Compounds in green tea plant may treat tuberculosis

An antioxidant found in green tea could become key to tackling tuberculosis, a new research has found. Through laboratory investigations, the research team from Nanyang Technological University (NTU), Singapore, discovered how the prominent compound, known as epigallocatechin gallate (EGCG), can inhibit the growth of a tuberculosis-causing bacteria.

EGCG, a compound in green tea, can inhibit the growth of a tuberculosis-causing bacteria. This EGCG does so by binding to an enzyme that provides biological energy for cellular activity. The process results in a drop in the amount of energy the bacteria has for its cellular processes vital for growth and stability, such as cell wall formation.

“Our discovery of the EGCG’s ability to inhibit the growth of tuberculosis will allow us to look at how we can improve the potency of this compound in green tea, and other similar compounds, to develop new drugs to tackle this airborne disease,” said study lead researcher Gerhard Greub, Professor at NTU.

According to the researchers, cells require energy for vital processes such as cell wall formation to take place. They get their energy from an energy storage molecule made by an enzyme called adenosine triphosphate (ATP) synthase. Without energy for essential cellular activity, a cell loses its stability and eventually dies.