

## A Better View Of Cancer Treatment

Emory University



In 2003, the Office of Technology Transfer licensed the patents to Nihon Medipysics — a Japanese joint venture owned by Sumitomo and GE Healthcare — which had provided funding for Goodman’s research for 10 years beginning in 1994. In 2008, GE Healthcare licensed the fluciclovine F-18 imaging compound from Nihon Medipysics. But then GE concentrated its efforts on a different imaging compound — one for Alzheimers’ — and fluciclovine F-18 languished. That frustrated not only Emory researchers but also a few GE employees, including David Gauden.

“GE has a lot of options about where it can invest its money,” says Gauden. “It was clear to some of us that this particular project was not going to be a priority for them,” he says. “But we believed in the product. We could see an unmet need.” When prostate cancer spreads, it often goes to lymph nodes and bone. Fluciclovine F-18 could more accurately detect cancer in those areas, says Gauden, compared to other types of diagnostic scans that had trouble spotting cancer if it wasn’t a large tumor mass.

To help that innovation reach the marketplace, Gauden and several of his colleagues left GE and formed Blue Earth Diagnostics in 2014. The company's founding investor was Syncona, an investment company aligned with the Wellcome Trust and Cancer Research UK.

In 2014, GE licensed fluciclovine F-18 to Blue Earth Diagnostics, which now markets the compound under the name Axumin. "We continue to have a productive collaboration with GE," says Gauden, now CSO at Blue Earth Diagnostics. "They make some of the raw materials for us for product manufacturing."

He notes that the licensing history of the compound involves three continents — with companies in the United States, Japan and UK— and Emory's tech transfer office played a critical role along the way. "It's a fairly complicated licensing chain, and Emory's tech transfer has done a lot of work to keep everyone happy," says Gauden. "We also work very collaboratively with Emory to strengthen the patent portfolio on this product."

Axumin received FDA approval in May 2016 and marketing authorization from the European Commission came one year later. "The FDA gave us an expedited review. ... I think because they could perceive the unmet need," said Gauden.

With U.S. headquarters in Burlington, Mass., and global headquarters in Oxford, Blue Earth Diagnostics now has more than 50 employees and hopes to expand Axumin's use for other cancers. That includes brain cancer — which originally prompted the development of fluciclovine F-18 at Emory — as well as breast cancer, ovarian cancer, and bladder cancer. Those possibilities are being investigated clinically, says Gauden.

“*In the last year, thousands of men and their families, and doctors, have benefited from better information about the location of their prostate cancer recurrence and more informed decision making about treatment.*”

David Gauden

"To have that kind of impact already is great, and we look forward to much more of that in the future," says Gauden. "It's just great to sit here and think, we are able to actually progress a technology that may not have progressed otherwise,"

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