

Ezekiel Femi ADEBIYI, PhD

Current position: Professor

Computer and Information Sciences Department
Covenant University
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<http://cubre.covenantuniversity.edu.ng/>

[www.covenantuniversity.edu.ng/Profiles/Adebiyi-](http://www.covenantuniversity.edu.ng/Profiles/Adebiyi-Ezekiel)

[Ezekiel](#)

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Personal data

Date of Birth: July 28th, 1970

Place of Birth: Ibadan, Nigeria

Local Gov Area: Boluwaduro

State of Origin: Osun

Nationality: Nigeria

Marital Status: Married with four children

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Language: Yoruba (native language), English,
and German.

EDUCATION

1987-1991 B.Sc (Hons) Mathematics (2nd Class Upper division), University of Ilorin, Nigeria.

1992-1995 M.Sc. Mathematics with „B+“ (Computer Option), University of Ilorin, Nigeria.

1998-2002 Ph.D Computer Science with „cum laude“ (good) (Algorithms and Bioinformatics).

Supervisors: Prof. M. Kaufmann and Prof. T. Jiang of University of Tübingen,

Germany and University of California, Riverside, USA. Dissertation title: Pattern

Discovery in Biology and Strings Sorting: Theory and Experimentation.

WORK EXPERIENCE

1992-1995 Graduate Assistant, Department of Mathematics, University of Ilorin, Nigeria.

1995-1998 Assistant Lecturer, Department of Mathematics, University of Ilorin, Nigeria.

1996-1997 Visiting Lecturer, Ladoke Akintola University of Technology, Department of Computer Science and Engineering, Ogbomosho, Nigeria.

1998-2002 Research Fellow, Wilhelm Schickard Institute for Informatik, University of Tuebingen, Germany.

04/01-05/01 Research Fellow, Department of Computer Engineering, University of California (UCR), Riverside, California, USA.

1998-05/03 Lecturer II, Department of Mathematics, University of Ilorin, Nigeria.

05/03-09/03 Lecturer I, Department of Mathematics, University of Ilorin, Nigeria (on withdrawal of service).

03/04-04/04 Visiting Scientist, San Diego Super Computer (SDSC), San Diego, California, USA.

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- 12/04-01/05 Visiting Scientist, University of California (UCSF), San Francisco, California, USA.
- 01/06-02/06 Visiting Scientist, LIRMM, CNRS, University of Montpellier, France
- 08/06-09/06 Visiting Scientist, German Cancer Research Centre (DKFZ), Heidelberg, Germany.
- 07/10-10/10 Visiting Scientist, German Cancer Research Centre (DKFZ), Heidelberg, Germany.
- 08/11-11/11 Visiting Scientist, German Cancer Research Centre (DKFZ), Heidelberg, Germany.
- 10/12 Visiting Scientist, German Cancer Research Centre (DKFZ), Heidelberg, Germany.
- 09/03-2008 Senior Lecturer and Bioinformatics Research Group Leader, Department of Computer and Information Sciences, Covenant University, Ota, Nigeria.
- 09.05.08-29.06.10 prima facie Professor, Ag. Head of Department and Bioinformatics Research Group Leader, Department of Computer and Information Sciences, Covenant University, Ota, Nigeria.
- 29.06.10-30.09.11 Professor, Head of Department and Bioinformatics Research Group Leader, Department of Computer and Information Sciences, Covenant University, Ota, Nigeria.
- 01.10.11-Till date Professor and Head, Covenant University Bioinformatics Research (CUBRe, cubre.covenantuniversity.edu.ng) and CU NIH H3AbioNet node, Department of Computer and Information Sciences, Covenant University, Ota, Nigeria.
- 01.07.14-Till date Program Director, Covenant University Bioinformatics, Biotechnology and Public Health Research
- 01.09.14-30.04.16 Visiting Scientist and Senior Georg Forster Alexandra von Humboldt Fellow, German Cancer Research Centre (DKFZ), Heidelberg, and Jena University Hospital, Jena, Germany.
- 01.05.16-Till date Senior Scientist and Principal Investigator, Heidelberg University, Faculty of Biosciences, Institute of Pharmacy and Molecular Biotechnology (IPMB), Heidelberg, Germany.

TECHNICAL EXPERIENCE

- **Operating Systems:** Linux, Redhat, Solaris, and Windows.
 - **Programming and Packages:** GRID computing, R, C/C++, Java, Python, Perl, Matlab, HTML, Excel, SQL, and Powerpoint.
- 1996-1997 Consultant/Project Officer; Informatics Company and Telematics (IC and T) Limited, Ilorin, Nigeria.
- 03-07/2002 Programmer; Polirami, Doerr, Gotz and Harbarth GbR, Tuebingen, Germany
- 05-07/2002 Programmer; Exelixis Deutschland GmbH, Tuebingen, Germany
- 02-05/2001 Web site master; AHF analysentechnik AG, Tuebingen, Germany
- 02-06/1999 Software Manager Assistant; Stadtwerke GmbH, Tuebingen, Germany
- 09/1998 System Manager Assistant; Robert Bosch GmbH, Reutlingen, Germany

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RESEARCH INTERESTS/ON GOING RESEARCH

My main research interests are in computational complexity and computational molecular biology, with emphases on

- anti malarial drugs design and development;
- PCR detection of malaria at the liver stage;
- anti-malaria drugs resistance mechanism;
- characterizing the malaria parasite transcription factors and their DNA binding sites using a holistic probabilistic framework;
- 3D Structures prediction and structures based drug discovery;
- computational identification of functional modules in *Plasmodium falciparum*;
- organisms inter-pathways analysis using the microarray data;
- malaria control mathematical modelling;
- insecticides design and development and recently
- Human genetics and biofuel (Flux-variability analysis (FVA) for the optimization of the bioreactor).

INTERNATIONAL RESEARCH LINKAGES/COLLABORATORS

- Prof. Roland Eils and Dr. Benedikt Brors, German Cancer Research Centre (DKFZ), Heidelberg, Germany and University of Heidelberg, Heidelberg, Germany.
- Prof Rainer Koenig and Dr Marcus Oswald, University Hospital, Center for Sepsis Control and Care, Jena University, Jena, Germany.
- Prof. Dr. Lars Kaderali, Chair for Statistical Bioinformatics and Vice Director, Institute for Medical Informatics and Biometry (IMB), Medical Faculty Carl Gustav Carus Dresden University of Technology, Fetscherstr. 74, 01307 Dresden.
- Prof. Olivier Gascuel, Dr. Eric Rivals, LIRMM, CNRS, University of Montpellier, France.
- Dr. Karine Le Roch, Department of Cell Biology, University of California, Riverside, USA.
- Prof. Seydou Doumbia, Malaria Research and Training Center (MRTC), Bamako, Mali.
- Prof. Michael Lanzer, Department of Parasitology, University of Heidelberg, Germany.
- Prof. Ginsburg Hagai, Department of Biochemistry, Hebrews University of Jerusalem, Israel.
- Prof. Nancy Amato, Department of Computer Science, Texas A&M University, College Station, USA
- Prof. Rebai Ahmed, Unit of Bioinformatics, Sfax Biotechnology Centre, BP _K', 3038 Sfax, Tunisia.
- Prof. Fotis Kafatos and Dr George Christophides, Immunogenomics department, Division of Cell & Molecular Biology, Imperial College, London.
- Prof Marcelo Jacobs-Lorena, Johns Hopkins Malaria Research Institute, Baltimore, USA.

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- Prof Jason Rasgon, Department of Entomology, Center for Infectious Disease Dynamics, The Huck Institutes for the Life Sciences, Millennium Science Complex, Room W-127, the Pennsylvania State University, University Park, PA 16802.
- Prof Dr Martin Schlitzer, Department of Pharmacy, Philipps-University of Marburg, Marburg, Marbacher Weg 6, 35037 Marburg, Germany.
- Prof Dr Gerhard Klebe, Department of Pharmaceutical Chemistry, Philipps University of Marburg, Marbacher Weg 6, 35037 Marburg, Germany.
- Dr Manuel Llinas, Department of Molecular Biology, Princeton University, USA.
- Dr Zbynek Bozdech, School of Biological Sciences, Nanyang Technological University, Singapore.
- Dr Judit Kumuthini, Center for Proteomics and Genomics Research (CPGR), University of Cape Town, South Africa.
- Dr Alia Benkahla, Group of Bioinformatics and Mathematical Modelling, Laboratory of Medical Parasitology, Biotechnology and Biomolecules, Institute Pasteur of Tunis, Tunisia.
- Dr James Brandful, Noguchi Memorial Institute for Medical Research, University of Ghana, Accra, Ghana.
- Prof Matthew Adigun, Department of Computer Science, University of Zululand, South Africa.
- Dr Vuyo Mavumengwana, Dr Patrick Njobeh, Department of Biotechnology, UNIVERSITY OF JOHANNESBURG, UNIVERSITY & KINGSWAY, AUCKLAND PARK, JOHANNESBURG, SA.
- Dr Elvis Fosso-Kankeu, Department of Biotechnology, North-West University, Building C1, 53 Borcherd Street, 2531 Potchefstroom, SA.

RESEARCH CONSORTIUM

- CODE MALARIA, coordinating center at Covenant University, Ota, Nigeria (<http://cubre.covenantuniversity.edu.ng/index.php/research-consortium/>)
- Human Heredity and Health in Africa (H3Africa), coordinating center at National Human Genome Research Institute/National Institutes of Health, Bethesda, USA (<http://www.h3africa.org/>) and
- Pan African Bioinformatics Network for the Human Heredity and Health in Africa projects (H3AbioNet), coordinating center at University of Cape Town, SA (<http://www.h3abionet.org/>).

TEACHING INTERESTS

Presently what I am teaching at Covenant University represented exactly my teaching interests. These include

Undergraduate level:

- CSC 215: Mathematical Methods
- CSC 311: Discrete Mathematics
- CSC 317: Theory of Computing

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- CSC 314: Compiler Design
- CSC 415: Algorithms and Complexity Analysis
- CSC 422: Introduction to Bioinformatics

Postgraduate level:

- CIS 813: Advanced Analysis and Design of Computer Programs
- CIS 822: Advanced Computational Geometry
- CIS 935: Computational Molecular Biology

Other teaching interests include: Computer Graphics, Artificial Intelligence, Stochastic Processes and Computer Architecture.

MEMBERSHIP OF LEARNED SOCIETIES AND INTL' MANAGEMENT TEAM

- Member and President, Nigeria Society of Bioinformatics and Computational Biology (NiSBCB) (2005-Till date)
- Member and Vice President, Africa Society of Bioinformatics and Computational Biology (ASBCB) (2007-2011)
- Member and Secretary, Africa Society of Bioinformatics and Computational Biology (ASBCB) (2011-Till date)
- Member, Coordinators team, NEPAD Continental Centre for Bioinformatics Research (France government sponsored) (2005-2007).
- Member, Continental Working group for the establishment a Pan African Bioinformatics Network, WHO-TDR sponsored (2009-2012)
- Co-PI, NIH H3AbioNet – a Sustainable African Bioinformatics Network for H3Africa (2011-Till date)
- Management Committee (MC) Member, NIH H3AbioNet – a Sustainable African Bioinformatics Network for H3Africa (2011-Till date)
- Chair, Research and Tool Development Work Group (RTDWG), NIH H3AbioNet – a Sustainable African Bioinformatics Network for H3Africa (2011-Till date)
- Member, Accreditation Task-Force and Curriculum Development Task-Force of the NIH H3AbioNet – a Sustainable African Bioinformatics Network for H3Africa (2011-Till date)
- Member, African Bioinformatics Education Committee
- Associate member, Nigeria Computer Society
- Member, Computer Professional Registration Council of Nigeria (CPN)
- Member, International Society of Computational Biology (ISMB)

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CONFERENCES/SEMINAR/WORKSHOP ATTENDED (OR TO BE ATTENDED)

- Host, Covenant University GWAS workshop for complex diseases June 29 - July 1, 2015
- Targeting Ebola Conference, Paris, 28-29 May, 2015.
- Fourth H3AbioNet Consortium Meeting, 13-15th October 2014, Novotel City Centre Casablanca, Morocco.
- Host, H3AbioNet 2014 Postgraduate Workshop, 21 April – 26 May, 2014
- Second H3AbioNet and Third H3Africa Consortium Meetings, October 3-6, 2013, Johannesburg, SA
- Second H3Africa Consortium Meeting, May 16-18, 2013, Accra, Ghana
- 3rd Joint ISCB Africa ASBCB Conference on Bioinformatics, Casablanca, Morocco, March 12 – 15, 2013
- NIH H3AbioNet PIs and Associates Meeting, Cape Town, South Africa, November 21-23, 2012.
- Resource person at the Hands-on training on bioinformatics for health scientists and technologists. Nigeria Institute of Medical Research, Yaba, Lagos, Nigeria, 13-16 June, 2011.
- Resource person at the International Biotechnology Symposium (IBS), Covenant University, Ota, Nigeria, May, 2011.
- Resource person at the Medicare and Covenant University Malaria Conference, July 27-28, 2011
- Resource person at the Workshop on practical bioinformatics for agricultural research and development. Nigeria Institute of agricultural development, Ibadan, Nigeria, 21-23 March, 2011.
- 1st Joint ISCB Africa ASBCB Conference on Bioinformatics of Infectious Diseases, MRTC, Bamako, Mali, November 30 – December 2, 2009 (chaired a session in this conference)
- International EMBnet-RIBio Conference 2009 “Bioinformatics for High Throughput Technologies and the Interface of Bioinformatics and Systems Biology”, 26 – 29, October, 2009.
- Biology and Pathology of Malaria Parasites “BioMalPar” Network of Excellence, EMBL Heidelberg, 18-20, May, 2009.
- Initiation, Coordination and Resource person at/of the Second International Workshop on Pattern Discovery in Biology (IWPDB) April, 2009.
- 6th Annual Rocky Mountain Bioinformatics Conference (Rocky '08), Snowmass/Aspen, Colorado, USA, December 4-7, 2008.
- Resource person at the Molecular Biology and Applied Biotech International Workshop, Covenant University, Ota, Nigeria, 28th July – 2nd August, 2008.
- Resource person at the Bioinformatics 2008 Workshop, Bells University of Technology, Ota, Nigeria, 14th July – 18th July, 2008.
- UNICEF/UNDP/World Bank/WHO-TDR Bioinformatics Workshop 2008, Abuja, 21-23, April, 2008.
- 1st International School and Conference on the Bioinformatics of African Pathogens and Disease Vectors (Bioinformatics for Africa), ICIPE, Nairobi, Kenya, May 28 – June 2, 2007.
- The First Southern African Bioinformatics Workshop, The University of Witwatersrand, Johannesburg, South Africa, 28-30 January, 2007.

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- ApiDB Workshop, June 26-29, 2006, The University of Georgia, USA (Participant and Resource Person)
- Initiation, Coordination and Resource person at/of the First International Workshop on Pattern Discovery in Biology (IWPDB) 2005. (*This is the first of its kind in Nigeria and Africa.*)
- Journees Ouvertes Biologie Informatique Mathematiques (JOBIM 2005), 6-8 July, 2005, Lyon, France.
- West Africa Biotechnology workshop on Advanced Malaria Bioinformatics, WAWB, 3-8 May, 2004, University of Ibadan, Nigeria (Resource person)
- Eighth Annual International Conferences on Research in Computational Molecular Biology (RECOMB), March 27-31, 2004, Washington, USA.
- Sixth Annual International Conferences on Research in Computational Molecular Biology (RECOMB), April 16-20, 2002, Washington, USA.
- 9th Annual International conference on Intelligent Systems for Molecular Biology (ISMB), Copenhagen, Denmark, 2001.
- DIMACS workshop on DNA Sequence and Topology, Rutgers, The State University of New Jersey, April 17-20, 2001, NJ, USA.
- Frontiers in Mathematical and Computational Biology, June 17-19, 2001, UT Dallas, Richardson, TX, USA.
- Sequence-, Structures, Functions-Analysis Seminar, 04/12/2000 – 08/12/2000, Physiologisch-Chemischen Institut, University of Tuebingen, Germany.
- CIME School on “Mathematical Methods for Protein Structure Analysis and Design”, 8-15 July, 2000, Bari, Italy.
- 13th International Conf. of the Computer Association of Nigeria (COAN) on “Trend in Computing: Hardware, Software and Networking”, Durbar Hotel, Kaduna, Nigeria, 1996.
- School on “Fundamentals of Computer Science”, National Mathematics Center, Abuja, Nigeria, 16-21, April, 1994
- 11th International Conference of the Computer Association of Nigeria (COAN), Kwara Hotel, Ilorin, Nigeria, 1994
- Leray-Schavder Degree Method in Non-linear B.V.P., National Mathematical Center, Abuja, Nigeria, Dec. 6-17, 1993

SELECTED TALK GIVEN (OR TO BE GIVEN) (LOCAL AND INTERNATIONAL)

- Human metabolic network (HMN) modelling: contextualization of H3Africa projects high throughput data from pathological and drug-treated states and simulation of these states, Second H3ABioNet Consortium Meeting, October 3-5, 2013, Johannesburg, SA.
- Invited talk: Large data and Biomedical Studies: The Human metabolic network (HMN) modelling, University of Zululand, South Africa October 7, 2013.
- Invited talk: Bioinformatics and Malaria research: building cost efficient but effective antimalaria drugs. Texas A&M Fall 2011 CSCE 681 Graduate Seminar, 3rd October, 2011.

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- Invited talk: CODE MALARIA: Eradication developments for the decade. Covenant University 1st Inaugural lecture series, 24th March, 2011 and also given as a 1st STEM Seminar at the Fayetteville State University, NC, 11 October, 2011.
- Invited talk: Development of an evolution-proof insecticide against *anopheles gambiae*. Department of Theoretical Bioinformatics, DKFZ, Germany, 29th September, 2011.
- Keynote talk: CODE MALARIA: Learning from the past and on-going projects and Developing capacity for malaria eradication. Medicare and Covenant University Malaria Conference, July 27-28, 2011.
- Keynote talk: Agro-biotech and bioinformatics. International Biotechnology Symposium (IBS), Covenant University, Ota, Nigeria, May, 2011.
- Invited talk: Systems Biology for PCR detection of malaria at the liver stage. International EMBnet-RIBio Conference 2009 “Bioinformatics for High Throughput Technologies and the Interface of Bioinformatics and Systems Biology”, 26 – 29, October, 2009.
- Invited talk: Characterizing the malaria parasite transcription factors and their DNA binding sites using a holistic probabilities framework (a work in progress). Institute of Pharmacy and Molecular Biotechnology (IPMB), BIOQUANT, University of Heidelberg, Heidelberg, May 26, 2009.
- Keynote talk: Computational Biologists in Malaria Research: Significance, Challenges and Suggestions on way forward. First African Virtual Conference on Bioinformatics 2009 (Afbix’09), Feb., 19-20, 2009.
- Modeling the Malaria Parasite-Mosquito Midgut Cell Interactions. 6th Annual Rocky Mountain Bioinformatics Conference (Rocky '08), Snowmass/Aspen, Colorado, USA, December 4-7, 2008.
- Keynote talk: Bioinformatics in Biotech Research, Molecular Biology and Applied Biotech International Workshop, Covenant University, Ota, Nigeria, 28th July – 2nd August, 2008.
- Translation of Genomic and Biological Information to Health tools and agents: The Nigeria Contributions, UNICEF/UNDP/World Bank/WHO-TDR Bioinformatics Workshop 2008, Abuja, 21-23, April, 2008.
- Pattern Discovery in Biology. College of Science and Technology, Covenant University Seminar series, Feb., 17, 2004
- Invited talk: Computational molecular biology and drug design. West Africa Biotechnology workshop on Advanced Malaria Bioinformatics, WAWB, 3-8 May, 2004, University of Ibadan, Nigeria . (http://www.wabw.org/2004_faculty.html)
- Keynote talk: Systems biology and the development of vaccines and drugs for malaria treatment. First Covenant University International Workshop on Pattern Discovery in Biology (CUWPDB) 2005. (<http://www.covenantuniversity.edu.ng/bioinformatics/TrainingActivities/iwpdb.htm>)
- On specific system biology computational tools for *Plasmodium falciparum*. Department of Theoretical Bioinformatics, DKFZ, Germany, 10th August, 2006.
- Computational discovery of new drug and vaccine targets in *Plasmodium falciparum*. Institute of Pharmaceutical and Molecular Biology (IPMB), University of Heidelberg, Germany, 26th September, 2006.
- Invited talk: Computer Operating System with special Emphasis on Linux and its tools that include Emacs/Xemacs, LATEX and xfig. Lagos State University Continuing Education Workshop, November 13-16, 2006.

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- A convoluted problem and heuristic solution for predicting ensembles and transitions for pseudoknots polymers. Proc. International Conference on the Bioinformatics of African Pathogens and Disease Vectors (Bioinformatics for Africa), Nairobi, Kenya, May 28 – June 2, 2007.

TRAINING/RESEARCH PROPOSALS WRITTEN TILL DATE (INCLUDING NEW ONES)

- Adebisi, E. F. Ph.D Working Papers. Deutscher Akademischer Austausch Dienst (DAAD), 1997-2001. (Received award)
- Adebisi, E. F., Koenig, R. and Lanzer, M. System Biology and the Development of Vaccines and Drugs for Malaria Treatments. Alexander von Humboldt (AvH) Stiftung, Germany, 2004. (initial version rejected but asked for a re-submission in two years time)
- Adebisi, E. F. On the tRNA Structures using graph-theory methods. Covenant University, Senate Research Award, 2004 (N498, 000.00, **Received award**)
- Adebisi, E. F. Covenant University 1st International Workshop on Pattern Discovery (IWPDB), 2005. (#2.5 million, Received award)
- Adebisi, E. F. A Computational dominated approach to the Development of Vaccines and Drugs for Malaria Treatments. UNICEF/UNDP/WORLD BANK/WHO/TDR, 2005. (initial version Rejected but requested for revised version)
- Adebisi, E. F. On Specific System Biology Computational Tools for *Plasmodium falciparum*, DAAD, 2005. (4,730 EURO, Received award)
- Adebisi, E. F. On the International Center for Bioinformatics Research (ICBR), at Covenant University, Ota, Nigeria, 2005. (#76,330,462.46, Reviewed and returned for down-scaling)
- Adebisi, E. F. Search for recombinations in homologous sequences and minisatellites. Centre National de la Recherche Scientifique (CNRS), Paris, France, 2005. (3000 EURO, Received award)
- Adebisi, E. F. On the Covenant University Bioinformatics Laboratory (CUBIL) at Covenant University, Ota, Nigeria, 2006. (#1,841,000, reviewed and returned for merging with the emerging Biotechnology and Microbiology research development at Covenant University)
- Nwadiuto Esiobu, Adebisi Ezekiel and Otunola Tejumola. Center for Biotechnology, Bioinformatics and Microbiology (CBBM) at Covenant University, Ota, Nigeria, 2006. (#10,850,000.00, as been approved to receive funding via the endowment foundation, ...)
- Nwadiuto Esiobu, Otunola Tejumola, Fagade Obasola and Adebisi Ezekiel. Proposed Undergraduate Curriculum for B.Sc in Biotechnology at Covenant University, Ota, Nigeria, 2006.
- Daniel Masiga, Ezekiel Adebisi, Nicola Mulder, Alia Benkhale, Seydou Doumbia. Carnegie-IAS Regional Initiative in Science and Education Concept Proposal: African Bioinformatics and Functional Genomics Education Network, 2008. (Rejected)
- Nicola Mulder, Ezekiel Adebisi et al. AfriGENBIT: African Genomics and Biological Information Translation Network. Initial take off to be sponsored by UNICEF/UNDP/World Bank/WHO-TDR, 2008 (Received award). The Network was launched at the UNICEF/UNDP/World Bank/WHO-TDR Bioinformatics Workshop 2008, Abuja, 21-23, April, 2008.

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- Adebisi, E. F. Characterizing transcription factors of the malaria parasite at the liver stages, German Cancer Research Center (DKFZ), 2008/2009. (Won the DKFZ Guest Research Scientist Award)
- Omonhinmin, A. C., Dike, I. P., Adebisi, E. F., Obembe, O. O., Chinedu, S. N., Fatumo, S., and Ogunlana, O. O. Molecular and Bioinformatics Analyses: Systematics and Lead-Compound Implications for Three Indigenous African Plant Collections. Covenant University Center for Research and Development (CUCERD), 2009. (approx. N10,200,000 project and on going)
- Adebisi, E. F. Covenant University 2nd International Workshop on Pattern Discovery (IWPDB), April, 2009. (#0.8 million, Received award)
- Adebisi, E. F. Characterizing the malaria parasite transcription factors and their DNA binding sites using a holistic probabilistic framework, DAAD, 2010. (6,570 EURO, Received award).
- Rasgon, J. L., Adebisi, E. F., Oluwagbemi, O. O. ANOSPEX: A Spatially- Explicit Predictive Computational Model and a potential tool for studying *Anopheles gambiae* Metapopulation dynamics towards Malaria Control, jointly funded by Bill and Melinda Gates Foundation, NIH and Fulbright Scholarship Board, 2010.
- Adebisi, E., Brors, B., Llinas, M., Ewejobi, I. Transcription Factor(s)-Target detection in the malaria parasite *Plasmodium falciparum*. DAAD PhD Student Sandwich Scholar Award, 2011.
- Adebisi, E. F. *In silico* study of the complex mechanisms of mosquito insecticide resistance. German Cancer Research Center (DKFZ), 2011/2012. (Euro 7420 DKFZ Guest Research Scientist Award, Received award)
- Adebisi, E., Schlitzer, M., Lanzer, M., Eils, R. and Koenig, R. Rational antimalarial inhibitors design and virtual screening. CUCERD 2010/2011. (N **6,622,343.67, Received award**)
- Adebisi, E., Schlitzer, M., Lanzer, M., Eils, R. and Koenig, R. Best inhibitor hits formulation and scale up. CUCERD 2010/2011. (N **17,629,343.69, Received award**)
- Rosemary Audu, Azeez Butali, Collet Dandara, Ezekiel F. Adebisi. Standard Biorepository for Genomic Studies in Africa, Human Virology Laboratory, Nigerian Institute of Medical Research (NIMR), Yaba, Lagos. NIH H3Africa Biorepository Grant (UH2/UH3) application (Rejected)
- Nicky Mulder, Ezekiel Adebisi et al.. H3ABioNet - a sustainable African Bioinformatics Network for H3Africa projects. NIH H3Africa network Grant application, 2012 (Received award)
- Ezekiel Adebisi, Victor Osamor, Angela Eni, Olubanke Ogunlana, Grace Olasehinde, Solomon Rotimi, Joys Oyedepo. Diagnosing liver malaria: Part I. CUCERD 2012/2013 (N14,362,175.53, Received award, under processing)
- Azeez Butali, Nicki Tiffin, Junaid Gamiendien, Ezekiel Adebisi et al. AFRICran – Collaborative approach to Cleft Lip and Palate Research in Africa. A WT research grant application (still under review but passed already the first stage successfully, rejected at the 2nd and final stage. Was asked to be reviewed and re-submitted)
- Ezekiel Adebisi, Rainer Koenig and Bolaji Famuyiwa. *Anopheles gambiae* Biochemical Network Chokepoint and Flux Balance Analysis. DAAD PhD Student Scholar Award, 2012 (Received award).
- Olanrewaju J. Oyelade, Ezekiel Adebisi and Benedikt Brors. Constructing Metabolic Pathways in the Malaria Parasite- *Plasmodium falciparum*. DAAD Post-doctoral Scholar Award, 2012 (Rejected).
- Azeez Butali, Wasiu Adeyemo, Rosemary Audu and Ezekiel Adebisi. Scientific Approach to Human Identification, Crime Prevention and the Prevention of Congenital Birth Defects in Nigeria. Nigeria Education Trust Funds (ETF) grant application. (Submitted)

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- Adebisi, E. F., Brors, B., Koenig, R., Lanzer, M. and Schlitzer, M. Computational identification and experimental analysis of evolution-proof drug and insecticidal targets in the most deadly malaria parasite and host-vector. Alexander von Humboldt (AvH) Stiftung, Germany, 2014. (received award)
- Adebisi, E. F., Okwumabua, O., Doumbia, S., Schlitzer, M. and Rasgon, J. Computational identification, experimental analysis and modeling of novel insecticidal targets for malaria *Anopheles*. NIH ICIDR grant application, 2014 (under review)
- Adebisi, E. F. African Institute for Mathematical Sciences (AIMS), Next Einstein Initiative, Nigeria (with center at CU), for partial sponsorship by DAAD and AvH (under review)
- Adebisi, E. F., Adebayo, Abiodun., Solomon, Rotimi. *In-vitro* and *in-vivo* of 7-11 newly synthesized antimalarials. DAAD Equipment (and consumables) grant application (under preparation)
- Ezekiel Adebisi, Abiodun Adebayo, Olubanke Ogunlana, Grace Olasehinde and Solomon Rotimi. Preclinical evaluation of novel computational-aided designed compounds as antimalarial drug candidates. The World of Academy of Sciences (TWAS), 2014 (Received award and ongoing)
- Olayinka Ajani, Martin Schlitzer and Ezekiel Adebisi. Synthesis of Bioactive of Hydroxamic-Based 2-Amino quinazoline Derivatives as Potential Inhibitors for Effective Antimalarial Drug Design. DAAD, 2015 (Received award and ongoing)
- Ezekiel Adebisi, Seydou Doumbia and Rainer Koenig. Computational identification and experimental analysis of novel insecticidal targets tipping malaria infected *Anopheles gambiae*. German Research Foundation (DFG), 2015 (1st review successful, completing the 2nd and final stage)
- Solomon Rotimi, Benedikt Brors and Ezekiel Adebisi. Assessment of *Plasmodium falciparum* RNA pseudouridylate synthase (putative), as novel antimalarial drug target. DKFZ guest scientist grant proposal, 2015 (under review)

LOCAL, NATIONAL AND INTERNATIONAL HONORS AND AWARDS (AND NEW ONES)

- African Scientist to JOBIM and CNRS-NEPAD continental Bioinformatics Network project, Lyon, France, 2005.
- Research Fellow, Eberhard Karl Institute fuer Informatik, University of Tuebingen, Germany, 1997.
- Best Graduate Student Award, University of Ilorin, Nigeria, 1991
- Oyo State Bursary Award, 1991

PRESENT EMPLOYMENT, STATUS, SALARY AND EMPLOYER

- Teaching, Researching and Community development
- Professor, Immediate past Head of Department and presently Head Covenant University Bioinformatics Research (CUBRe)
- CUSS 14/6
- Covenant University, Ota, Nigeria

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COMMUNITY DEVELOPMENT (LOCAL AND INTERNATIONAL)

- Captain, Handball Junior Team, United Community Secondary School, Ilorin, Nigeria (1985-1987)
- Assistant Head-boy, United Community Secondary School, Ilorin, Nigeria (1986-1987)
- Treasurer, National Association of Mathematics Students, Nigeria, University of Ilorin Branch (1990-1991)
- Level Adviser, 100L Mathematics Students, Department of Mathematics, University of Ilorin, Nigeria (1993-1995)
- Level Adviser, 100 L Computer Sc Students, Department of Mathematics, University of Ilorin, Nigeria (1995-1997)
- Secretary, Post graduate degree in Computer Science Implementation Committee, Department of Mathematics, University of Ilorin, Nigeria (1995-1997)
- Coordinator, Nigeria NEPAD Continental Centre for Bioinformatics Research (France government sponsored) (2005-Till date). See http://www.lirmm.fr/france_afrique/Nairobi2007/
- Initiation, Coordination and Resource person at/of the First Covenant University International Workshop on Pattern Discovery in Biology (CUWPDB) 2005. (*This is the first of its kind in Nigeria and Africa.*)
- PG Coordinator, College of Science and Technology post-graduate (PG) program (2005-2007)
- Member of the Consultative team, Covenant University, Faculty Support Program (FSP) (2005-2007)
- Acting Dean, College of Science and Technology (CST), Covenant University, 2007
- Member, Covenant University Research and Development Grant Committee (RDG) (2005-2007)
- Chairman, CUSAT Interview panel. 2004/2005, 2005/2006, 2007/2008
- Member, Covenant University Students Disciplinary Committee (SDC) (2005-2010)
- Member, Committee on Covenant Journal of Science and Technology (CJST) (2006-Till date)
- Final Year Academic Advisor, Covenant University, Computer and Information Sciences Department (2005-2008)
- Winner Satellite Fellowship (WSF) Location Provider, Faith Tabernacle, Ota, Nigeria (2006 – 2010)
- Winner Satellite Fellowship (WSF) Location Provider, Faith Tabernacle, Ota, Nigeria (2012 – Till date)
- Minister, Winner Satellite Fellowship (WSF), Faith Tabernacle, Ota, Nigeria (2012 – Till date)
- Member and the Academic Secretary, College Curriculum Development Committee, Covenant University, Ota, Nigeria (2007-2008)
- Member, Departmental Appointment and Promotion Committee (A & P C), Department of Computer and Information Science, Covenant University, Ota, Nigeria (2007-Till date)
- Member, College Quality and Academic Standard Committee Committee, Covenant University, Ota, Nigeria (2007 - 2008)
- Teen Teacher, Teen Church, Faith Tabernacle, Ota, Nigeria (2007 – 2010)

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- Member, ICTG, Faith Tabernacle, Ota, Nigeria (2011 – Till date)
- Member, Planning Committee for Covenant University Research and Development Centre (CUCERD), (2008 - 2009)
- Member, Senate Committee for Covenant University Research and Development Centre (CUCERD), (2009 – 2011): (2012 – Till date)
- Chair, Sub-committee on Grants and Publications, Senate Committee for Covenant University Research and Development Centre (CUCERD), (2012 – Till date)
- Member, Special Summer Programmes Implementation Committee, Covenant University, Ota, Nigeria (2008 – 2010)
- Member, Faculty Capacity Building and Enhancement Strategies Committee, Covenant University, Ota, Nigeria (2008- 2010)
- Member, Local Organizing Committee (LOC), Molecular Biology and Applied Biotech International Workshop, 28th July – 2nd August, 2008.
- Head of Department, Computer and Information Sciences Department, and Senate member, Covenant University, Ota, Nigeria. (2008 – 2011)
- Initiation, Coordination and Resource person at/of the Covenant University 2nd International Workshop on Pattern Discovery in Biology (2nd IWPDB), July 2009.
- Member, CUSAT Committee, 2010, 2011, 2012
- Chair, Senate Committee on e-Exam, 2011 – 2012
- Member, Senate Committee on UG and PG Academic Curriculum, 2013 – Till date
- Member, NUC Ad-hoc Accreditation Panel (that evaluated UG degree programmes in Sciences ‘C’ discipline at Osun State University), March 25-, 2012
- Member, NUC Ad-hoc Accreditation Panel (that evaluated UG degree programmes in Science discipline at Cross River University of Science and Technology, Calabar), April 28-, 2013
- Member, NUC Ad-hoc Accreditation Panel (that evaluated UG degree programmes in Sciences discipline at WellSpring University, Benin), May 25-, 2013
- External Examiner, University of South Africa (UNISA), SA; Lagos State University (LASU), NG and Babcock University, NG.
- Chair, Departmental Curriculum Development Committee for UG Bioinformatics program (2013 – Till date)
- Member, 1 of 10 in 10, Vision 10: 2022 Committee (2014 – Till date).
- Chair, LOC for the H3AbioNet Bioinformatics Postgraduate Workshop, April 11 – May 26, 2014.

EDITORIAL SERVICES

- The Bioinformatics Journal, published by Oxford Press, UK (2005-Till date)
- Advances in Modeling and Analysis (AMSE), Journal D: Mathematical tools and General computer tools (1999)
- Covenant Journal of Science and Technology (CJST), published by Covenant University Press (2007-Till date)

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- 6th Annual Conference of the MidSouth Computational Biology and Bioinformatics Society, 2009.
- 1st International School and Conference on the Bioinformatics of African Pathogens and Disease Vectors (Bioinformatics for Africa), ICIPE, Nairobi, Kenya, May 28 – June 2, 2007.
- 1st ISCB Africa ASBCB Joint Conference on Bioinformatics of Infectious Diseases, MRTC, Bamako, Mali, November 30 – December 2, 2009.
- 1st International Conference and Workshop on Software Engineering and Intelligent Systems (SEIS), Covenant University, Ota, Nigeria, 5th - 9th July, 2010.
- Elsevier Journal of Infection, Genetic and Evolution (2010 – Till date)
- Elsevier Transactions of the Royal Society of Tropical Medicine and Hygiene (2010 – Till date)
- 3rd ISCB Africa ASBCB Joint Conference on Bioinformatics, Casablanca, Morocco, March 13-15, 2013.
- PLoS ONE (2012 – Till date)
- South African Computer Journal (SACJ) (2014 - Till date)

CONFERENCES/WORKSHOPS COMMITTEE MEMBERSHIP

- Chairman, Program Committee: Covenant University 1st International Workshop on Pattern Discovery in Biology (1st IWPDB), 2005.
- Program Committee member: Intl Workshop and Conf. on New Trends in the Mathematics and Computer Sciences with Applications to Real World Problems, 19-23 June, 2006
- Program Committee member: Bioinformatics for Africa, Nairobi 2007 (1st Workshop on the Bioinformatics of African Pathogens and Disease Vectors), 28th May – 3rd June, 2007.
- Program committee member: Molecular Biology and Applied Biotech International Workshop, 28th July – 2nd August, 2008.
- Chairman, Program Committee: Covenant University 2nd International Workshop on Pattern Discovery in Biology (2nd IWPDB), July, 2009.
- Steering and Program Committee member: 1st Joint ISCB Africa ASBCB Conference on Bioinformatics of Infectious Diseases, MRTC, Bamako, Mali, November 30 – December 2, 2009.
- Program Committee member: 1st International Conference and Workshop on Software Engineering and Intelligent Systems (SEIS), Covenant University, Ota, Nigeria, 5th - 9th July, 2010.
- Program Committee member: 2nd Joint ISCB Africa ASBCB Conference on Bioinformatics, Cape Town, SA, March 9 - 11, 2011.
- Program Committee member: 2nd World Congress on Proteomics & Bioinformatics-2012, Las Vegas, USA, 2-4 July 2012.
- Chair, H3AbioNet Bioinformatics Postgraduate Workshop, Covenant University, Ota, Nigeria, April 21- May 26, 2014

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M.SC AND PHD SUPERVISIONS*

- Dipe, Tinu. Pattern Recognition using Suffix trees. **M.Sc Dissertation**, Department of Mathematics, University of Ilorin, 2004.
- Fatumo, Segun. SUTOODA: Suffix Tree based OligOnucleotide Design Algorithm. **M.Sc Dissertation**, Department of Computer and Information Sciences, Covenant University, 2006.
- Owolabi, Marion. Computational Discovery of Drugs Resistance Mechanism(s) of the Malaria Parasite (*Plasmodium falciparum* (P.f)). **M. Sc Dissertation**, Department of Computer and Information Sciences, Covenant University, 2008.
- Ekenna Chinwe. Computational Characterization and Evaluation of some malaria Drug targets. **M. Sc Dissertation**, Department of Computer and Information Sciences, Covenant University, 2008.
- Ewejobi, Itunu. The African *Plasmodium falciparum* database (afriPFdb) **M. Sc Dissertation**, Department of Computer and Information Sciences, Covenant University, 2009.
- Tolulope Oladimeji. Introducing agents into African *Plasmodium falciparum* Database (AfriPFdb). M.Sc Dissertation (**Completed**), Department of Computer and Information Sciences, Covenant University.
- Bolaji Famuyiwa. M.Sc Dissertation (In Preparation), Department of Computer and Information Sciences, Covenant University.
- Abayomi Mosaku. M.Sc Dissertation (In Preparation), Department of Computer and Information Sciences, Covenant University.
- Efejiro Ashano. M.Sc Dissertation (In Preparation), Department of Computer and Information Sciences, Covenant University.
- Adaobi Okafor. M.Sc Dissertation (In Preparation), Departments of Biological Sciences and Computer and Information Sciences, Covenant University.
- Oluwadamilare Falola. M.Sc Dissertation (In Preparation), Department of Computer and Information Sciences, Covenant University.
- Osamor, Victor. Simultaneous and single gene expression computational analysis for malaria treatment discovery. **Ph.D Thesis (Completed)**, Department of Computer and Information Sciences, Covenant University, 2009. 1st Supervisor: Dr. Ezekiel Adebisi, 2nd Supervisor: Dr. Seydou Doumbia (MRTC, Mali).
- Fatumo, Segun. An analysis of the topology of biochemical networks for the malarial parasite to detect novel drug targets. **Ph.D Thesis (Completed)**, Department of Computer and Information Sciences, Covenant University, 2009. 1st Supervisor: Dr. Ezekiel Adebisi, 2nd Supervisor: Dr. Rainer Koenig (DKFZ, Heidelberg, Germany).
- Oyelade, Jelili. Derivation of important activators and inhibitors of *Plasmodium falciparum* cell biological processes. Ph.D Thesis (**Completed**), Department of Computer and Information Sciences, Covenant University, 2012. 1st Supervisor: Prof. Ezekiel Adebisi, 2nd Supervisor: Dr. Benedikt Brors (DKFZ, Heidelberg, Germany).

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□ * Student still on their Master or Ph.D program, who is outside my department or University, have his/her location indicated beside his/her name.

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- Akinyemi, I. O. Reasoning with algebra on mathematical characterization of ayo board game. Ph.D Thesis (**Completed**), Department of Computer and Information Sciences, Covenant University, 2012. 1st Supervisor: Prof. H.O.D Longe (University of Lagos, Nigeria), 2nd Supervisor: Prof. Ezekiel Adebisi.
- Gbenga Oluwagbemi. ANOSPEX: A Spatially- Explicit Predictive Computational Model for studying *Anopheles gambiae* Metapopulation dynamics towards Malaria Control. Ph.D Thesis (**Completed**), Department of Computer and Information Sciences, Covenant University, 2012. 1st Supervisor: Prof. Ezekiel Adebisi 2nd Supervisors: A/Prof J. Rasgon.
- Angela Makolo. *Computational Inference Technique for Mining Structured Motifs*. Ph.D Thesis (**Completed**), Department of Computer Science, University of Ibadan, Ibadan, Nigeria, 2013. 1st Supervisor: Prof A. O. Osofisan (University of Ibadan, Nigeria), 2nd Supervisors: Prof Ezekiel Adebisi.
- Emmanuel Adetiba. Genomics based artificial neural networks (ANNs) ensemble for medical diagnosis: A case study of non-small cell lung cancer (NSCLC). Ph.D Thesis (**Completed**), Department of Electrical and Information Electronics, Covenant University, 2013.
- Adebisi, Marion. Computational analysis of *anopheles gambiae* metabolism to facilitate insecticidal target and complex resistance mechanism discovery. Ph.D Thesis (**Completed**), Department of Computer and Information Sciences, Covenant University, 2014.
- Ewejobi, Itunu. Ph.D Thesis (In Preparation), Department of Computer and Information Sciences, Covenant University.
- Ijeoma Dike Akomolafe. Ph.D Thesis (In Preparation), Department of Biological Sciences, Covenant University.
- Jumoke Soyemi. Ph.D Thesis (In Preparation), Department of Computer and Information Sciences, Covenant University.
- Tolulope Oladimeji. Ph.D Thesis (In Preparation), Department of Computer and Information Sciences, Covenant University.
- John Erigbe. Ph.D Thesis (In Preparation), Department of Computer Science, Babcock University.
- Stephen Aiyeneko. Ph.D Thesis (In Preparation), Department of Computer Science, Babcock University.

PATENTS

1. **Adebisi, E.** and Koenig, R. Four Enzymatic (and encoding genes) antimalarial drug targets in the malaria parasite *P. falciparum*. (Under processing)

ON GOING RESEARCH PROJECTS AND PUBLICATION LIST

In Preparation

- Adebisi, E., Kranz, A-L, Schramm, G., Fatumo, S., Adebisi, M., Eils, R. and Koenig, R. Elucidating the Drugs Resistance Mechanism(s) of the Malaria Parasite to T4 choline, Tetracyclines and Chloroquines.

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- Olayinka Ajani, Koenig, R., Lanzer, M., Schlitzer, M. ... and Adebiyi, E. Rational antimalarial inhibitors design and virtual screening.
- Integrating Novel Genetic Control Methods into *AnoSpEx*: an advanced mathematical simulation model for malaria eradication campaign. - Olugbenga Oluwagbemi, Ezekiel Adebiyi, Jason Rasgon.
- Large scale mining of transcription factors from the genome of *Plasmodium falciparum*. - Itunu Ewejobi, Brors Benedikt and Ezekiel Adebiyi
- Revisiting the Africa *Plasmodium falciparum* database (AfriPFdb): Introducing agents.- Tolu Oladimeji, Itunu Isewon and Ezekiel Adebiyi
- AnoCyc: Introducing an Automated Biochemical Metabolic Network for the malaria vector, *Anopheles gambiae* – Marion Adebiyi, Olubanke Ogunlana, Segun Fatumo, Benedikt Brors, Rainer Koenig and Ezekiel Adebiyi
- Diagnosing liver malaria: The challenge ahead - Victor Osamor, Angela Eni, Banke Ogunlana, Grace Olasehinde, Solomon Rotimi, Joyce Oyedepo, Ezekiel Adebiyi
- Computational Identification of Metabolic Pathways in the Malaria Parasite, *Plasmodium falciparum* - Jelili Oyelade, Itunu Ewejobi, Benedikt Brors, Roland Eils, Ezekiel Adebiyi
- Jelili Oyelade, Benedikt Brors and Ezekiel Adebiyi. Hypotheses on Signaling pathways in the malaria parasite *Plasmodium falciparum*.
- Ezekiel Adebiyi, Judit Kumuthini and Ozlem Bishop. Human metabolic network modeling: interpretation and simulation of H3Africa high throughput data (H3AbioNet project).
- Marion Adebiyi, Segun Fatumo, Olubanke Ogunlana, Jason Rasgon and Ezekiel Adebiyi. Computational Analysis of *Anopheles gambiae* Metabolism to Facilitate Insecticidal Target Discovery.

A) *Submitted Manuscripts/Manuscripts under review*

1. Emmanuel Adetiba, Frank Ibikunle and Ezekiel Adebiyi. Genomics-based artificial neural network ensemble for lung cancer diagnosis.

B) *Accepted manuscripts & To appear*

1. **Adebiyi, E. F.** Calculating the probability of patterns revisited. **Journal of Scientific Research and Essay.**

C) *Books contributions invitation*

2. **Ezekiel Adebiyi**, Benedikt Brors, Jelili Oyelade, Itunu Isewona, Signalling pathways and RBCs invasion by the malaria parasite: A computational analysis. In the Blood Cell. To be Edited by Terry Moschandreou. InTech Publisher

D) *Published Books/Mini-Book*

1. **Adebiyi, E. F.** CODE MALARIA: Eradication developments for the decade. Covenant University 1st Inaugural lecture mini-book. Covenant University Press, **2011**.
2. **Adebiyi, E. F.** and Fatumo, S. Mathematical methods and their applications. (A 771 pages peer reviewed text) Covenant University Press, **2006**. (<http://www.covenantuniversity.com/publications/pdf/cu-press.pdf>)
3. **Adebiyi, E.F.** Pattern Discovery in Biology and Strings Sorting: Theory and Experimentation. (A 152 pages peer reviewed text) Shaker Publisher, Aachen, Germany, **2002**. (<http://www.shaker.de/>)

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E) *Articles in Journals/Contributions to books*

1. Nicola J. Mulder, Ezekiel Adebisi, Raouf Alami, Alia Benkahla, James Brandful, Seydou Doumbia, Dean Everett, Faisal M. Fadlilmola, Fatima Gaboun, Simani Gaseitsiwe, Hassan Ghazal, Scott Hazelhurst, Winston Hide, Azeddine Ibrahimi, Yasmina Jaufferally Fakim, C. Victor Jongeneel, Fourie Joubert, Samar Kassim, Jonathan Kayondo, Judit Kumuthini, Sylvester Lyantagaye, Julie Makani, Ahmed Mansour Alzohairy, Daniel Masiga, Ahmed Moussa, Oyekanmi Nash, Odile Ouwe Missi Oukem-Boyer, Ellis Owusu-Dabo, Sumir Panji, Hugh Patterton, Fouzia Radouani, Khalid Sadki, Fouad Seghrouchni, Özlem Tastan Bishop, Nicki Tiffin, Nzovu Ulenga, The H3ABioNet Consortium. H3ABioNet, a sustainable pan-African bioinformatics network for human heredity and health in Africa. *Genome Res.* 2016 February; 26(2): 271–277. doi: 10.1101/gr.196295.115. PMID: PMC4728379
2. Azeez Butali, Peter Mossey, Nikki Tiffin, Wasii Adeyemo, Mekonen Eshete, Chrispinanus Mumena, Rosemary Audu, Chika Onwuamah, Pius Agbenorku, Mobolanle Ogunlewe, Adetokunbo Adebola, Hecto Olosoji, Babatunde Aregbesola, Ramat Braimah, Abimibola Oladugba, Ifeanyiichukwu Onah, **Ezekiel Adebisi**, Peter Olaitan, Lukman Abdur-Rahman, Adebowale Adeyemo. Multidisciplinary approach to genomics research in Africa: the AfriCRAN model. *Pan Afr Med J.* 2015; 21: 229. Published online 2015 July 30. doi: 10.11604/pamj.2015.21.229.7380. PMID: PMC4607986
3. Itunuoluwa Isewon, Jelili Oyelade, Benedikt Brors, **Ezekiel Adebisi**. In-silico Gene Regulatory Network of the Maurer's Cleft Pathway in *Plasmodium falciparum*. *Evolutionary Bioinformatics* (accepted and to appear)
4. Tastan Bishop O, **Adebisi EF**, Alzohairy AM, Everett D, Ghedira K, Ghouila A, Kumuthini J, Mulder NJ, Panji S, Patterton HG; (for the H3ABioNet Consortium, as members of The H3Africa Consortium). *Bioinformatics Education-Perspectives and Challenges out of Africa*. *Brief Bioinform.* 2014 Jul 2. pii: bbu022. [Epub ahead of print]
5. The H3Africa Consortium (Charles Rotimi, ..., Nicola Mulder, **Ezekiel Adebisi** et al. Research capacity. Enabling the genomic revolution in Africa. *Science.* 2014 Jun 20;344(6190):1346-8. doi: 10.1126/science.1251546.
6. Segun A. Fatumo, Moses P. Adoga, Tolulope Adeoye, Itunuoluwa Ewejobi, Olugbenga Oluwagbemi, Marion Adebisi, Opeolu O. Ojo, **Ezekiel Adebisi**+, Clement Bewaji+ and Oyekanmi Nashiru+. *Computational Biology and Bioinformatics in Nigeria*. *PLoS Comput Biol.* 2014 Apr 24;10(4):e1003516. doi: 10.1371/journal.pcbi.1003516. eCollection 2014 Apr. + Joint last Author
7. Plaimas K, Wang Y, Rotimi SO, Olasehinde G, Fatumo S, Lanzer M, **Adebisi E**, König R. Computational and experimental analysis identified 6-diazo-5-oxonorleucine as a potential agent for treating infection by *Plasmodium falciparum*. *Infect Genet Evol.* 2013 Dec;20:389-95. doi: 10.1016/j.meegid.2013.09.019. Epub 2013 Oct 9.
8. Oluwagbemi OO, Fornadel CM, **Adebisi EF**, Norris DE, Rasgon JL. ANOSPEX: a stochastic, spatially explicit model for studying *Anopheles* metapopulation dynamics. *PLoS One.* 2013 Jul 8;8(7):e68040. doi: 10.1371/journal.pone.0068040. Print 2013.
9. Fatumo S, Adebisi M, **Adebisi E**. In silico models for drug resistance. *Methods Mol Biol.* 2013;993:39-65. doi: 10.1007/978-1-62703-342-8_4.
10. Osamor VC, **Adebisi EF**, Enekwa EH. k-Means Walk: Unveiling Operational Mechanism of a Popular Clustering Approach for Microarray Data. *J Comput Sci Syst Biol* 6, 035-042, 2013.
11. Adetiba E., Ibikunle F. A., **Adebisi E. F.** GENOMICS MUTATIONS' BASED ARTIFICIAL NEURAL NETWORK AND FIELD PROGRAMMABLE GATE ARRAY FRAMEWORK FOR LUNG CANCER DIAGNOSIS. *JOURNAL OF THORACIC ONCOLOGY*, 7(7), S132-S133, 2012.
12. Dike IP, Obembe OO, **Adebisi FE**. Ethnobotanical survey for potential anti-malarial plants in south-western Nigeria. *J Ethnopharmacol.* 2012 Dec 18;144(3):618-26. doi: 10.1016/j.jep.2012.10.002. Epub 2012 Oct 18.

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13. Victor Osamor, **Ezekiel Adebisi**, Jelilli Oyelade and Seydou Doumbia. Reducing the time requirement of k-means algorithm. *PLoS ONE* 7(12), 2012: e49946. doi:10.1371/journal.pone.0049946
14. Fatumo, S., Kitiporn, P., **Adebisi, E.** and Koenig, R. Comparing metabolic network models based on genomic and automatically inferred enzyme information from *Plasmodium* and its human host to define drug targets in silico. **Infect Genet Evol.** 2011 Jan;**11(1):201-8. Epub 2010 Sep 8.**
15. Oyelade J, Ewejobi I, Brors B, Eils R, **Adebisi E.** Computational identification of signaling pathways in *Plasmodium falciparum*. **Infect Genet Evol.** 2010 Nov 26. [Epub ahead of print].
16. Chinwe Ekenna, Segun Fatumo and **Ezekiel Adebisi**. In-silico evaluation of malaria drug targets. **IACSIT International Journal of Engineering and Technology**, 2(2), 132-135, 2010.
17. Victor Chukwudi Osamor, **Ezekiel Femi Adebisi**, and Seydou Doumbia. Clustering *Plasmodium falciparum* Genes to their Functional Roles Using k-means. **IACSIT International Journal of Engineering and Technology**, 2(2), 215-225, 2010.
18. Nelson N. Gichora, Segun A. Fatumo, Mtakai V. Ngara, Noura Chelbat, Kavisha Ramdayal, Kenneth B. Opap, Geoffrey H. Siwo, Marion O. Adebisi, Amina El Gonnouni, Denis Zofou, Amal A. M. Maurady, **Ezekiel F. Adebisi**, Etienne P. de Villiers, Daniel K. Masiga, Jeffrey W. Bizzaro, Prashanth Suravajhala, Sheila C. Ommeh, Winston Hide. Ten Simple Rules for Organizing a Virtual Conference—Anywhere. **PLoS Comput Biol** 6(2): e1000650. doi:10.1371/journal.pcbi.1000650, 2010.
19. Valverde, J. and **Adebisi, E.** 2nd International workshop on pattern discovery in biology: Synapses: Bridging the gaps between biologists and bioinformaticians. **EMBnet.news** 15(3), 8-10, 2009.
20. Fatumo, S., Plaisma, K., Mallm, J-P., Schramm, G., **Adebisi, E.**, Oswald, M. Eils, R. and Koenig, R. Estimating novel potential drug targets of *Plasmodium falciparum* by analysing the metabolic network of knock-out strains in silico. **ScienceDirect Infection, Genetics and Evolution (IGE)**, 9(3), 351-358, 2009.
21. Adebisi, M., Fatumo, S. and **Adebisi, E.** Computational Discovery of Drugs Resistance Mechanism(s) of the Malaria Parasite to Tetracyclines and Chloroquines. **The Journal of Computer Science and its Application**, 17(2), 2009.
22. Akinyemi, I. O., **Adebisi, E. F.**, Longe, H.O. D. Critical analysis of decision making experience with a machine learning approach in playing Ayo game. **World Academy of Science, Engineering and Technology**, 56, 49-54, 2009.
23. Osamor, V., **Adebisi, E.**, and Doumbia, S. Comparative functional classification of *Plasmodium falciparum* genes using k-means clustering. **IACSIT, IEEE Computer Society Press**, 17, 491-495, 2009.
24. Fatumo, S., **Adebisi, E.**, Schramm, G., Eils, R. & König, R. (2009). An in silico approach to design an efficient malaria drug to combat the malaria resistance problem. **IACSIT, IEEE Computer Society Press**, 17, 564-569, 2009.
25. Fatumo, S. A., Akinyemi, I. O. and **Adebisi, E. F.** Aligning multiple sequences with genetic algorithm. **Intl Journal of Computer theory and Engineering**, 1(2), 179-182, 2009.
26. Fatumo, S. A., **Adebisi, E. F.**, Adebisi, M. O. and Ekenna, C. P. An efficient graph based greedy algorithm for the analysis of metabolic network on its topology. **The Journal of Computer Science and its Application**, 15:1, 14-21, 2008.
27. Fatumo S.A and **Adebisi E.F.** A comparative study of Human and Rodent infected *Plasmodium* Species: Biochemical Approach, *International Journal of Malaria and Tropical Diseases, Nigeria*, 4(1), 147-155, 2008.
28. **Oluwagbemi O.O**, Adebisi E.F, Fatumo S.A and Dawodu Ayo. PQ Trees, Consecutive Ones Problem and Applications, *International Journal of Natural and Applied Sciences*, 4(3): 262-277, 2008.
29. Akinyemi, I. O., Olugbara, O. O., Longe, H. O. D. and **Adebisi, E. F.** On nearest neighbour refinement strategy for evolving Ayo game player. **The Journal of Computer Science and its Application**, 15:1, 48-58, 2008.

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30. **Adebiyi, E. F.** and Rivals, E. Detection of recombination in variable tandem repeats sequences. **South Africa Computer Journal (SAC J)**, 39, 1-7, 2007.
31. Bulashevskaya, S., **Adebiyi, E. F.**, Brors, B., and Eils, R. New insights into the genetic regulation of *Plasmodium falciparum* obtained by Bayesian modelling[†]. (12 pages), **Gene Regulation and System Biology**, 1, 137-149, 2007.
32. **Adebiyi, E. F.** A comparative analysis of existing oligonucleotides selection algorithms for microarray technology (5 pages). **African Journal of Biotechnology**, Vol. 6 (13), pp. 1582-1586, 4 July 2007.
33. **Adebiyi, E. F.** The left and right extension problems revisited, (7 pages). The **Journal of Computer Science and its Application**, 14(1), 75-85, 2007.
34. Fatumo, S. and **Adebiyi, E.** On global alignment algorithm implementation. **International Journal of Natural and Applied Science (IJONAS)**, 2(4), 300-304, 2006.
35. **Adebiyi, E. F.** A Subquadratic time generation of $|\Sigma|^q$ dictionary from string(s) using suffix tree, (7 pages). The **Journal of Computer Science and its Application**, 13(1), 25-31, 2006.
36. **Adebiyi, E. F.** Systems biology and the development of vaccines and drugs for malaria treatment. (7 pages) **Biokemistri**, 18(1): 1-7, June 2006.
37. **Adebiyi, E.F.** and Kaufmann, M. Extracting Common Motif under the Levenshtein Metric: Theory and Experimentation, **Lecture Note in Computer Science (LNCS)**, 140-156, 2002.
38. **Adebiyi, E. F.**, Jiang, T., and Kaufmann, M. An efficient algorithm for finding short approximate non-tandem repeats (Extended abstract), **Bioinformatics** 17(1): S5-S13, 2001.
39. **Adebiyi, E. F.** A further step toward improving Ayo game system, **AMSE**, 3(2): 53-69, 1999.
40. Bamigbola, O. M and **Adebiyi, E. F.** Generalized basis of finite order. **Journal of Computer Metrics**, 1, 73-86, 1997.

F) *Published Contributions to Academic Conferences/Symposium*

1. Ezekiel Adebiyi, Rainer Koenig and Benedikt Brors. Human metabolic network modelling: simulation and interpretation of Ebola high throughput data from pathological and drug-treated states. Poster Proceeding of the Targeting Ebola Conference, Paris, 28-29 May, 2015.
2. Isewon, I., Oyelade, J., Brors, B., Adebiyi, E. Ensemble based Clustering of Plasmodium falciparum genes. Proceeding of the 2nd CU International Conference on African Development Issues (CU ICADI 2015), Mon.11th – Wed.13th May, 2015
3. Adebiyi, M., Ogunlana, O., Fatumo, S., Rasgon, J., Adebiyi, E. The Anopheles gambiae Insecticidal Targets Made Bare by In-silico Analysis. Proceeding of the 2nd CU International Conference on African Development Issues (CU ICADI 2015), Mon.11th – Wed.13th May, 2015
4. Mosaku, A., Rotimi, S., Samuel, J. Fernandes Saraiva, J.P., Koenig, R., Adebiyi, E. Computational Analysis Of Differentially Expressed Genes In Mycobacterium Tuberculosis Infection. Proceeding of the 2nd CU International Conference on African Development Issues (CU ICADI 2015), Mon.11th – Wed.13th May, 2015
5. Emmanuel ADETIBA, Frank A. IBIKUNLE, **Ezekiel F. ADEBIYI**. Development of Encoding and Dimensionality Reduction Algorithms for a Genomics Based Medical Diagnostic Probe on Artificial Intelligence Platform. Paper Proceeding of the IEEE Computational Intelligence Society Symposium Series on Computational Intelligence (SSCI 2013), 16th -19th April, Singapore.
6. Victor Osamor and **Ezekiel Adebiyi**. A Simplified Integrated Automation of Clustering Indices for Quality Validation and Comparison. Paper proceeding of the ISCB Africa ASBCB conference on Bioinformatics, Casablanca, Morocco, 2013

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□ [†] Authors SB and EA have contributed equally to the publication

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7. Angela Makolo, Adenike Osofisan and **Ezekiel Adebisi**. Identification of Transcription Associated Proteins in *Plasmodium falciparum*. Paper proceeding of the ISCB Africa ASBCB conference on Bioinformatics, Casablanca, Morocco, 2013
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