

## **Scientists have identified a novel gene of GABA from fermented soybean meal *Kinema***

By Dr. Bilqeesa Bhat

Scientists from Center of Innovative and Applied Bioprocessing, Mohali, Punjab and Institute of Biore-sources and Sustainable Development (IBSD), Manipur have identified a novel gamma-aminobutyrate (GABA) gene. The gene was identified from environmental samples of *Kinema*, a naturally fermented soybean food product found in Sikkim Himalayan region of India.

The team has developed a new method for biosynthesis of GABA from the precursor molecule gluta-mate using a novel GABA gene from the metagenomics study of genetic material recovered from *Kinema*.

The gene product was able to catalyze the conversion of amino acid L-Glutamate to GABA, a high-value biomolecule with neuroprotective features. Besides, GABA is also used as a precursor molecule for synthesis of polymers like Nylon-4.

GABA is known to produces multiple neuroprotective effects, and over the years it has become a popu-lar option for stress and pain management. Therefore, the GABA finds wide application in food and pharmaceutical industries.

The scientists have filed a patent for this methodological invention under Patent File No. 201911030305. The joint research team consisted of Dr. Sudhir P. Singh, Dr. Nitish Sharma, Dr. Amit K. Rai, and Dr. Dinabandhu Sahoo.

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