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ONLINE ISSN : 1880-313X

PRINT ISSN : 0388-6107

Biomedical Research

Vol. 25 (2004) , No. 5 October pp.245-248

[\[PDF \(101K\)\]](#) [\[References\]](#)**Ghrelin is expressed in and released from mouse testicular Sertoli TM4 cells**Yukio ARAKAWA¹⁾, Sanae YAMANISHI²⁾, Syoji MATSUMOTO¹⁾, Ikuo KATO³⁾, Xinmin YU³⁾, Hitoshi YANAIHARA⁴⁾ and Nobuo KUROKAWA¹⁾

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(Received August 23, 2004)

(Accepted September 17, 2004)

ABSTRACT

Using newly developed ghrelin specific radioimmunoassay (RIA) combined with high performance liquid chromatography (HPLC), expression and release of ghrelin/des-n-octanoyl ghrelin in mouse testicular Sertoli TM4 cells were demonstrated. The expression and release of the peptides were significantly higher than those of Leydig TM3 cells under the condition used. Testosterone (1—100 ng/mL) increased dose-dependently ghrelin release from Leydig TM3 cells but not from Sertoli TM4 cells. Both TM3 and TM4 cells possessed growth hormone secretagogue receptor (GHS-R). Implication of Sertoli cells in ghrelin expression in the testis has never been discussed. Apart from species-specificity or/and age-dependency in expression of ghrelin in different cell types of the testis, the expression and release of the peptide in TM4 cells which were found in this study raise an issue of physiological significance of ghrelin in Sertoli cells of the testis.

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To cite this article:

Yukio ARAKAWA, Sanae YAMANISHI, Syoji MATSUMOTO, Ikuo KATO, Xinmin YU, Hitoshi YANAIHARA and Nobuo KUROKAWA; "Ghrelin is expressed in and released from mouse testicular Sertoli TM4 cells", *Biomedical Research*, Vol. **25**, pp.245-248 (2004) .

doi:10.2220/biomedres.25.245

JOI JST.JSTAGE/biomedres/25.245

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