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A new study has discovered that bee, snake, or scorpion venom could form the basis of a new generation of cancer-fighting drugs.

A team of researchers at the University of Illinois have devised a method for targeting venom proteins specifically on malignant cells while sparing healthy ones. This step reduces or eliminates side effects that the toxins would cause.

Venom from snakes, bees, and scorpions contain proteins and peptides which, when separated from other components and tested individually, can attach themselves to cancer cell membranes. This action could potentially block the growth and spread of the disease.

In a research note, Mr Dipanjan Pan, who led the study, said, "We have safely used venom toxins in tiny nanometer-sized particles to treat breast cancer and melanoma cells in the laboratory. These particles, which are camouflaged from the immune system, take the toxin directly to the cancer cells, sparing normal tissue."

In future, the team plans to try a combination of the synthesised venom and nanotechnology on cancer cells in rats and pigs.

The paper was presented at the American Chemical Society conference.