

# Accepted Manuscript

Research report

Localization of Connexin 43 Gap Junctions and Hemichannels in Tanycytes of Adult Mice

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PII: S0006-8993(17)30346-3

DOI: <http://dx.doi.org/10.1016/j.brainres.2017.08.010>

Reference: BRES 45452

To appear in: *Brain Research*

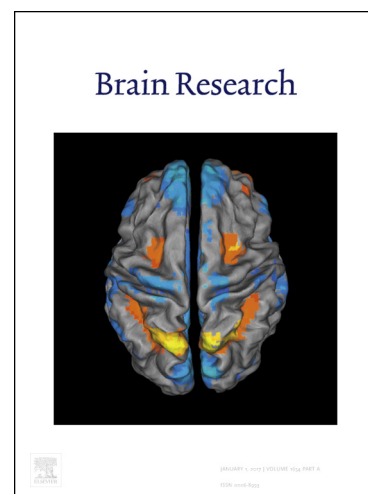
Received Date: 14 June 2017

Revised Date: 22 June 2017

Accepted Date: 9 August 2017

Please cite this article as: A. Szilvasy-Szabo, E. Varga, Z. Beliczai, R.M. Lechan, C. Fekete, Localization of Connexin 43 Gap Junctions and Hemichannels in Tanycytes of Adult Mice, *Brain Research* (2017), doi: <http://dx.doi.org/10.1016/j.brainres.2017.08.010>

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**Localization of Connexin 43 Gap Junctions and Hemichannels in Tanycytes of Adult Mice****Anett Szilvasy-Szabo<sup>a,b</sup>, Edina Varga<sup>a</sup>, Zsuzsa Beliczai<sup>a</sup>, Ronald M. Lechan<sup>c,d</sup>, Csaba Fekete<sup>a,c</sup>**<sup>a</sup>Department of Endocrine Neurobiology, Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary.<sup>b</sup>Semmelweis University Neurosciences Doctoral School, Neuroendocrinology Program, Budapest, Hungary<sup>c</sup>Department of Medicine, Division of Endocrinology, Diabetes and Metabolism, Tupper Research Institute, Tufts Medical Center, Boston, MA, USA.<sup>d</sup>Department of Neuroscience, Tufts University School of Medicine, Boston, MA, USA.**Corresponding Author:** Csaba Fekete, MD, PhD, DSc

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E-mail: [fekete.csaba@koki.mta.hu](mailto:fekete.csaba@koki.mta.hu)**Highlights:**

- Cx43 gap junctions and hemichannels are present on the surface of tanycytes.
- Functional Cx43 gap junctions ensure an effective communication among tanycytes.
- Cx43 hemichannels promote the transport between tanycytes and extracellular fluids.

**Keywords:**

tanycyte, connexin 43, gap junction, hemmichannel, median eminence, hypothalamus

Abbreviations: aCSF – artificial cerebrospinal fluid; BBB – blood-brain barrier; Cx43 – Connexin 43; CSF – cerebrospinal fluid; LY – Lucifer yellow; ME – median eminence; P2Y1 – purinergic G-protein coupled receptor type 1; PBS – phosphate-buffered saline; PFA – paraformaldehyde

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