

BILAL NIZAMI

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EDUCATION:

2014 –Dec 2016 (anticipated)	University of KwaZulu Natal <i>Durban, South Africa, 4000</i> <i>Ph.D. Computational chemistry, March 2017</i>
2011-2013	Dr D.Y Patil University <i>Navi Mumbai, India</i> <i>M. Tech (bioinformatics)</i> <i>August 2013, (72%)</i>
2006-2010	Hamdard University <i>New Delhi, India</i> <i>Bachelor of Pharmacy (B.Pharm), (72%)</i>

Research Experience:

2014 – 2016

*PhD in computation chemistry with Dr. Bahareh Honarparvar at **University of KwaZulu Natal***

1. QSAR models and scaffold-based analysis of non-nucleoside HIV RT inhibitors.
2. Molecular insight on the binding of NNRTI to K103N mutated HIV-1 RT: Molecular dynamics simulations and dynamic pharmacophore analysis.
3. QM/MM and ONIOM study of binding of NNRTIs and RnaseH inhibitors with the HIV-1 Reverse Transcriptase (RT).
4. Development and modeling of amber parameters for metalloprotein having Ca²⁺ in coordination with surrounding residue using MCPB tool.

2013 (January – December)

*Trainee with Dr. Susan Thomas at **National Institute for Research in Reproductive Health (NIRRH)**, ICMR, Mumbai, India*

1. Development of anti-microbial peptide prediction system using R programming language and its web implementation.

Publications:

Articles in peer review journals

1. Bilal Nizami, Dominique Sydow, Gerhard Wolber, and Bahareh Honarparvar, *Molecular insight on the binding of NNRTI to K103N mutated HIV-1 RT: Molecular dynamics simulations and dynamic pharmacophore analysis*, *Molecular Biosystems*, **2016**, DOI [10.1039/C6MB00428H](https://doi.org/10.1039/C6MB00428H).
2. Faez Iqbal Khan, Bilal Nizami, Razique Anwer, KeRen Gu, Krishna Bisetty, Md. Imtaiyaz Hassan and, Dong Qing Wei, “*Structure prediction and functional analyses of a thermostable lipase obtained from Shewanella putrefaciens*”, *Journal of Biomolecular Structure & Dynamics*, **2016**, [DOI 10.1080/07391102.2016.1206837](https://doi.org/10.1080/07391102.2016.1206837)
3. Bilal Nizami, Igor V. Tetko, Neil A. Koorbanally, Bahareh Honarparvar, *Chemometrics and Intelligent Laboratory Systems*, **2015**, 148, 134-144. [10.1016/j.chemolab.2015.09.011](https://doi.org/10.1016/j.chemolab.2015.09.011)
4. F. H. Waghu, L. Gopi, R. S. Barai, P. Ramteke, B. Nizami and S. Idicula-Thomas, *Nucleic acids research*, **2014**, 42, D1154-D1158. [doi: 10.1093/nar/gkt1157](https://doi.org/10.1093/nar/gkt1157)
5. B. Nizami, H. Damani and D. R. mahato, *IJCA Proceedings on International Conference on Recent Trends in Information Technology and Computer Science 2012 ICRTITCS(2)*, **2013**, 31-37.
6. Elham Mousavinezhad Sarasia, Bilal Nizami, Mehbub I. K. Momin, Bahareh Honarparvar, *Estrogenic active stilbene derivatives as anti-cancer agents: DFT and QSAR studies*, submitted in *Molecules* (ISSN 1420-3049).

Oral presentation:

1. **Molecular insight on the binding of NNRTI to E138K mutated HIV-1 RT**, accepted for oral presentation at *Frank Warren Conference* of the South African Chemical Institute at *Rhodes university* from 4th – 8th December 2016.

Abstract:

1. ***Dynamics of rilpivirine binding with wild type and k103n mutated hiv-1 RT***, Nizami Bilal, Honarparvar Bahareh, College of Health Sciences Research Symposium abstract book, UKZN, 2016/9/8

2. Abstract published titled "**Drug resistance analysis for Mycobacterium tuberculosis from molecular perspective**" in Souvenir of SBCADD-2012 ISBN: 978-93-80243-69-6
3. Abstract published titled "**Lysine as weak loser is a gainer during the course of evolution**" in proceedings of National seminar on 'Intelligent Computing in Biological Science (ICIBS 2012)

Presentations:

- Bilal Nizami, "Dynamics of rilpivirine binding with wild type and k103n mutated hiv-1 RT", Honarparvar Bahareh, College of Health Sciences Research Symposium, UKZN, 2016/9/8 (Poster)
- Bilal Nizami, "QSAR and Molecular Docking of Non- Nucleoside HIV RT Inhibitors", Vienna Summer School on Drug Design, University of Vienna, Austria, 2015 (Poster)
- Bilal Nizami, "Drug resistance analysis for Mycobacterium tuberculosis from molecular perspective", Recent Trends in Structural Bioinformatics and Computer Aided Drug Design, at Alagappa University, 2014, (Poster)

Computer proficiency:

- **Operating system** - windows 7,10, XP, CentOS, Ubuntu
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Programming and Computer Skills

Programming Languages: Python, R, C, PERL

Python programming experience

- Python standard library
- Bio-python
- RDkit in python
- Python scientific programming including numpy, scipy, matplotlib, etc
- Debugging Python code using the Python debugger (pdb) and the interactive interpreter

Static typed language experience

- C

Software engineering experience

- git and github distributed version control system

Operating System, program, and scripting experience

- Shell scripting (e.g., bash)
- Excellent experienced with Linux/Unix, and Windows operating systems
- Good experience with Amber program suite
- Gaussian quantum chemistry program
- Visual Molecular Dynamics (VMD) program
- Fair experience with GROMACS

Industrial training and workshops:

- 5th CHPC Introductory Scientific Programming School on Linux and the Python Programming language, University of South Africa, Pretoria, SA
- High Performance Computing School 2015, on programming for parallel systems with MPI, OpenMP and CUDA, using the C, University of Johannesburg, SA
- 15 days Industrial training in Abyss Pharma Pvt. Ltd., New Delhi
- Educational tour to Cipla manufacturing plant at Baddi, India
- Volunteered in the 5-day workshop in Bioinformatics Week conducted at Dept of Biotechnology and Bioinformatics, Dr. D.Y Patil University, Navi Mumbai.

Accomplishments and Awards:

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- 2016** *Knowledge, Interchange and Collaboration Round 2 (KIC) local travel grant from NRF, South Africa, 2016 (KIC160626174258)*
- 2015** *Knowledge, Interchange and Collaboration (KIC) international travel grant from NRF, South Africa, 2015 (grant no. 97110)*
- 2014** *College of Health Sciences, UKZN, Doctoral bursary*