



CDB SEMINAR

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Thursday, March 23, 2017

16:00~17:00 A7F Seminar Room

Mechanosensor channel Piezos and their physiological roles ~touch, proprioception and breathing~

Summary

Mechanical stimuli are often sensed by organisms and impact on their behaviors, as exemplified by touch sensation. However, molecular mechanism or physiological importance of mechanotransduction remains obscure in many field. Piezo1/2 are recently identified mechanically activated cation channels. Piezo2 has been shown to function as the key mechanotransducer of touch sensation and proprioception. By analyzing Piezo deficient animals, we had a unique opportunity to clarify previously unclear roles of mechanotransduction. In this seminar, I'll introduce series of evidence proving Piezo1/2 as mechanotransducer protein and our latest finding how breathing, during which lungs are exposed to repetitive and wide-ranged mechanical force, is regulated by Piezo2-mediated mechanotransduction.

Nonomura et al., Nature. 2017 Jan 12;541(7636):176-181.

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