



Avesthagen granted US patent for its efficient Sunflower transformation and eco-friendly sugar selection method replacing antibiotic marker technology in GM Crops.

Bangalore, 20th June, 2011: Avesthagen Limited has been granted the patent by the US patent office for breakthrough Sunflower transformation and eco-friendly safe selection method that can replace the traditional antibiotic marker technology in GM crops. In the past, antibiotic resistance marker gene(s) have been used in developing GM crops which has raised world-wide opposition to the GM technology in general. Avesthagen's Xylose Isomerase (XI) technology does not use antibiotics in the selection process thus successfully addressing public concerns. This positive selection process is based on the function imparted by the patented technology to metabolize certain carbohydrate compounds during the selection process.

The transformation efficiency of the patented method is approximately 2 to 3 times that of the antibiotic based methods thereby increasing the chances of success of identifying transformed cells. The present patent has been granted towards improvement in the method of generating engineered plantlets with novel genes and can be extended to trait stacking with multiple genes which requires several markers in the selection process.

The patent was also granted for sunflower transformation. This is the first such patent granted for a recalcitrant species. This will unfold a new market outlook for sunflower seed and oil industry. Sunflower is an important oil-seed crop with high potential to increase the production of specific polyunsaturated fatty acids (PUFAs) essential for human health. Certain polyunsaturated fatty acids should be part of human supplementary diet as the human body cannot synthesize them. Avesthagen's patented technology has enhanced sunflower transformation process thus assisting in the process of producing PUFAs.

This patent gives Avesthagen significant freedom to operate in the global Agricultural Biotech Industry. According to Dr. Viloo Morawala Patell the Founder and CMD of Avesthagen, "We constantly aim to produce breakthrough solutions that are advantageous for the farmers and consumers and this patent reinforces our commitment to develop novel biotech crops that are eco-friendly and helpful for human health."

About Avesthagen Limited:

Avesthagen is India's leading integrated systems biology platform company that focuses on achieving convergence of food, pharma and population genetics leading to predictive preventive and personalized healthcare.

Avesthagen partners include multiple top 10 global companies in each of its fields of research. Since its inception Avesthagen has grown into one of India's leading healthcare biotech companies. In addition to its agri-biotechnologies product pipeline it has developed clinically validated botanical bioActives and a strong pipeline of bio-similars.

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