

# 第22回 最先端脳科学セミナー

## Presynaptic and Postsynaptic mechanisms for chronic pain and anxiety

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場所: 薬学部研究棟Ⅱ 7階 セミナー室8

### 要旨

Chronic pain can lead to anxiety and anxiety can enhance pain. Our recent studies have identified the anterior cingulate cortex (ACC) as one of key cortical regions for chronic pain and its related emotional disorders. At synaptic and molecular levels, we found that two major forms of LTP (presynaptic and postsynaptic LTP) serve as basic mechanisms for chronic pain and anxiety. Distinct signaling proteins have been identified to induce and maintain such long-lasting persistent changes. Two forms of LTP may converge to mediate interaction between anxiety and pain; and chemicals that interfere with such interaction may help to erase pain and anxiety in future.

### References

***Science*** 330:1400-1404, 2010  
***J Neurosci.*** 32:11318-11329, 2012  
***J Neurosci.*** 32:1082-1095, 2012  
***Mol Brain.*** 7:27, 2014

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