

Amygdala-enriched genes in fear extinction and maternal care

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場所：農学部1号館地階 第5講義室

Date: 15:00-16:30, October 16, 2024

Venue: Faculty of Agriculture Building No.1 – Lecture room #5 (basement floor)

Gleb Sumyatsky 博士は、扁桃体を中心にして恐怖記憶研究をされてきました。恐怖制御に関わる扁桃体特異的発現遺伝子を発見し、この遺伝子によって制御される扁桃体局所回路を特定し、近年では、母性行動や社会性行動もこれら遺伝子が制御していることを明らかにされています。わかりやすくご説明していただけますので、ぜひ奮ってご参加ください。

Reference:

1. Morishita Y, Fuentes I, Favate J, Zushida K, Nishi A, Hevi C, Goldsmith N, Buyske S, Sullivan SE, Miller CA, Kandel ER, Uchida S, Shah P, **Shumyatsky GP**. The gastrin-releasing peptide regulates stress-enhanced fear and dopamine signaling. *bioRxiv*. 2021 Jan 1:2020-12.
2. Fuentes I, Morishita Y, Gonzalez-Salinas S, Champagne FA, Uchida S, **Shumyatsky GP**. Experience-Regulated Neuronal Signaling in Maternal Behavior. *Front Mol Neurosci*. 2022 Mar 24;15:844295.
3. Uchida S, Teubner BJW, Hevi C, Hara K, Kobayashi A, Dave RM, Shintaku T, Jaikhan P, Yamagata H, Suzuki T, Watanabe Y, Zakharenko SS, **Shumyatsky GP**. CRTC1 Nuclear Translocation Following Learning Modulates Memory Strength via Exchange of Chromatin Remodeling Complexes on the Fgf1 Gene. *Cell Rep*. 2017 Jan 10;18(2):352-366.
4. Martel G, Uchida S, Hevi C, Chévere-Torres I, Fuentes I, Park YJ, Hafeez H, Yamagata H, Watanabe Y, **Shumyatsky GP**. Genetic Demonstration of a Role for Stathmin in Adult Hippocampal Neurogenesis, Spinogenesis, and NMDA Receptor-Dependent Memory. *J Neurosci*. 2016 Jan 27;36(4):1185-202.
5. Uchida S, Martel G, Pavlowsky A, Takizawa S, Hevi C, Watanabe Y, Kandel ER, Alarcon JM, **Shumyatsky GP**. Learning-induced and stathmin-dependent changes in microtubule stability are critical for memory and disrupted in ageing. *Nat Commun*. 2014 Jul 10;5:4389.
6. Martel G, Hevi C, Friebely O, Baybutt T, **Shumyatsky GP**. Zinc transporter 3 is involved in learned fear and extinction, but not in innate fear. *Learn Mem*. 2010 Oct 29;17(11):582-90.
7. Martel G, Nishi A, **Shumyatsky GP**. Stathmin reveals dissociable roles of the basolateral amygdala

in parental and social behaviors. *Proc Natl Acad Sci U S A*. 2008 Sep 23;105(38):14620-5.

8. **Shumyatsky GP**, Tsvetkov E, Malleret G, Vronskaya S, Hatton M, Hampton L, Battey JF, Dulac C, Kandel ER, Bolshakov VY. Identification of a signaling network in lateral nucleus of amygdala important for inhibiting memory specifically related to learned fear. *Cell*. 2002 Dec 13;111(6):905-18.

(* 事前のお申込みは不要です / No registration required.)

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アクセス



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