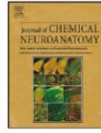


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Review

The benefits of magnetic resonance imaging methods to extend the knowledge of the anatomical organisation of the periaqueductal gray in mammals



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^bUniversité François Rabelais de Tours, Inserm, Imagerie et Cerveau UMR U930, Tours, France

^cInstitute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary



Hungarian participants.

- József Haller
- Kornél Demeter
- Csilla Lea Fazekas
- Hanga Réka Horváth

French participants.

- Elodie Chaillou-Sagon project leader
- Ophélie Menant
- Mélody Morisse
- Manon Bellardie

ENDOCRINE REGULATIONS VOL. 52, No. 4, XX–XX, 2018

Short title: The PAG in emotions

Periaqueductal gray and emotions: the complexity of the problem and the light at the end of the tunnel, the magnetic resonance imaging

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¹Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary; ²Centre for Neuroscience, Szeged Research Centre, Institute of Physiology, Medical School, University of Pecs, Hungary; ³INRA-CNRS-Université de Tours-IFCE, UMR85, Physiologie de la Reproduction et des Comportements, Nouzilly, France; ⁴Université François-Rabelais de Tours, Inserm, Imagerie et Cerveau UMR U930, Tours, France
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Scholarship possibility in the framework of the Hungarian-French R&D cooperation

05 March 2018 • Last modified: 05 March 2018 • Reading time: 2 minute(s)



Experimental Medicine

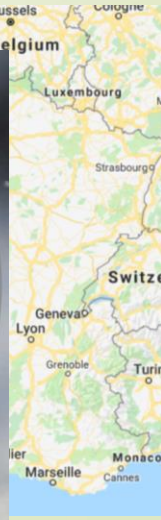


15 January
31 August 2018

Median raphe of male mice and social behavior in connection with thermoregulation and locomotion

Manon Bellardie, Master 2

Supervisor : Dora Zelena
Stress and behavior team, Budapest



Posters

Structure:

Stress-related anxiety from the viewpoint of the midbrain: focus on the periaqueductal gray (PAG)

Kornél Demeter, Ophélie Menant, Mélody Morisse, Hanga Horváth, Frédéric Andersson, Cyril Poupon, Marine Siwiaszczyk, Scott Love, Dóra Zelena, Elodie Chaillou - (PHC Balaton 36385UB)

Function:

THE ROLE OF SPECIFIC CELLS OF THE MEDIAN RAPHE IN ANXIETY AND WORKING MEMORY

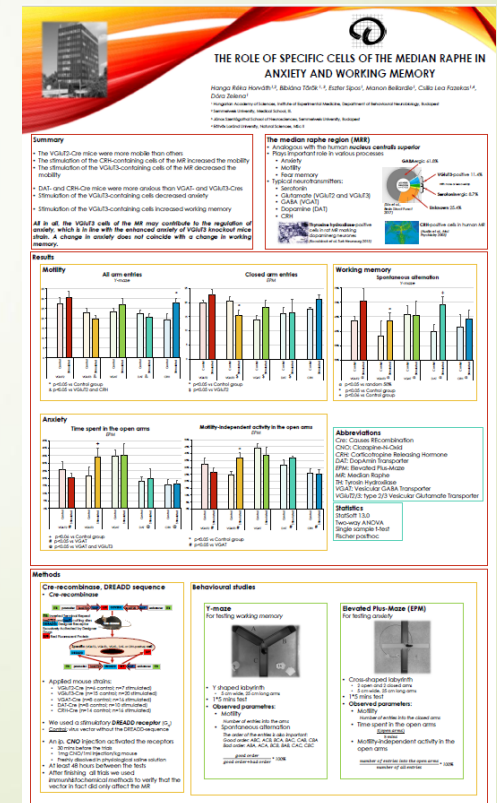
Hanga Réka Horváth^{1,2}, Bibiána Török^{1,3}, Eszter Sipos¹, Manon Bellardie¹, Csilla Lea Fazekas^{1,4}, Dóra Zelena¹

¹ Hungarian Academy of Sciences, Institute of Experimental Medicine, Department of Behavioural Neurobiology, Budapest

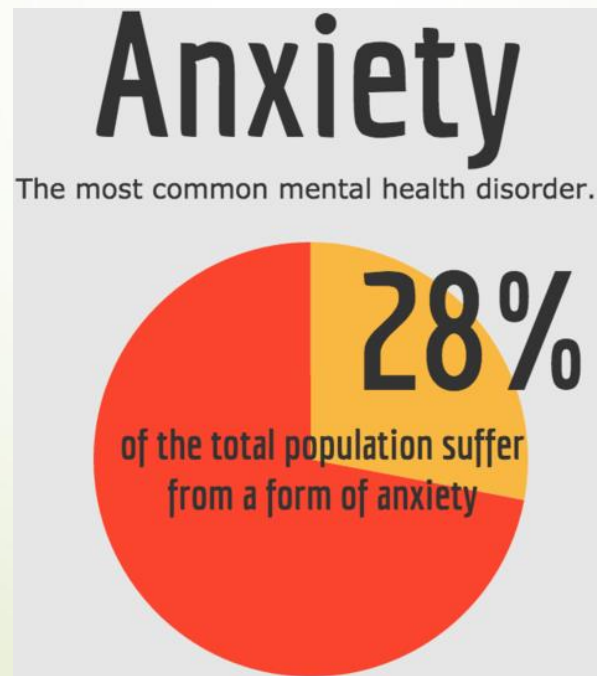
² Semmelweis University, Medical School, III.

³ János Szentágotthai School of Neurosciences, Semmelweis University, Budapest

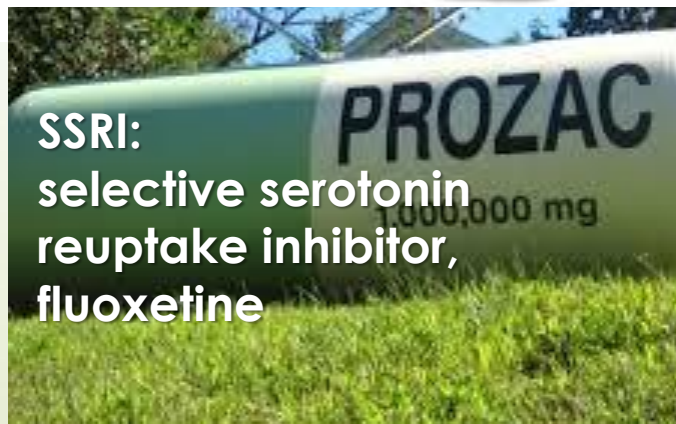
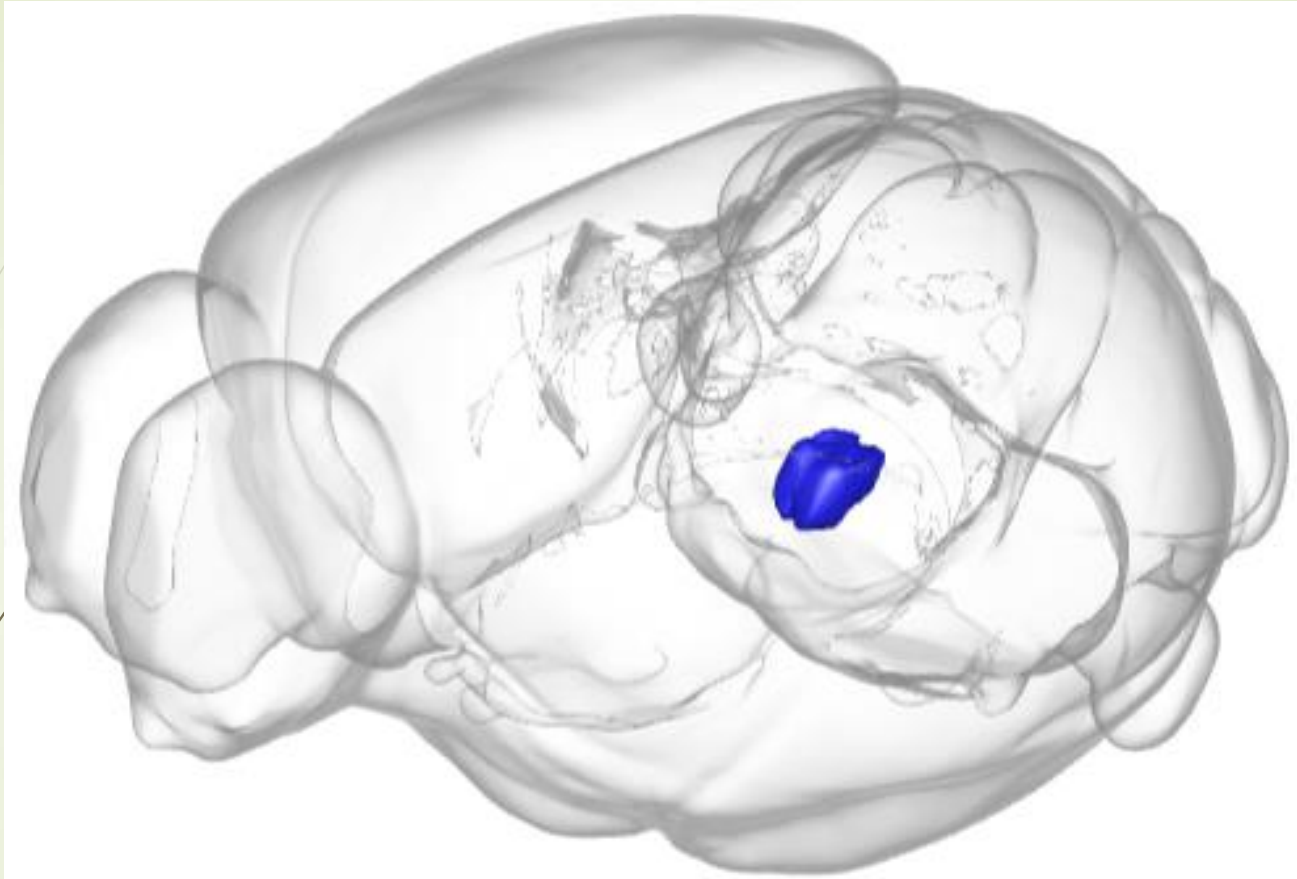
⁴ Eötvös Loránd University, Natural Sciences, MSc II



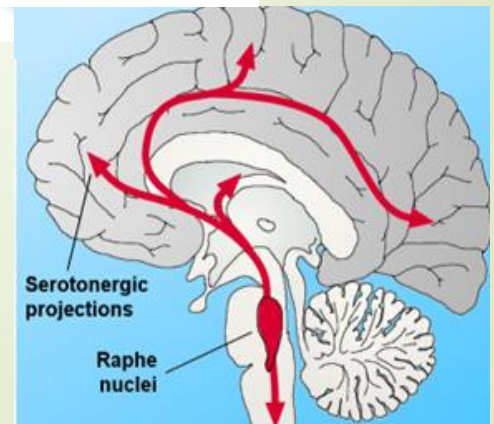
Stress and Anxiety



Anatomical background



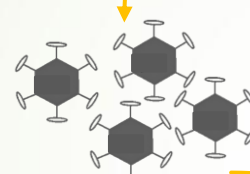
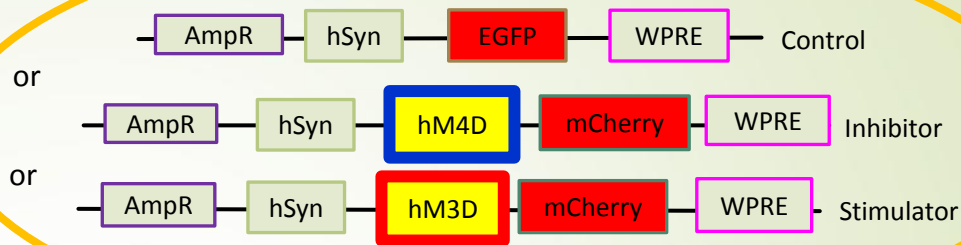
SSRI:
selective serotonin
reuptake inhibitor,
fluoxetine



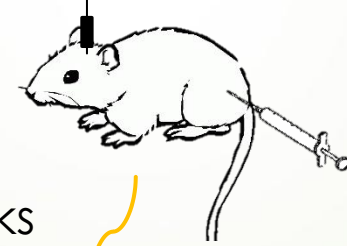
DREADD system

Designer Receptor Exclusively Activated by Designer Drug

Coordinates:
AP: -4.1
DV: 4.6

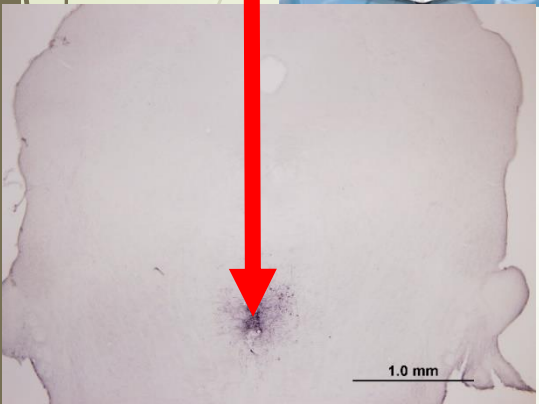
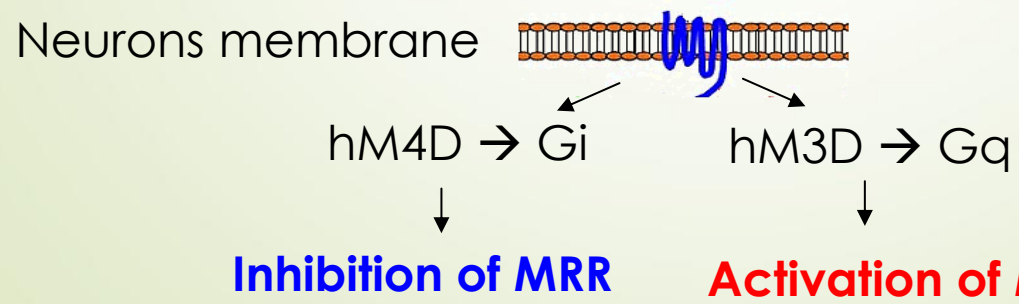


AAV: adenoassociate virus vector



CNO: clozapine-N-oxide
(30min before test)
into the peritoneal cavity

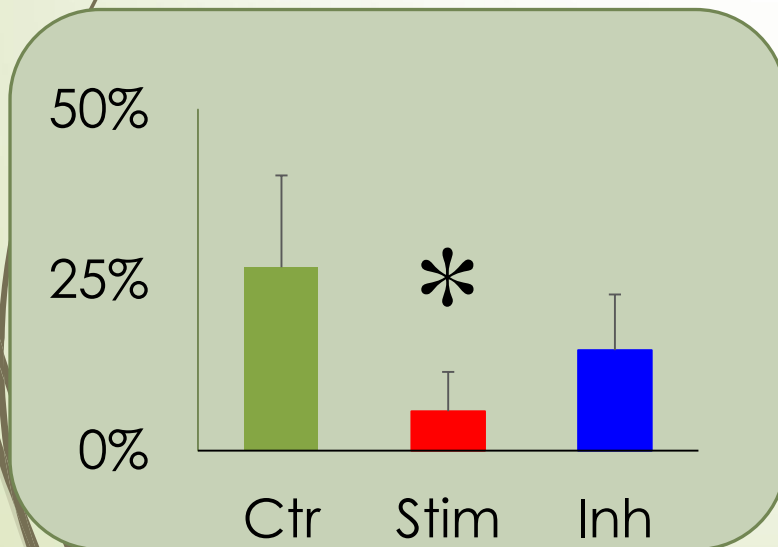
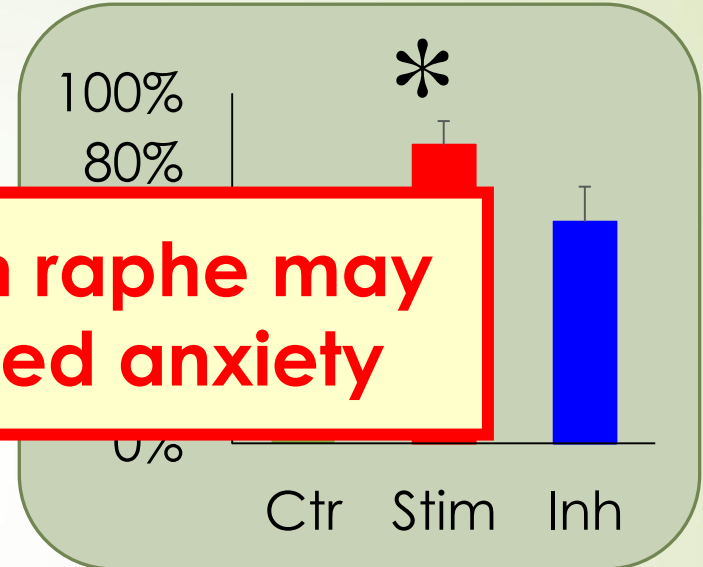
2 weeks



Stimulation of median raphe region by DREADD



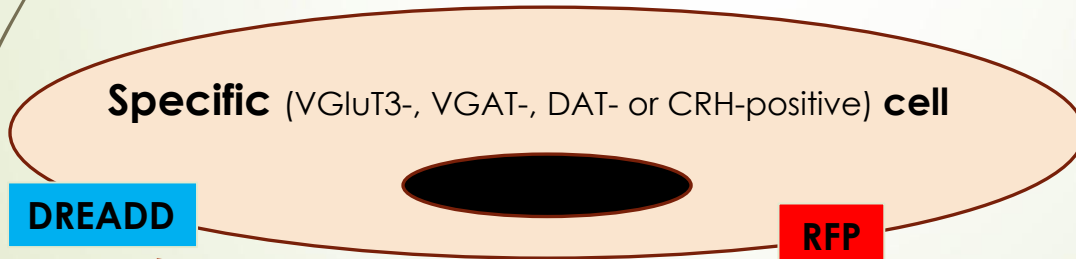
Activation of median raphe may contribute to reduced anxiety



Cre recombinase



ITR: Inverted Terminal Repeat
lox2722 és **loxP:** hasítási helyek
DREADD: Designer Receptor Exclusively Activated by Designer Drugs
RFP: Red Fluorescent Protein



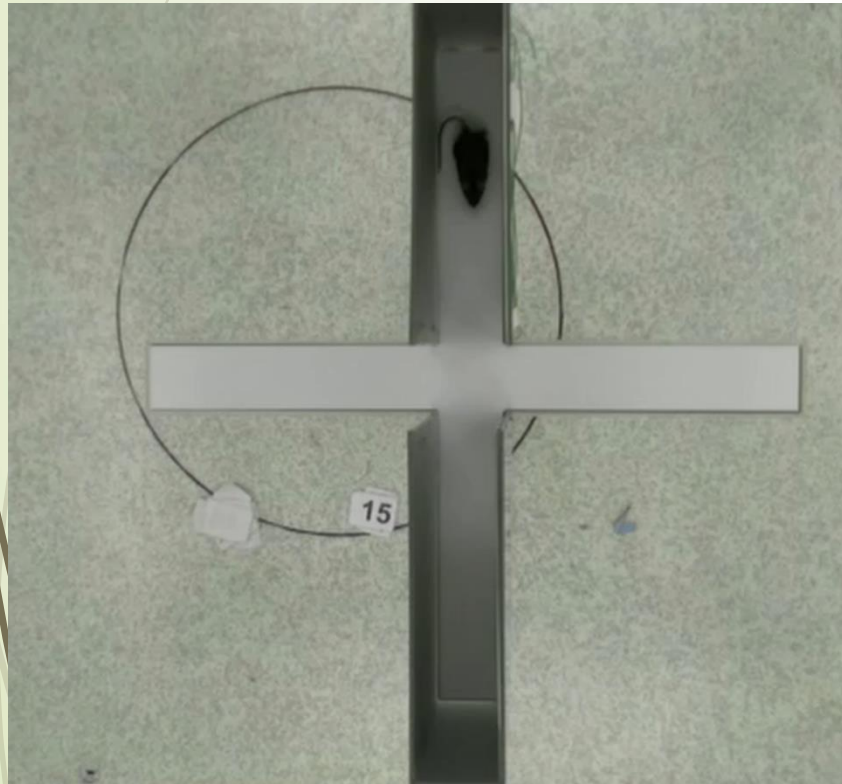
Cre enzyme



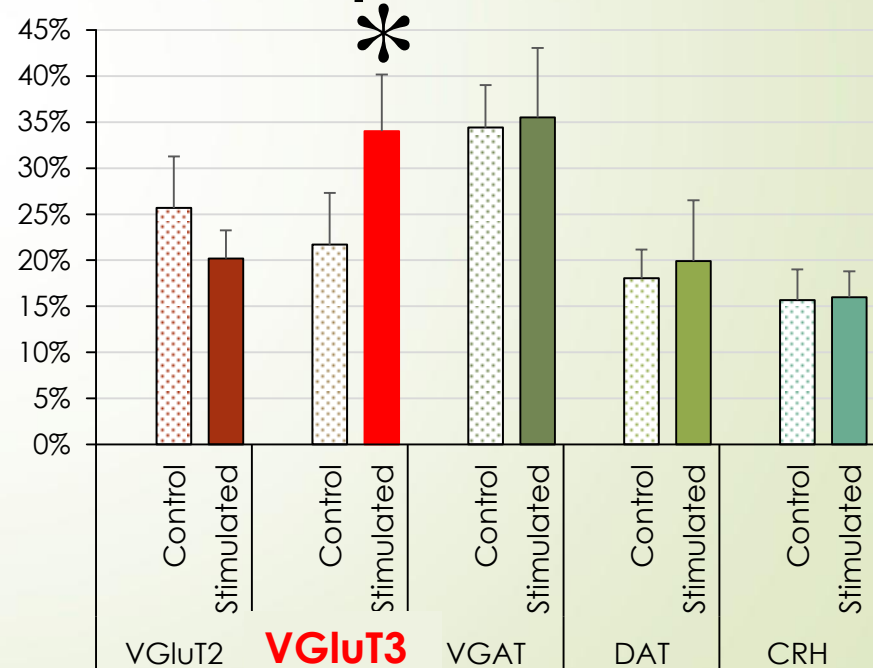
EPM

Elevated plus maze

Activation of VGluT3 positive cells of the median raphe may contribute to reduced anxiety



Time spent in the open arms





Elodie Chaillou-Sagon project leader



Manon Bellardie, student



Csilla Fazekas, student



Hanga Horváth, student

**Thank you for your
attention!**



Eszter Sipos, Ph.D.



Bibiána Török, PhD student