

Title	Radioactive metal complexes of ethylenediamine-N, N-diacetic acid. biodistribution of radioactivity in mice bearing tumors
Sub Title	
Author	加留部, 善晴(Karube, Yoshiharu) 高田, 二郎(Takata, Jiro) 山本, 孫兵衛(Yamamoto, Magobei) 河野, 彬(Kono, Akira) 松島, 美一(Matsushima, Yoshikazu)
Publisher	共立薬科大学
Publication year	1985
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.30 (1985.) ,p.82- 82
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000030-0082

慶應義塾大学学術情報リポジトリ(KOARA)に掲載されているコンテンツの著作権は、それぞれの著作者、学会または出版社/発行者に帰属し、その権利は著作権法によって保護されています。引用にあたっては、著作権法を遵守してご利用ください。

The copyrights of content available on the KeiO Associated Repository of Academic resources (KOARA) belong to the respective authors, academic societies, or publishers/issuers, and these rights are protected by the Japanese Copyright Act. When quoting the content, please follow the Japanese copyright act.

**Radioactive Metal Complexes of Ethylenediamine-*N, N*-diacetic Acid.
Biodistribution of Radioactivity in Mice Bearing Tumors***

Yoshiharu KARUBE**, Jiro TAKATA**, Magobei YAMAMOTO**,
Akira KONO*** and Yoshikazu MATSUSHIMA

加留部善晴**, 高田二郎**, 山本孫兵衛**, 河野 彬***, 松島美一

We reported previously that ^{99m}Tc radioactivity was concentrated in tumor tissues in experimental animals a few hours after the administration of the complex of ethylenediamine-*N, N*-diacetic acid (EDDA) with ^{99m}Tc . The tumor tissues were clearly visualized in scintigrams. As a part of the studies on the mechanism of the ^{99m}Tc localization in tumor tissues, biodistributions of the EDDA complexes with other radioactive metals as well as ^3H -labeled EDDA were studied.

Complexes of EDDA with ^{51}Cr , ^{57}Co , ^{59}Fe , ^{64}Cu , and ^{67}Ga were prepared by mixing aqueous solutions of inorganic salts of the radioactive metals with EDDA in saline. μ -oxo ^{57}Co EDDA was prepared by treatment of ^{57}Co EDDA with hydrogen peroxide.

Solutions of the radioactive inorganic salts, the radioactive complexes of EDDA, and ^3H -labeled EDDA were injected intravenously to mice bearing Ehrlich tumor. Distribution of the radioactivity in blood, organs, and tumor tissues were measured at selected times.

^{57}Co EDDA and μ -oxo ^{57}Co EDDA were concentrated in the tumor tissues, whereas other radioactive compounds were not. The tumor tissues were clearly visualized in scintigrams after the administration of the ^{57}Co complexes to the mice.

Since no stable isotope of Tc exists, chemical and biological studies of this element meet with many difficulties. The present finding should provide a new approach towards the mechanistic studies of ^{99m}Tc complexes.

* 本報告は *Chem. Pharm. Bull.*, 32, 4049 (1984) に発表

** 福岡大学薬学部

*** 九州がんセンター