

seeks partner to license

Method for Synthesizing Xanthohumol

Xanthohumol has been found to have a range of interesting biological properties *in vitro* that may have therapeutic utility including hormonal, antioxidant, and inhibition of HIV-1, as well as its multi-mechanism-based classification as a potential 'broad spectrum' anticancer and cancer prevention agent. Studies directed toward dietary supplements having increased xanthohumol content and further biological characterization of purified xanthohumol at the *in vivo* level are underway. However, the biological characterization has been limited by the need to obtain pure material from natural sources using a multi-step process. Previous supplies of xanthohumol have had to rely upon extraction from abundant natural sources, but isolation in a pure form is tedious and involves several distinct steps. The overall yield for this process is about 0.1%, and the process does not lend itself to preparing large quantities. In spite of such difficulties, there is still a great interest in the intracellular and *in vivo* disposition and activity of xanthohumol, particularly since it is believed to have potential anticancer or cancer preventive properties. There is a need for a method of production of xanthohumol that can be achieved using a synthetic route rather than the tedious and very low yielding extraction of xanthohumol from common hops. Therefore, an improved method for synthesizing xanthohumol has been developed.

The University of Toledo is seeking a company interested in utilizing this six-step synthetic method for preparing xanthohumol to provide pure material in at least 10 % overall yield beginning from a readily available starting material.

Applications:

1. To provide research supplies of xanthohumol to scientific investigators
2. Key 'fortified' component of dietary supplement products
3. Specific cancer preventative or anticancer agent within the realm of pharmaceuticals
4. Both stable and radio-isotopes can be incorporated for use as research tools

Advantages:

1. Readily available starting material
2. Six well-behaved steps
3. At least 10% overall yield
4. Estimated to be at least 100 times less expensive than current method
5. Can be scaled-up to larger production quantities

This invention is patent pending

Contact

The University of Toledo
Office of Research Development
MS 1034
3000 Arlington Avenue
Toledo, Ohio 43614

Phone: 419-383-6963
E-mail: stephen.snider@utoledo.edu

