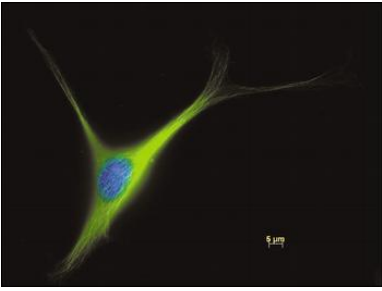


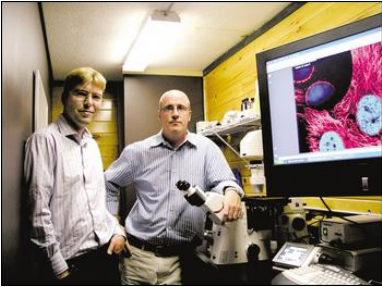
Photos

Published July 18, 2007 10:30 pm - Emerging science photographs new worlds inside a cell.



A microscopic image captured with two lasers and special dye shows individual sections of the fine nerve cell tail, called dendrites.

Photo Courtesy /



Biophysicist Dr. Jorg Bewersdorf (left) of Jackson Laboratories and biologist Dr. Brian Thomas Bennett of Lake Placid Biologicals are shown with a laser scanning microscope used in cancer and neurological research. The Lake Placid company, formed when Biotech left two years ago, explores cutting-edge scientific microscopy methods in basement quarters of a log building on Saranac Avenue. Staff Photo/Kim Smith Dedam /

Lake Placid Biologicals paves the way for breakthrough research

Scientists at Lake Placid Biologicals photograph new worlds inside cells

By **KIM SMITH DEDAM**
Staff Writer

LAKE PLACID "" Entirely new forms of music emerge from basement studios.

And now so is breakthrough science.

Lake Placid Biologicals, a nascent bio-reagent company comprised of nine scientists and a president, just landed a multi-million dollar pharmaceutical contract essentially to chemically paint molecules.

Their colors illuminate neon green and blue as quantum stains on target cellular structures in microscopic photography.

The LP Bio lab, crammed into basement quarters of a log building not far from the depths of Lake Placid, discovered how to do it.

Advancing techniques in spectral scanning, researchers at LP Bios take pictures inside brain cells searching for causes of disease like Parkinson's and Alzheimer's.

They are discovering how broken proteins repair themselves and why those repairs don't happen in genes that cause breast cancer.

And they're taking pictures to prove it.

LP Bio scientist Dr. Brian Thomas Bennett ventures inside cells using a 4-pi, a laser microscope invented by a team of physicists at Max Planck Institute, including colleague Dr. Jorg Bewersdorf, a physicist at Jackson Labs in Maine.

Bennett and Bewersdorf barely fit side by side with equipment in the LP Bio lab room that's about as wide as a ping-pong table.

In its new application, the 4-pi, which Bewersdorf shares via T-line with Lake Placid because there are only two such microscopes on the planet, illuminates a foreign world as strange as distant nebulae.

"Because of Dr. Bennett and his association with Dr. Bewersdorf, this technology has moved incredibly quickly," Dr Kendall Knight, dean of the doctoral candidates at UMass Medical School, told a group of officials celebrating the LP Bio's accomplishment on Tuesday.

Bennett and Bewersdorf outlined their work with a few slides.

They tossed jibes at each other like Frisbees sailing over most of the audience.

A biologist and a physicist might never get a light bulb screwed in right, but they can illuminate and capture images of things shorter than a wavelength of light.

They shot the bumpy tail of a brain cell where energy and chemicals connect somehow creating thought and feeling.

"We talked about how we could influence the industry from Lake Placid," Bennett relayed of early discussions as the company formed a year ago.

The pending contract will make LP Bio the exclusive worldwide supplier of immunofluorescent dyes and kits, "all things that will make microscopy easier for the end user," Bennett said.

The lab will hire likely 10 new scientists in the coming months.

That's how fast the science is breaking.

Officials on hand praised the research and the company.

Assemblywoman Teresa Sayward admitted being astounded by the incredible research.

"This benefits not only the North Country, but also New York state as a whole. I am committing my support to make sure you have the tools you need to grow," she said.

"It gives me pride to note I was minutely involved, and as good government should do, we got out of the way," said Noel Merrihew, chairman of the Essex County Board of Supervisors.

LP Biologicals emerged from the remnants of Upstate Biotech, which closed its pre-eminent cell-science research doors two years ago.

With low-cost loans obtained through the Essex County IDA, the new company opened for business with a vision.

"When Upstate closed, we were all so devastated," said North Elba Supervisor Shirley Seney. "We were losing a strong economic driver, good friends and good neighbors."

This emerging science could be the reason that happened, Seney said.

"When I see what's being done in the basement of a little building; it certainly is one of the best things that's ever happened to the Town of North Elba and Lake Placid. Thank you for the dare, and all the things you've accomplished on a shoestring."

Leaning on a counter inside the lab, Bennett rolled up the cuffs on his pin-striped sleeve revealing a bright flame tattoo.