

Biological activities of *Rhodiola sachalinensis*

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Recently, it was reported that a few herbal extracts could decrease blood ethanol concentrations by stimulating ethanol metabolism or inhibiting ethanol absorption in the gastrointestinal tract. And it was also reported that the extract of *Rhodiola* root decrease blood ethanol concentration in rats fed ethanol by blocking ethanol absorption. We made an activity guided isolation from ethanol extract of *Rhodiola sachalinensis* and some identified phenolic compounds as a active components of blocking ethanol absorption.

[PD2-27] [ 04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3] ]

**A Study on the Anti-metastatic activities and Toxicity of IH-901**

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Anti-metastatic activities of IH-901, an intestinal bacterial metabolic derivative formed from Ginseng protopanaxdiol saponins, was studied using experimental and sapotaneous metastasis model produced by intravenous, intraportal, and intrasplenic or subcutaneous injections of Lewis lung carcinoma, B16 melanoma or Colon26 carcinoma in syngeneic C57BL/6 or BALB/c mice. And the study was carried out to investigate the acute toxicity in ICR mice of both sexes exposed to IH-901. The mice of the both sexes were observed daily for 14 days after single oral administration. Results from separate studies on general toxicity and safty pharmacology of IH-901 revealed its low toxicity. Also IH-901 administrated mice did not induce any mortalites and abnormal signs in clinical findings, body weights, gross findings and histopathological findings. Based on the results, it is impossible estimate LD50 vaules(LD50 values in male and female mice would be > 5g/kg b.w. in the intragastrically route.) in male and female mice.

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**Benzothiadiazole potentiates elicitor-induced rosmarinic acid production in the suspension cultures of *Agastache rugosa***

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Benzothiadiazole (BTH) which is known as a plant activator plays an important role in various plant defense responses. It has been reported that BTH induced systemic acquired resistance in several plants and primed for augmented elicitation of phytoalexin synthesis. Rosmarinic acid (RA) is one of the most abundant phenylpropanoid in the species of Labiatae. Because of its antimicrobial activities and elicitor-inducible characteristic, rosmarinic acid could serve as a defense compound (phytoalexin) against pathogens. Recently, we reported that the suspension cultures of *Agastache rugosa* also produced rosmarinic acid larger amount than the intact plant and its production can be increased by yeast elicitor treatment. As one of the methods to increase the yield of RA we attempted to preincubate the cells with BTH. When 50  $\mu$ M of BTH was added in the suspension cultures of *A. rugosa* prior to elicitation, RA content was increased by 11 folds compared to non-elicited cells. BTH alone, however, was not able to induce RA production. Therefore, the results presented above implicated that BTH could be used as a chemical tool to facilitate the expression of the genes which is involved in the biosynthesis of a certain secondary metabolite, especially phytoalexin, together with elicitation.