

Pioneering Researcher Plants Seeds Of Biotechnology Success

University of Calgary



For more than two decades, University of Calgary Professor Maurice Moloney, Ph.D., has focused on the molecular biology of plant development. But it was his research on seeds and oilbodies — the protein-covered spheres within seeds that are involved in seed oil storage — that has led to further biotechnological developments, and ultimately, the creation of a successful company.

Moloney discovered a way to genetically engineer oilbodies and oilbody-related proteins, called oleosins, which have a wide range of therapeutic and industrial applications. With support from University Technologies International, the University of Calgary's technology transfer and commercialization arm, Moloney and others formed SemBioSys Genetics Inc. in 1994. Based in Calgary, SemBioSys utilizes Moloney's oilbody-oleosin technology to develop and commercialize various pharmaceutical and non-pharmaceutical products.

“ One of its first products was *DermaSphere®*, an oil-in-water emulsion that can be used in a variety of personal care products, from sunscreens to lotions to eye-care products. SemBioSys

also has developed ImmunoSphere™, a feed additive that encourages disease resistance in shrimp.

The company currently is developing and testing a safflower-based form of insulin that could cut capital costs by up to 70 percent and product costs by more than 40 percent.

With shares trading on the Toronto Stock Exchange, SemBioSys had a market capitalization of more than \$80 million in late 2005. That same year, it was named company of the year by BIOTECanada, Canada's leading biotechnology association.

It is work like Moloney's that gives new (and literal) meaning to the phrase "planting the seeds of success."

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