyositis: A Bayesian Belief Network approach. *Indian J Dermatol Venereol Leprol* 2007;73:445-5 [[Full Text](#)] [[Details](#)]
- (5) Bell Raj Eapen. M. Leprae genome revisited using the latest bioinformatics tools. (MSc Bioinformatics Project)
- (6) Sandra A, Eapen BR, Sheno SD. Effect of thickness of sunscreen on SPF. *British Journal of Dermatology (Suppl)*. 2000; 143 (57): 24 [[Citation](#)]
- (7) Eapen BR. Structural analysis of Staphylococcal enterotoxin G (SEG) and its inactive mutant (SEGL29P) using the bioinformatics tools. *Biomedicine*. 2002; 22: 89-93. [[Citation](#)]
- (8) Eapen BR. Vit1 gene in Vitiligo - Letter to Ed. *Indian J Dermatol Venereol Leprol*. 2004;70:184. [[Full Text](#)] [[Pubmed](#)]
- (9) Eapen BR. Neural network algorithm to predict the severity of Epidermolysis Bullosa Simplex. *Indian J Dermatol Venereol Leprol*. 2005;71:106-8. [[Full Text](#)] [[Pubmed](#)]
- (10) Bell Raj Eapen, Murali Srinivasan, Geetanjali Bhas. Antibiotic sensitivity profile of common bacterial pathogens in Dubai – A study of 107 cases. *MEJFM* 2005; 3(4): 28 - 32 [[Full Text](#)]
- (11) Bell Raj Eapen. Bioinformatics - A Clinician's perspective. *Bioinformatics - India* Apr-jun(2003). 1 (1); 17-18. [[Abstract](#)]

- (12) Bell Raj Eapen, Shrutakirthi D Shenoi, Sandra A. Patch Testing with Shoe series in suspected cases of footwear dermatitis. *Indian J Dermatol* 2001; 46(3): 146-148 [[Abstract](#)]
- (13). Bell Raj Eapen, T Salim, S D Shenoi. Clinical Presentation and treatment outcome in Systemic Lupus Erythematosus. (Vol 47 No 3 July - September 2002, *Indian Journal of Dermatology*). [[Abstract](#)]
- (14) Bell Raj Eapen, Shobana S, Anandan S. Waist dermatoses in Indian women wearing saree *Indian J Dermatol Venerol Leprol.* 2003;69:88-89. [[FULL TEXT](#)][[Pubmed](#)]
- (15) R Sudha, SB Hussain, E Bellraj et al. Clinico Pathological study of Exfoliative Dermatitis. *Indian J Dermatol Venerol Leprol.* 2003;69:30-31.
- (16) Murali Srinivasan, Bell Raj Eapen, Geetanjali Bhas, Cyril Kumar T. Efficacy of Chlorhexidine Mouthwash as an Oral Antiseptic - An Invivo Study on 20 Patients. *MEJFM* 2005; 3(4): 28 - 32 [[Full Text](#)]
- (17) Eapen BR. Data sharing using internet: A suggestion - Letter to Ed. *Indian J Dermatol Venerol Leprol.* 2003;69:194. [[FULL TEXT](#)][[Pubmed](#)]
- (18) Eapen BR. EndNote 7.0. *Indian J Dermatol Venerol Leprol.* 2006;72(2):165-6. [[Full Text](#)] [[Pubmed](#)]
- (19) Eapen BR. Blog your clinical photos. Letter to Ed. *Indian J Dermatol Venerol Leprol.* 2006;72(3):231. [[Full Text](#)] [[Pubmed](#)]
- (20) Bell Raj Eapen. Informatics in Clinical Practice Monitoring and Strategic Planning. *MEJFM* 2006; 4(5): 72 - 76 [[Full Text](#)]
- (21) Eapen BR. Collaborative writing: Tools and tips. *Indian J Dermatol Venerol Leprol* 2007;73:439-41 [[Full Text](#)] [[Pubmed](#)]
- (22) Eapen BR. Vitiligo, psoriasis and imiquimod: Fitting all into the same pathway. *Indian J Dermatol Venerol Leprol.* 2008 Mar-Apr;74(2):169. [[Full Text](#)] [[Pubmed](#)] [[Author's reply](#)]
- (23) Eapen BR. ONTOderm - A domain ontology for dermatology. *Dermatology Online Journal* 14 (6): 16 [[Full Text](#)] [[Pubmed](#)] [[Project Home Page](#)]
- (24) Eapen BR. Molecular biology of Botulinum Toxin Serotype A (BoNT/A): A Cosmetic perspective. *Journal of cosmetic dermatology* (2008). 7 ; 221-225

In Print:

(25) Schwann cell invasion by M.leprae: The probable Trojan horse. (Leprosy Review)

(26) DermaMan: Scoring dermatology on your palm. (Indian Journal of Dermatologists, Venereologists and Leprologists)