

ACTIVITY REPORTING FORM  
FOR CDC GRANTS PROGRAM  
IMU Simons African Fellowship Program

*(Deadline for completion: four (4) week after the end of the research visit)*

*Please note that at least four pictures of the supported activity should be included/ attached to this report. (by email). Please send this report as a pdf-file. After consideration by CDC, the intention is that this activity report and pictures will be made publicly available on the CDC website.*

Name of grantee: Kazeem Oare Okosun  
 Home institution and country of grantee: Vaal University of Technology, South Africa  
 Name of the host: Prof. Majid Jaberi-Douraki  
 Name of the host institution and country: Kansas State University, USA  
 Topic of the research activity: Development of computational and mathematical models of different biological systems including infectious and autoimmune diseases.  
 Dates spend at the center/ host institution: 2 June 2017 – 31 July 2017

The progress report should a brief (one page) activity report:

1. Summary statement (1-2 sentences) of major outcome of your visit:  
Development of agent-based models
2. Brief description of your research activities during your research visit:  
Models analyses and computations; Manuscripts preparations
3. Students and post-doctoral fellows advised (interacted with):  
Dr Herman Shakeri, Dr Shi Tracy, Mr Demond Handley, Ms Tahmineh Azizi , Mr Reza Mazloom  
Mr Allen Zhang
4. Joint activities with your host: Agent-based malaria disease model, learning the use of  
Netlogo for modelling dynamical systems and diseases  
interaction
5. Research in progress (as a result from the visit):  
A research paper on agent-based malaria model in progress
6. Papers published or in preprint form as a result from the research visit:  
A paper titled “ On the dynamics HIV/Cryptosporidiosis” in press (The European Physical Journal)
7. Planned future activities as a result of your research visit:  
To engage more on collaborative work with respect to molecular dynamics modelling and other  
agent-based disease models. We are also working on a joint proposal on the “cost and analysis  
of drug abuse and unemployment role on mental health burden of South Africa” for grants to be  
submitted to the South African Medical Council by end of August 2017

Date: 10<sup>th</sup> August 2017



Signature Grantee: