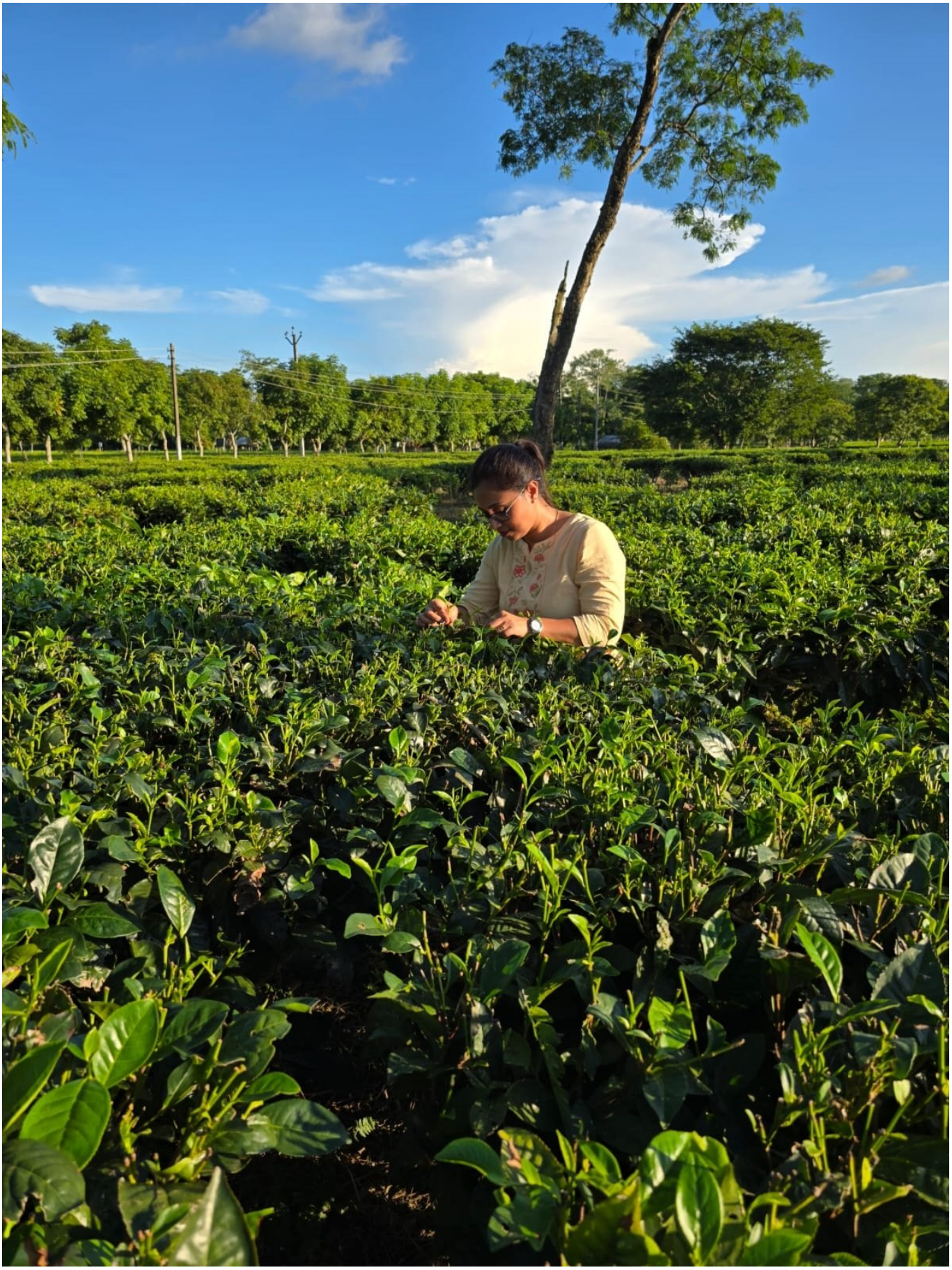
NEWS | RESEARCH

Nagaland University-led Multi-Institutional Study unlocks tea blossoms' potential for wellness products

The findings re-imagine Tea blossoms, transforming overlooked farm byproducts into powerful sources of health supplements, cognitive wellness, antioxidant nutrition, and sustainable rural prosperity

By **Sanjiv Das** | October 14, 2025



Dr. Sagarika Das. Centre for Biotechnology and Bioinformatics, Dibrugarh University, collecting tea blossoms from Assam's tea estates

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The findings re-imagine Tea blossoms, transforming overlooked farm byproducts into powerful sources of health supplements, cognitive wellness, antioxidant nutrition, and sustainable rural prosperity

A Nagaland University-led Multi-Institute Research has unveiled the hidden health potential of tea blossoms that are often discarded as agricultural byproducts. The study shows that these delicate flowers are abundant in potent bioactive compounds, positioning them as a natural source for health supplements and functional beverages.

While tea leaves dominate global research and consumption, blossoms remain largely overlooked. This study is the first systematic effort in Assam, one of the world's largest tea-producing regions, to analyse the biochemical richness of tea blossoms from seven premium cultivars, rather than the traditional focus on the leaves.

Nutraceutical companies could harness Tea blossom extracts to create natural energy boosters, relaxation aids, and skin-health products. Beyond consumer health, the research offers economic opportunities for smallholder tea farmers by opening new revenue streams through blossom collection and processing.

This approach also advances environmental sustainability, as utilising blossoms reduces agricultural waste and contributes to a circular bioeconomy. With global demand rising for plant-based, eco-friendly health products, India has the chance to position itself as a leader in functional foods and supplements derived from tea blossoms.

Dr Sagarika Das, researcher from the Centre for Biotechnology and Bioinformatics at Dibrugarh University, fronted this groundbreaking research, collaborating with renowned tea biochemist Monoranjan Goswami from Tocklai Tea Research Institute in Jorhat, Assam, and Prof Tanmoy Karak from the Department of Soil Science at the School of Agricultural Sciences, Nagaland University.

This transformative study also garnered contributions from prestigious institutions, including the University of California, US, the ICAR-Indian Agricultural Statistics Research Institute in New Delhi, and the Departments of Horticulture and Soil and Water Conservation from Nagaland University and the Department of Chemistry, Dibrugarh University, showcasing an extraordinary alliance in the pursuit of scientific excellence. The findings were published in a reputed, peer-reviewed journal, Food Research Journal, in a paper co-authored by Sagarika Das, Monoranjan Goswami, Ranjit Kumar Paul, and Md Yeasin, Animesh Sarkar, CS Maiti, Saumik Panja, Manoj Dutta, Jiban Saikia and Tanmoy Karak

Prof Jagadish K Patnaik, Vice Chancellor, Nagaland University, said, “This groundbreaking research highlights the potential of innovation originating from our region to effect significant global change. By tapping into the often-overlooked benefits of tea blossoms, our dedicated scientists are pioneering advancements in health and wellness that could revolutionise dietary supplements and natural remedies. This effort not only broadens the scope of scientific inquiry but also fosters opportunities for rural entrepreneurship, empowering local communities to engage in sustainable agricultural practices and create new economic avenues. Nagaland University is particularly proud to collaborate with esteemed research organisations, both within India and internationally, to facilitate this transformative work. Our joint initiatives aim to enhance scientific understanding while simultaneously addressing pressing societal challenges. Together, we are not just advancing the field of science; we are building a more resilient and sustainable future for our communities and beyond.”

The research team plans to advance into clinical trials, explore synergies with other nutraceuticals, and

Dr Sagarika Das, said, “Tea blossoms are known to be abundant in health-enhancing compounds, featuring notably higher concentrations of polyphenols, catechins, terpenoids, and L-theanine, while also having lower caffeine levels compared to traditional tea leaves. The presence of L-theanine, particularly in combination with caffeine, is beneficial for promoting mental clarity, relaxation, and stress reduction. By repurposing tea blossoms, there is potential to minimise agricultural waste, increase rural incomes, and diversify the tea industry through the development of nutraceuticals, herbal teas, and dietary supplements.”

Prof Tanmoy Karak, Department of Soil Science, School of Agricultural Sciences, Nagaland University, added, “The study highlights the potential of tea blossoms as versatile ingredients that can be transformed into a variety of products, including herbal teas, infused oils, dietary supplements, and unique wellness formulations. Rich in antioxidants and essential amino acids, tea blossoms show great promise as effective solutions for stress relief, cognitive enhancement, and the prevention of chronic diseases such as diabetes and cardiovascular issues.”

Read online: https://nuffoodsspectrum.in/news/17/22800/nagaland-university-led-multi-institutional-study-unlocks-tea-blossoms-potential-for-wellness-products.html
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