

GenBio CSO Highlights Groundbreaking Research on Anthocyanins and Their Potential for Global Health and Food Security

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-- GenBio today announced that its Chief Scientific Officer shared new insights into the powerful role of [anthocyanins](#), natural plant metabolites responsible for the vibrant red, pink, purple, and blue colors in fruits, vegetables, and flowers. These [bioactive compounds](#), found in more than 700 naturally occurring forms, are increasingly recognized not only for their aesthetic value in nature but also for their potential to advance agricultural resilience, food technology, and human health.



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Feeding the world will be one of the greatest challenges of the 21st century. It will be impossible without using scientific advancements and biotechnology.”

Mike Pompeo

“Anthocyanins are more than just natural pigments,” said Professor Lindsay Brown, Chief Scientific Officer at GenBio. “Our research suggests they are central to how plants adapt to stress and may play a critical role in supporting human health through their [antioxidant](#), anti-inflammatory, and microbiome-modulating properties.”

Agricultural Impact

Drought and excessive salinity pose significant threats to global food security. Research indicates that anthocyanin

biosynthesis helps protect plants from oxidative damage, UV radiation, and metal stress—factors that limit crop growth. By leveraging biotechnology to manipulate regulatory genes for anthocyanin synthesis, scientists may one day engineer crops that are more resilient and capable of thriving in extreme environments. This could translate to more reliable food sources in the face of climate change.

Food Science and Extraction Innovation

Despite their promise, anthocyanins are chemically unstable. Optimizing extraction remains a major challenge for the food industry. GenBio's CSO noted advances in mild, non-thermal processing methods such as ultrasound-assisted and pressurized liquid extraction, as well as simpler, cost-effective techniques like grape marc extraction with acidified ethanol. These innovations may help pave the way for scalable, sustainable production of anthocyanin-rich ingredients for functional foods and nutraceuticals.

Human Health Potential

Anthocyanins are abundant in berries, plums, grapes, pomegranates, purple corn, and even food industry by-products like grape skins and tropical fruit rinds. While daily intake levels vary widely, research suggests anthocyanins may have beneficial effects on cardiovascular health, cognition, inflammation, bone health, and age-related diseases. Recent studies highlight the role of the gut microbiome in anthocyanin metabolism, pointing to a future where personalized nutrition and microbiome modulation could maximize their therapeutic benefits.

Looking Ahead

GenBio is committed to advancing research into anthocyanins as part of its broader mission to harness natural compounds for human and planetary health. By pursuing innovations in biotechnology, extraction methods, and therapeutic applications, the company envisions a



Professor Lindsay Brown



Anthocyanins are water-soluble pigments found in red, purple, and blue fruits and vegetables

future where anthocyanins contribute to healthier aging, improved disease prevention, and a more sustainable global food system.

Forward-Looking Statements

This press release contains forward-looking statements regarding GenBio's ongoing and future research into anthocyanins. These statements are based on current expectations and projections about future events and are subject to risks, uncertainties, and assumptions. Actual results may differ materially due to factors including, but not limited to, scientific, regulatory, market, and manufacturing challenges. GenBio undertakes no obligation to update any forward-looking statements to reflect future events or circumstances.

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