Accepted Manuscript

Title: Automatic delineation of brain regions on MRI and PET images from the pig

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PII: S0165-0270(17)30394-1

DOI: https://doi.org/10.1016/j.jneumeth.2017.11.008

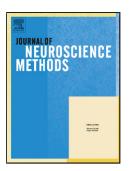
Reference: NSM 7893

To appear in: Journal of Neuroscience Methods

Received date: 21-7-2017 Revised date: 9-10-2017 Accepted date: 12-11-2017

Please cite this article as: Villadsen Jonas, Hansen Hanne D, Jørgensen Louise M, Keller Sune H, Andersen Flemming L, Petersen Ida N, Knudsen Gitte M, Svarer Claus. Automatic delineation of brain regions on MRI and PET images from the pig. *Journal of Neuroscience Methods* https://doi.org/10.1016/j.jneumeth.2017.11.008

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ACCEPTED MANUSCRIPT

Automatic delineation of brain regions on MRI and PET images from the pig

Jonas Villadsen^a, Hanne D. Hansen^a, Louise M. Jørgensen^{a,b}, Sune H. Keller^c, Flemming L. Andersen^c, Ida N. Petersen^{b,d}, Gitte M. Knudsen^{a,b}, Claus Svarer^{a,*}

Highlights (old highlights, new version below)

- A PET atlas of the domestic pig brain was constructed using MRI as reference
- Spatial normalization and delineation of brain regions on new PET scans was automated
- Only requires a perfusion-weighted image of the dynamic PET scan, no MRI required
- Applicable for radiotracers having different brain kinetics and spatial distributions
- Eliminates operator-dependent variation and increases accuracy and reproducibility

Highlights

- Construction of a multimodality brain atlas for the domestic pig
- Automatized spatial normalization and delineation of brain regions on new PET scans
- The method uses a perfusion-weighted image of the dynamic PET scan
- Validated across radiotracers with different brain kinetics and spatial distributions
- Freely available to standardize pig PET image quantification

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