NEW HUMAN CLINICAL TRIAL WITH GLUCORAPHANIN-RICH BROCCOLI SEED EXTRACT SHOWS DOUBLING OF SULFORAPHANE BIOAVAILABILITY

BALTIMORE, MD, UNITED STATES, February 20, 2026 /EINPresswire.com/ -- Sulforaphane, derived from broccoli, is one of the most extensively studied plant bioactives in modern nutrition science. Researchers, including Paul Talalay, MD, and Jed W. Fahey, ScD of Johns Hopkins School of Medicine — whose foundational work established the modern scientific understanding of sulforaphane — were at the forefront of more than 125 human clinical trials and thousands of peer-reviewed publications on this phytochemical. Sulforaphane is widely recognized as one of the most powerful activators of Nrf2-regulated cytoprotective antioxidant and detoxification pathways.

> “Sulforaphane is one of the most powerful phytochemicals identified in modern nutrition science. The clinical study shows that adding exogenous plant myrosinase can double sulforaphane bioavailability.”
>
> *Tony Talalay*

Yet one longstanding challenge has constrained its consistency in human application: sulforaphane must first be formed from its dietary precursor, glucoraphanin, and that conversion varies widely between individuals due to differences in human biology and gut microbiome composition.

A newly published randomized, double-blind human clinical trial strengthens the scientific foundation for understanding individual differences in sulforaphane bioavailability. Researchers from North Carolina State University, the University of Maine, Appalachian State University, and Brassica Protection Products showed that adding a standardized source of active mustard seed–derived myrosinase to a glucoraphanin-rich broccoli seed extract increased bioavailability from 19% to 40% — a doubling of conversion efficiency in humans.

Conversion in the first 8 hours after ingestion was more than threefold higher when myrosinase was included, consistent with small-intestinal absorption rather than reliance on full transit through the colon, which accounted for later (8-24 hour) absorption.

The study also identified significant correlations between sulforaphane formation and specific glucoraphanin-converting bacterial genes and observed higher conversion in participants with greater Bifidobacterium abundance — reinforcing the role of the microbiome in determining individual response.

“Sulforaphane has been one of the most powerful phytochemicals identified in modern nutrition science,” said Tony Talalay, CEO of Brassica Protection Products LLC (BPP), the company founded to translate glucoraphanin and sulforaphane science into the highest-quality standardized ingredients. “This clinical study of conversion of glucoraphanin to sulforaphane with commercial ingredients shows that added exogenous plant myrosinase increases bioavailability for virtually all individuals.”

The glucoraphanin extract used in the study was TrueBroc®, a proprietary broccoli seed extract which is standardized to a minimum 13% glucoraphanin that is widely used in clinical research, along with the addition of BPP’s mustard seed–derived myrosinase.

The study is now published in Scientific Reports, a peer-reviewed journal within the Nature Portfolio:
https://www.nature.com/articles/s41598-026-39389-4

###

Mirran Raphaely
Brassica Protection Products
+1 707-854-5840
email us here
Visit us on social media:
LinkedIn
Instagram

Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.