

TECHNOLOGY

Putting a Face on

By John Marini

THE FLORIDA HIGH-TECH CORRIDOR COUNCIL SHOWCASES THE REGION'S TOP SCIENTISTS AND THE GROUNDBREAKING WORK REVOLUTIONIZING THEIR FIELDS.



When .decimal president and CEO **Richard Sweat** (see "Peak Performer," p. 6) was growing up, his imagination was captivated by the television show "Emergency." That led him to become a paramedic and later he discovered a passion for helping cancer patients while working in radiation technology. Sweat now leads a medical device manufacturing firm in Sanford that produces custom-made, patient-specific radiation therapy devices for cancer patients in the U.S. and Japan.

The newest product for .decimal is an electron conformal therapy device called BolusECT. It is designed for tumors that lie just beneath the skin's surface and targets them while sparing healthy tissue. Through all his efforts to keep pace with changing technologies in his field, he stays true to his motto: "Never forget about the patient."

Similar to Sweat, **Bill Warren** is focused on new solutions to advance the medical field. An engineer by trade, Warren serves as president and CEO of VaxDesign, an emerging biotechnology company taking a new approach to creating drug therapies.

VaxDesign develops surrogate human immune systems for multi-dimensional analysis of blood used to make predictions about how certain populations will respond to a particular drug or vaccine. His quest started as an attempt to construct a minimally invasive surgical tool that would build tissue-engineered constructs inside the body.

➤➤ It's not uncommon for a company, especially one in a high-tech sector, to be known by its products. But without the people at those high-tech companies who are inspired to design and build them, none of those products would ever come into existence. Behind each company is a leader driven by the desire to seek answers to the whys and hows of making things better and more efficient.

Warren has found that his system is able to correctly predict human immune responses when animal models have not. He is looking to help his customers make better vaccines, and make drugs faster and cheaper to produce.

He credits great partnerships with Florida Hospital and Florida's Blood Centers, as well as with the University of Central Florida (UCF), for his biotech success and that of others in the Corridor. Warren says, "There's a really collaborative spirit in Central Florida."

What ties great minds such as these together? Other than a desire to help others through their scientific work, they comprise an elite group of individuals recognized for changing the future of Central Florida through breakthrough discoveries and technological advancements ... they are the "Faces of Technology."

Nominated by groups of academic, economic development and high-tech industry partners, these Faces of Technology were selected by the Florida High-Tech Corridor Council to represent the finest scientific minds of emerging technology clusters in the 23-county corridor region, which spans the service areas of UCF, University of South Florida and University of Florida. More than two dozen have been highlighted in the Florida High-Tech Corridor Council's annual magazine, *florida.HIGH.TECH*, as well as on its website.

Another Orlando-based Faces of Technology innovator, **Dr. Sudipta Seal**, is in search of ways to make big impacts on people and the planet with the smallest of things. As director of the AMPAC (Advanced Materials Processing and Analysis Center) and NanoScience Technology Center at UCF, he and his colleagues are engaged in materials research and education.

The rare earth-oxide nanoparticles they create can be used for a variety of

biomedical applications, including Alzheimer's disease, retinal degeneration, anti-inflammatory therapies and anti-angiogenesis (cancer) treatment. They recently discovered that by treating the surfaces of fly ash, which is a byproduct of power plant smokestacks, they can convert it into a cement substitute and create a concrete block which has excellent strength and is also very lightweight. By doing so, they will greatly reduce CO₂ emissions.

Seal's aim is to tailor the material properties in such a way as to find applications for tomorrow. "Our work with waste materials and cleansing nanoparticles will create a better environment for years to come," he says.

In a previous career as a commercial airline pilot, **Bill Ferree** spent his days several thousand feet closer to the sun than most of us, so it's no surprise that he has an interest in solar power. At WattNext in Eustis, he is looking to leverage that interest into the development of clean energy solutions.

What started as a desire to design and install a solar heating system for his personal residence led him to where he is now. The dual-purpose products from WattNext not only capture the sun's rays, but provide shade for those beneath at the same time in areas such as parking lots, bus stops and personal driveways. He hopes his work will hasten the arrival of electric cars into the mainstream marketplace. "Leaving a place better than you found it is a great life goal," he says.

The stories of these and many other Faces of Technology are available online at www.FacesOfTechnology.com, where you can hear firsthand how they are using technology to create products and advance innovations that are helping make the Florida High-Tech Corridor a breeding ground for technology and creativity. 

