



# THE ROLE OF SEROTONIN IN METABOLIC AND NEUROPSYCHIATRIC DISORDERS: INSIGHTS FROM HUMAN AND ANIMAL STUDIES

GUEST LECTURE by



**Jasminka Stefulj, PhD**

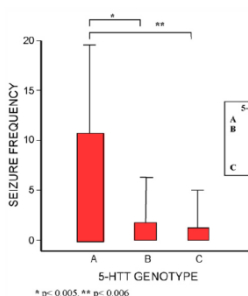
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**Monday, 13.06.2016  
13:00**

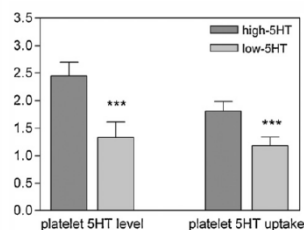
**SR 26.K3, Department of Pathophysiology & Immunology, MUG  
(Heinrichstrasse 31a, basement)**

|   | L/L 12/12, n=7 | L/L 10/10, L/L 10/12, S/S 12/12, S/L 12/12, n=56 | No L/L, no 12/12, n=34 |
|---|----------------|--|------------------------|
| Age (years)   | 32 ± 14        | 33 ± 14  | 32 ± 13                |
| Gender (M/F in %)   | 42.9/57.1      | 23.2 ± 76.8                                      | 38.9 ± 61.1            |
| Age of onset (years)  | 19 ± 13        | 22 ± 15  | 20 ± 12                |
| Seizure Frequency/6 Mo  | 11.0 ± 8.5     | 2.0 ± 5.1  | 1.6 ± 3.5              |
| Seizure duration (years)  | 15 ± 12        | 11 ± 10  | 13 ± 11                |
| Current number of AEDs  | 1.8 ± 0.9      | 1.5 ± 0.8  | 1.5 ± 0.8              |
| History of secondarily generalized seizures or status epilepticus | 71%            | 36%  | 44%                    |
| Presence of mesial temporal sclerosis (%)                         | 25             | 31   | 19                     |
| Education (years, %)  |                |  |                        |
| 8   | 28.6           | 3.6  | 5.6                    |
| 12  | 42.9           | 67.9   | 63.9                   |
| 16  | 28.6           | 63.9   | 25.0                   |
| Employed (Y, %)   | 57.1           | 71.4   | 77.8                   |
| Married (Y, %)  | 28.6           | 37.5   | 50                     |

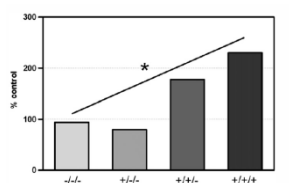
Demographic and clinical variables of 101 TLE patients, based on the 5-HTT polymorphism. Hecimovic et al. (2010) *Epilepsy Res* 91:35-8



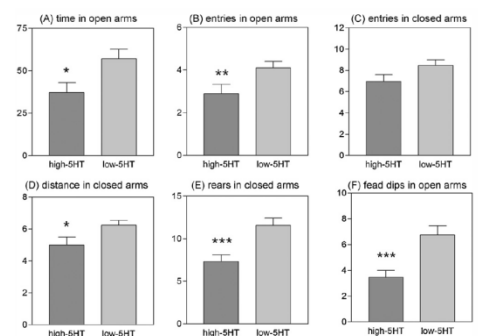
Seizure frequency was significantly higher in L/L and 12/12 5-HTT genotypes than in L/L 10/10, L/L 10/12, S/S 12/12 and S/L 12/12 genotypes. Hecimovic et al. (2010) *Epilepsy Res* 91:35-8



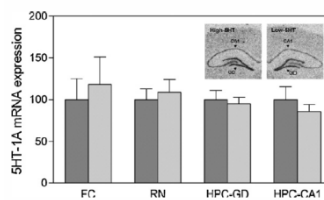
Platelet serotonin and velocity of platelet serotonin uptake in animals from high-5HT and low-5HT sublines. Bordukalo-Niksic et al. (2010) *Behav Brain Res* 213(2):238-45



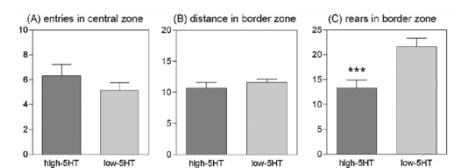
Co-occurrence of "suspected" genotypes of 5-HTTLPR (LL), STIn2 (1010) and MAO-A uVNTR (3 repeat) polymorphisms in patients with type-2 alcoholism. Bordukalo-Niksic et al. (2012) *Psychiatry Res* 200:1041-43



Behavioural variables representing anxiety- (A, B), locomotion- (C, D) and exploratory-related (E, F) behaviours measured in animals from high-5HT and low-5HT sublines in the elevated-plus maze test. Bordukalo-Niksic et al. (2010) *Behav Brain Res* 213(2):238-45



5HT-1A mRNA expression in different brain regions of animals from high-5HT (dark gray) and low-5HT (light gray) sublines of the Wistar-Zagreb 5HT rats. Bordukalo-Niksic et al. (2010) *Behav Brain Res* 213(2):238-45



Behaviour in open field: variables representing anxiety- (A), locomotion- (B) and exploratory-related (C) behaviours measured in animals from high-5HT and low-5HT sublines under mild anxiety conditions. Bordukalo-Niksic et al. (2010) *Behav Brain Res* 213(2):238-45