

# Spinoff draws \$9.2M

**Molecular Imprints attracts VC from three Calif. firms, \$2.5M in federal funding**

**Stacey Higginbotham, Austin Business Journal Staff**

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A nanotechnology company has emerged from the University of Texas to secure \$9.2 million in venture capital and generate returns for UT's commercialization program.

Austin-based Molecular Imprints Inc. obtained about three-fourths of a potential \$12 million in first-round funding from three California firms: lead investor Alloy Ventures as well as Draper Fisher Jurvetson and Asset Management Co.

Nanotechnology promises to make a number of products in nearly every industry better, faster, safer and, most importantly, smaller. Nanoscientists study material and processes at the nanometer level, which is 50,000 times smaller than the width of a human hair.

Norman Schumaker, president and CEO of 1-year-old Molecular Imprints, says the money will pay for development of a tool that can be used in semiconductor lithography and for the space where the tool will be built.

Despite not yet having a product built, Molecular Imprints boasts revenue thanks to a \$2.4 million federal contract with the Defense Advanced Research Projects Agency, the research arm of the U.S. Defense Department. It also has received \$100,000 in the first phase of a small business innovative research grant.

The company was founded based on research done at UT by Grant Willson and S.V. Sreenivasan and was spun off into a private company under UT's technology licensing office. Rene Mallett, associate director of the office, says UT has concentrated on licensing its research and spinning off companies in the past two to three years.

Molecular Imprints follows Evacyte Corp., a biotech company, as one of UT's more successful licensing projects in the past few years, Mallett says.

During the past fiscal year, UT earned about \$2 million from licensing fees and already has earned \$2 million this fiscal year, Mallett says. The university's fiscal year begins Sept. 1. She expects UT to spin off three startups this year.

"The good news about Molecular Imprints is they have near-term products and we will see the returns within the next 18 months," Mallett says. "We don't see many returns on things so early. Most of the returns are down the road. ..."

Molecular Imprints' tool would be used to imprint a minute design on a wafer made of substances such as gallium arsenide or indium phosphide. The tool works like a waffle iron, with the design for the wafer etched on a press made of quartz. The wafer is covered with a chemical substance that solidifies when exposed to light.

When the press is lowered, a light shines through the quartz and solidifies the substance into the actual design of the chip. The result is a more finely etched chip at a lower cost, compared with photomasking done by companies such as Round Rock-based DuPont Photomasks Inc.

Semiconductor manufacturers use photomasks to transfer chip designs onto silicon wafers. However, the tool eventually will be used to create nanochannels, which are the small lines etched by the tool, for industries as diverse as recording media and biotechnology.

The potential for the tool and technology to be used in so many industries is the reason Alloy Ventures invested in Molecular Imprints, says Dan Rubin, a partner with the VC firm.

"We like investing in infrastructure deals, and we view this as one of the more interesting infrastructure plays in the nanotech area," Rubin says. "The ability to print very small features -- subnanometer features, even -- will undoubtedly have multiple roles in the nanotech area."

Stephen Knight, director of microelectronic programs for the National Institute of Standards and Technology, says there's a concern the cost of lithography is rising compared with the bigger cost of producing the wafer, so the institute is searching for cheaper lithography technologies.

As lithography becomes more expensive, the chipmaking process becomes more expensive, so technology like molecular imprinting becomes vital in reducing the costs.

Molecular Imprints now employs eight people. Schumaker expects the workforce to reach 30 by year's end. The company is looking for 15,000 square feet of light industrial space to house offices and a small cleanroom, he says.

For now, Molecular Imprints occupies space at the Austin Technology Incubator in Northwest Austin.

Schumaker expects the company to build its first tool before the end of the year; he says undisclosed companies are interested in buying it at a cost of \$3 million and \$7 million each. Companies that might buy the tool include Motorola Inc., Advanced Micro Devices Inc. and IBM Corp.

Molecular Imprints is working with Motorola to design the way to etch the quartz templates, Schumaker says.

*Email STACEY HIGGINBOTHAM at ([shigginbotham@bizjournals.com](mailto:shigginbotham@bizjournals.com)).*

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