Research Reference Guide

1. Japanese Indigo (Ai) and Tryptanthrin: Anti-Cancer and Pharmacological Research

Isolation and Cytotoxicity of Tryptanthrin

Research Focus: Studies on the antineoplastic activity of the alkaloid tryptanthrin derived from Indigo (*Polygonum tinctorium*), including isolation methods and structural determination through cytotoxic activity screening against cancer cells.

Suggested Search Terms: Tryptanthrin isolation "Furuse" "Yamamoto"

Google Scholar Link: Search here

Tryptanthrin's Cell Proliferation Inhibition

Research Focus: Evaluation of tryptanthrin's inhibitory effects on the proliferation of various human-derived cultured cancer cells, including leukemia and gastric cancer cell lines.

Suggested Search Terms: Tryptanthrin cytotoxicity "Otsuki" "Furuse"

Google Scholar Link: Search here

Tryptanthrin's Chemopreventive Efficacy

Research Focus: *In vivo* verification studies demonstrating the suppressive effects of oral tryptanthrin administration on the incidence of small intestinal adenomas and colorectal cancer in animal models.

Suggested Search Terms: Tryptanthrin chemoprevention colorectal cancer

Google Scholar Link: Search here

Indigo Extracts: Anti-inflammatory and Antiviral Properties

Research Focus: Pharmacological investigations into the antibacterial and anti-inflammatory effects of indigoid compounds and tryptanthrin found in traditional Kampo medicine herbs (Ban Lan Gen, Da Qing Ye).

Suggested Search Terms: Indigo Ban Lan Gen anti-inflammatory antiviral

Google Scholar Link: Search here

2. Comparative Studies: Indigo and Methylene Blue

Methylene Blue's Neuroprotective Action

Research Focus: Studies examining methylene blue's ability to improve mitochondrial function and its therapeutic potential for neurodegenerative diseases including Alzheimer's and Parkinson's disease.

Suggested Search Terms: Methylene Blue neuroprotection mitochondria

Google Scholar Link: Search here

Indigoids for Inflammatory Bowel Disease

Research Focus: Research on the anti-inflammatory effects and mechanisms of action (including AhR agonist activity) of Indigo components (indirubin, indigo) in treating conditions like ulcerative colitis.

Suggested Search Terms: Indirubin "Ulcerative Colitis" AhR

Google Scholar Link: Search here

3. Mulberry Leaf: Efficacy and Production

Action of DNJ (1-Deoxynojirimycin)

Research Focus: Studies on DNJ's α-glucosidase inhibitory effects found in mulberry leaves, particularly its ability to suppress postprandial blood glucose elevation.

Suggested Search Terms: 1-Deoxynojirimycin DNJ blood glucose

Google Scholar Link: Search here

Mulberry Leaf: Anti-obesity and Lipid Improvement

Research Focus: Animal and human clinical studies investigating the effects of mulberry leaf extract and DNJ on reducing serum triglycerides and suppressing visceral fat accumulation.

Suggested Search Terms: Mulberry leaf anti-obesity triglycerides

Google Scholar Link: Search here

Mulberry Leaf Production Information

Research Focus: Information on major production areas for mulberry leaf tea, regional brands (such as Shimane Sakuracho, Yamanashi Ichinose Kuwa), and official agricultural industry data.

Suggested Search Terms: Mulberry leaf tea production Japan

Google Scholar Link: Search here

Note: These search terms are suggested starting points for literature research. For comprehensive reviews, consider using academic databases such as PubMed, Google Scholar, or Web of Science.