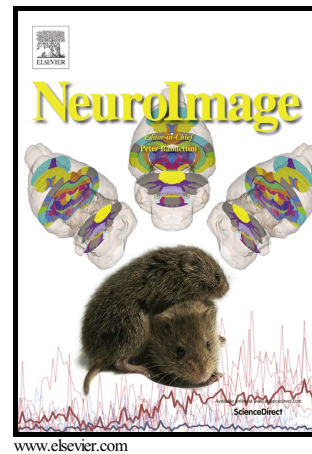


## Author's Accepted Manuscript

Toward defining deep brain stimulation targets in MNI space: A subcortical atlas based on multimodal MRI, histology and structural connectivity

Siobhan Ewert, Philip Plettig, Ningfei Li, Mallar Chakravarty, Louis Collins, Todd Herrington, Andrea Kühn, Andreas Horn



PII: S1053-8119(17)30407-X  
DOI: <http://dx.doi.org/10.1016/j.neuroimage.2017.05.015>  
Reference: YNIMG14027

To appear in: *NeuroImage*

Received date: 15 January 2017  
Accepted date: 9 May 2017

Cite this article as: Siobhan Ewert, Philip Plettig, Ningfei Li, Mallar Chakravarty, Louis Collins, Todd Herrington, Andrea Kühn and Andreas Horn, Toward defining deep brain stimulation targets in MNI space: A subcortical atlas based on multimodal MRI, histology and structural connectivity, *NeuroImage* <http://dx.doi.org/10.1016/j.neuroimage.2017.05.015>

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 a review of the resulting galley proof before it is published in its final citable 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.

# Toward defining deep brain stimulation targets in MNI space: A subcortical atlas based on multimodal MRI, histology and structural connectivity

Siobhan Ewert<sup>1,2\*</sup>, Philip Plettig<sup>1</sup>, Ningfei Li<sup>3</sup>, Mallar Chakravarty<sup>4,5</sup>, Louis Collins<sup>6</sup>, Todd Herrington<sup>2</sup>, Andrea Kühn<sup>1</sup>, Andreas Horn<sup>1,7</sup>

<sup>1</sup>Department of Neurology, Movement Disorder and Neuromodulation Unit, Charité – University Medicine, Berlin, Germany

<sup>2</sup>Department of Neurology, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA

<sup>3</sup>Institute of Software Engineering and Theoretical Computer Science, Neural Information Processing Group, Technische Universität, Berlin, Germany

<sup>4</sup>Douglas Mental Health University Institute, Cerebral Imaging Centre, McGill University, Montréal, Canada

<sup>5</sup>Departments of Psychiatry and Biological and Biomedical Engineering, McGill University, Montréal, Canada

<sup>6</sup>Brain Imaging Centre, Montreal Neurological Institute, McGill University, Montréal, Canada

<sup>7</sup>Harvard Medical School, Beth Israel Deaconess Medical Center, Neurology Department, Berenson-Allen Center for Noninvasive Brain Stimulation, Laboratory for Brain Network Imaging and Modulation, Boston, MA, USA

\***Corresponding Author.** Dr. Siobhan Ewert. Department for Neurology, Movement Disorders Unit Charité – University Medicine (CVK), Augustenburger Platz 1, 13353 Berlin, Germany; Phone : +49 (0)30 450 660 279 . E-mail: siobhan.ewert@charite.de

## Abstract

Three-dimensional atlases of subcortical brain structures are valuable tools to reference anatomy in neuroscience and neurology. For instance, they can be used to study the position and shape of the three most common deep brain stimulation (DBS) targets, the subthalamic nucleus (STN), internal part of the pallidum (GPi) and ventral intermediate nucle-

Download English Version:

<https://daneshyari.com/en/article/8687140>

Download Persian Version:

<https://daneshyari.com/article/8687140>

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