

Newest ally in fight against cancer, Alzheimer's? Immune systems of plants

A natural defense that helps plants ward off insect predators, discovered at Washington State University, could lead to better crops and new treatments for cancer and Alzheimer's disease.

As the building blocks of our bodies, proteins play important roles in plant and animal health. Special enzymes called proteases destroy proteins and must be carefully controlled to avoid problems like disease and early aging.

Rustgi explored the relationship between a protease called RD21 and its inhibitors, Serpin1 and WSCP, in plants.

They found that when a seedling emerges from soil, inhibitors shut down and protease levels rise. When an insect tries to eat the plant, the protease attacks its digestive enzymes, causing the insect to seek a different meal.

Better understanding of protease activity could also improve human health, Rustgi said. His findings bring insights into cancer progression and could lead to new therapies for cancer and other diseases.

"These proteins are similar in structure in animals and plants," he said. "Most medicines for cancer and aging diseases are protease inhibitors. Understanding how these proteins interact could lead to artificial inhibitors and ultimately to safer medicines."

[Read the full study [here](#).]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Natural plant defense could help fight cancer, Alzheimer's](#)