



Nutrition and Health

PHOTO: University of Guam Western Pacific Tropical Research Center

Understanding root causes of chronic health conditions, more natural ways to treat them

Chronic health concerns, including diabetes, autoimmune disorders and vitamin deficiency, are costly and debilitating to patients and the healthcare system. Researchers across the Land-Grant University System are looking at new and often natural ways to help ease the onset or effects of common, chronic conditions, and promote better health along the way.

Here are a few examples of that work:

- In **Guam**, diabetes mortality rates are higher than in the mainland United States. Food scientists in Guam tested local plants for phytochemicals that inhibit carbohydrate breakdown. Extracts from mango leaves showed antidiabetic activity in five varieties, with 30%-90% enzyme inhibition. These components could be used as dietary supplements to benefit those with diabetes or prevent it. *University of Guam Western Pacific Tropical Research Center; Hatch Multistate. See [full statement](#).*
- Research in **Pennsylvania** suggests that Vitamin D regulates immune response by targeting some cells but not others. When Vitamin D levels are low in healthy people, there is evidence of increased autoimmune diseases such as ulcerative colitis, Crohn's disease and multiple sclerosis. The findings could offer insights for future treatments for people with Vitamin D deficiency. *Pennsylvania Agricultural Experiment Station; Hatch, non-profit grants and contracts. See [full statement](#).*
- Vitiligo is an autoimmune disease that affects the skin, eyesight and hearing in humans and other animals. In **Arkansas**, studies on a vitiligo-prone chicken breed are shedding insight into how the immune system decides between attacking or tolerating melanin-producing cells, which could lead to significant advancements in the prevention and treatment of vitiligo and similar autoimmune disorders. *Arkansas Agricultural Experiment Station; Hatch. See [full statement](#).*

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