JOHNS HOPKINS
BLOOMBERG
SCHOOL of PUBLIC HEALTH

August 16, 2015

Prof. Hassan Vatandoost
Head, Dept. of Medical Entomology and Vector Control
School of Public Health
Tehran University of Medical Sciences
Iran

RE: Certificate of sabbatical leave for Dr. Mohammad Ali Oshaghi

Dear Prof. Vatandoost,

I am writing to report on Dr. Mohammad Oshaghi's activities while he was on sabbatical leave in my laboratory. Working with personnel from my laboratory, Dr. Oshaghi has learned many new procedures and techniques related to our project of genetic engineering symbiotic bacteria from the mosquito gut (paratransgenesis) to make the mosquitoes resistant to the malaria parasite.
Following is a summary of his accomplishments.

1- Familiarized with techniques required for paratransgenesis including
- Dynamics of paratransgenic bacteria populations in mosquitoes
- Design of genes for genetic manipulation
- Molecular cloning
- Measurement of gene expression
- Western blotting
- Assay of malaria parasite blocking in mosquitoes

2- Completed a new project entitled "Potential application of melittin (bee venom) as an effector molecule for paratransgenesis approach against malaria parasites."

3- Contributed to experiments for producing engineered bacteria that secrete a variety of effector anti-malarial molecules including MP2, EPIP, scorpine, SHIVA, and a poly-effector.

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4- Started work on a new and ongoing project entitled "Use of gene silencing (dsRNA) by paratransgenic bacteria for blocking/reducing malaria transmission".

Overall, I judge Dr. Oshaghi's accomplishments to be outstanding. Not only did he profit from this experience to learn new techniques and new approaches in medical entomology but also, our laboratory benefited significantly from his stay as our project made important progress toward the goal of introducing new approaches to reduce the spread of malaria.

Upon your request, I would be glad to provide any further information that you may need.

Sincerely,

Marcelo Jacobs-Lorena