

Targeting Trends

Reporting the latest news in Molecular Surgery



The Discovery of Saporin

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Saporin from *Saponaria officinalis* (soapwort plant of the Caryophyllaceae family) was discovered as part of the research on plant toxins we undertook around 1970, when we became interested in the study of the mechanism of action of ricin.

Ricin, from *Ricinus communis* (castor bean plant of the Euphorbiaceae family) and abrin from *Abrus precatorius* (of the Leguminosae family), are two potent toxins known since the end of the 19th century, when Paul Ehrlich prepared the first antibodies with them.

The study of these toxins was almost completely neglected until in 1970 it was found that they were more toxic to malignant than to normal cells (1), and that they inhibited protein synthesis both by cells and cell-free systems. While investigating the mechanism of this inhibition, in collaboration with L. Montanaro and S. Sperti of our Department, we had the rather simple idea that if two plants taxonomically very far from each other contained very similar toxins, it was possible that other



Saponaria officinalis

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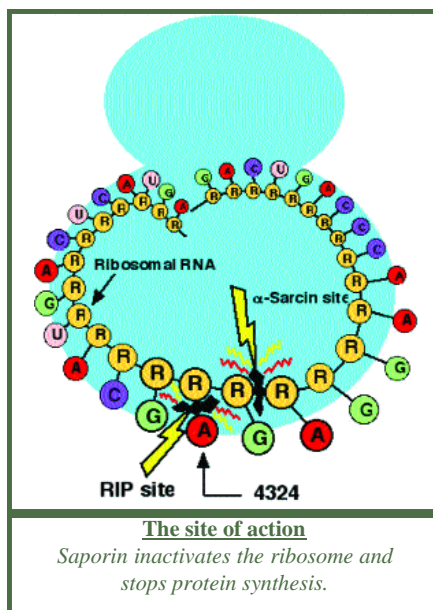
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Denise Higgins, Editor

ADVANCED TARGETING SYSTEMS



SAP FACTS

Saporin

(from the seeds of the plant *Saponaria officinalis*)

29.5 kDa

SO6 isoform

Single-chain ribosome-inactivating protein (RIP)

Extremely stable

Non-glycosylated

Most active RIP

Safely handled in the laboratory