

Germanium prevents pulmonary metastasis of Lewis lung cancer.-

GreenMedInfo Summary

Abstract Title:

Prevention of pulmonary metastasis of Lewis lung carcinoma and activation of murine macrophages by a novel organic germanium compound, PCAGeS.

Abstract Source:

Eur J Appl Physiol. 2008 May;103(1):33-40. Epub 2008 Jan 11.
PMID: [3373232](#)

Abstract Author(s):

I Sato, T Nishimura, N Kakimoto, H Suzuki, N Tanaka

Article Affiliation:

Institute of Applied Microbiology, University of Tokyo, Japan.

Abstract:

The pulmonary metastasis of Lewis lung carcinoma was strongly blocked by daily intraperitoneal (i.p.) treatment with 0.5 mg of PCAGeS/kg/day for 7 days after tumor implantation. The metastasis-preventive activity of PCAGeS was markedly reduced when mice were treated with carrageenan, a macrophage blocker. On the other hand, treatment with anti-asialo GM1 antiserum did not significantly affect the percentage of inhibition of metastasis by the compound. These results suggest that macrophages rather than natural killer (NK) cells play an important role in the suppression of metastasis by PCAGeS. PCAGeS induced tumoristatic and tumoricidal activities in the peritoneal macrophages of mice by oral administration. The activity of NK cells was also augmented by i.p. treatment with the compound. These results suggest that PCAGeS is a useful substance for preventing pulmonary metastasis.

Article Published Date: May 01, 2008

Study Type: Animal Study

Additional Links

Substances: [Germanium : CK\(12\) : AC\(7\)](#)

Diseases: [Breast Cancer: Metastatic : CK\(123\) : AC\(52\)](#), [Lung Cancer : CK\(1043\) : AC\(393\)](#)

Pharmacological Actions: [Anti-metastatic : CK\(634\) : AC\(414\)](#)