highlights

System in a Package Photoacoustic Module
pages 2

opportunities

Start-up Formed Around UNM Technology

page 5

interns

Intern Interview: Dorian McKenzie

page 7

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In This Issue

President's Corner ..... pg 1
System in a Package Photoacoustic Imaging Module ..... pg 2
Innovative Nano Silver-Silica Composites ..... pg 2
Restoring Images in High Resolution ... pg 3
Paratransgenesis for Controlling Infectious Diseases ..... pg 3
3rd Annual Gap Fund Awardees ..... pg 4
Cerner and STC Bring New Technology to Market ..... pg 4
Start-up MacVision Formed Around UNM Technology ..... pg 5
Issued Patents ..... pg 6
Protecting Your Research Data ..... pg 6
Intern Interview: Dorian McKenzie ..... pg 7
Staff Directory ..... pg 7
Board Directory ..... pg 7
Seminars & Events ..... pg 8
Sell Your Inventions Online ..... pg 8

President's Corner

Lisa Kuttila
President & CEO, STC.UNM

At this time of economic uncertainty for the U.S., innovation is a key element in our recovery. Investment in innovation requires a proprietary advantage and patents are an important way for companies to gain a competitive advantage. There are efforts to reform the U.S. patent system, which are resurfacing in the current congressional session. It is important for us to understand the connection among small business, patents and economic development.

New Mexico has a strong base of small businesses, which are the backbone of our industry in the state. New Mexico had 35,857 small employers (less than 500 employees) in 2005, representing 96.3% of the state's employers and 57.5% of its private sector employment, according to a report from the U.S. Small Business Administration (www.sba.gov/advo/research/profiles/08nm.pdf). Small businesses created 54.3% of the state's net new jobs from 2004 to 2005. The growth in the number of New Mexico small businesses was 5.2% vs. 0.3% for large businesses from 2000 to 2005. Clearly, small business growth is critical to the growth of the New Mexico economy.

Small businesses in the United States also provide much of the economic growth of the U.S. economy. The U.S. had 6 million small employers in 2005, representing 99.7% of the nation's employers and 50.4% of its private-sector employment (www.sba.gov/advo/research/profiles/08us.pdf). Small businesses created 78.9% of the nation's net new jobs from 2004 to 2005. Our nation is very dependent for its future growth on the health of our small businesses.

Patents are critical for small businesses. According to a November 2008 Small Business Administration Report entitled, *An Analysis of Small Business Patents by Industry and Firm Size* (www.sba.gov/advo/research/rs335tot.pdf), "Small businesses develop more patents per employee than larger businesses, with the smallest firms, those with fewer than 25 employees, producing the greatest number of patents per employee. Furthermore, small firm patents tend to be more significant than large firm patents, outperforming them in a number of categories including growth, citation impact, and originality. Finally, small firms tend to specialize in high tech, high growth industries, such as biotechnology, pharmaceuticals, information technology, and semiconductors." A strong patent system is critical to the health of the New Mexico economy, as well as to the growth of the U.S. economy, especially important in these challenging economic times.

Patents are also important to our technology-based small businesses, the source of the highest paying new jobs in our economy. U.S. university research transferred to the marketplace result in the development of over 500 new start-up companies each year. These new companies are highly dependent on strong patents (www.autm.net/about/dsp.pubDetail2.cfm?pid=41). Investors in new start-ups rely on a proprietary position, often based upon patents, in their decisions to finance new firms. New Mexico research institutions have contributed many new companies and jobs to the state's economy. Weakening the patent system would cripple this process for both the state and the nation.

Current efforts to "reform" the U.S. patent system would likely weaken the system, creating fewer patents which are more easily challenged. At the same time, the courts have ruled on a number of patent cases which have addressed many concerns originally raised to support the case for

(continued on page 6)

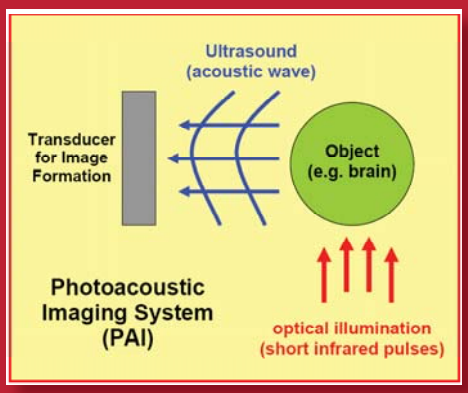
System in a Package Photoacoustic Imaging Module

System in a Package Photoacoustic Imaging Module
Reference number STC-PS-0894

Jingkuang Chen, Ph.D.
Department of Electrical and Computer Engineering
University of New Mexico

Photoacoustic imaging (PAI) is a hybrid biomedical imaging modality based on the photoacoustic effect. It combines the advantages of optical absorption contrast with ultrasonic spatial resolution for deep imaging.

In PAI, short infrared pulses are delivered into biological tissues where they are absorbed and converted into heat. When the pulses are converted into heat, transient thermoelastic expansion takes place and ultrasonic waves are produced. The generated ultrasonic waves are then detected by ultrasonic transducers to construct images of organs or tissues inside the body. Making use of different infrared absorption rates of different tissues, photoacoustic imaging provides better image contrast than pulse-echo ultrasound imaging alone and is, therefore, excellent for imaging blood-containing organs and tissues. It is also exceptionally useful for identifying diseases related to blood, including cancers, early-stage tumors and internal bleeding.



PAI is gaining ground in clinical use and has proven to be useful in providing critical diagnostic information (mainly due to its blood "seeing" capability) not available from traditional medical imaging modalities. Currently, photoacoustic imaging requires that the laser source, the ultrasonic transducer, and the target tissue be manually aligned in order to obtain the maximum ultrasound signal. While useful as a laboratory platform, this setup is not suitable for end users such as medical doctors for general clinical use.

Dr. Jingkuang Chen, Associate Professor in the UNM Department of Electrical and Computer Engineering, has developed a novel photoacoustic imaging module that integrates a broad-area infrared light source and an ultrasonic transducer array into a package for medical imaging. This PAI module can be placed directly on the skin of the patient for imaging, and is able to provide a real-time 3D photoacoustic image of tissues and organs for clinical use. The 3D image acquired is displayed in real-time and can be stored as a data file on a PC for future review. In addition to photoacoustic imaging, this module can also provide pulse-echo ultrasound imaging in parallel with photoacoustic imaging and offers complementary diagnostic information.

Advantages of PAI System In a Package

- Provides pulse-echo ultrasound imaging in parallel with photoacoustic imaging
- Provides real-time 3D photoacoustic images of tissues and organs for clinical use
- Offers diagnostic information complementary to imaging
- No infrared source to ultrasound transducer alignment is needed
- Exceptionally useful for identifying diseases related to blood and soft tissue
- Portable module that will easily integrate into hospitals and physicians' offices
- Non-ionizing method that avoids the safety concerns of X-ray imaging ■

Innovative Nano Silver-Silica Composites

Method for Nano Silver-Silica Composite Anti-Microbial Agent
Reference number STC-PS-0847

C. Jeffrey Brinker, Ph.D. and Xingmao Jiang, Ph.D.
Center for Micro Engineering Materials
University of New Mexico

Increasing bacterial resistance to antibiotics continues to hinder effective medical treatment for many infections and generally calls into question the future of most antibiotics. Researchers are looking for new anti-microbial agents and are finding them among certain metals known for their anti-microbial properties. These properties are ideal for use in materials having a sustained efficacy against bacteria. Metals with the highest anti-microbial properties include silver, copper, zinc, gold, platinum, and palladium.

In the past, silver was used in the food service industry and for home use, for example in goblets and silverware, because it was believed to inhibit diseases. In particular, colloidal silver appears to be useful as a strong, natural antibiotic and is effective against germs, bacteria, parasites, viruses, and fungi. When colloidal silver is near a virus, fungus, bacterium, or any other single-celled pathogen, it acts as a catalyst to disable the oxygen metabolism enzyme (necessary for the growth of pathogens) without incurring harm to humans, animals, plants and other multi-celled living matter. Additionally, the bacterium does not develop resistance to silver colloids.

Dr. C. Jeffrey Brinker, UNM Regents' Professor in the Department of Chemical & Nuclear Engineering and faculty member at the Center for Micro Engineering Materials, and Dr. Xingmao Jiang, Post Doctoral Fellow at the Center, have developed a method for forming a nano silver-silica composite that acts as an anti-microbial agent. This method employs aerosol-assisted, evaporation-induced self-assembly (EISA) for the synthesis of nano-structured silver-silica particles. The silver nanoparticles that are created by this process can be released in a controlled manner from a nontoxic silica matrix for long-term disinfection, or can be dispersed as dry powder in water, plastics, or other medium for the same result.

(continued on page 5)

Restoring Images in High Resolution

In traditional cameras, the photographer must choose the focal plane when capturing an image. Anything out of focus when the picture is taken will appear blurred. Although sharpening and defocus algorithms exist, they have fundamental limits as to what they can recover from out-of-focus regions.

Captured conventional image

Result after restoration

A few years ago, the computer graphics community began working on the concept of hand-held light field cameras, which capture more "information" about the image when the photograph is taken. These cameras allow users to refocus an image after the photograph has been taken, thereby exposing details that are not visible with conventional defocusing approaches. The fundamental problem with some of the designs for light field cameras is that they produce low-resolution images or have a very low dynamic range.

UNM Assistant Professor Pradeep Sen and graduate Research Assistant Viktor Chekh from the Department of Electrical and Computer Engineering have invented a novel camera that solves the problem of low-resolution images by capturing high-resolution light fields so images can be refocused with high resolution. When the picture is taken, it captures both a low-resolution light field version as well as a high-resolution standard image. The researchers have developed an algorithm to combine the information from both low-resolution light fields and high-resolution standard images to synthesize a high-resolution light field. Such a design could fundamentally change the ways cameras are manufactured. ■

Restoration of Images Captured with Combined Conventional and Plenoptic Camera
Reference number STC-PS-0927

Pradeep Sen, Ph.D., et al.
Department of Electrical and Computer Engineering
University of New Mexico

Paratransgenesis for Controlling Infectious Diseases

For over ten years Dr. Ravi Durvasula, Associate Professor at the UNM Department of Internal Medicine, has played a pioneering role in the development of novel approaches to the control of infectious disease transmission. In 1997, Dr. Durvasula was part of a research team at Yale that described the strategy called paratransgenesis. In the paratransgenic technique, infectious pathogens are targeted at the site of transmission by toxic molecules delivered via organisms that reside in proximity to the pathogens. An example of paratransgenesis would involve a disease-transmitting insect in which symbiotic bacteria of the insect are genetically transformed to produce molecules that kill the infectious agent within the insect itself, a "trojan horse" approach, if you will.

Dr. Durvasula is now working to apply this novel approach to control several infectious diseases of commercial aquaculture. Lines of marine cyanobacteria, algae and diatoms—common components of feed for farmed shrimp and fish—can be transformed to produce recombinant antibodies as well as naturally occurring antiviral and antimicrobial proteins that will neutralize infectious pathogens in commercially farmed shrimp. Using these transformed feed organisms in the commercial aquaculture industry will result in passive immunization of the farmed marine animals, particularly immunization to White Spot Syndrome Virus (WSSV) and Vibrios.

World aquaculture production has increased to 51.4 million metric tons (MT) in 2002, with a value of $60 billion. Of this, global shrimp production is greater than 5 million MT and remains the most important trade commodity. Farmed shrimp account for 1.6 million MT, representing a value of nearly $9 billion. Disease outbreaks cause significant losses in aquaculture production throughout the world and greatly reduce export trade for affected nations. The most striking examples are shrimp viral diseases, particularly WSSV, which have devastated many parts of the world, with grave economic consequences and reduction in available food supply. The global annual economic loss due to WSSV is estimated to be $3 billion. Antibiotic use as a prophylactic measure is tightly regulated in almost all countries due to the emergence of antibiotic resistant microbes and offers no benefit against this viral disease. Effective vaccination techniques or antiviral treatments for WSSV are currently unavailable. Given the tremendous global impact of WSSV on shrimp farming and the constraints of high-intensity cultivation, new strategies to combat WSSV are highly essential. ■

Paratransgenic Delivery of Passive Immunity to Animals of Mariculture
Reference number STC-LS-0350

Ravi Durvasula, M.D., et al.
Department of Internal Medicine
University of New Mexico

STC has filed patent applications on these exciting new technologies and is currently examining commercialization options. If you are interested in information about any of these technologies, please contact Andrea Kemp at akemp@stc.unm.edu or 505-272-7886.

3rd Annual Gap Fund Awardees

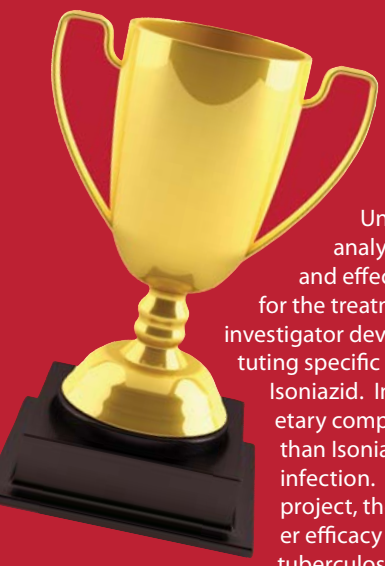
Four UNM research groups were recipients of funding from the third annual round of awards from STC's Gap Fund @ UNM program. The goal of this funding is to advance UNM technology from early-stage research to a proof-of-concept stage of development in order to attract corporate/investment capital that will grow the research into a product ready for commercialization. Each awardee received approximately $25,000 toward development.

"Each awardee received approximately $25,000 toward development."

Development of Monoclonal Antibodies to Hyperglycosylated hCG

Bryce Chackerian, Ph.D., Dept. of Molecular Genetics & Microbiology
Laurence A. Cole, B.M., Ph.D., Depts. of Obstetrics & Gynecology and Biochemistry & Molecular Biology

This project combines two separate technologies to generate a new antibody to hyperglycosylated hCG (hCG-H) for use in pregnancy-related diagnostic testing. Under this proposal the investigators will isolate a specific part of the hCG-H protein and attach it to a virus-like particle that will, when injected into mice, cause a high immune response and the generation of antibodies to hCG-H. Some of the applications include a serum pregnancy test for in-vitro fertilization, a pregnancy failure and preeclampsia screening test, and multiple tumor marker tests for diseases and malignancies.



Preclinical Studies of NM031—A Stable Isotope-Enhanced Tuberculosis Drug

Graham Timmins, Ph.D., College of Pharmacy

Under this proposal, the investigator will analyze the pharmacokinetics, toxicity profile and effectiveness of his new compound, NM031, for the treatment of drug-resistant tuberculosis. The investigator developed the NM031 compound by substituting specific isotopes in the existing drug compound Isoniazid. Initial testing has revealed that this proprietary compound, NM031, is 10 times more effective than Isoniazid in the treatment of tuberculosis infection. Upon completion of the gap-funded project, the goal will be to establish NM031's greater efficacy over Isoniazid in treating drug-resistant tuberculosis and to develop an investigational new drug application for NM031 along with application for FDA fast-track approval for multidrug resistant treatment.

Three-Step Preparation of Pharmaceuticals Using Environmentally Friendly Organocatalytic Asymmetric Processes

Wei Wang, Ph.D., Dept. of Chemistry & Chemical Biology

The purpose of this project is to produce two drugs using a new, faster, greener and less expensive method based on a new chemistry. One of the drugs is used to treat nerve pain and seizures and is a top selling drug worldwide. It is also the lead compound for the design of GABA agonists and antagonists, which are the gateway to developing new drugs for the central nervous system. Currently, research efforts are focused on the synthesis of the drugs and their analogues to find new anticonvulsants and analgesics. This new chemical process is needed because existing processes are time consuming and require the use of rare chemicals, which limit large-scale synthesis. The development of this technology will lead to a cheaper and faster synthesis of new drugs for treatment of a variety of conditions such as epilepsy, Huntington's and Parkinson's disease, pain, and anxiety.

Thin-Film Heat Switches for Energy Generation and Cooling: Pyro-Electric/ElectroCaloric Heat Engines—PEECHE

Kevin J. Malloy, Ph.D., Dept. of Electrical & Computer Engineering
Richard Epstein, Ph.D., Dept. of Physics & Astronomy and Los Alamos National Laboratory

This technology focuses on developing thin films for creating thermal switches to regulate the flow of heat for refrigeration and energy generation. Thin-film, liquid-crystal heat switches are a new approach for refrigeration and electrical power generation from heat flow. These films can be incorporated into compact, efficient heat engines for cooling and energy scavenging applications such as pyroelectric and electrocaloric heat engines, refrigerators and generators. Possible applications include automobile energy generation from coolant heat, automobile air conditioning, residential air conditioning and individual cooling, and could eliminate the need for radiators and generators in vehicles or provide cooling systems in hazmat suits worn in warm environments. The investigators goal is to build and evaluate single-stage heat engines and analyze the economic and practical potentials for multistage and large-scale devices. ■

Cerner and STC Bring New Technology to Market

Research Could Potentially Result in Better Outcomes for People Living with Asthma and Chronic Obstructive Lung Disease

STC.UNM (STC) and Cerner Corporation entered into an exclusive licensing agreement earlier this year based on technology developed by Dr. Hugh Smyth of UNM's College of Pharmacy and Dr. Randy Truman of UNM's School of Engineering. The agreement provides Cerner with an option for exclusive licensing of the technology for clinical and commercial use worldwide. Additionally, Cerner entered into a Sponsored Research Agreement with UNM's Health Sciences Center for further development and evaluation of the dry-powder inhaler (DPI) drug-delivery technology for use in both pulmonary and systemic conditions, such as asthma and chronic obstructive lung disease.

Cerner's depth of research experience and proven ability to connect retrospective information with real-time point of care makes a difference for people living with chronic disease every day. The sponsored research agreement is a clear opportunity for Cerner and UNM to make a difference for people who could benefit from this new type of inhaler technology.

"Based upon its impressive capabilities for dispersal of particles with only small inspiratory effort, we believe this DPI technology can become an important addition to the therapeutic armamentarium, especially for indications that affect children and the elderly," said

(continued on page 6)

Start-up MacVision Corporation Formed Around UNM Macular Degeneration Technology

In 2006 former UNM Provost and Emeritus Physics Professor McAllister Hull came to STC with an innovative lens technology that could potentially help millions of Americans suffering from a progressive eye disease known as macular degeneration. Dr. Hull was determined to create an assistive device that could help his wife, who suffers from age-related macular degeneration (ARMD), use her remaining vision effectively. "When my wife, Mary, was diagnosed with macular degeneration, I became an instant 'expert' on the etiology of the disease."

Through STC's marketing efforts, Professor Hull's technology caught the "eye" of Select University Technologies, Inc. (SUTI). SUTI, a technology commercialization firm that specializes in forming new companies based upon technologies developed at research universities, has spun out start-up company MacVision Corporation to develop Dr. Hull's technology into a product for the marketplace. A patent on the technology has been granted by the U. S. Patent Office with an issue date of January 2009 and MacVision has an exclusive license agreement with STC.

ARMD affects more than 2 million Americans and is the fastest growing form of macular degeneration today. It is the number one cause of severe vision loss and legal blindness in adults over 60 years of age. While ARMD never causes total blindness, it does rob sufferers of their sharp central vision—that clear, straight-ahead sight needed for reading, driving, identifying faces, watching television, performing tasks requiring fine detail and safely navigating physical obstacles such as stairs. The disease is caused by oxidation of, or bleeding in, the macula, the small, circular membrane at the center of the retina responsible for central vision, and leads to the "wet" (neovascular) or "dry" (atrophic) varieties of the disease. The degeneration process affects the rods and cones of the retina near the macula and prevents them from transmitting optic signals to the brain. The region around the macula loses vision, creating cloudiness and dark spots or holes, usually leaving those affected with only their peripheral vision intact. This has a profound effect on the sufferer's independence and ability to perform daily activities.

Since there is at present no effective treatment for the disease, efforts are concentrated on developing corrective devices to reduce symptoms. Current assistive devices tend to use hyper magnification for vision loss. However, MacVision's initial device, a hand-held single lens with special refractive properties (similar in appearance to a standard magnifying glass), actually improves central vision by redirecting incoming light hitting the cornea to the still functioning rods and cones in the unaffected areas of the compromised retina.

Dr. Hull explained his thought process: "Most important was the fact that the peripheral part of the retina is unaffected. The rods and cones left are not as effective as those

The world as seen by a patient with macular degeneration

in the macula, but they're still quite useful. Having taught classical optics several times in my teaching career, I began to think about what modification in eyeglass lenses might be helpful. A cone recessed into the glass surface should turn incipient light aimed for the macula away towards the still receptive peripheral part of the retina. The diverted light would have to be focused, but that would be easily done with a button lens behind the cone. An optics technician in California made the initial test examples for us to try. Mary has used the sample devices (and also an optical reader for larger texts). The MacVision device does make it possible for her to read, a few words at a time, printed or written text."

Over the past several months, MacVision Corporation has been testing an alpha prototype with optometric specialists and low-vision patients in Florida and California. Seventy percent of patients reported an improvement in close reading tests using the prototype. MacVision will use the data to develop products for the commercial sector that are affordable, practical, easy to use and effective.

According to Sam Jones, Director of Business Development at SUTI, MacVision intends to have at least two different formats for the lens—hand-held and eye-glass frames. "The hand-held lens device seems to be the most useful product with our testers right now because it can be moved around to redirect incoming light to all undamaged areas of the retina and because it can be produced at low cost. But since there is such variability in the disease stages of ARMD, some patients could also benefit from eyeglasses." Mr. Jones stated that the company is fundraising right now and is working on the development of commercially available products. "We would really like to encourage interested readers to visit our website at www.macvisionlens.com and join our mailing list (see the contact page) for periodic updates on our activities. We want to stay in contact with patients, caregivers and any individual or organization that has an interest in this technology."

For more information on SUTI, visit their website at www.suti.com. ■

Innovative Nano-Silica Composites

(continued from page 2)

This aerosol method is promising because it is a continuous low-cost method for large-scale production of advanced materials. The process is also fast, flexible, simple, easy to scale up, and produces fewer pollutants. Silver nanocomposites are particularly attractive because they are stable and extremely convenient for transportation, storage, dispersion and application, and provide elongated disinfection time. Applications include weaving the nanocomposites directly into fabrics or dispersing them as pigments into electrical appliances. ■

Issued Patents (July 1 - December 31, 2008)

Fabrication of Anisotropic Super Hydrophobic/Hydrophilic Nanoporous Membranes

U.S. Patent No. 7,393,391 issued July 1, 2008.
Inventors: Gabriel P. Lopez, Plamen B. Atanassov, Dmitri A. Brevnov, Marcos Barela

Fabrication of Optical-Quality Facets on a (001) Orientation Substrate by Selective Epitaxial Growth

U.S. Patent No. 7,432,161 issued October 7, 2008.
Inventors: Seung-Chang Lee, Steven R. J. Brueck

Fabrication and Use of Semipermeable Membranes and Gels for the Control of Electrolysis in a Microfluidic Device

U.S. Patent No. 7,402,229 issued July 22, 2008.
Inventors: Scott Sibbett, Dimiter N. Petsev

Human Kunitz-Type Inhibitor with Enhanced Antifibrinolytic Activity

U.S. Patent No. 7,432,238 issued October 7, 2008.
Inventors: Walter Kisiel, Hitendra S. Chand

Wavy Interface Mixer

U.S. Patent No. 7,416,903 issued August 26, 2008.
Inventors: Larry A. Sklar, Andrea A. Mammoli, Richard A. Truesdell, Peter V. Vorobieff

Quantum Dots Nucleation Layer of Lattice Mismatched Epitaxy

U.S. Patent No. 7,432,175 issued October 7, 2008.
Inventors: Diana Huffaker, Larry R. Dawson, Ganesh Balakrishnan

Use of C-Reactive Protein to Treat Immune Complex-Mediated Renal Disease

U.S. Patent No. 7,425,616 issued September 16, 2008.
Inventors: Terry W. Du Clos, Carolyn Mold

Electrokinetic Molecular Separation in Nanoscale Fluidic Channels

U.S. Patent No. 7,465,381 issued December 16, 2008.
Inventors: Gabriel P. Lopez, Steven R. J. Brueck, Linnea K. Ista, Anthony L. Garcia, Dimiter N. Petsev, Paul Bisong, Michael J. O'Brien

Distance of Flight Spectrometer for MS and Simultaneous Scanless MS/MS

U.S. Patent No. 7,429,728 issued September 30, 2008. Inventor: Christie G. Enke

Protecting Your Research Data: New Brochure Available Online

The strength of any researcher's intellectual property depends upon how well the data is documented. Lab notebooks in particular should be thorough, complete and precise, and should be documented using specific procedures in order to protect future technology developed from the research from potential legal challenges.

STC's newest brochure, Guidelines for Keeping Records in Laboratory Notebooks, is now available online at http://www.stc.unm.edu/inventors/downloads.php. Written by Ann M. Mueting, Ph.D., J.D., senior patent attorney at Mueting Raasch & Gebhardt, P.A., the Guidelines offer a step-by-step outline on organizing laboratory notebooks—covering everything from how much detail to include to how entries should be recorded, signed, dated and witnessed.

We are very fortunate to have Ms. Mueting share her comprehensive lab notebook guidelines with STC and UNM inventors. Mueting Raasch & Gebhardt, P.A., is an IP law firm with expertise in patent preparation and prosecution both nationally and internationally. ■

Cerner and STC Brings New Technology to Market

(continued from page 4)

Douglas McNair, M.D., Ph.D., Cerner Senior Vice President for Clinical Research. "We believe UNMHSC's technology can contribute significantly in addressing higher morbidity populations and indications than presently available inhaler devices. Our enthusiasm for this opportunity is based in part on our data mining of de-identified and confidentiality-protected clinical data which revealed relatively large gaps in existing systemic therapeutics and incomplete coverage by pulmonary delivery modalities that exist today."

"We are extremely pleased to be working with Cerner to advance the state-of-the-art in drug-delivery by the pulmonary route," said Dr. Hugh Smyth. "Bench-testing and initial human studies of our aeroelastic dispersion technology have shown promise, and suggest that it is capable of producing consistent deposition in the deep lung. The comparatively low pressure gradient required should enable this device to address various important unmet needs, not just in ambulatory patients with chronic conditions but in certain in-patient acute-care indications as well."

Lisa Kuuttila, STC.UNM President and CEO, said, "Cerner's readiness to partner with the University validates both the enablement of our DPI drug-delivery technology platform and their leadership as an informatics-based life sciences development company." Cerner is currently one of the only health information technology companies working to develop both drug and healthcare device solutions for market. ■

Letter from the President

(continued from page 1)

patent reform.

I encourage you to become aware of this important issue and make your thoughts known to others. Please check the STC website where you can electronically sign a letter indicating your support for keeping the U.S. patent system strong.

Lisa Kuuttila
President & CEO
kuuttila@stc.unm.edu
505-272-7905

Intern Interview:

Dorian McKenzie

LoboVenture Lab Intern

STC is fortunate to have many talented and hard-working student interns, a description that applies particularly well to Dorian McKenzie. Dorian joined STC as an intern in the Lobo VentureLab in January 2008. A native New Mexican, Dorian grew up in Bosque Farms and is a graduate of St. Pius X High School. A dedicated soccer player, Dorian has devoted many years (and many injuries) to the sport!

Dorian is a senior business major at UNM's Anderson School of Management and is set to receive a BBA in Entrepreneurial Studies in May, 2009. With both parents alumni of UNM and the opportunity to stay close to home, UNM was a desirable choice for Dorian. Scholarships made it an even easier choice. Dorian is the recipient of two military scholarships (thanks Dad!), a bridge scholarship, a scholarship from the New Mexico Educators Federal Credit Union and the state of New Mexico lottery scholarship. Since she has a real interest in starting her own company some day, she likes Anderson's emphasis on team work and the curriculum orientation towards projects, such as having students work as consultants for small businesses. "I've always wanted to work for myself in order to have more control over the whole process of running a business, and the entrepreneurial studies program allows me to learn about the 'best practice' principles of successful companies."

Dorian came to STC looking for a work experience that would move her forward professionally and allow her to learn skills that dovetail with her educational experiences at Anderson. "I like the variety of my job responsibilities at STC and the opportunity to switch back and forth between different projects." Dorian started out doing market analysis for STC technologies and has progressed to preparing business plans for STC start-ups and learning how to write non-confidentiality summaries (NCS). "I really enjoy market analysis because I like promoting innovation. It is very exciting to see the outcome of the marketing work—company interest in our technologies. I am also enjoying learning how to write NCS's because they allow me to understand STC technologies on a deeper level." Dorian recently worked on a marketing campaign that led to company interest in an STC technology and a possible licensing opportunity.

In terms of her education at UNM and future career plans, for Dorian, the most valuable aspect of working at STC is that "it functions as a bridge between school and the professional world. You're pulling resources from everyone you work with because there's such a diversity of backgrounds and this enables you to do research for real understanding rather than just fact gathering." She also likes the professional but friendly atmosphere at STC and the fact that her work experience here will be a valuable recommendation for future employment.

"[STC] functions as a bridge between school and the professional world."

So, what does the future hold after graduation? Right now, Dorian is looking at the MBA program at Anderson as a possible next step. After that, she hopes to find a position with a smaller company in the healthcare industry. Of course, the dream of starting her own company is still a future goal. Her experiences as an athlete and her research on sports injuries have stimulated her interest in developing prevention programs which could, for example, be marketed to school athletic programs. We're confident that she is definitely on the road to success! ■

About STC.UNM & the *Portal al Mercado*

STC.UNM strives to support the University of New Mexico and its partners as the source for innovation management and commercial development. Additionally, STC.UNM desires to play a vital role in New Mexico economic development and to be an innovator in commercialization worldwide.

Portal al Mercado is a publication of STC.UNM, produced in-house, and is published bi-annually, coinciding with the beginning of the fall and spring semesters, for the University's faculty, staff, and students and New Mexico's business community.

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To learn more about STC.UNM and our activities, please visit us on the web at www.stc.unm.edu.

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