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Triangle scientist DeSimone wins MIT prize

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Joseph DeSimone, a respected researcher with posts at two Triangle universities, this morning was named the winner of the Massachusetts Institute of Technology's Lemelson Prize.

Considered the "Oscar for Inventors," MIT's Lemelson is one of a handful of premier prizes in science that include the most respected of all, the Nobel Prize. The MIT award pays \$500,000 in cash to each year's recipient.

DeSimone, 44, is the first Triangle scientist to win the Lemelson. He will receive the award Thursday at MIT's Kirsch Auditorium in Boston.

At UNC-Chapel Hill, DeSimone is a chemistry professor who directs a team of 35 students and associates. At N.C. State University, he teaches chemical engineering.

Off campus, he oversees product development as chief scientific officer at Liquidia Technologies, a Durham company he co-founded.

His contributions are in the field of polymers, made-made materials better known as plastics.

In the past five years, most of DeSimone's work has focused on medical devices. That includes a stent that keeps blocked arteries open and then dissolves to prevent scarring, and bacteria-shaped vessels that can slip inside tumor cells to unload poisonous cargo.

"The breadth of his inventions, and his ability to leverage his expertise across all these disciplines is really amazing," said Joshua Schuler, executive director of the Lemelson-MIT program.

DeSimone grew up in suburban Philadelphia, where his interest in chemistry blossomed in part because of a chemistry set his younger sister received as a gift.

"Maybe it was just jealousy in wanting to have something she had that made me move in that direction," DeSimone said in a phone interview.

His interest in "green" chemistry and the search for environmentally friendly ways to make plastics led him to develop a process to reduce pollutants left over from manufacturing, substituting carbon dioxide for an acid that's normally used.

A \$40 million DuPont Co. plant in Fayetteville, N.C., that went online in 2002 uses the technique.

DeSimone also has waded into nanotechnology, creating minuscule engineered particles that scientists hope can help diagnose and treat conditions such as diabetes, multiple sclerosis and cancer.

DeSimone said he plans to use the prize money to support additional scientific ventures.

Prolific inventor Jerome H. Lemelson and his wife, Dorothy, founded the nonprofit Lemelson-MIT



Joseph DeSiimone

Program in 1994.

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