

June 30, 2016
Dr. Teena Mehta
Scientific Editor
Journal of Visualized Experiments

Dear Dr. Mehta,

Please see our manuscript entitled “QTL mapping and CRISPR/Cas9 editing to identify a drug resistance gene in *Toxoplasma gondii*” by Shen B. *et al.* that we would like to submit for publication in the Journal of Visualized Experiments. This manuscript provides detailed protocols to map, identify and confirm a gene responsible for sinefungin resistance in *T. gondii*. Specifically, two protocols are of interest as indicated in the title, QTL mapping and CRISPR/Cas9 editing. QTL mapping is a robust method to map genetic loci correlated with phenotypes, and is one for which JoVE has a limited number of publications utilizing the technique. To properly describe this approach we provide detailed command line syntax and step by step usage of freely available software that should complement your journal. CRISPR/Cas9 is a new and powerful tool to efficiently edit genomes that promises to continue to be effective. We give details on how CRISPR/Cas9 works, how to create a new CRISPR/Cas9 plasmid using site-directed mutagenesis, and how to use that plasmid to generate targeted mutations or insert constructs in *T. gondii*. The contributions of the authors are as follows; Shen and Behnke designed the protocols, Shen, Powell and Behnke performed the experiments/analyzed the data, and Shen and Behnke wrote the manuscript. During the preparation and submission of this manuscript, we have been kindly assisted by Teena Mehta, as Scientific Editor of Journal of Visualized Experiments, who we thank for the invited submission of this manuscript.

Please, see the list of recommended reviewers that follows.

Thank you for receiving our manuscript and considering it for review. We appreciate your time and look forward to your response.

Yours sincerely,



Michael S. Behnke, Ph.D.
Assistant Professor
Department of Pathobiological Sciences
School of Veterinary Medicine
Louisiana State University
Skip Bertman Drive
Baton Rouge, LA 70803
office 225- 578-9857 | cell 314-371-6107
mbehnke@lsu.edu

Recommended Reviewers

Dr. Jon P. Boyle
Associate Professor
101A Life Sciences Annex
4249 Fifth Avenue
Pittsburgh, PA 15260
boylej@pitt.edu

Dr. Qun Liu,
Professor
National Animal Protozoa Laboratory
College of Veterinary Medicine
China Agricultural University
Beijing 100193, China
qunliu@cau.edu.cn

Dr. Marc-Jan Gubbels
Professor
Department of Biology
Boston College
355 Higgins Hall
140 Commonwealth Avenue
Chestnut Hill, MA 02467
gubbelsj@bc.edu

Dr. Jinlin Zhou
Professor
Shanghai Veterinary Research Institute, Chinese Academy of Agricultural Sciences
No.518, Ziyue Road, Minhang District, Shanghai 200241, China
Tel:86-21-34293411
Fax:86-21-54081818
jinlinzhou@shvri.ac.cn

Dr. Guan Zhu
Professor
Department of Veterinary Pathobiology
College of Veterinary Medicine & Biological Sciences
Texas A&M University, College Station, Texas, USA
gzhu@cvm.tamu.edu

Dr. Dana G. Mordue
Associate Professor
Dept. of Microbiology & Immunology
Basic Sciences Building, New York Medical College
Valhalla, NY 10595
dana_mordue@nymc.edu