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FUJITA LABORATORY  (December 1962～)

Head:  Dr. Eiichi Fujita

In 1962 Professor Eiichi Fujita succeeded the late Professor Risaburo Nakai as head of the laboratory of Pharmacological Research for Chemotherapy. Thus, Fujita laboratory was established on 21st. December, 1962. The official name of the laboratory was changed to Physiological Activity on 25th. February, 1964.

Main subjects of research in the laboratory are the physiologically active organic natural and synthetic compounds. Works in the past three and half years are classified and summarised.

I. Alkaloids

_Thalictrum_ alkaloids were investigated. Thalicrine, a bisbenzylisoquinoline alkaloid, extracted from the root of _Thalictrum Thunbergii_ proved to be identical with aromoline, hence the name of homothalicrine, a new alkaloid, was changed to homo-aromoline. A detailed reinvestigation of the structure of thalicberine confirmed again the unique mode of ether linkage in the molecule.

The structure of takatonine, another _Thalictrum_ alkaloid, was revised, and a total synthesis established the correct structure.

The structure and configuration of cissampareine, a novel bisbenzylisoquinoline alkaloid possessing antitumor activity which was extracted from _Cissampelos pareira_, was clarified by chemical and spectral evidences.

Another work is concerned with the alkaloids of _Lythrum anceps_. Several kinds of new type alkaloids have been isolated, and the structure of lythranine, a major alkaloid, has almost certainly been clarified.

II. Diterpenoids

A couple of reviews on the chemistry of diterpenoids in 1964 and 1965 were published by Prof. Fujita.

Enmein, an active bitter diterpenoid, extracted from _Isodon trichocarpus_ was converted to (—)-kaurane via many steps of chemical reactions. Thus, the absolute configuration of the complex molecule of enmein was established by an unequivocal chemical method. The structure of the other components of _I. trichocarpus_ and _I. japonicus_ has been investigated and several interesting new precursors of enmein and gibberellins have been found.

III. Synthesis of compounds possessing antifungal activity

Some potential antifungal organic compounds have been synthesized. The relation between activity and structure has been examined.
Detailed test for the physiological activity will be carried out on the foregoing natural and synthetic compounds.

Publications


