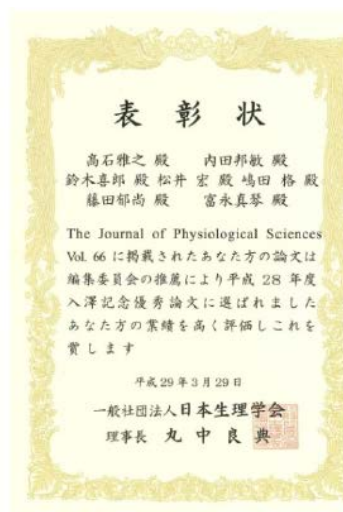


Mandom received Paper Award at the 94th Annual Meeting of the Physiological Society of Japan

Mandom Corporation (Head Office: Osaka, President Executive Officer: Motonobu Nishimura, hereafter “Mandom”), have been conducting joint research with Professor Makoto Tominaga at the National Institutes of Natural Sciences and the Okazaki Institute for Integrative Bioscience for the purpose of developing t evaluation method using TRP (Transient Receptor Potential) channels. Furthermore we try to apply our findings to development of our products.

Our research showed that capsaicin, the warming agent, suppresses activity of TRPM8, cooling sensor. On the other hand, menthol, the cooling agent, suppresses activity of TRPV1, warmth sensor. These findings was published in the “Journal of Physiological Sciences” and we received the “Hiroshi and Aya Irisawa Memorial Award for Excellent Papers in The Journal of Physiological Sciences¹⁾”.

We will continue to work developing our technical improvement of sensory stimulation.



[Topic & Outline of the Winning Paper]

Contact

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(1) Title

Reciprocal effects of capsaicin and menthol on thermo-sensation through regulated activities of TRPV1 and TRPM8

(2) Publication

Journal of Physiological Sciences March 2016, Volume 66, Issue 2, pp 143-155

(3) Researchers

Mandom Corporation: Masayuki Takaishi, Hiroshi Matsui, Tadashi Shimada, Fumitaka Fujita
National Institutes of Natural Sciences & Okazaki Institute for Integrative Bioscience:
Kunitoshi Uchida, Yoshiro Suzuki, Makoto Tominaga

(4) Contents

We have discovered that menthol, the well-known cooling agent, suppresses the activity of TRPV1 (a warmth sensor), and that capsaicin, the well-known warming agent, suppresses the activity of TRPM8 (a coolness sensor). These results suggest that temperature sensation induced by chemical was not only activation of one thermo-sensor but also inhibition of opposite thermo-sensor.

Additionally, we have found that the sensory irritation through the activation of the TRPV1 receptor was alleviated by menthol. Thus, we clarify one of analgesic mechanism of action induced by menthol².

<Notes>

***1 Hiroshi and Aya Irisawa Memorial Award for Excellent Papers in The Journal of Physiological Sciences**

Each year the Physiological Society of Japan offers an award to the author(s) of outstanding papers published in the Journal of Physiological Sciences (formerly the Japanese Journal of Physiology). This award is named in honor of Dr. Hiroshi Irisawa, a well-known cardiac physiologist. Based on the Hiroshi Irisawa Fund, the award is sponsored by the Physiological Society of Japan. Its purpose is to promote the contribution of high-quality papers particularly those written by junior members of the Society. The selection of the award is the responsibility of the selection committee, whose members are JPS Editors and Officers of the Physiological Society of Japan.

Excerpted from the website of the Physiological Society of Japan

***2 “Mandom identified menthol-induced analgesic mechanisms,” (released December 10, 2015)**

END