

Omega-2 oil squalene may soon be produced in biotech tobacco rather than extracted from sharks

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For years, the coveted omega-2 oil squalene has been harvested from deep-sea shark livers because of its numerous health properties and commercial uses. Now, a company called SynShark has developed a more environmentally friendly production method that can ease pressure on shark catches and benefit North Carolina tobacco farmers.

In May, SynShark's production of squalene grown in tobacco plants won the \$10,000 first prize at the third annual North Carolina Ag Biotech Entrepreneurial Showcase.

Your body produces squalene. But the greatest concentrations of squalene are found in sharks – making them a target for companies seeking a delivery agent used in vaccines, as a moisturizer in cosmetics, and as a boost to nutritional supplements.

Jason Ornstein, executive director of SynShark, says 3 million deep-sea sharks are killed each year for the contents of their livers.

SynShark technology, designed by professor Joshua Yuan at Texas A&M University, works with the tobacco plant's natural biology to encourage it to produce higher levels of squalene – and then store the compound rather than use it as an energy source.

Paul Ornstein, SynShark president of operations (and Jason Ornstein's father), says squalene demand provides an unprecedented opportunity for long-suffering North Carolina farmers.

"As a North Carolina resident, I can't think of anything more important to our state than providing the tobacco farmers the opportunity to replant thousands of acres of farmland that has been sitting unused for years due to the reduced demand for traditional tobacco," he said.

"In addition, our project will create jobs for farm workers and yield a much higher per-acre return for farmers – typically \$3,200 per acre for tobacco, projecting to \$12,000 per acre for squalene-producing tobacco."

Read full, original post: [Saving sharks ... with NC tobacco](#)