

# PERSPECTIVES 2018 ANNUAL REPORT





# \$62.5M

Technical Assistance Provided by Labs

# 2,931

Businesses Assisted

# 7,853

Jobs Created and Retained

# 33

New Mexico Counties Supported

*Cumulative numbers since the inception of NMSBA in 2000.*

# CONTENTS

<b>Opening Remarks</b> .....	2
<b>Program Information</b> .....	4
<b>Success Stories</b>	
Advanced Optical Technologies .....	6
Meow Wolf Leveraged Project .....	8
Monarch Waste Technologies .....	10
New Solutions Energy .....	12
NTxBio .....	14
Parting Stone .....	16
<b>Program Metrics</b> .....	18
<b>Success Stories</b>	
Rhino Health .....	20
Rope Rescue Leveraged Project .....	22
Solstar Energy Devices .....	24
Wicked Edge Sharpeners .....	26
<b>Leveraged Projects</b> .....	28
<b>Individual Projects</b> .....	32
<b>Innovation Celebrations</b> .....	34
<b>Acknowledgements</b> .....	35



*NMSBA is an invaluable tool for growing New Mexico's innovation ecosystem and economy. By utilizing the expertise at Los Alamos and Sandia, small businesses can solve complex technical problems and succeed here. New Mexico's economy grows and we all benefit when talent stays here and local businesses thrive.*

**Alicia J. Keyes**

Cabinet Secretary  
New Mexico Economic Development Department  
State of New Mexico



*Small businesses are a vibrant part of the New Mexico economy that help us all thrive. NMSBA has been there for small businesses every step of the way, helping grow talent and reward innovation. We're thankful for their continued efforts to foster economic development.*

**Stephanie Schardin Clarke**

Cabinet Secretary  
New Mexico Taxation and Revenue Department  
State of New Mexico

# Dear Governor Lujan Grisham and New Mexico State Legislators,

We are pleased to present the 2018 Annual Report for the New Mexico Small Business Assistance (NMSBA) Program. This report highlights just a few of the hundreds of successful projects from 2018 and quantifies the overall performance of NMSBA, both for the past year and since its inception in 2000.

During 2018, a total of 359 small New Mexico businesses participated in NMSBA. Thanks to the *Laboratory Partnership with Small Business Tax Credit Act*, the State of New Mexico, along with Los Alamos National Laboratory and Sandia National Laboratories, invested \$4.6 million of national laboratory expertise and resources to help small businesses in 23 counties overcome technical challenges and grow.

The success stories in this report demonstrate the impact of NMSBA on small businesses from various industries in various counties and on tribal land around the state. Here are just a few points from some of the featured stories:

- A business received technical assistance which resulted in successful product prototype testing in outer space, interest from NASA and space companies, and seed funding.
- A group of associated companies received assistance with mixed reality and sensor systems, resulting in a new company department and new local jobs, as well as aiding the company with their growth in future locations.
- Streamlining company operations reduced manufacturing delays and increased revenue by 50% for a company selling knife sharpening systems.
- Assessments of a company's new vaccine technology led to raising \$2.5 million, hiring more employees, and collaboration with an international manufacturer and distributor.

NMSBA helps small businesses create jobs, increase revenues, and attract new funding.

One project received the *Honorable Speaker Ben Luján Award for Small Business Excellence* for demonstrating the most economic impact. Rhino Health is moving forward with building a nitrile glove plant in New Mexico, investing more than \$35 million in production facilities that are expected to create up to 350 new jobs.

NMSBA has helped New Mexico's small businesses create jobs, increase revenues, decrease operating costs, and attract new funding opportunities. Since 2000, the two national laboratories have provided \$62.5 million in technical assistance to 2,931 businesses, enabling 7,853 jobs to be created and retained across the state's 33 counties.

Your continued support of NMSBA, which promotes collaboration between our national laboratories and small business community, leads to economic development throughout our great state. Thank you!

Sincerely,



**Mariann Johnston**  
Los Alamos National Laboratory



**Jackie Kerby Moore**  
Sandia National Laboratories

# PROGRAM INFORMATION

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## OVERVIEW

In 2000, the New Mexico State Legislature created the *Laboratory Partnership with Small Business Tax Credit Act* for the purpose of "bringing the technology and expertise of the national laboratories to small businesses in New Mexico to promote economic development in the state, with an emphasis on rural areas." As a result, Sandia National Laboratories established the New Mexico Small Business Assistance (NMSBA) Program to provide technical support to small businesses throughout the state. Los Alamos National Laboratory began participating in NMSBA in 2007. Jointly, the labs are committed to solving small businesses' critical challenges with national laboratory expertise and resources; influencing New Mexico business development by building capacity, capabilities, and competencies; and acting as an advocate for small businesses through an entrepreneurial culture.

While each company utilizes NMSBA in a different way, all use it as a means to maintain or grow their businesses. NMSBA services are provided at no cost to the participating small businesses in the form of lab staff hours valued at up to \$20,000 per calendar year for businesses located in rural counties and \$10,000 for businesses located in urban counties (currently just Bernalillo County). The total amount of assistance is capped at \$2.4 million annually for each laboratory. NMSBA may not provide assistance that is available in the private sector, and no equipment or cash can be given to a participating company.

## FUTURE DIRECTION

In March 2019, House Bill 526, *Lab Small Business Tax Credit Changes*, was signed into law. These changes doubled the value of assistance each New Mexico small business can receive, enabling NMSBA to expand the support the national laboratories and contractors can provide. To ensure this opportunity significantly benefits small businesses while helping grow and diversify the state's economy, NMSBA will emphasize reaching innovators in high potential clusters such as agriculture, sustainable energy, bioscience, space and aerospace, and arts and culture. With the passage of this bill, national laboratories can increase the range of technical expertise offered while remaining aligned with their missions. New Mexico's small businesses will continue to use this valuable resource as they solve problems, bring new products and services to market, attract financing, and create meaningful jobs.

*During 2018, NMSBA helped 359 small businesses across the state reach business goals, develop their products for commercial use, and increase profitability.*

### **NMSBA makes a statewide impact by:**

- Enabling New Mexico small businesses to access cutting-edge technology
- Increasing New Mexico small businesses' technical sophistication and capabilities
- Sharing knowledge and resources between laboratory personnel and small businesses to address issues and develop real-world applications

## TYPES OF SMALL BUSINESS ASSISTANCE

### Individual Projects

Individual NMSBA projects involve a single New Mexico for-profit small business. Projects address business-specific challenges that can be solved with national laboratory expertise and resources. Technical assistance challenges are wide ranging; however, the majority include testing, design consultation, and access to special equipment or facilities. Requests for individual projects are accepted year-round until funding is exhausted.

### Leveraged Projects

Leveraged NMSBA projects allow a group of small businesses that share technical challenges to collectively request assistance. Leveraged projects address issues that are too large or complex to solve through an individual project. Proposals for projects are reviewed semi-annually by the NMSBA Advisory Council.

### Contract Projects

Legislation allows NMSBA to contract with entities that have the capability to provide small business assistance services not available in the private sector. For the benefit of New Mexico's small businesses, NMSBA has contracts for specific services with the New Mexico Manufacturing Extension Partnership and the state's three research universities.

**The New Mexico Manufacturing Extension Partnership** provides training and assessments in the areas of quality and lean manufacturing principles.

**The Arrowhead Center at New Mexico State University** evaluates small business capabilities and technologies using subject matter experts throughout the university.

**The New Mexico Tech Department of Management** interfaces with a variety of disciplines taught at the university to help accurately assess the current competitive position of small business technologies.

**The University of New Mexico Management of Technology program at the Anderson School of Management** evaluates the commercial potential of small business technologies and identifies commercialization challenges and pathways.

**The University of New Mexico School of Engineering** addresses technical challenges faced by small businesses in computer science and chemical, biological, electrical, computer, civil, nuclear, and mechanical engineering.



**Dawson Stokley**  
*Optical Engineer  
Advanced Optical  
Technologies*

**Malini Hoover**  
*CEO  
Advanced Optical  
Technologies*



## BERNALILLO COUNTY

*Thanks to NMSBA, our collaboration with Sandia facilitated comparative studies to broaden our market base to help ensure the quality and affordability of high-performance titanium aerospace parts.*

**Malini Hoover**

CEO  
Advanced Optical  
Technologies, Inc.



# ADVANCED OPTICAL TECHNOLOGIES

Titanium is an important material for fighter jets and commercial aircraft. Strong but light, titanium enhances fuel efficiency and performance. Currently, scientists use a destructive crystallographic testing technique known as electron backscatter diffraction (EBSD) to better understand titanium's mechanical properties.

Advanced Optical Technologies (AOT) offers multidimensional material characterization of complex materials and devices and develops custom sensors for defense and commercial customers. AOT developed a nondestructive test alternative to EBSD known as polarization-classification imaging (PCI). Malini Hoover and her team believed that PCI was a dramatic improvement over EBSD, but lacked the EBSD equipment to prove it.

Hoover contacted NMSBA for assistance and was partnered with Joseph Michael at Sandia National Laboratories. Michael and his team used a scanning electron microscope to perform a comparative study between PCI and EBSD. The team found that while EBSD takes nine hours, PCI takes only minutes. PCI has significant advantages for industrial use, imaging larger areas and requiring less surface polishing of samples. This shorter timeframe means that users can test crystallographic structures while titanium is being produced. Innovative technologies like PCI are delivering faster and cheaper ways to characterize materials, especially in quality control and inspection for additive manufacturing.

In part because of the study results, AOT received \$750,000 from the Air Force Research Laboratory Materials & Manufacturing Directorate to build the first sensor dedicated to titanium crystallography. The company also received a \$50,000 New Mexico Economic Development grant.

Meet the  
PRINCIPAL  
INVESTIGATOR

**Joseph Michael**  
Sandia National Laboratories



**Justin Weimer**  
*Program Manager*  
*Meow Wolf Films*

**Conor Peterson**  
*General Manager*  
*Meow Wolf Santa Fe*

**Danny Bazo**  
*Designer/Developer*  
*Meow Wolf*

**Jordan Snyder**  
*Systems Architect*  
*Meow Wolf Atlas*

**Drew Trujillo**  
*Director of Technology*  
*Meow Wolf*

# MEOW WOLF LEVERAGED PROJECT

## SANTA FE COUNTY

*NMSBA is essential for creative small businesses wishing to leverage up.*

*Without technical expertise from places like Los Alamos and Sandia, opportunities to expand might not exist.*

**Drew Trujillo**

*Director of Technology  
Meow Wolf, Inc.*



Meow Wolf creates immersive and interactive experiences that transport audiences into fantastic realms of story and exploration. Such experiences cover a variety of media, from architecture, painting, and video production, to music, live performance, and creative narrative.

Because Microsoft’s original Kinect was discontinued, the company’s technical department needed to use regular internet cameras to track the location of visitors so that characters, mood, and storylines could react to their movements. To address this challenge, Drew Trujillo reached out to NMSBA, which paired him with Dan Small, a computer scientist at Sandia National Laboratories. Meow Wolf’s internal team on this project included Conor Peterson, Jordan Snyder, and Wolves.

Working with Meow Wolf and its associated companies, Small and his team assessed technologies to track visitors during Meow Wolf experiences. The team also assessed how best to correlate visitors across different types of sensor systems, and explored technologies to create and deploy mixed-reality systems at scale.

The results gave Meow Wolf the confidence to create a department known as the Digital Storytelling Team, creating 11 new local jobs. In addition, this project led to the company being able to control the animatronic characters for the Meow Wolf Kaleidoscope, a new ride that opened in April 2019 at Elitch Gardens in Denver, Colorado. With the Santa Fe location as an evaluation site, Meow Wolf intends to apply the results to future locations in Nevada, Arizona, Colorado, and Washington, D.C.

*Meet the  
PRINCIPAL  
INVESTIGATOR*

**Dan Small**

*Sandia National Laboratories*



**Charles "CJ" Martinez**  
*General Manager*  
*Monarch Waste Technologies*

SANTA FE COUNTY,  
NAMBE TRIBAL LAND

*The specialized technical assistance provided by NMSBA and Sandia brings immediate legitimacy to the validation process. Where else in New Mexico are you going to find such affordable and authoritative expertise?*

**Kevin Yearout**  
CEO  
Monarch Waste  
Technologies



## MONARCH WASTE TECHNOLOGIES

Few people remember 1987's "syringe tide," where medical waste, including used hypodermic syringes, washed up on American beaches. In response, the Environmental Protection Agency (EPA) mandated that all medical waste be incinerated. In the 1990s, the EPA instituted stringent limits on toxic air pollution emitted by incinerators. Over time, such limits closed most incinerators, leaving only 7 of what was once over 3,000 operational today.

Monarch Waste Technologies developed a new approach using pyrolysis to destroy medical waste. Unlike incineration, pyrolysis uses directed heating—not fire—to destroy waste, leaving a noninfectious residue safe to dispose at any local landfill.

Although Monarch was certain its pyrolysis technology worked, convincing the EPA was another matter. To address this problem, Kevin Yearout reached out to NMSBA, which connected him with Alexander Brown at Sandia National Laboratories. Brown and his team performed chemical analyses indicating that Monarch's pyrolysis approach meets the EPA's guidelines and that the company's Pryomed 550 system operates within EPA regulations.

As a result, Monarch is expecting an EPA exemption shortly, which will reduce permit costs from \$2000,000 to \$5,000. By initiating early operations at the company's plant in Nambe, Monarch expects annual revenue of \$3 million and the creation of 13 new jobs at the Nambe Tribal Industrial Park. Moreover, it is now possible for new "micro-disposal" facilities to pop up where needed, cutting the costs of shipping medical waste across multiple states to the handful of remaining incineration plants.

Meet the  
PRINCIPAL  
INVESTIGATOR

**Alexander Brown**  
Sandia National Laboratories



**Luke Spangenburg**  
*Founder  
New Solutions Energy*

## SANTA FE COUNTY

*NMSBA is a great asset when it comes to New Mexico companies validating their technologies and products. Without NMSBA and the Arrowhead Center, my company would not have been able to complete this essential work.*

**Luke Spangenburg**

*Founder  
New Solutions  
Energy Corporation*



## NEW SOLUTIONS ENERGY

Based in Santa Fe, New Solutions Energy (NSE) works to harness tomorrow's energy-rich resources for use today. One promising resource is algae, which has significant potential in applications for food and fuel production.

NSE invented two new algae-based organic formulas, Bloom and Grow, to help grow plants more efficiently. To assess and ultimately validate the efficacy of the Bloom and Grow products, Luke Spangenburg contacted NMSBA, which in turn connected him with the Arrowhead Center at New Mexico State University (NMSU).

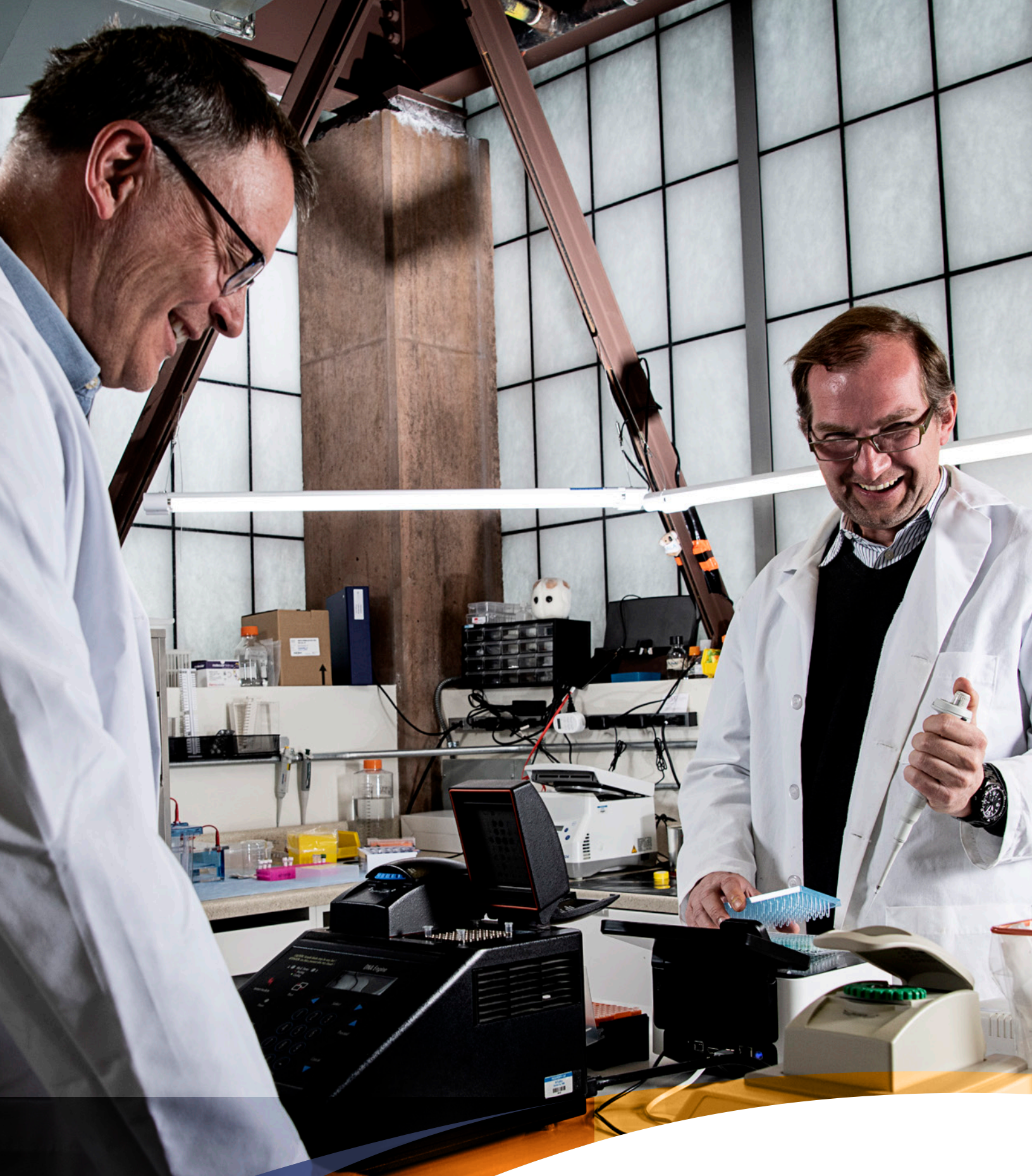
Kristin Morehead and her team at the Arrowhead Center worked with NMSU faculty from the Department of Plant and Environmental Sciences to provide a biochemical composition analysis so that NSE scientists could better understand how Bloom and Grow help plants grow faster and healthier even when other resource inputs remain the same. Analytical tests included plant hormone and growth factor profiling, as well as nutrient and metal analysis. Metabolites from the algae used in Bloom and Grow were also characterized.

The results from the testing and analysis demonstrated that Bloom and Grow amendments make plants grow more efficiently. Based upon the validation provided by the Arrowhead Center and NMSBA, NSE has commercialized the Bloom and Grow products. NSE has since entered into a three-year, \$200,000 contract with a West Coast company to manufacture Bloom and Grow soil amendment products. NSE also anticipates creating four new full-time jobs in New Mexico.

Meet the  
PRINCIPAL  
INVESTIGATOR

**Kristin Morehead**

*Arrowhead Center at New Mexico State University*



**Matthew Ennis**  
CEO  
NTxBio

**Alexander Koglin**  
Founder & Chief Technology  
and Science Officer  
NTxBio



## SANTA FE COUNTY

*NMSBA enables small businesses with limited resources, like all technology start-ups, to secure technical and business help from various organizations in New Mexico. Such support assists businesses moving from concept to commercial markets.*

**Matthew Ennis**  
CEO  
NTxBio, LLC

## NTxBIO

NTxBio is commercializing a platform, NTxpress™, which facilitates the rapid production of critical vaccines. This technology enables the production of target vaccines with much higher purity, 1/100,000th as much waste, in a fraction of the time, at much lower cost. Moreover, this technology makes it possible to create vaccines in time frames that enable rapid response to national epidemics.

Although excited about this new technology, Alex Koglin, co-founder, chief technology and science officer, and Matthew Ennis, CEO, were unsure how to approach the vaccine and pharmaceutical markets. The team reached out to NMSBA, which connected them with the University of New Mexico Management of Technology (UNM-MOT) program.

Professor Steve Walsh and his students provided two forms of assistance. They performed expeditionary marketing studies to assess the technology's value and pricing, and determine the rate of adoption for such a product. They also collaborated with the company to choose the best markets to compete in, determine customer focus, and select which part of the industry value chain to compete in.

In part due to the knowledge gained from this technical assistance, NTxBio has recently raised \$2.5 million, hired four new employees, and engaged in its first collaboration with an international vaccine manufacturer and distributor. Also as a result of the NMSBA project, NTxBio was recognized by *Pharma Tech Outlook* as one of the Top 10 Drug Discovery and Development Solution Providers for 2018.



Meet the  
PRINCIPAL  
INVESTIGATORS

**Steve Walsh, Vincent Brandon, and Austin Buckingham**  
*University of New Mexico*



**Kimberly Corbitt**  
CEO  
Parting Stone

**Justin Crowe**  
Founder  
Parting Stone

## SANTA FE COUNTY

*The results from NMSBA and Los Alamos were spectacular, and we would love to work with them forever.*

**Kimberly Corbitt**

CEO

Chronicle Cremation Designs  
dba Parting Stone



## PARTING STONE

Losing a loved one is never easy. Most people build monuments to those they have lost, and although interment remains popular, more people are seeking alternatives, such as cremation. One issue with cremation is that the resultant ashes often evoke fear, as loved ones are scared to touch, accidentally inhale, or spill the ashes.

To overcome these issues, Parting Stone developed a new type of remains by taking cremated ashes and turning them into alabaster-looking stones. Loved ones can display, hold, and touch these Sharing Stones, erasing fears associated with conventional cremation.

Although company founder Justin Crowe had an idea about how to convert ashes to stone, he did not have a complete recipe. To solve this problem, Crowe reached out to NMSBA, which paired him with ceramic engineer Chris Chen of Los Alamos National Laboratory. Working with Crowe, Chen and his team developed a process to superheat cremated remains, chemically altering ashes into beautiful stones.

Crowe believes the results of this effort were instrumental in him winning Santa Fe's 2018 bizMIX competition, and enabling Parting Stone to raise a \$150,000 seed round to open a processing lab. Offering Sharing Stones as an alternative to ashes has proven successful in a small test market of 15 crematories and Parting Stone is now planning their public launch and expansion. The company expects to create as many as 100 new jobs and help thousands of grieving people feel more connected to loved ones.

Meet the  
PRINCIPAL  
INVESTIGATOR

**Chris Chen**

Los Alamos National Laboratory

## VALUE OF PROGRAM ASSISTANCE IN 2018

In 2018 the State of New Mexico, along with Los Alamos National Laboratory and Sandia National Laboratories, invested **\$4.6M** helping **359** small businesses in **23** counties to solve technical challenges. The following table contains the number of small businesses that received assistance from NMSBA, dollar value of the assistance for calendar year 2018, and cumulative value from 2000 to 2018.

	Los Alamos*	Sandia	Total
<b>Number of Small Businesses Served</b>			
<b>2018</b>	<b>174</b>	<b>187</b>	<b>359**</b>
Rural	125	102	226**
Urban	49	85	133**
<b>2000 - 2018</b>	<b>986</b>	<b>2,263</b>	<b>2,931**</b>
Rural	703	1,373	1,868**
Urban	283	890	1,063**
<b>Value of Assistance Provided</b>			
<b>2018</b>	<b>\$2,216,711</b>	<b>\$2,399,876</b>	<b>\$4,616,587</b>
Rural	\$1,818,196	\$1,708,952	\$3,527,148
Urban	\$ 398,515	\$ 690,924	\$1,089,439
<b>2000 - 2018</b>	<b>\$23,690,405</b>	<b>\$38,837,660</b>	<b>\$62,528,065</b>
Rural	\$20,644,740	\$28,760,048	\$49,404,788
Urban	\$ 3,045,665	\$10,077,612	\$13,123,277

\*Los Alamos began participating in NMSBA in 2007. \*\*Some companies are served by both laboratories.

## ACCOUNTABILITY & ECONOMIC IMPACT

NMSBA, enabled by the Laboratory Partnership with Small Business Tax Credit Act, is accountable to the State of New Mexico for its expenditures. NMSBA measures its economic impact through client surveys conducted by Research and Polling, Inc., and economic analysis provided by Robert Grassberger, PhD Economist.

ECONOMIC IMPACT FOR BUSINESSES FROM NMSBA PROJECTS	2000-2017*
Small Business Jobs Created and Retained	7,853
Average Reported Salary (2017)	\$51,825
Increase in Revenue	\$378,196,511
Decrease in Operating Costs	\$182,767,455
Investment in NM Goods / Services	\$133,103,902
New Funding / Financing Received	\$148,854,105
Return on Investment**	For every \$1.00 of tax credit invested, the State receives a return of \$1.43.

\* Economic surveys are performed six months to one year after completion

\*\* ROI is based on salaries of jobs created and retained.

## BENEFITS TO NEW MEXICO SMALL BUSINESSES

New Mexico small businesses achieved positive results after receiving technical assistance from NMSBA. Feedback from companies that participated in the 2017 economic impact client survey revealed that:

**64%**

DEVELOPED A NEW PRODUCT OR TECHNOLOGY

**64%**

IMPROVED OVERALL OPERATIONS

**65%**

EXPANDED OR IMPROVED A PRODUCT OR SERVICE

**62%**

BECAME MORE COMPETITIVE IN THE MARKETPLACE

**58%**

IMPROVED THE EXPERTISE OR CAPABILITIES OF EMPLOYEES

# PROGRAM METRICS

NMSBA identifies the areas of technical expertise that the national laboratories and their contractors utilized in NMSBA technical assistance projects, as well as the industry sector for the participating companies. The counties in which the small businesses are located are tracked to gain a better understanding of the reach of the program across the state.

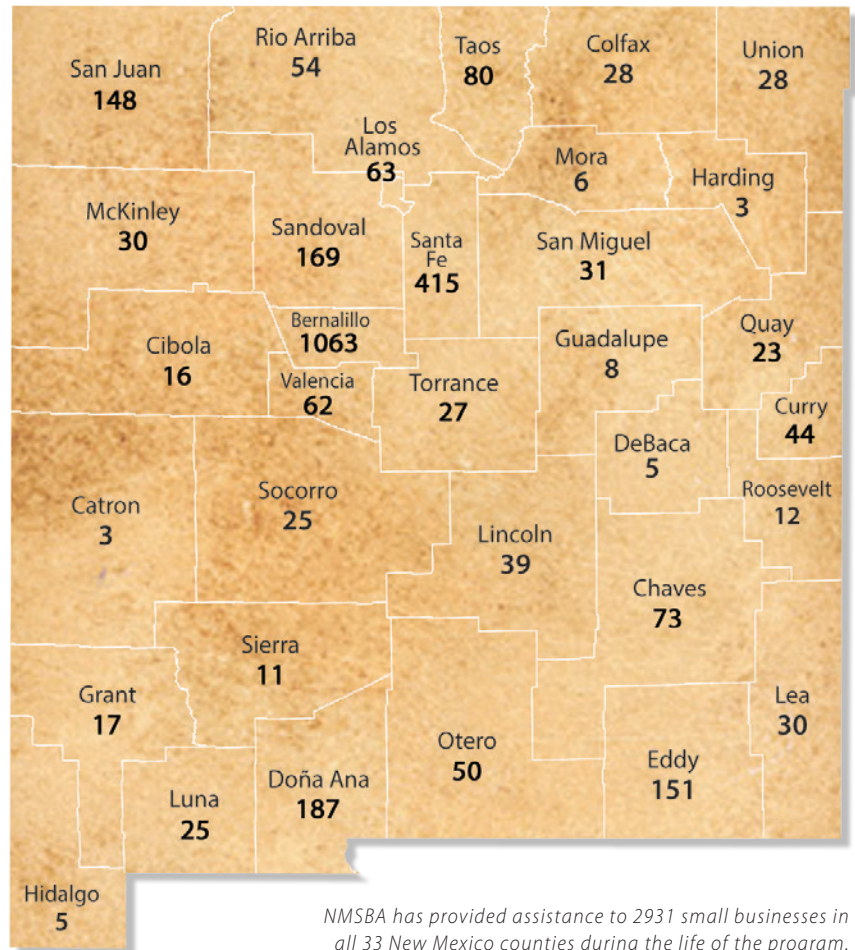
## LABORATORY CAPABILITIES UTILIZED IN 2018

Engineering .....	30.9%
Manufacturing.....	22.0%
Biological and Medical .....	9.2%
Materials Science .....	8.1%
Chemistry .....	6.1%
Advanced Modeling and Simulation .....	5.6%
Energy .....	5.0%
Business Development.....	4.5%
Earth and Environmental Sciences .....	3.3%
Math and Computer Science.....	3.3%
Astronomy and Physics .....	1.1%
Micro-Nano Technology.....	0.9%

## INDUSTRIES OF SMALL BUSINESSES SERVED IN 2018

Manufacturing.....	42.9%
Professional, Scientific, and Technical Services.....	29.8%
Agriculture and Natural Resources .....	9.2%
Education Services and Health Care .....	4.2%
Other Services (except Public Administration) .....	3.9%
Retail and Wholesale Trade.....	3.6%
Oil & Gas, Utilities, and Mining.....	3.4%
Media and Hospitality.....	2.2%
Real Estate, Finance, Insurance, and Management Services .....	0.8%

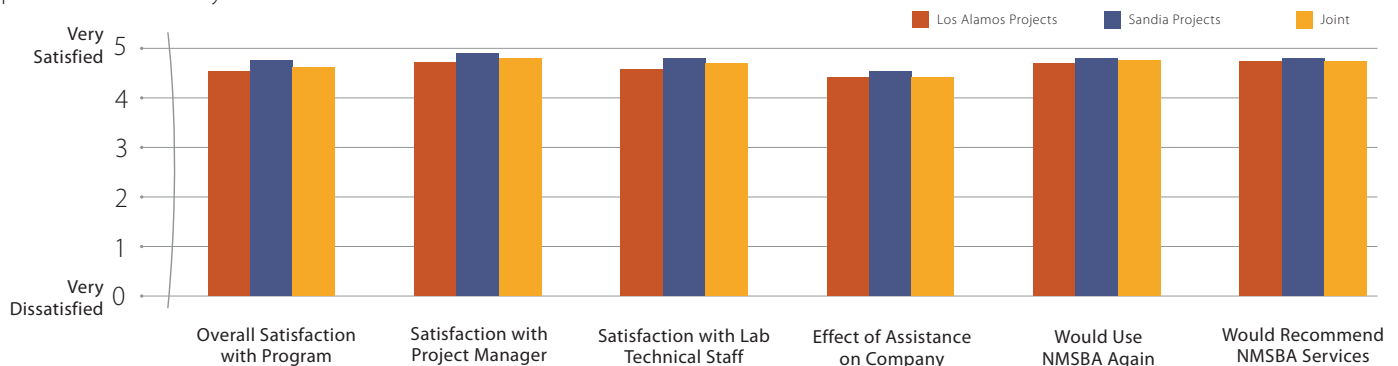
## BUSINESSES ASSISTED BY COUNTY 2000-2018



NMSBA has provided assistance to 2931 small businesses in all 33 New Mexico counties during the life of the program.

## CUSTOMER SATISFACTION IN 2018

Each year, NMSBA surveys the participating businesses to learn about their satisfaction with the program. In 2018, 87% of the businesses responded to the survey.





**DJ Yoon**  
Senior VP & COO  
Rhino Health

**Mark Lee**  
President & CEO  
Rhino Health

MCKINLEY COUNTY,  
NAVAJO TRIBAL LAND

*The results from NMSBA  
and Sandia gave me  
the confidence to move  
forward to build our  
first nitrile glove factory  
in the United States.  
My goal now is to build  
four or five more factories  
in the Gallup area.*

**Mark Lee**

President & CEO  
Rhino Health, Inc.



## RHINO HEALTH

Made from synthetic rubber, nitrile gloves are superior when it comes to puncture resistance and are a proven alternative to latex, which causes allergic reactions in some users. Users of nitrile gloves range from medical and workplace professionals to first responders and science professionals.

Mark Lee and his partner DJ Yoon established Rhino Health to build a nitrile glove factory in the United States. Although Lee desired to build in Church Rock, located within the Navajo Nation, he realized that the manufacturing process required a great deal of water of a certain quality. To address this issue in the water-deprived lands of New Mexico, Mark was introduced to the NMSBA through the Greater Gallup Economic Development Corporation. NMSBA partnered Lee with Patrick Brady of Sandia National Laboratories.

Brady and the Rhino team analyzed the quality of water in Gallup, examined the factory wastewater discharge options, and determined methods to reduce factory water consumption by 22% to 30%. This means they will be able to manufacture more gloves per gallon of water.

The results gave Lee the confidence to move forward. In its first phase of operations, Rhino has already installed over \$5 million of new production equipment. They will begin production this summer and expect to grow to 35 employees by August, when they should receive FDA approval. Rhino anticipates investing more than \$35 million, part of which will go toward building an additional 110,000-square-foot manufacturing facility and create up to 350 new jobs.

Meet the  
PRINCIPAL  
INVESTIGATOR

**Patrick Brady**

Sandia National Laboratories



**Daniel Barela**  
Owner  
*Rescue, Tactics and Training*



BERNALILLO, SANDOVAL,  
AND SAN JUAN COUNTIES

*Working with NMSBA and Sandia enabled the small businesses in this collaborative effort to access technical expertise that could ultimately save lives in the rescue field.*

**Daniel Barela**

*Owner  
Rescue, Tactics and Training*



## ROPE RESCUE LEVERAGED PROJECT

Technical rope rescue is a skill set used by personnel associated with technical rescue services, police and fire departments, military operations, and search and rescue. The equipment used during these rescues is as critical as training. One important piece of equipment is rope systems, which rescuers use to descend into an accident scene, and then to extricate victims and themselves.

The equipment used for technical rope rescue must be equally tough and lightweight. Originally, rescuers relied on 13-millimeter rope, which is heavy and cumbersome. However, when some rescuers used lighter 6-millimeter rope, they started to experience catastrophic failures.

To address this problem, the following small businesses came together: Rescue, Tactics and Training; High Desert Technical Rescue; Resolution Rescue Rope Guides; and ASK Tower Supply. The goal was to find a robust rope that was light enough for field use.

The collaborators contacted NMSBA, which partnered them with Luis Abeyta at Sandia National Laboratories. Abeyta and his team conducted 62 tests from a drop tower to determine force on a rescuer during a critical failure. The team found that 9-millimeter rope is ideal for such rescues. Test information gathered by Abeyta's team covered data such as force, acceleration, displacement, and rebound elongations.

As a result of these analyses, the collaborators plan to present the data at the annual International Technical Rescue Symposium. They believe this information will save lives, redefine how instructors are trained, and likely revolutionize the rope-rescue industry.

*Meet the  
PRINCIPAL  
INVESTIGATOR*

**Luis Abeyta**

*Sandia National Laboratories*



**M. Brian Barnett**  
CEO  
*Solstar Energy Devices*

## SANTA FE COUNTY

*NMSBA is the best way the labs can help technology-based small businesses in New Mexico.*

**M. Brian Barnett**  
CEO  
Solstar Energy Devices, LLC



## SOLSTAR ENERGY DEVICES

In April and July of 2018, Blue Origin's New Shepard suborbital rocket system traveled into space. Aboard the rocket was Solstar's Schmitt Space Communicator. As the craft reached maximum altitude, the Communicator tweeted back to Earth via WiFi: "What a view of Planet Earth. Brought to you live from Space."

Solstar is the first internet service provider operating from space. The company has demonstrated internet services from space to Earth and enabled Earth-based customers access to machines and colleagues located in space. Although Solstar scientists had a prototype of the Space Communicator ready for testing, M. Brian Barnett needed to ensure that his payload met all requirements. Barnett reached out to NMSBA, which partnered him with Justin McGlown, Terra Shephard, and Angus Guider at Los Alamos National Laboratory.

McGlown, Shepherd, Guider, and their team modeled a space flight, and consulted with Solstar on the design of the Communicator. After the second flight, the team also developed a bar chart of connection instances for potential sensors. This will help Solstar develop their antenna design for future flights to optimize how the Communicator works from space.

In part as a result of this work, Solstar successfully tested and validated its Communicator from outer space, demonstrating its viability in this new market. Solstar has raised a \$350,000 seed round, and has NASA and other prominent space companies as customers. Based on intense interest, Solstar plans to manufacture its Space Communicator soon.

Meet the  
PRINCIPAL  
INVESTIGATOR

**Justin McGlown**

*Los Alamos National Laboratory*



**Ray (Red) Kofler**  
*Technical Specialist*  
*Wicked Edge Sharpeners*

## SANTA FE COUNTY

*Thanks to NMSBA, the New Mexico Manufacturing Extension Partnership broke through all the personality types and odd workarounds at my company and streamlined the entire process so that we went from a stagnant company to one with increased revenue.*

**Clay Allison**

CEO  
Hollowpoint, LLC  
dba Wicked Edge Sharpeners



## WICKED EDGE SHARPENERS

After 15 years running a successful elk-outfitting business, Clay Allison was frustrated with having to bring four knives into the field. Even with so many blades, Allison found that he also needed to bring along a sharpener, as the knives wouldn't retain their edge after extended use. In 2007, Allison founded Wicked Edge. One of the company's first products, the Wicked Edge Precision Sharpener, is regarded as the best knife-sharpening system in the world.

Although Allison's frustration related to keeping blades sharp was remedied, a new type of frustration took over. Increasing demand for Wicked Edge products made it difficult to keep up. Supply and demand issues were stunting the company's growth.

Allison reached out to NMSBA for assistance. NMSBA matched Allison with Scott Bryant of the New Mexico Manufacturing Extension Partnership. Bryant and his team worked with Wicked Edge to implement lean manufacturing tools and techniques that streamlined company operations, both administratively and on the manufacturing floor. This enabled the company to gain control over inventory delays and balance costs while reshoring manufacturing work to U.S. component suppliers.

Because of this assistance, Wicked Edge reduced lead times by 90%, bolstering retained sales. The assistance also almost eliminated backorders and enabled the company to launch a new product line, which led to a 50% increase in revenue, partly because of new sales. Lean manufacturing approaches also enhanced staff morale by making Wicked Edge an easier, less frustrating place to work.

Meet the  
PRINCIPAL  
INVESTIGATOR

**Scott Bryant**

New Mexico Manufacturing Extension Partnership

# LEVERAGED PROJECTS

	PROJECT	DESCRIPTION	BUSINESS PARTICIPANTS	COUNTIES	FUNDING
Sandia	<b>3D and Additively Manufactured Ceramic Nanocomposites</b>	The Labs made boron carbide (B4C) and silicon boron carbide (SiBC) preceramic materials utilizing two distinct synthetic routes. 1H nuclear magnetic resonance (NMR) and thermal/microwave heating were used to characterize monomers and pyrolyze materials, respectively.	Goodman Technologies, LLC Robocasting Enterprises, LLC	Bernalillo	\$19,000
Sandia	<b>Advanced Fire Sprinkler Experimental Validation and Design Optimization</b>	The Labs provided design optimization and experimental testing of advanced fire sprinklers.	A-1 Machine, Inc. Cooper Construction Services Cooper Fire Protection Services Foster Plumbing and Heating Company, Inc. Westates Supply, Inc.	San Juan	\$97,500
Los Alamos	<b>Antibody/Probiotic from Ostrich Eggs</b>	The Lab evaluated the growth of <i>Lactobacillus acido-philus</i> and <i>Bifidobacterium bifidum</i> in ostrich eggs.	Madre Foods Tall Goods	Santa Fe	\$39,500
Sandia	<b>Beverage Widget For Use in Nitrogen Dosing</b>	The Labs provided technical assistance on the unique design and optimization of nitrogen dispersing widgets.	365 Brewing and Distilling Company, LLC dba Broken Trail Spirits Mother Road Mobile Canning New Mexico Hard Cider Taos Mesa Brewery Villa Myriam Coffee	Bernalillo Santa Fe Taos	\$70,000
Sandia	<b>Consultation on Mixed-Reality Systems</b>	The Labs provided technical consulting on the use of a variety of technologies for tracking visitors, correlating visitors across sensor systems, and exploring targeted technologies for creating and deploying mixed-reality systems at scale.	Future Fantasy Delight Meow Wolf Atlas, LLC Meow Wolf Films, LLC Meow Wolf Santa Fe, LLC Meow Wolf, Inc.	Santa Fe	\$90,500
Sandia	<b>Defend Six: A Wearable Safety Device</b>	The Labs provided technical support in the development of a wearable radar device that can provide the user situational awareness of approaching bodies.	Defend Six Corporation Sierra Peaks Corporation	Bernalillo	\$9,000
Sandia	<b>Earth Block Adhesion Testing</b>	The Labs provided technical consulting on strength testing including shear and three-point bend tests on samples of compressed earth blocks bonded with different adhesive formulations.	Adherent Technologies, Inc. Paverde, LLC PG Enterprises, LLC	Bernalillo	\$29,500
Sandia	<b>Electrical Bonding Problem for Solar Mounting Systems</b>	The Labs provided technical consulting on the topic of limited short-circuit testing of photovoltaic racking system hardware. Analysis and consulting was performed on proposed improvements for UL 2703 testing standard protocols and circuit analysis of current and improved test beds for 240V-340V, and 5kA testing waveforms to enable controlled rise time and fall times.	The Thompson Machine Tool & Die Group, Inc. Unirac, Inc.	Bernalillo	\$20,000

Los Alamos National Laboratory and Sandia National Laboratories provide technical assistance for both individual and leveraged NMSBA projects. The following is a listing of this year's leveraged projects.

	PROJECT	DESCRIPTION	BUSINESS PARTICIPANTS	COUNTIES	FUNDING
Los Alamos	<b>Fine Art Preservation</b>	The Lab provided a plan to validate the GOKMI shipping container designed to transport high-value pieces of artwork. Validation testing provides convincing and defensible evidence for museums, galleries, and insurance companies that the GOKMI is suitable for artwork shipping. Testing began in 2018 with lab staff and hardware supporting vehicle testing at Continental Tire's U.S. proving ground, and will continue into 2019 with multi-axis shaker testing.	Art Handlers, Ltd Daniels Insurance, Inc. Georgia O'Keeffe Museum Innovations (GOKMI) Ken's Machine & Tool Montiel's Custom Plastics Santa Fe Exports	Bernalillo Santa Fe	\$83,500
Sandia	<b>Fluid Dynamics Modeling of the Tucumcari Methane Production Plant</b>	The Labs provided technical assistance by using multiphysics modeling that included computational fluid dynamics modeling, biological modeling, and chemistry to address three items: 1) quantifying non-Newtonian fluid, bubble dynamics, heat transfer, and multi-phase flow; 2) adding bacterial modeling and chemistry into item 1); and 3) creating applied models to address process issues.	Phillip Box Farms R & P Farms Rancho Alma Linda Tucumcari Bio-Energy Company Tucumcari Mountain Cheese Factory	Quay	\$98,000
Los Alamos	<b>Green Chemical</b>	The Lab evaluated feasibility of creating a genetic transformation system for prairie cordgrass (PCG) with the goal of improving the PCG genome assembly and completing the annotation critical for peer reviewed publication.	Aromaland Eldorado Biofuels, LLC Mar Oil & Gas Corporation Mountain Vector Energy Santa Fe Brewing Company, Inc.	Sandoval Santa Fe	\$99,000
Los Alamos	<b>Innovation of Micro-Needling</b>	The Lab established proper techniques for maintaining the medium and skin samples in order to test the device and protocols.	Divine Beauty Gabuca Salon, LLC Marcella Bilvado	Bernalillo Dona Ana Santa Fe	\$49,500
Sandia	<b>Livestock Ice-Melter Evaluation</b>	The Labs provided technical assistance on pilot system installations and design and performance optimization for livestock water tank heating using solar energy to minimize ice formation.	McKenzie Land & Livestock Company Milagro Ranch Resources, Inc. (MRRRI) Remote Well Solutions, LLC	Guadalupe Otero Torrance	\$59,000
Sandia	<b>Long Range Bomb Detection Using Polarized Radar</b>	The Labs provided software upgrades and consultation in implementing a bomb detection device that utilizes radar signatures to determine the presence of IED materials hidden under clothing. The goal was to increase the range of the detection from 3 m to 30 m and increase the number of targets that can be scanned in an hour.	APPI, Inc. Counter Terrorism Consulting Indelible Enterprises, LLC McLemore Enterprises, LLC R3 Technologies, LLC The MacAleese Companies, Inc. dba Safe Zone Systems Wind Mountain Research Associates	Bernalillo Dona Ana	\$78,500
Los Alamos	<b>Medical Device Testing and Production</b>	The Lab conducted control testing to determine device functionality, collected and analyzed data from control testing, and conducted experiments with drugs in the device.	Creative-33 Gutierrez-Lara Law Group, LLC Pivotal Biotech, LLC RJ Welter BD&L Global, LLC RMRV Respiratory Consultants	Bernalillo Dona Ana	\$88,500

# LEVERAGED PROJECTS CONTINUED

PROJECT	DESCRIPTION	BUSINESS PARTICIPANTS	COUNTIES	FUNDING	
Sandia	<b>New Antibiotics and Autophagy Drugs for TB and other Catastrophic Diseases</b>	The Labs designed and performed advanced microscopy and biochemical assays to 1) characterize new, proprietary autophagy stimulants in a reporter cell line; 2) measure the ability of a new, proprietary antibiotic class to kill <i>M. bovis</i> , a tuberculous surrogate; 3) Identify potential intercellular drug binding sites; and 4) determine the efficacy of the most promising antibiotic-autophagy drug combinations in a TB model system.	Avisa Pharma, Inc. Biophagy, Inc. Hyperimage Solutions Omphalos Bioscience, LLC	Bernalillo Sandoval Santa Fe Torrance	\$69,000
Sandia	<b>Novel Coated Glass Bead and Collection Efficiency</b>	The Labs used the beads provided by the requestors to pack multiple sorbent tubes for each type of bead, and determine the capacity and breakthrough volume for each tube for a variety of different VOCs.	Defiant Technologies, Inc. Michroma	Bernalillo	\$20,000
Los Alamos	<b>Penasco Power Cooperative</b>	The Lab did an assessment of renewable energy feasibility by collecting metered data and conducting water flow measurement tests on the land around the companies. Other work included estimates of maximum capacity and energy, a phased system build-out plan, and a potential habitat impacts overview.	Double N Ranch George R. Dreher Ranch Muniz Ranch Ortiz Ranch Victor Muniz Ranch	Taos	\$58,500
Los Alamos	<b>Post-Surgical Recovery Clothing</b>	The Lab completed work in two areas: 1) anti-bacterial protection, pros and cons; and 2) computational algorithms to predict the dimension of the disposable part needed based on the body mass index (BMI) of female patients.	Advanced Arts Design Development dba aadd MARPAC Medical Manufacturing Sangre De Cristo Heart Center	Bernalillo Los Alamos	\$40,000
Sandia	<b>Rope Rescue Systems</b>	The Labs provided testing of 9 mm rope rescue systems and components of these systems at the Drop Tower Facility.	ASK Tower Supply High Desert Technical Rescue Rescue Tactics and Training, LLC Resolution Rescue Rope Guides	Bernalillo San Juan Sandoval	\$45,000
Sandia	<b>Solar Bifacial Modules on a Single Axis Tracker</b>	The Labs conducted field experiments comparing the performance of solar bifacial and standard monofacial modules on a single axis tracker under different mounting and weather conditions.	Affirmative Solutions, LLC / DISC-IT Grill Array Technologies, Inc. Enchanted Machine Works, LLC Golden Rule Holdings dba TCS Industries, Inc. Navarro Machining Salteydogg Metal Fab, LLC Solar Rackworks Vic Brown Sales, Inc. dba VBS Mfg, Inc.	Bernalillo	\$78,500



	PROJECT	DESCRIPTION	BUSINESS PARTICIPANTS	COUNTIES	FUNDING
Sandia	<b>Solid State Tissue Equivalent Radiation Dose (SSTED) Detector</b>	The Labs conducted radioactive testing using gamma radiation as well as narrow and wide beam resolution x-ray sources to assist in refining the SSTED design and demonstrating performance under various radiation exposures. Device response consistently tracked against independent concurrent measurements. These tests further prove the RDS concept. Similar testing with neutrons is now required to support the fundraising necessary to advance the SSTED Detector to prototype development and full commercialization.	Noel Savignac Consultants nStone Corporation Radiation Detection Solutions (RDS), LLC Sigma Science Testudo Engineering	Bernalillo Los Alamos Torrance	\$68,500
Sandia	<b>Systems-Level Assessment of NM's Transmission Infrastructure</b>	The Labs modeled the state of New Mexico's electricity transmission system and generation asset composition. The adequacy of the transmission system in the state was analyzed for possible scenarios as determined by the companies.	Assurance Engineering David Breecker Associates, Inc. Paradise Power Company, Inc. dba PPC Solar Reineke Construction Renewable Energy Ventures, LLC	Bernalillo Rio Arriba Taos	\$61,000
Sandia	<b>UAV Inspection Arrays for Wind Power Systems</b>	The Labs developed tools for drone-deployed inspection and disposition of wind blade damage. LiDAR sensors, coupled with Sandia aerodynamics models of energy losses with respect to leading edge erosion, were used to develop cost-benefit models about the optimal time to make repairs on these issues. The Labs developed wind blade specimens with engineered flaws to enable the requestors to train automated damage disposition models.	Emerging Technology Ventures, Inc. Redhouse Additive Manufacturing Robotic Technology Solutions Systems Technology Solutions, LLC	Otero Sandoval	\$78,500
Los Alamos	<b>VASP Workflow for Alloy Design</b>	The Lab tested the effectiveness of a hardware and software system on the workflow for alloy design, and provided feedback on the necessary fine-tuning of the software for use on high-performance computer clusters.	Absolute Powder Coating, LLC CreativeC, LLC Jacobson Consulting Manufacturing Technologies, Inc.	Bernalillo Los Alamos Sandoval	\$49,000
Sandia	<b>Versatile Platform for Monitoring &amp; Control of Electro-Mechanical Systems</b>	The Labs provided technical assistance on computers, sensors, and actuators with the ability to maintain the automated functionality of the system. The assistance parameters were that the system components be networked, low power, low cost, high-reliability, easily sourced and self-organizing. The system included a user interface, security, and file transfer.	AMENERGY, Inc. CUB, Inc. FarmPod, LLC SolarLogic, LLC	Santa Fe	\$78,000
Los Alamos	<b>Watershed Restoration from Wildfire</b>	The Lab collected data from geochemical sampling, analyzed stable isotope data, and analyzed pre-treatment geochemistry and isotopes.	Earth Analytic, Inc. Global Conservation Assistance Keystone Restoration Ecology, Inc.	Santa Fe	\$60,000

# INDIVIDUAL PROJECTS

## **Bernalillo**

@Pay  
3D Glass Solutions  
Advanced Air Vehicles (AAV)  
Advanced Optical Technologies, Inc. (AOT)  
AlbuGierke Environmental Solutions, LLC  
Angstrom Thin Film Technologies, LLC  
Assila, LLC  
Bayotech, Inc.  
Biosafe Defenses, LLC  
Bio-Tec Environmental  
Bogue Machine Company  
Boston Therapeutics  
BrightCores, Inc.  
Captive Group, Inc.  
Castillo-Beyerlein's Counseling & Electronics  
CDS Lighting Studios, Inc.  
CloudSolar  
Cocoa Coffee, LLC  
Continental Machining Company  
Cosant Materials  
Cut and Dry Lumber Company, LLC  
Damage Control AthletiX  
Easy Lifts, LLC  
El Encanto, Inc. dba Bueno Foods  
Electrodynamic  
Energy Analyst, LLC  
Energulse, Inc.  
Enthentica, Inc.  
Equipment Specialties Company, Inc.  
Eric Archuleta, LLC  
Estech Global  
Eternal Stone  
EXHIB-IT!  
Fire Instrumentation Research, LLC  
Fortitude Machine and Mold, LLC  
FreeRange-FRtoken

Gruet Winery  
Guardian Sensors, Inc. fka Sentient Business Systems, Inc.  
Heelstone Proprietary, LLC  
HR Efficient  
Ibex Aegis  
IC Tech Incorporated  
IDEAS Engineering & Technology, LLC  
Industrial Water Engineering  
Inspyrd Products Corporation  
Jaguar Precision Machine Corporation  
Kaehr Corporation  
Kenneth Ingham Consulting, LLC  
LAD Engineering  
Los Poblanos Historic Inn & Organic Farm  
Lotus Leaf Coatings, Inc.  
LoudHailer  
Machining Solutions, LLC  
Management Sciences, Inc.  
MB Solutions, LLC dba SANesuite  
Milaine Jewelers, Inc.  
MyLens, Inc.  
Nangeroni Design  
New Mexico Sabor, LLC  
OGB Architectural Millwork, Inc.  
Optisource R&D, LLC  
OptiSource, LLC  
Parental Values, LLC  
Passages International, Inc.  
Pastian's Bakery Enterprises  
PJ Woodlands, LLC  
Precision Fabrication, Inc.  
Precision Solar Technologies Corporation  
Pure Water Technologies, LLC  
ReGen Technology, LLC fka SoilCo, LLC  
RingIR, Inc.

Roberta, LLC  
aka Enchanting Soap Collections, LLC  
Saturday Farm Company & Goods  
Sentient Sensors, LLC  
Snugglecubs Cookies  
Sombra Cosmetics, Inc.  
Southwest Pattern Works, Inc. / Southwest Composite Works  
Southwest Sterilizers, LLC  
TEAM Technologies, Inc. fka TEAM Specialty Products  
Thermogenics, Inc.  
Theta Plate, Inc.  
Think Ubiquitous, LLC  
ThriveMO, LLC  
Tic Tac Grow, LLC  
US Hydrants, LLC fka Humble Hydrant Operations, LLC  
Vamco, LLC  
VanDevender Enterprises, LLC  
Voss Scientific  
Winrock Bakery, Inc., The dba Pastian's Bakery  
YeDoma Consultants, LLC

## **Chaves**

Sippy & Opal's Ice Cream Shop & Sweet Treats

## **Curry**

Front Line Equipment Company  
Leslie Candy, Inc.  
Marvin Estes Farms  
Petty and Associates, LLC  
TeePee C, Inc.

## **Doña Ana**

Donohue, Inc.  
FlashAg  
FlashAnalysis  
JM3 Corporation

Kool Armor, LLC  
MagPi Innovations  
Multi-Physics Multi-Scale Computational Modeling, LLC  
RB Designs, LLC  
Reap, LLC  
Scientifica, LLC  
White Sands Research and Developers, LLC

## **Eddy**

CGS Group, LLC  
Taddy Healthcare Services, LLC

## **Grant**

AGMECHTRONIX  
Johnny Benavidez

## **Guadalupe**

Bedford Family, LLC

## **Harding**

Ute Creek Cattle Company

## **Los Alamos**

BioStim, Inc.  
HyPwr, LLC  
RockSmith Precision Machining, Inc.  
Tibbar Plasma Technologies, Inc.  
UbiQD, LLC  
Zhennovate, LLC

## **Luna**

Lagomorph Fencing  
Luna Precision Welding, LLC

## **McKinley**

Advanced Impact Environmental, LLC  
Navajo Spirit Southwestern Wear  
Rhino Health, Inc.

**Otero**

NowClean, LLC  
 Rocky Mountain Aspen  
 Ranch Springs, LLC

**Quay**

T. Mountain Forge

**Rio Arriba**

Black Mesa Winery  
 C4 Enterprises, Inc.  
 Canton Custom  
 Instruments, LLC  
 Freshies of New Mexico, LLC  
 Growing Opportunities  
 Manzanar Los Silvestres

**San Juan**

ABC Canvas, Inc.  
 AIM Construction Services  
 Company, LLC  
 Alpha Bioscience  
 Company, LP  
 Animas Environmental  
 Services, LLC  
 Animas Medical Supply, LLC  
 Aztech Power and  
 Energy, LLC  
 Dr. Herman Four Corners  
 Orthodontics and Dental  
 Gas Analysis Service  
 Glenhasbah Renewable  
 Energy Technologies, Inc.  
 (GRET)  
 HDEnergy Consulting  
 Henry Production, Inc. (HPI)  
 Industrial Cooling  
 Exchanger (ICE)  
 J & T Distributing  
 Jack's Plastic Welding, Inc.  
 Linear Motion 120, LLC  
 Nostrious Designs  
 dba Forte Digital  
 PESCO, Inc.  
 Princess Energy, LLC  
 Quick Carriers  
 dba Hauling Accessories  
 R & T Holdings, LLC

Real Green Building  
 Systems (RGSB)  
 Rejuvenator, The  
 Tethering Ideas  
 Third Axis  
 Trotting On Innovations  
 Valley Mills

**San Miguel**

Montibon Provenance  
 International, Inc.  
 MxRam, LLC  
 Old Wood, LLC  
 TKL, LLC dba Pecos  
 River Cabins

**Sandoval**

Advanced Laser  
 Technologies, LLC  
 Bladewerx, LLC  
 Cordova & Sons Tire  
 Recycling & Manufacturing  
 fka Cordova & Sons  
 Tire Disposal  
 & Recycling  
 Creative LIBS Solutions, LLC  
 Data Center Transitions, Inc.  
 DNM Farms  
 Jemez Hot Springs  
 fka Giggling Springs/  
 Giggling Star, LLC  
 KEWA Resources, Ltd.  
 Mezel Mods  
 Omnius Technology  
 Solutions

**Santa Fe**

Aerblock Enterprises, LLC  
 Apogee Spirulina  
 ASM, LLC  
 BioDirection, Inc.  
 Bonner Design Consultancy  
 Bruins, LLC  
 Chili Line Brewery  
 Chronicle Cremation Designs  
 dba Parting Stone  
 Clearstream  
 Technologies, LLC  
 Compact Fusion Systems, Inc.

Cottonwood Capital  
 Partners II, LLC  
 Earth System Sciences, LLC  
 Earth Traveler Teardrop  
 Trailers, LLC  
 Fault Tolerant Technology  
 Gonzo Farms, LLC  
 Greffen Systems, Inc.  
 Hollowpoint, LLC  
 dba Wicked Edge  
 Sharpeners  
 iBeam Materials, Inc.  
 Labzy, LLC  
 Leaf & Hive, LLC  
 Little Prairie Services  
 Luca Industries USA, LLC  
 Marty's Meals  
 Michael G. Smith  
 Consulting Services, Inc.  
 Molten Salt Solutions, Inc.  
 fka UCL3, Inc.  
 Monarch Waste Technologies  
 New Solutions Energy  
 Corporation (NSE)  
 NM Solar Fund  
 Nomad Systems, LLC  
 NTxBio, LLC  
 Ocean-based Climate  
 Solutions, Inc.  
 OpenEye Scientific  
 Software, Inc.  
 Patrick's Fine Foods  
 Paynes Nurseries  
 & Greenhouses, Inc.  
 PediBioMetrix, LLC  
 Process Art Studio  
 Pure Circle Recycling  
 Rachel Wood Consulting  
 Rader Awning  
 & Upholstering, Inc.  
 Rosscoe's Outfitters, LLC  
 S. Silber & Associates, LLC  
 Santa Fe Quantum Solutions  
 Sceery Outdoors, LLC  
 Sigma Labs, Inc. dba B6  
 Sigma, Inc.  
 fka Beyond6 Sigma  
 Solstar Energy Devices, LLC

STAR Cryoelectronics, LLC  
 Stargazer Kombucha  
 dba Kombucha X  
 Taiga Products  
 Tumbleroot Brewery  
 & Distillery  
 Twist Resist  
 VOx Diagnostics, LLC  
 Woodruff Scientific, Inc.

**Sierra**

Hot Springs Transit, LLC  
 St Cloud Mining  
 Company, Inc.

**Socorro**

EFX Energy Technologies, LLC  
 Solaro Energy, Inc.  
 Space Sciences Corporation

**Taos**

Beyond Laundry, LLC  
 Blue Feather Naturals, LLC  
 Diamond Sow Garden  
 Earthtones  
 George R. Dreher  
 Lock on Designs, LLC  
 Musicode Innovations  
 Private Label  
 Select, Ltd. Company  
 Shrub Life Foods, LLC  
 Taos Bee Flower  
 Company, LLC  
 Taos County  
 Community Distillery  
 Xander, LLC

**Torrance**

Romero's Heating  
 and Cooling

**Valencia**

ABO Viejo Investment, LLC  
 Accurate Machine  
 & Tool Company, Inc.  
 P18 Solutions  
 Sisneros Bros. Mfg., LLC  
 TBE CrossFit

# INNOVATION CELEBRATIONS

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Projects from 2018 that achieved outstanding innovations through NMSBA were honored at Innovation Celebration Award events in 2019.

One leveraged project received the *Honorable Speaker Ben Luján Award for Small Business Excellence* for demonstrating the most economic impact. Rhino Health is moving forward with building a nitrile glove plant in New Mexico, investing more than \$30 million in production facilities that are expected to create up to 350 new jobs.

In addition to honoring NMSBA participants, the events provided an opportunity for small businesses, elected officials, local economic development representatives, and community leaders to network and learn what NMSBA offers to help businesses grow.



**RHINO HEALTH**

# ACKNOWLEDGEMENTS

- Thank you to all the small businesses for participating in NMSBA and 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 and expanding the *Laboratory Partnership with Small Business Tax Credit Act*, effective July 1, 2019.
- Thank you to the Advisory Council for their leadership, advice, and guidance in support of NMSBA.

**Nyika Allen**  
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- Thank you to the Contract Project Representatives for their evaluations and input on leveraged project proposals.

**Christos Christodoulou**  
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- Thank you to the Emeritus Advisory Council members— Jim Brockmann, Mike Byrnes, John Chavez, Naomi Engelman, David Griscom, Steven Hernandez, Terrence Kamm, Terry Lombard, James Manatt, Griselda Martinez, David Meurer, Raymond Mondragon, Vince Murphy, Kim Sanchez Rael, Michael Roach, Suzanne Roberts, Robert Sachs, and Patrick Vanderpool—for their continued championing of NMSBA.

- And a final thank you to the Staff who work every day to ensure the success of NMSBA.

**Sharon Evans**  
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Thank you to everyone who  
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**NMSBA**

Los Alamos National Laboratory  
Sandia National Laboratories

*Solving New Mexico's Small Business Challenges*

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