

# Accepted Manuscript

Changes in cerebellar activation following onabotulinumtoxin A injections for spasticity after chronic stroke: A pilot fMRI study

Chia-Lin Chang, PhD, PT, Douglas J. Weber, PhD, Michael C. Munin, MD



PII: S0003-9993(15)00590-0

DOI: [10.1016/j.apmr.2015.07.007](https://doi.org/10.1016/j.apmr.2015.07.007)

Reference: YAPMR 56254

To appear in: *ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION*

Received Date: 24 October 2014

Revised Date: 17 June 2015

Accepted Date: 7 July 2015

Please cite this article as: Chang C-L, Weber DJ, Munin MC, Changes in cerebellar activation following onabotulinumtoxin A injections for spasticity after chronic stroke: A pilot fMRI study, *ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION* (2015), doi: 10.1016/j.apmr.2015.07.007.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Running Head: fMRI after Stroke

ARTICLE TITLE: **Changes in cerebellar activation following onabotulinumtoxin A injections for spasticity after chronic stroke: A pilot fMRI study**

**Chia-Lin Chang**<sup>1</sup>, PhD, PT, **Douglas J. Weber**<sup>2</sup>, PhD, **Michael C. Munin**<sup>3</sup>, MD

<sup>1</sup> Department of Kinesiology, University of San Francisco, San Francisco, CA

<sup>2</sup> Defense Advanced Research Projects Agency, Arlington, VA

<sup>3</sup> Department of Physical Medicine & Rehabilitation, University of Pittsburgh, Pittsburgh, PA

**Disclosure:** This study was funded by University of San Francisco Faculty Development Fund, Brain Imaging Research Center pilot grant, National Institutes of Health Post-Doctoral Training grant (Training Rehabilitation Clinicians for Research Careers) (T32 HD049307), and National Institutes of Health K award (K12 HD055931), as well as financial support from Allergan.

Reprint requests to Chia-Lin Chang, PhD, PT., Harney Science Center 206, 2130 Fulton St. Department of Kinesiology, University of San Francisco, San Francisco, CA, 94117, E-mail: changchialin@gmail.com

#### ACKNOWLEDGEMENTS

We thank Dr. Peter L. Strick (Neurobiology) and Dr. Michael Boninger (Physical Medicine & Rehabilitation, PM&R) at the University of Pittsburgh (Pitt) for informative discussion and constructive guidance. We thank Dr. Katie Russell (PM&R at Pitt), Dr. Joaquin Anguera (Neurology at the University of California, San Francisco), Dr. Howard J. Aizenstein (Psychiatry at Pitt), and Dr. Joseph H. Ricker (PM&R at Pitt) for their suggestions on biomedical imaging. We thank Dr. Elizabeth R. Skidmore (Occupational Therapy at Pitt) for recommendation of

Download English Version:

<https://daneshyari.com/en/article/6149700>

Download Persian Version:

<https://daneshyari.com/article/6149700>

[Daneshyari.com](https://daneshyari.com)