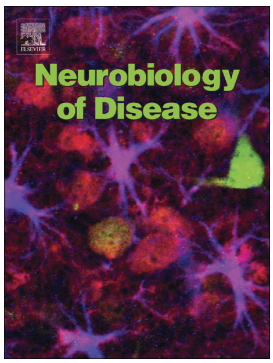


# Poloxamer 188 decreases membrane toxicity of mutant SOD1 and ameliorates pathology observed in SOD1 mouse model for ALS

Jacob J. Riehm, Lijun Wang, Ghanashyam Ghadge, Michael Teng, Ana M. Correa, Jeremy D. Marks, Raymond P. Roos, Michael J. Allen

PII: S0969-9961(18)30093-7
DOI: doi:10.1016/j.nbd.2018.03.014
Reference: YNBDI 4140

To appear in: *Neurobiology of Disease*

Received date: 21 December 2017
Revised date: 6 March 2018
Accepted date: 28 March 2018

Please cite this article as: Jacob J. Riehm, Lijun Wang, Ghanashyam Ghadge, Michael Teng, Ana M. Correa, Jeremy D. Marks, Raymond P. Roos, Michael J. Allen , Poloxamer 188 decreases membrane toxicity of mutant SOD1 and ameliorates pathology observed in SOD1 mouse model for ALS. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Ynbdi(2017), doi:10.1016/j.nbd.2018.03.014

# Poloxamer 188 decreases membrane toxicity of mutant SOD1 and ameliorates pathology observed in SOD1 mouse model for ALS

*Short Titl*e**: Role of misfolded SOD1 in ALS**

Jacob J. Riehm[1†], Lijun Wang[2‡], Ghanashyam Ghadge[2], Michael Teng[1§], Ana M. Correa[3], Jeremy D. Marks[4], Raymond P. Roos[2]*, Michael J. Allen[1¥]

Department of Medicine, Section of [1]Pulmonary Critical Care, [2]Department of Neurology, [3]Department of Biochemistry and Molecular Biology and [4]Department of Pediatrics, The University of Chicago, Chicago IL

*Current Affiliation:* †Oncology Discovery, AbbVie, Inc. 1 North Waukegan Road, North Chicago, IL 60064-6098, USA; ‡BloodCenter of Wisconsin, 638 N. 18th St., Milwaukee, WI 53233; §Castle Global, 255 California Ave., Suite 800, San Francisco, CA 94130; ¥Biometrology, 1448 E. 52nd St., Chicago, IL 60615

**Corresponding author*: Raymond P. Roos, MD, The University of Chicago Medicine, 5841 S. Maryland Avenue, MC 2030, Chicago, IL 60637. Email: rroos@neurology.bsd.uchicago.edu

*Keywords:* ALS; P188; F68; poloxamer; protein misfolding; superoxide dismutase; SOD1; G93A; atomic force microscopy; AFM; electrophysiology; membrane toxicity; lipid peroxidation

*Support:* Research reported in this publication was supported by NIH U54 GM087519: Membrane Protein Structural Dynamics Consortium to AMC, National Institute of Neurological Disorders and Stroke of the National Institutes of Health under award numbers R01NS056313 to JDM, and R01NS067247 to MJA. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

*Conflict of Interest:* There are no conflicts for the authors regarding any aspect of the work represented in this manuscript.

Prepared for submission to *Neurobiology of Disease*