

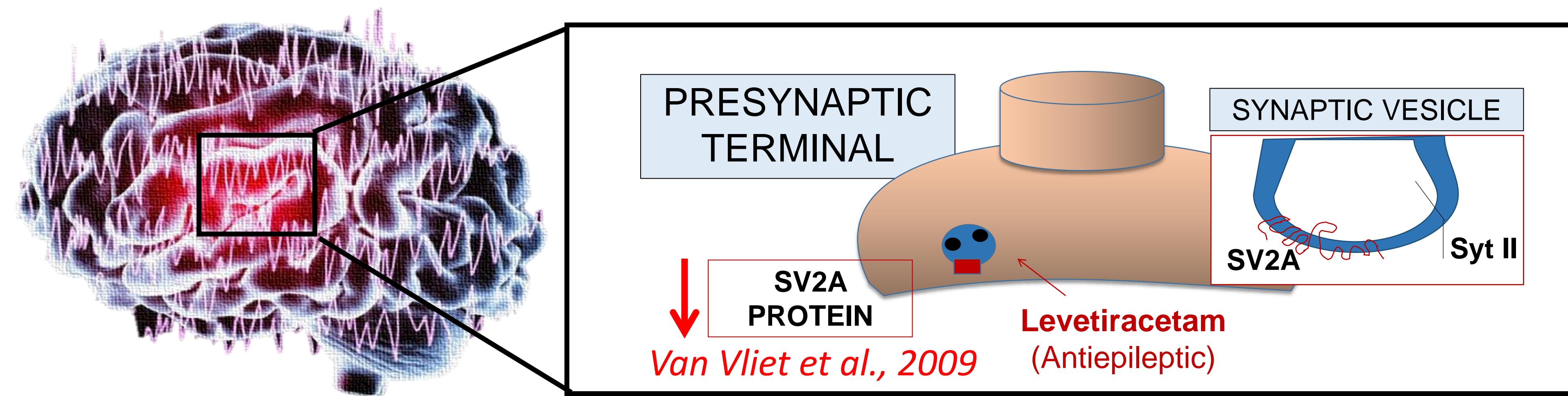
# The SV2A protein: imaging synaptic density during the progression of the temporal lobe epilepsy in the kase rat model

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## Introduction

### EPILEPSY

- ✓ Affects around 1% population, 25% suffer drug-resistant epilepsy.
- ✓ SYMPTOMS: Seizures, cognitive impairments, mood disorders.



## Methods and results

EPILEPTIC MODEL:  
KA (SALINE) IP  
INJECTION (15mg/kg)  
(Hellier et al., 1998)

[<sup>18</sup>F]UCB-H  
Focus120  
micoPET  
(Siemens)

T2 structural  
9.4T/310 ASR  
(Agilent/Varian)

24h

Acute phase

DAYS 3-6

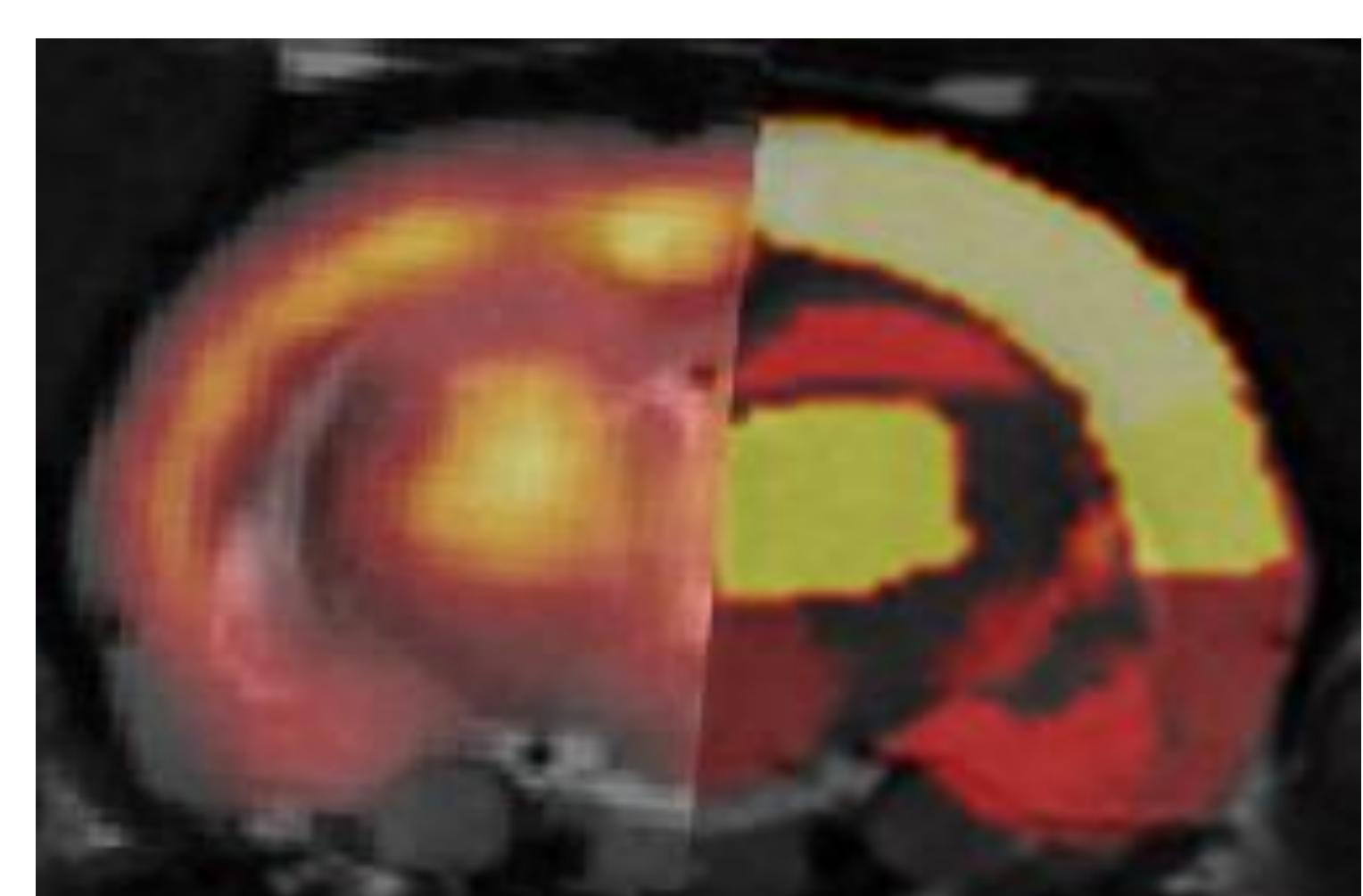
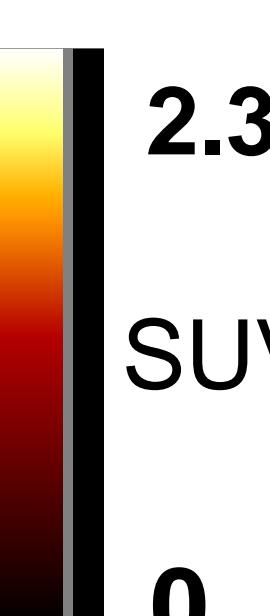
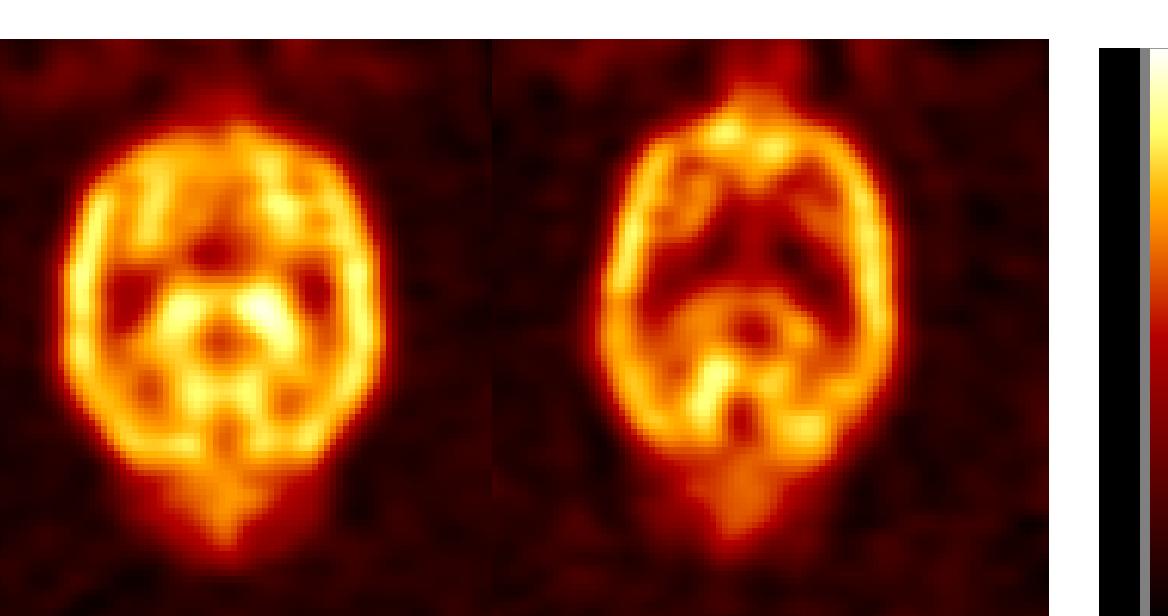
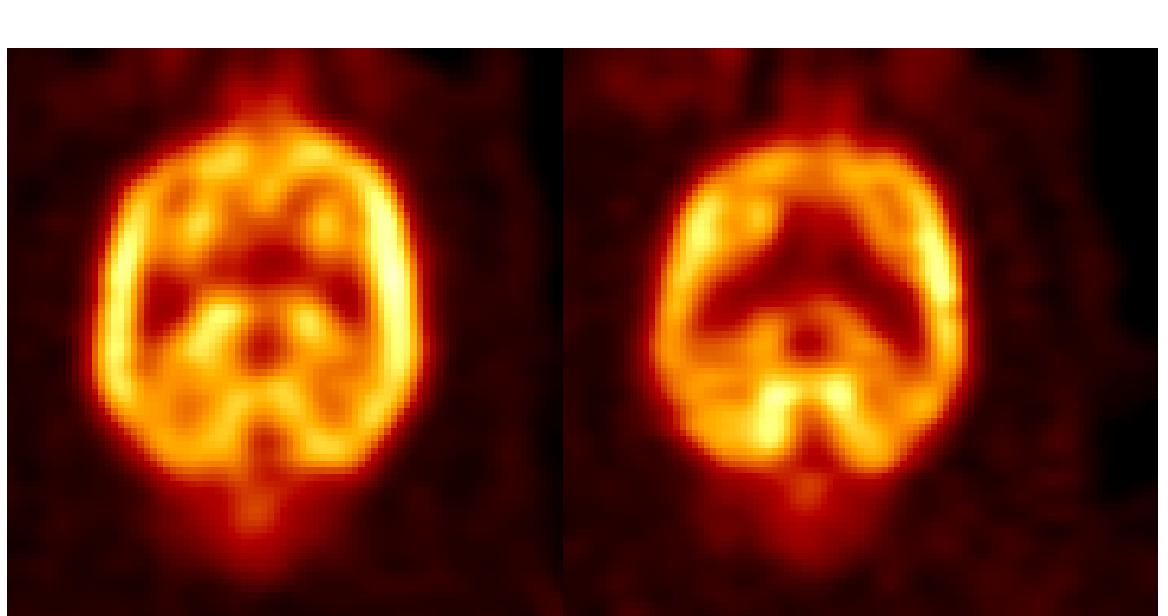
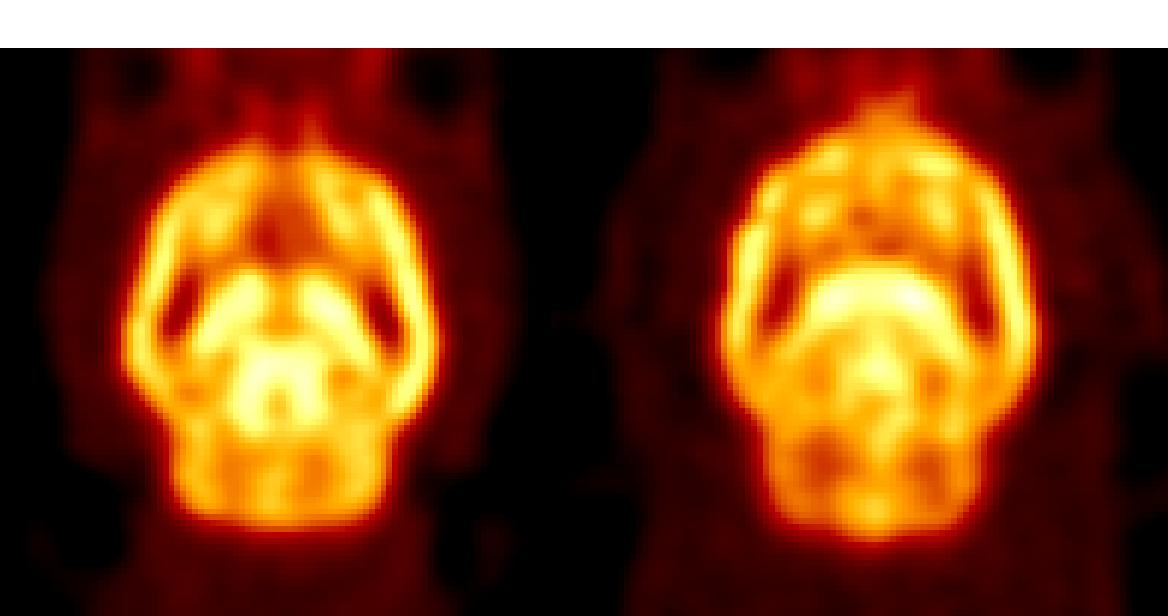
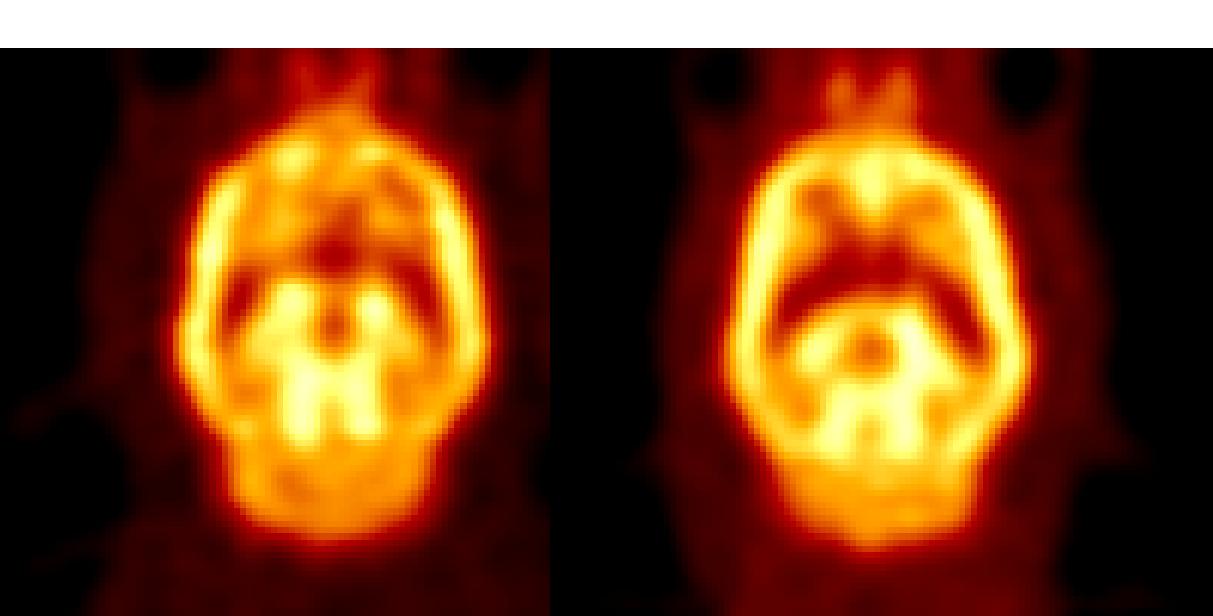
Latent phase

DAYS 30-45

First spontaneous crises

DAYS 90-105

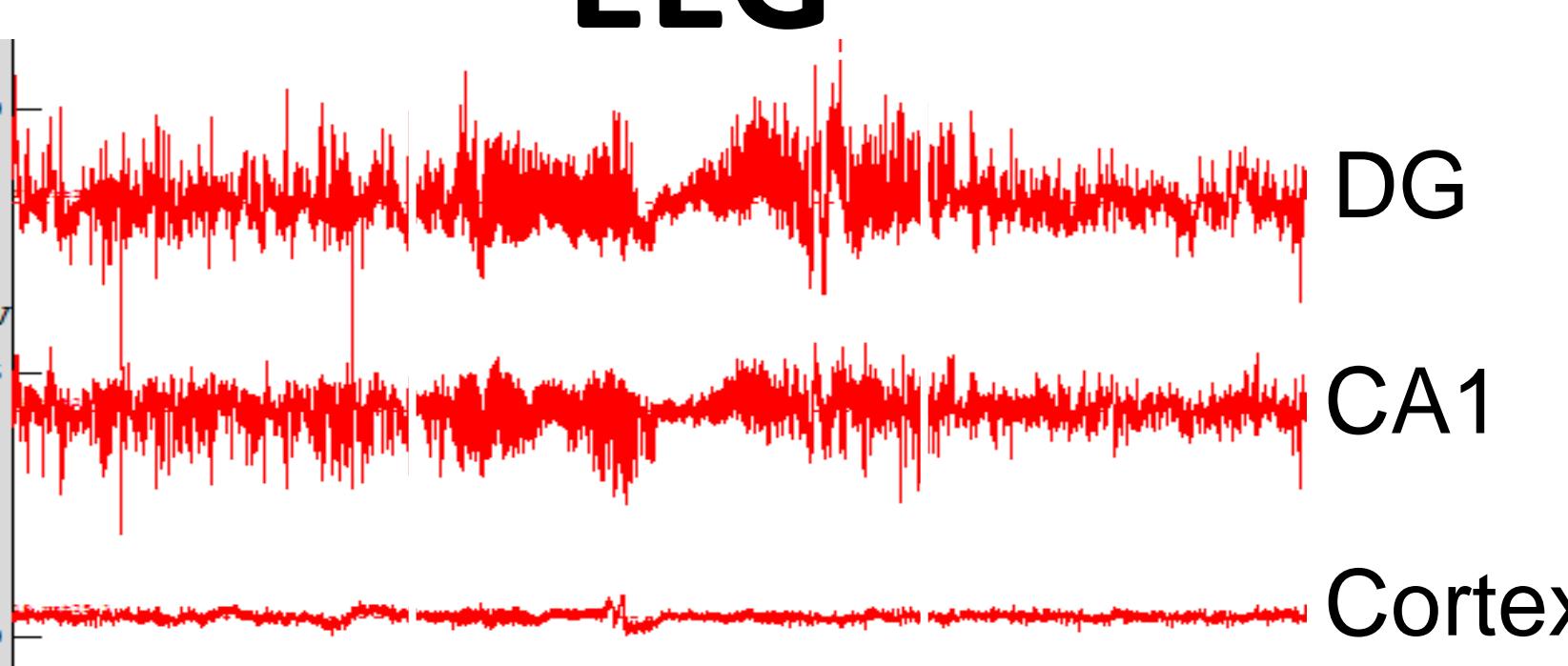
Chronic Phase



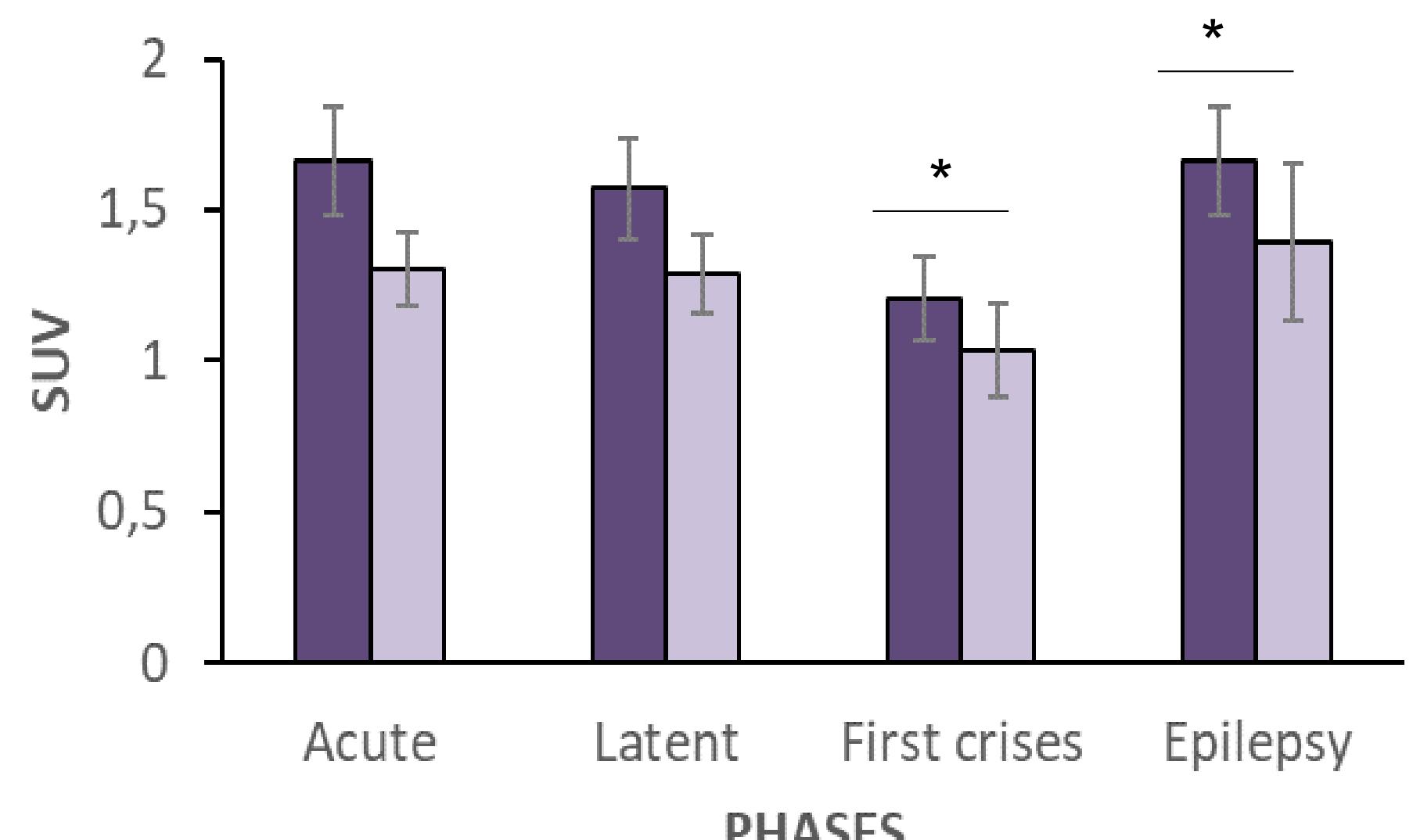
PET AND  
IRM

ATLAS RAT  
BRAIN

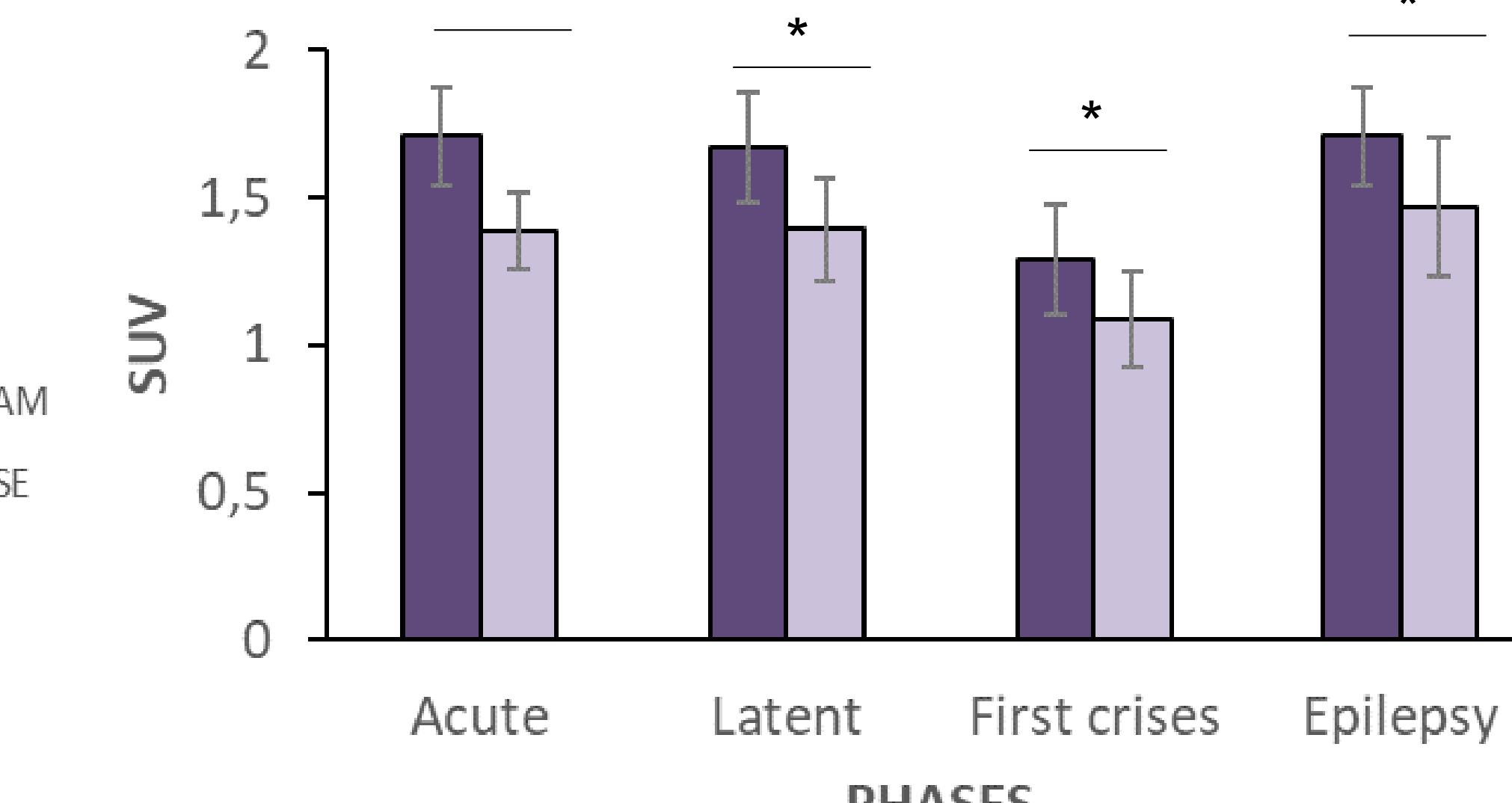
EEG



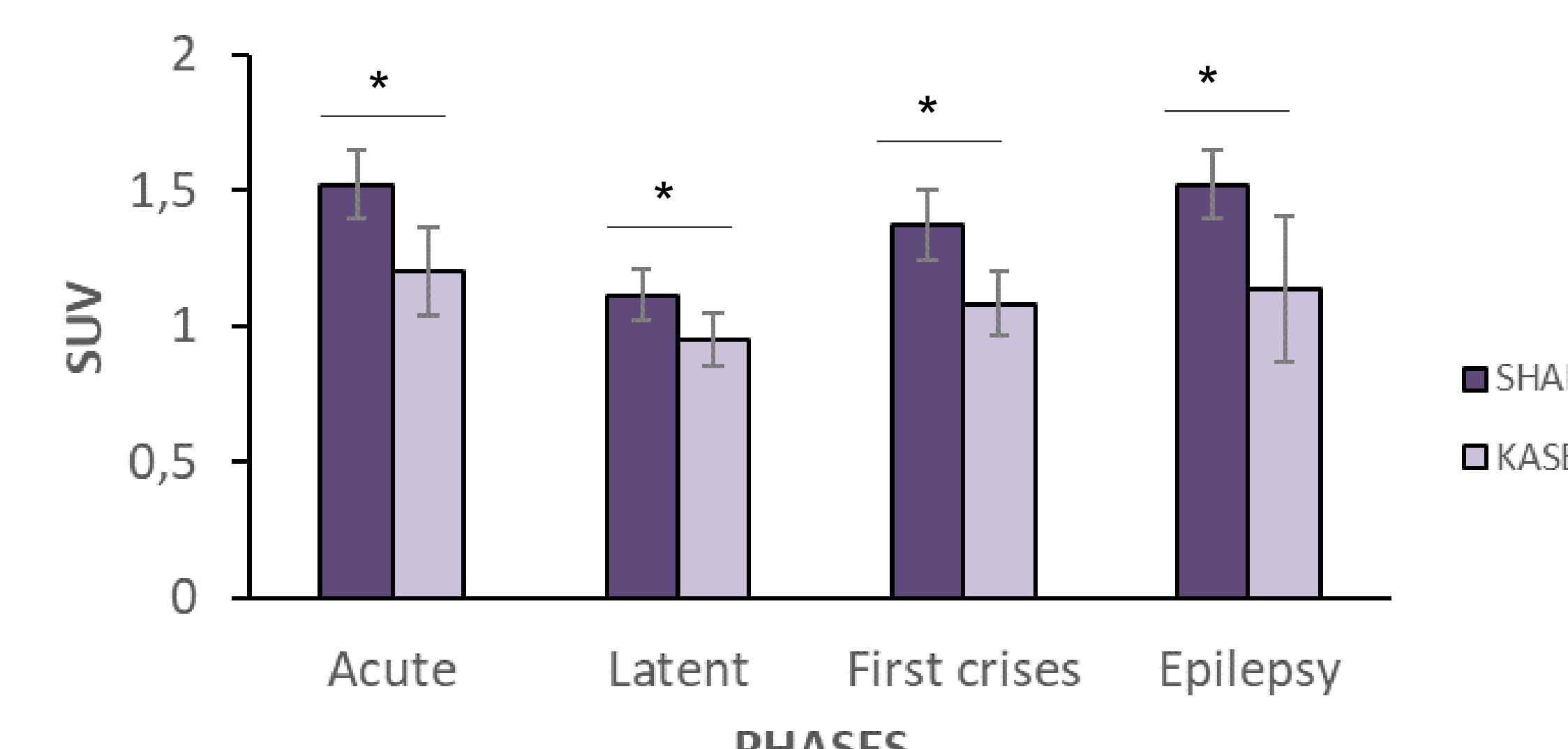
### HIPPOCAMPUS



### THALAMUS



### AMYGDALA



- ✓ The SV2A decrease is present along all the epileptic process, even in early phases of the disease.
- ✓ The use of [<sup>18</sup>F]UCB-H is suitable to detect and evaluate the epileptic disease, and to develop and evaluate new therapeutic drugs.