Changes in glucosylceramide structure affect virulence and membrane biophysical properties of Cryptococcus neoformans

Shriya Raj, Saeed Nazemidashtarjandi, Jihyun Kim, Luna Joffe, Xiaoxue Zhang, Ashutosh Singh, Visesato Mor, Desmarini Desmarini, Julianne Djordjevic, Daniel P. Raleigh, Marcio L. Rodrigues, Erwin London, Maurizio Del Poeta, Amir M. Farnoud

PII: S0005-2736(17)30267-5
DOI: doi: 10.1016/j.bbamem.2017.08.017
Reference: BBAMEM 82566

To appear in:

Received date: 13 April 2017
Revised date: 3 August 2017
Accepted date: 27 August 2017

Please cite this article as: Shriya Raj, Saeed Nazemidashtarjandi, Jihyun Kim, Luna Joffe, Xiaoxue Zhang, Ashutosh Singh, Visesato Mor, Desmarini Desmarini, Julianne Djordjevic, Daniel P. Raleigh, Marcio L. Rodrigues, Erwin London, Maurizio Del Poeta, Amir M. Farnoud , Changes in glucosylceramide structure affect virulence and membrane biophysical properties of Cryptococcus neoformans, (2017), doi: 10.1016/j.bbamem.2017.08.017

Changes in Glucosylceramide Structure Affect Virulence and Membrane Biophysical Properties of *Cryptococcus neoformans*

Shriya Raj[a], Saeed Nazemidashtarjandi[b], Jihyun Kim[c], Luna Joffe[d], Xiaoxue Zhang[c], Ashutosh Singh[e], Visesato Mor[e], Desmarini Desmarini[f], Julianne Djordjevic[f,g,h], Daniel P. Raleigh[c], Marcio L. Rodrigues[i], Erwin London[c], Maurizio Del Poeta[e,j,k,#], Amir M. Farnoud[b,#]

[a]Department of Mycology, Institut Pasteur, Paris, France, [b]Department of Chemical and Biomolecular Engineering, Ohio University, Athens, OH, [c]Department of Chemistry and Biochemistry, Stony Brook University, Stony Brook, NY, [d]Departamento de Microbiologia Geral, Instituto de Microbiologia Paulo de Góes, Universidade Federal do Rio de Janeiro (UFRJ), [e]Department of Molecular Genetics and Microbiology, Stony Brook University, Stony Brook, NY, [f]Fungal Pathogenesis Laboratory, Centre for Infectious Diseases and Microbiology, The Westmead Institute for Medical Research, Westmead NSW, Australia, [g]Westmead Clinical School, University of Sydney at Westmead Hospital, Westmead NSW, Australia; [h]Marie Bashir Institute for Infectious Diseases and Biosecurity, University of Sydney, NSW, Australia, [i]Centro de Desenvolvimento Tecnológico em Saúde (CDTS) da Fundação Oswaldo Cruz (Fiocruz), Rio de Janeiro, Brazil, [j]Veterans Administration Medical Center, Northport, NY, [k]Division of Infectious Diseases, Stony Brook University, Stony Brook, NY.

To whom correspondence should be addressed: Dr. Maurizio Del Poeta, Stony Brook University, Department of Molecular Genetics and Microbiology, 145 Life Sciences Building, Stony Brook, NY, USA, 11794 Tel.: (631) 632-4024; Fax: (631) 632-9797; E- mail: maurizio.delpoeta@stonybrook.edu and Dr. Amir M. Farnoud, Ohio University, Department of Chemical and Biomolecular Engineering, 168 Stocker Center, Athens, OH, USA 45701 Tel.: (740) 593-1426; Fax: (740) 593-0873; E-mail: farnoud@ohio.edu

Keywords: Sphingolipid, fungi, infectious disease, plasma membrane, *Cryptococcus*, glucosylceramide