

SAND2012-3349P

# INNOVATION CELEBRATION

MAY 1, 2012

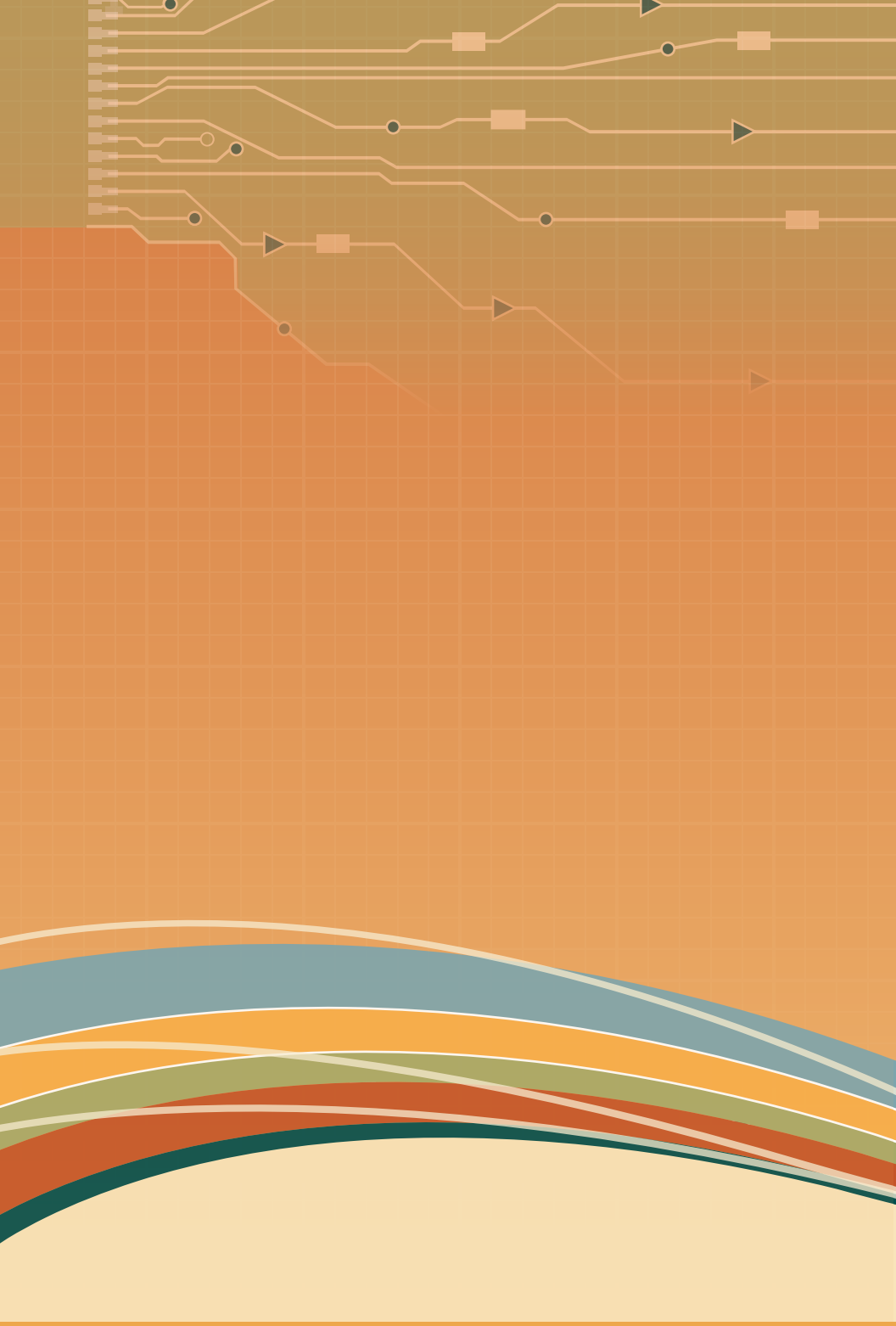


**NMSBA**

Los Alamos National Laboratory  
Sandia National Laboratories

*Solving New Mexico's Small Business Challenges*

**NEW MEXICO SMALL BUSINESS ASSISTANCE (NMSBA) PROGRAM**



# INNOVATION C E L E B R A T I O N

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## PROGRAM AGENDA

**11:30 am**

Networking

**11:45 am**

Welcome and Introductions

**12:00 pm**

Keynote Address

Honorable Ben Ray Luján

U.S. House of Representatives

Special Tribute

Honorable Ben Luján

Speaker of the House

N.M. House of Representatives

**12:30 pm**

Lunch

**1:00 pm**

Advisory Council Recognition

Innovation Awards Presentation

Closing Remarks



# CELEBRATING SUCCESS

***The New Mexico Small Business Assistance (NMSBA)***

***Program assists for-profit small businesses in  
New Mexico to access cutting-edge technologies,  
solve technical challenges, and gain knowledge  
from laboratory experts at Los Alamos National  
Laboratory and Sandia National Laboratories.***

# RESULTS

**1,876**

**BUSINESSES ASSISTED**

**2,317**

**JOBS CREATED/RETAINED**

**\$29.8M**

**TECHNICAL ASSISTANCE  
PROVIDED BY LABS**

**ASSISTED BUSINESSES IN ALL**

**33**

**COUNTIES IN NEW MEXICO**

# ALBUQUERQUE DELICATE DENTISTRY


*“As a result of working with NMSBA, Albuquerque Delicate Dentistry now makes custom-fit mouthguards that are lightweight, strong, shock absorptive, and even customizable with color and design.”*

Delano Romero, Martial Artist

Native New Mexican martial artist Delano Romero discovered the deficiencies of standard over-the-counter mouthguards after fracturing his front teeth in a Brazilian Jiu-Jitsu sparring match. This unfortunate accident was Romero's inspiration for starting a business to develop a superior mouthguard, which he achieved with assistance from NMSBA.

Most mouthguards are bulky, uncomfortable, and inhibit comfortable breathing. Consequently, many martial artists and other athletes do not wear them. With the support of his wife, Dr. Vesna Delic, DDS, Romero began to research how custom mouthguards could be better and more widely used. In his initial investigation, he

found few industry standards for mouthguards and hypothesized that thicker would be stronger and more shock absorptive.

Romero came to NMSBA with two initial questions: What is the best material for shock absorption, and, ideally, how thick should a mouthguard be? James McElhanon, an organic chemist at Sandia National Laboratories, tested and analyzed a variety of materials for potential use. McElhanon helped Romero identify both the best material and its ideal thickness. Someday soon, Romero hopes to expand his product line into commercially available, over-the-counter mouthguards and other protective gear. 





# BROWN RANCH PROPERTIES



*“Our landowners’ association did not have the capability or resources to create a viable economic development strategy on our own. With NMSBA’s help, we can now find the sweet spot of sustainability in wind energy development negotiations.”*


Damon Brown, Owner



On his ranch in rural northeastern New Mexico, Damon Brown had long assumed that wind energy could provide financial sustainability for ranchers. The economics of this resource, however, are largely unknown. To determine how wind energy could benefit his and other ranches in Union County, Brown sought assistance from NMSBA, which linked him to the University of New Mexico Anderson School of Management.

The Anderson School team synthesized a broad body of information to assemble a wind energy business analysis. This included background data on wind energy, equipment and setup costs, regulatory issues, expected returns, and typical points of negotiation

between landowners and wind developers. The team then combined the business analysis with an investigation of local and regional wind projects and revenue ranges. The result was a tailored discussion of factors Brown Ranch should consider as it pursues wind development. The analysis also addressed the unique attributes and advantages Brown Ranch has in order to create wind developer interest and enhance its negotiating leverage.

With this analysis, Brown can now consider wind development proposals and assess their financial potential. Additionally, the information can be used to benefit the entire area. 

## HERBS, ETC.

*"I feel confident in the new scientifically based standard that NMSBA helped me establish. In addition to making my products better and safer, I have experienced a positive impact on waste control, production, and cost."*

Daniel Gagnon, Owner

From research and development to processing and retail sales, Herbs, Etc. owner Daniel Gagnon is involved in every facet of his Santa Fe-based company. This commitment led Gagnon to develop high antimicrobial standards for his products.

Traditionally, Gagnon eliminated unwanted microbes by processing his herbs with water and alcohol. But in 2000, he developed an alcohol-free product using olive oil and soft gel encapsulation. Gagnon established microbial levels for the product by sending samples to testing laboratories. When elevated levels or spikes were reported, he cleaned all the equipment and threw away entire batches of

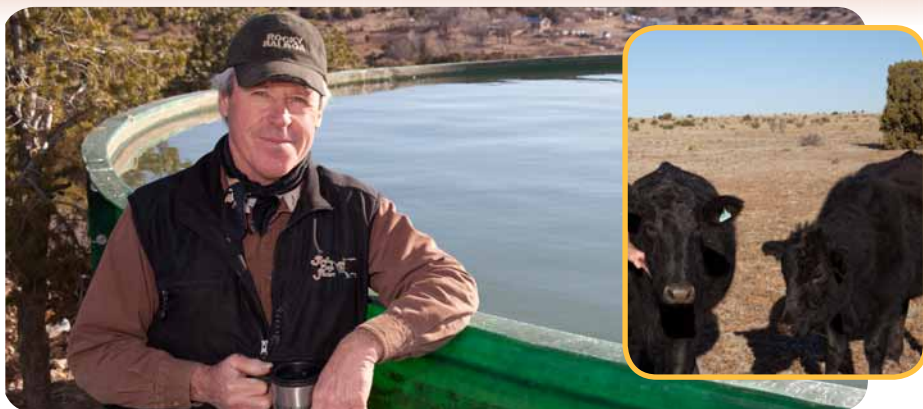
herbs. After several spikes and product losses, Gagnon sought assistance from NMSBA to resolve this ongoing issue.

John Dunbar, a microbiologist from Los Alamos National Laboratory, analyzed Gagnon's test standards and found they were conservative. In fact, the levels of microbes in Herbs, Etc. products were considerably less than those found naturally in a wide variety of herbs, spices, grains, and other foods, and were well below FDA food standards. Spikes of common benign soil bacteria occasionally occurred because many extracts were made using roots. Finally, Dunbar advised Gagnon on an acceptable standard for microbe measurement and monitoring. 📊





# IMPROVING LIVESTOCK HEALTH



*“We hope to see results with this year’s calf crop . Removing water contaminants should increase the calf birth and survival rate, improve cattle life expectancy by 20%, and make us more profitable.”*

Kenneth McKenzie, Rancher

The health of livestock in eastern New Mexico, specifically Guadalupe and San Miguel counties, has been impacted by water quality from deep ground water wells that serve as the area’s primary water supply. Health issues include shorter life expectancies and lower reproduction rates among cattle. In one calving season, an area rancher lost more than 20 animal units as the result of poor water quality from a specific well. The rancher requested that NMSBA help identify suspected water quality issues and determine if a correlation existed with impaired livestock health.

The water quality analysis conducted by Michael Schuhen and Brian Dwyer of Sandia National Laboratories uncovered an endemic bacterium that releases sulfur into the water. To solve the

sulfur problem, Schuhen and Dwyer engaged leveraged project participants with expertise in water quality and improvement. Al Bierle of Western Environmental Management Group conducted a feasibility study on low pressure reverse osmosis (RO) and provided pertinent cost data from his experience with dairy cows. Jay Glasscott of Arrakis provided expertise on membrane selection for the RO system. To power RO in remote locations, Joe Ortiz of Sustainable Resources evaluated the use of solar pumping systems using a blanket solar panel.

The team continues to test additional solutions to improve water quality and livestock health. Al Bierle expects increased sales of his RO system as the word spreads about the Guadalupe County success. 🚧

# 2011 COMPANIES SERVED

- › 310 Solar, Inc.
- › Access Technology, Inc.
- › ACG Services
- › Acoustic Biosystems
- › Adams Produce, Inc.
- › Advanced Composite Structures, LLC (ACS)
- › Advanced Wireless Communications, LLC
- › AEgis Technologies Group, Inc.
- › Aerolight, LLC
- › AeroParts Manufacturing & Repair, Inc.
- › Affordable Solar Group, LLC
- › AgVentures, LLC
- › Air Pollution Product Systems (APPS) USA, Inc.
- › Akamai Physics, Inc.
- › Alameda Tool Engineering Corporation (ALTEC)
- › Albuquerque Delicate Dentistry
- › Alliance Building, Inc.
- › Alpha Bioscience Company, L.P.
- › American Stone, LLC
- › Amicable Inventions, LLC
- › Analytical Solutions, Inc.
- › Angel Fire Resort Operations, LLC
- › Angstrom Thin Film Technologies, LLC
- › Antelope Ridge Wind Farm, LLC
- › Aqua Membranes, LLC
- › Armed Response Team, Inc.
- › Armored Construction
- › Aromaland
- › Arrakis Corporation
- › Array Technologies, Inc.
- › Asgard Enterprises, LLC
- › Ashcraft Consulting, Inc.
- › Aspen Avionics
- › Automation-X
- › AWT, LLC
- › Aztec Machine & Repair, Inc.
- › Barson Corporation
- › BASIC Dental, Inc.
- › Basilisk, LLC
- › BC Water Solutions, LLC
- › Beard Livestock aka Rita Beard
- › Bell Group, The
- › BES, Inc.
- › Bio-Detector, LLC
- › Biofuels & Energy, LLC
- › Biosphere Environmental Sciences & Technologies, LLC (B.E.S.T.)
- › Black Mesa Coffee Company, Inc.
- › Bladewerx, LLC
- › Bluejay, Inc.
- › BML Services, LLC
- › BMT USA, LLC
- › Bogue Machine Company
- › Brockman Ranches, Inc.
- › Brown Ranch Properties, LLC
- › Cabinets Southwest, Inc.
- › Calculex, Inc.
- › Canon Forestry, LLC
- › Carlsbad Current - Argus
- › Carriaga Machine
- › CCS Computer Services, Inc.
- › Center for Orthopaedic and Sports Performance Research, Inc.
- › Century Sign Builders
- › Cetane Energy, LLC
- › CH4NET, Inc.
- › Chenault Consulting, Inc.
- › Chili River, Inc.
- › Cimarronica Historic Ranch Retreat
- › Cinnafil, Inc.
- › CIP, Inc.
- › Clean Can Technology, Inc.
- › Cold Thumb Agriculture
- › Commercial Door & Hardware, Inc.
- › Compresco Partners, L.P.
- › Constructors, Inc.
- › Continental Machining Company
- › Corazon Family Health PC
- › Cranes Materials & Handling
- › Creative Consultants, LLC
- › Cuba Mesa Recyclers
- › Custom Farming
- › CVI Melles Griot
- › DaiiriConcepts
- › Daniel Baeza Farms
- › Danlin Products, Inc.
- › DB Technologies, Inc.
- › Decano, Inc.
- › Decysive Systems
- › Desert Paper & Envelope Company, Inc.
- › DiGregory Brothers, Inc.
- › Direct Power & Water Corporation
- › Dooglamoo Studios, LLC
- › Dr. Carr's Office
- › Durham & Associates
- › Dynamic Heating & Cooling, LLC
- › Eaton Farms
- › Ecofec.com, LLC
- › Edometrics
- › EECS dba Gator Hydro-Incineration
- › El Bigote Cattle Company, LLC
- › El Dorado Land Corporation
- › El Milagro Herbs
- › Eldorado Biofuels, LLC
- › Electro Science Technologies, LLC
- › Emerald Earth
- › Empirical Path, LLC
- › EMvolution
- › Energy K. Systems
- › Energy Matter Conversion Corporation (EMC2)
- › EnviroLogic, Inc.
- › Environmental Building Sciences, Inc.
- › Excel Manufacturing
- › ExerPlay, Inc.
- › Farming Services Company of New Mexico dba FarmKo
- › Fatman's Beef Jerky
- › Fault Tolerant Technology
- › Ffhoenix Cuivre, LLC
- › Focus, LLC
- › FXI - Foamex Innovations
- › GED, LLC
- › GeoScience Technologies
- › Globosocks, LLC
- › Glorieta Geoscience, Inc.
- › Good Water Company
- › Greene Ranch, LLC
- › Green-Horizon
- › GreenVolt Systems, LLC
- › Greffen Systems, Inc.
- › Growstone
- › Hall Environmental Analysis Laboratory
- › Hall Machine & Welding Company, Inc.
- › Haulrite of Four Corners, Inc.
- › Henry Production, Inc.
- › Herbert's Welding
- › Herbs, Etc., Inc.
- › HEYCO Energy Group, Inc.
- › Hodi'shooH Specialty Cleaning Services, LLC
- › Horney Land and Cattle, LLC
- › Hutcherson Family Ranch, L.P.
- › HydraTech of New Mexico
- › Hydro Resources, Inc. aka HRI Energy
- › HydroResolutions, LLC
- › Hydrosience Associates, Inc.
- › HyPwr, LLC
- › ICE-LOC
- › Ideum, Inc.
- › Illuminated Electric, LLC
- › Imaginative Technologies
- › Immersives, The
- › InLight Solutions, Inc.
- › Inscription Rock Trading & Coffee Company
- › Inspyrd Products Corporation
- › Integrated Machining Company
- › Intermodal International & Associates, LLC
- › International Cargo Airport Solutions, LLC
- › Into the OM, LLC
- › ISI Technology
- › ItsDiscreet, Inc.
- › J. S. Ward & Son, Inc.
- › Jack's Plastic and Welding
- › Jaguar Precision Machine Corporation

- ▶ Johnny Reid Farms
- ▶ Jumping Bean Party Rentals
- ▶ dba Concrete Impressions USA
- ▶ Jurva Farms
- ▶ JX Cattle Company, LLC
- ▶ Kana Clothes, LLC
- ▶ KD Consulting
- ▶ Kevin Hertel, DVM
- ▶ KEWA Resources, Ltd
- ▶ King Sun Solar
- ▶ Lack Farms
- ▶ Lau-Nahmias, LLC
- ▶ Lava Living, LLC
- ▶ L-Bar Resources, LLC
- ▶ Lifeline Building Sciences, LLC
- ▶ Linac Systems, LLC
- ▶ Lincoln County Industries
- ▶ Litehouse International, Inc.
- ▶ Looking New NM
- ▶ Lotus Leaf Coatings, Inc.
- ▶ Lucky Corridor, LLC
- ▶ Lumenscapes
- ▶ MacAleese Companies, Inc., The
- ▶ dba Safe Zone Systems
- ▶ Machining Solutions, LLC
- ▶ MAK Innovations, Inc.
- ▶ Manhattan Isotope Technology
- ▶ Marla Bell, LLC
- ▶ Matt Channon Consulting
- ▶ Max Vasquez Farms
- ▶ McFarland Instrumentation
- ▶ Services
- ▶ McKenzie Land & Livestock
- ▶ Company
- ▶ Mesa Tech International, Inc.
- ▶ Metallicum, Inc.
- ▶ Mich Casa Co.
- ▶ Milagro Ranch Resources
- ▶ Mineral Exploration Location
- ▶ Services
- ▶ Mirasol Solar Energy Systems
- ▶ Mocozev, Inc. dba Carpet One
- ▶ Floor and Home
- ▶ Moffett Productions
- ▶ Monarch Litho, Inc.
- ▶ Mountain Hound, LLC
- ▶ MPS, Inc. dba Formulab
- ▶ Musicode Innovations
- ▶ MVD Express
- ▶ National Water Services, Inc.
- ▶ Navajo Spirit Southwestern Wear
- ▶ Navajo Tractor & Sales, Inc.
- ▶ Navitus Group, LLC
- ▶ Needbase, Inc.
- ▶ New Mexico Texas Coaches
- ▶ Newberry & Associates, Ltd
- ▶ Nickel Brand Software, Inc.
- ▶ Noaz Sourcing Ltd, Company
- ▶ Not Limited, LLC
- ▶ Oasis Biofuels
- ▶ OGB Architectural Millwork, Inc.
- ▶ Ogden Farms
- ▶ Optomec, Inc.
- ▶ Osuna Development
- ▶ Otra Vuelta Tire Recycling
- ▶ Pardue Limited Company
- ▶ Paverde, LLC
- ▶ Perma Works
- ▶ Perry Farms
- ▶ PESCO, Inc.
- ▶ Pica Services, LLC
- ▶ Planet Forward, LLC
- ▶ Pocagua Consulting
- ▶ Pointy Triangle, LLC
- ▶ Porter Farms, LLC
- ▶ Precision Grinding, Inc.
- ▶ Private Label Select Ltd
- ▶ Company
- ▶ Pro Serve Feeds, Inc.
- ▶ Progressive Dairy Health
- ▶ Services
- ▶ Providence Technologies, Inc.
- ▶ Pueblo Ancient Way, The
- ▶ Pueblo of Zia
- ▶ PureColor, Inc.
- ▶ R & T Holdings, LLC
- ▶ Radiation Detection Solutions,
- ▶ LLC
- ▶ Rael's General Construction &
- ▶ Cabinet Shop, Inc.
- ▶ Ramblin Wood, Inc.
- ▶ Reciprocal Technologies, LLC
- ▶ Restoration Solutions, LLC
- ▶ Richard Martin Geophysical
- ▶ Consulting
- ▶ Richard N. Arnold Consulting
- ▶ Rio Grande Neurosciences
- ▶ Rio Magdalena Investment
- ▶ Corporation
- ▶ River Brink, LLC, The
- ▶ Roberson Construction
- ▶ Company, Inc.
- ▶ ROB-O-CO, Inc.
- ▶ Rocky Mountain Enterprises, Inc.
- ▶ Ruidoso News
- ▶ Russell Heimann Ranch
- ▶ S. Silber & Associates
- ▶ Sacred Power Corporation
- ▶ Sacred Power Motorsports
- ▶ Samitaur Medical
- ▶ Technologies, LLC
- ▶ San Cristobal Development
- ▶ Santa Fe by Design Water
- ▶ Treatment
- ▶ Santa Fe Medical Group, LLC
- ▶ SAVSU Technologies
- ▶ SBA Materials, Inc.
- ▶ Sci Tac, LLC
- ▶ Security Designs, Inc. of
- ▶ New Mexico
- ▶ Seirad, Inc.
- ▶ Select Milk Producers
- ▶ Senior Scientific, LLC
- ▶ Shouman Associates
- ▶ Engineering
- ▶ Sigma Labs dba B6 Sigma, Inc.
- ▶ SignPlex, LLC
- ▶ Simons Systems
- ▶ Simons Systems, LLC
- ▶ Singleton Ranches
- ▶ Sisneros Brothers
- ▶ Manufacturing
- ▶ Skorpios Technologies, Inc.
- ▶ SmilesIncluded, Inc.
- ▶ Soil Remediation Systems, LLC
- ▶ Soil Secrets, LLC
- ▶ SoilCo, LLC
- ▶ Soiltutions, Inc.
- ▶ Southwest Cheese Company, LLC
- ▶ Southwest Wines
- ▶ Southwest Wines and
- ▶ Tasting Room
- ▶ Speed of Light
- ▶ Squilptures, Inc. dba Art Retreat
- ▶ Workshops
- ▶ Stainless Motors, Inc.
- ▶ Standard Machine Company
- ▶ STAR Cryoelectronics, LLC
- ▶ STD Test Card, Inc.
- ▶ Stewart Brothers Drilling
- ▶ Company
- ▶ Sun King Solar, LLC
- ▶ Sun Valley Energy, Inc.
- ▶ Sundancer Creations, LLC
- ▶ Sunland, Inc.
- ▶ Sunspot Solar Energy Systems, LLC
- ▶ Sustainable Resources, Inc.
- ▶ Sustainable Technology
- ▶ Systems, Inc.
- ▶ Synergy Operating, LLC
- ▶ Taycar Enterprises, Inc.
- ▶ TEAM Technologies, Inc.
- ▶ TerranearPMC
- ▶ TH Chem, Inc.
- ▶ ThermoSun, Inc.
- ▶ Thompson Cattle Company
- ▶ Thrust Energy Corporation
- ▶ Tim Aydelott Productions
- ▶ TJZ Farms, LLC
- ▶ TK Services, Inc.
- ▶ Transcore AMTECH Technology
- ▶ Center
- ▶ Transmission & Distribution
- ▶ Services, LLC (T & D Services)
- ▶ TransMix Safe Lock
- ▶ TruTouch Technologies, Inc.
- ▶ U. S. Wood
- ▶ Union Development
- ▶ Corporation
- ▶ Unirac, Inc.
- ▶ Valencia Flour Mill LTD
- ▶ Valverde Energy, Inc.
- ▶ Venture Energy Solutions
- ▶ Veralight, Inc.
- ▶ Viola Productions
- ▶ Vista Therapeutics, Inc.
- ▶ Vitality Works
- ▶ Vitre International, LLC
- ▶ VM Technology, Inc.
- ▶ Walker Brangus
- ▶ Wall Colmonoy
- ▶ Wallace Williams, LLC
- ▶ Walterscheid Heifers, Inc.
- ▶ Warshawer, Steve
- ▶ Water Lady, Inc.
- ▶ Watermatters, LLC
- ▶ Western Environmental
- ▶ Management Group
- ▶ Wines of the San Juan
- ▶ Xurex, Inc.
- ▶ Y Bar Ranch, LLC
- ▶ Y L Bar Ranch, LLC
- ▶ Yates Energy Corporation
- ▶ ZBOX, LLC
- ▶ Z-Coil Footwear aka Z-Tech
- ▶ Footwear
- ▶ Zygote Pro-Creations, Inc.

# MUSICODE INNOVATIONS

*“Thanks to the technical assistance from NMSBA, I will be market-ready once the refinements are made.”*

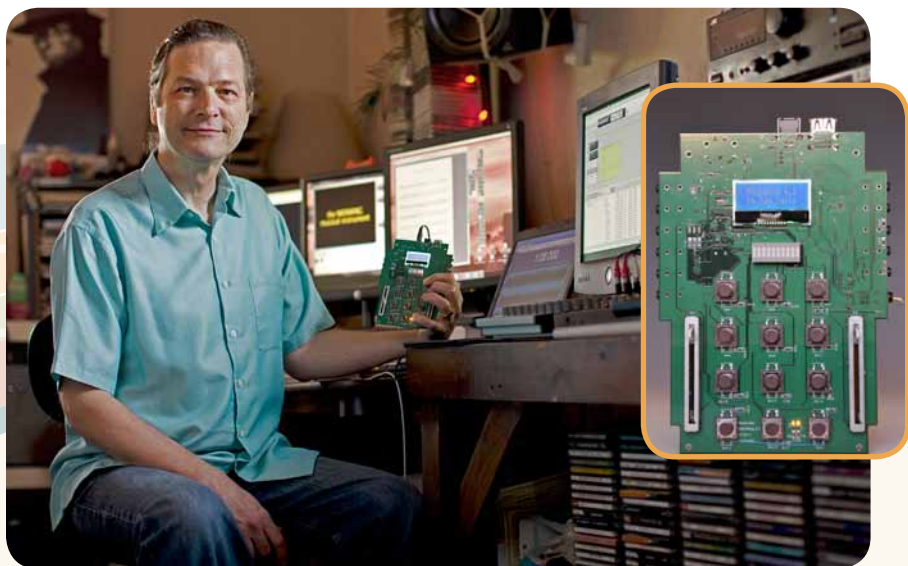
Dan Daily, Director

As a young child, Dan Daily, Director of Musicode Innovations, watched his mother compassionately care for people with disabilities in a daycare that she owned and operated. Today, as a musician and music instructor, Daily is developing a musical instrument, the Midiwing, for those who lack the experience, physical ability, or maturity to play music with traditional instruments.

Midiwing unites music and computer technology. To create the instrument, Daily reworked and recoded Musical Instrument Digital Interface (MIDI) technology and introduced ergonomic design. He applied for NMSBA help when he discovered the microcontroller he used was being phased out. The controller supports the

interface with the musician by transmitting the data from the user to the audio instrument.

NMSBA matched Daily with Sandia National Laboratories’ Kent Pfeifer, an electrical engineer and musician himself. Daily sent Pfeifer his old microcontroller code and the desired criteria and function for the instrument. Together, the two rewrote the code, modernized the interface to use USB communication, refined the microcontroller for high-speed and low-power battery operation, and essentially created a new state-of-the-art design. The new Midiwing is slated to go into production at the end of 2013. Daily is currently focused on a series of pilot programs to help test and refine the product. 🚀





*“As a fairly evolved company, I was unsure how NMSBA could help MVD Express, but the results have been transformational.”*

Melissa Stock, Chief Operating Officer

Promising fast and efficient service, MVD Express provides half of New Mexico’s motor vehicle services through its 11 locations and 85 employees statewide. But over the years, owner Janice Lucero noticed that document and photocopying requirements in the highly-regulated industry were taking up more and more employee time, increasing office supply expenses, and causing wait times to rise.

Through NMSBA, Karen Converse of the New Mexico Manufacturing Extension Partnership (MEP) introduced lean manufacturing processes to MVD Express. Converse examined all of the company’s processes and made a series of recommendations, three of which were

implemented immediately. As a result of MEP’s assistance, MVD Express standardized desk arrangement and supplies for each employee, developed a company-wide standard of which documents should be photocopied, and consolidated 27 logs into five simplified checklists.

The company has already cut two minutes off each transaction, saved 30% in office supply expenses, reduced photocopies by 20%, and saved hours each week in staff time. By adopting lean manufacturing as the company’s culture, management and staff at MVD Express have changed the way they think, ask questions, spend money, and work together as a team. 🚀



# NANOTITANIUM DENTAL IMPLANTS

*“We received two key benefits from NMSBA. Data on our product and competitive products helped us to validate our market advantage and the LANL analyses showed us ways to enhance the benefits of Biotanium™ implants.”*

Terry Lowe, Metallurgist

The leveraged project Nanotitanium Dental Implants is a venture between three New Mexico companies. Metallurgist Terry Lowe from Metallicum (a subsidiary of Manhattan Scientifics), designer and manufacturer Dan Blacklock from Danlin Products, and dentist and educator Walt Schuman from BASIC Dental are collaborating to develop, manufacture, and market dental implants. The formative material for the venture is Biotanium, an enhanced variant of titanium used to anchor dental implants into the jawbone.

Through NMSBA, the companies accessed specialized technical capability to investigate and validate the performance of Biotanium. Joseph Mang, Robert Dickerson, and Marilyn Hawley

of Los Alamos National Laboratory (LANL) used scanning electron microscopy and atomic force microscopy to characterize the material. Initially, the companies asked that the metal's interior be explored, but the powerful imaging technology revealed that the important properties were on the surface. Biotanium's nanoscale and micron scale features create a surface ideal for bone cell attachment and proliferation. This leads to a dramatically faster and stronger recovery for the patient.

The companies plan to expand their products and employ up to 28 new people at a manufacturing facility in Albuquerque. With test markets already underway, they look forward to competing worldwide. 🚀





# PUEBLO OF ZIA



*“The expertise and assistance provided to the Pueblo of Zia by NMSBA is a key component of our success thus far. We look forward to our continued partnership with LANL as the study evaluates our integrated approach to producing cost-effective renewable energy.”*

Peter Pino, Tribal Administrator



The Pueblo of Zia has a long and proud history of self-sufficiency and a strong community life. Economic development efforts must be aligned not only with economic goals, but also with the Pueblo's traditional culture and values. Within these parameters, renewable energy provides a unique opportunity to promote sustainable energy independence and respect for Pueblo land and natural resources.

Tribal Administrator Peter Pino and Project Manager Jai Lakshman led an expert team including NMSBA, New Mexico Community Capital, NM Renewable Energy Transmission Authority, and Witcher & Associates to develop a strategy for renewable energy development

and deployment. NMSBA provided assistance through Los Alamos National Laboratory's (LANL) Loren Toole, who provided a broad range of information on site assessments, energy transmission and distribution system access, and economic analysis of energy alternatives.

As a result of the team's efforts, the Pueblo of Zia was awarded a grant from the U.S. Department of Energy to conduct a feasibility study for integrated solar, geothermal, and wind energy. The study will analyze the potential to develop and export renewable energy from the Pueblo, including how to distribute to the grid, secure continuous energy production, and be cost-competitive in the energy market. 🚀

# SAVSU TECHNOLOGIES


*“Our goal is to have a pre-assembled ice maker that can be shipped with the NanoQ container. With help from NMSBA, this package of equipment will utilize only solar energy and will bring lifesaving vaccines to the far reaches of the world.”*

Bruce McCormick, SAVSU Technologies

The company SAVSU, which stands for “State of the Art Vaccine Storage Unit,” is clear about its mission. Inexpensive vaccines can save millions of lives, yet 14-35% of vaccines worldwide are exposed to freezing conditions that compromise or destroy them. A passively cooled vaccine storage container would be an enormous boost to health care and immunization programs in developing countries.

Bruce McCormick of SAVSU designed the NanoQ container to store vaccines at proper temperatures while utilizing ice as thermal energy. Typically ice can freeze and destroy vaccines. But the NanoQ makes use of advances in materials science including NASA technology to overcome the freezing potential of ice

while harnessing its energy storage capacity. SAVSU also began development of a solar thermal icemaker for the NanoQ. It attempted to overcome the limited success of previous attempts at solar thermal ice making by redesigning the technology for small volumes of ice.

Through NMSBA, McCormick teamed with Eric Coker and Brian Iverson of Sandia National Laboratories to undertake a massive review of technology relating to solar thermal ice makers, calculate optimal thermal performance criteria, and create a design basis to apply solar thermal ice making capability to the SAVSU cooler. 



# SOUTHWEST WINES



*“As a direct result of NMSBA’s consultations, we are now confidently seeking a software application to squarely address our needs.”*

Thomas Elder, IT Manager



Southwest Wines is the largest winery in New Mexico, and continues to experience healthy business growth. Yet, increased demand was quickly outpacing the company's internal computer information systems. The winery recognized the need for Information Technology (IT) improvements, including an assessment of the IT systems that underpin its business activities.

NMSBA connected Thomas Elder, Southwest Wines' IT Manager and James Husby, the company's General Manager, with Frank Reinow from the Department of Management at the New Mexico Tech. Reinow and his team performed two onsite assessments. The first evaluated Southwest Wines' IT systems and technologies, including networks, communications, hardware and software,

integration, and maintenance functions. Specific recommendations covered everything from routine improvements in email, contact lists, and scheduling to larger scale improvements in network management and software upgrades.

The second assessment addressed the company's accounting software, a relatively well-known software product within the winemaking industry. The team's IT and management evaluation found that the software was insufficient for the functionality, efficiency, and vendor support required by Southwest Wines. The team then developed a performance framework for evaluating new software applications. Southwest Wines plans to share its findings with other wineries in the region in hopes that the information might address common problems. 🚀

# THANK YOU

- ▶ Thank you to all the small businesses for participating in the NMSBA Program and for creating jobs and economic wealth for New Mexicans.
- ▶ Thank you to all Los Alamos and Sandia national laboratories' Principal Investigators who applied their expertise and knowledge to help New Mexico small businesses solve their technical challenges.
- ▶ Thank you to the Governor's office and the New Mexico State Legislature for supporting the Laboratory Partnership with Small Business Tax Credit Act.
- ▶ Thank you to the Advisory Council for their leadership, advice, and guidance in support of the NMSBA Program.

**Mike Byrnes**

Ruidoso Small Business  
Development Center

**John Chavez**

New Mexico Angels

**Naomi Engelman**

Regional Development Corporation

**Stephen Guerin**

Santa Fe Complex

**Charles Hanley**

Sandia National Laboratories

**Steve Hernandez**

Steven L. Hernandez, Esq.

**Gilbert Herrera**

Sandia National Laboratories

**David Janecky**

Los Alamos National Laboratory

**David Meurer**

Armed Response Team, Inc.

**Hal Morgan**

Sandia National Laboratories

**Suzanne Roberts**

Technology Ventures Corporation

**Kim Sanchez Rael**

Flywheel Ventures

**Daniel Sanchez** (Ex-Officio)

US DOE / NSA Sandia Site Office

**Belinda Snyder**

Los Alamos National Laboratory

**Kurt Steinhaus**

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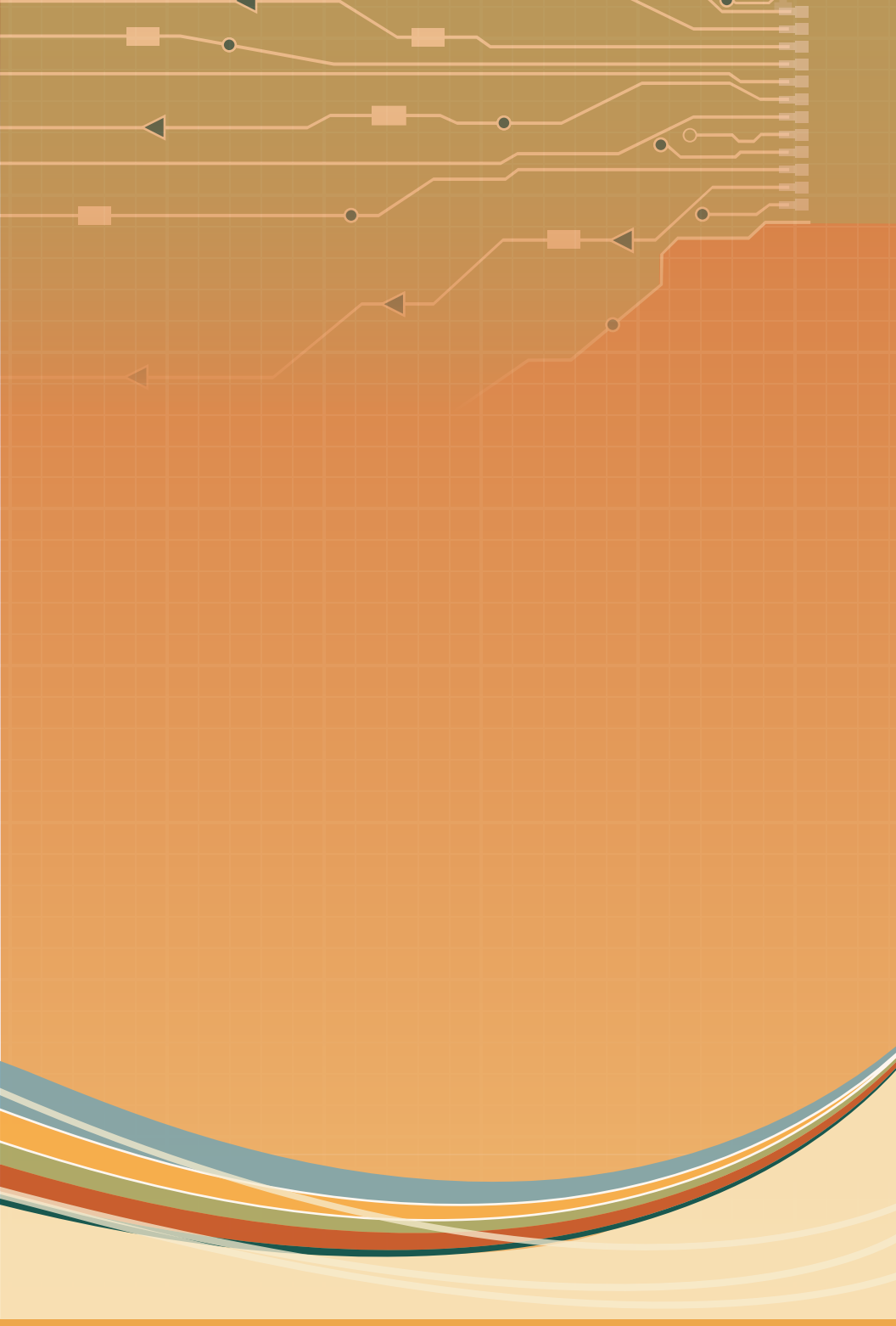
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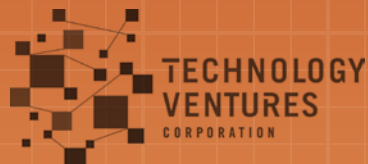
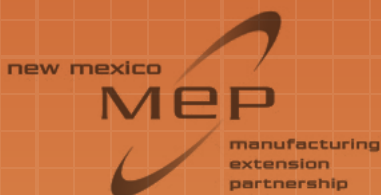
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