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# UNM's Science and Technology Corporation: The Impact of Start-Up Companies

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Bureau *of* Business &  
Economic Research

**UNM'S SCIENCE AND  
TECHNOLOGY CORPORATION:  
THE IMPACT OF START-UP  
COMPANIES**

January 2011



## **ACKNOWLEDGEMENTS**

First and foremost, we acknowledge the companies that contributed to this analysis. Without their participation, this analysis would have been impossible. We thank Lisa Kuuttila and the entire staff at the Science and Technology Corporation at the University of New Mexico for their assistance and input throughout the process. We also thank Dr. Julia Fulghum, Vice President for Research at the University of New Mexico, and Kevin Stevenson at the Office of the Vice President for Research for encouraging us to proceed with this analysis. Thanks go to Jessica Bloom for assisting in creating the survey instrument and Doleswar Bhandari for his assistance computing the impact numbers. Finally, thanks go to Dr. Lee Reynis, Director at the Bureau of Business and Economic Research, for overseeing this project from inception to completion.

Michael O'Donnell  
Bureau of Business and Economic Research  
University of New Mexico

## EXECUTIVE SUMMARY

The University of New Mexico's Science & Technology Corporation (STC) is a nonprofit corporation formed for the purposes of protecting, commercializing and transferring faculty inventions and university patents and is a vital tool in the economic development of a high-tech industry in New Mexico.

### Economic Impact of STC Start-ups (2009 dollars)

	<b>Direct Effect</b>	<b>Indirect Effect</b>	<b>Induced Effect</b>	<b>Total Effect</b>
<b>Output</b>	\$9,448,892	\$3,310,066	\$5,319,260	\$18,078,217
<b>Employment</b>	88	25	49	162
<b>Labor Income</b>	\$5,827,835	\$1,089,426	\$1,616,043	\$8,533,304

Source: UNM-STC; BBER, using IMPLAN

STC has a portfolio of inventions and patents and is currently actively servicing sixteen start-up companies in New Mexico. These companies have:

- Attracted over \$12.4 million in venture capital money to the state since 2004;
- Had sales of \$7.0 million in 2009;
- Paid \$5.8 million in salary and benefits in 2009;
- 88 full-time, part-time and contract employees with average compensation of \$66,225, well above the New Mexico average.

The amount of venture capital that has been attracted to the state in 2009 and sales in 2009 has yielded an indirect impact on the state of:

- \$3.3 million in additional economic activity;
- 25 full and part-time jobs;
- \$1.1 million in compensation.

The expenditures of the employees of the start-ups have yielded an induced impact of:

- \$5.3 million in additional economic activity;
- 49 full and part-time jobs;
- \$1.6 million in compensation.

The start-ups are in industries that represent:

- 5% of the New Mexico economy;
- 4% of New Mexico employment;
- 7% of all of New Mexico compensation;
- 176% of the average New Mexico compensation.

Nearly all of STC's technologies awaiting licensing are in industries with above average compensation, making STC a driver for good jobs for New Mexicans

## UNM's Science and Technology Corporation: The Impact of Start-up Companies

and an effective conduit not only for UNM research but also UNM graduates who want to enter high-tech fields.

## STC TECHNOLOGY COMMERCIALIZATION

The Science and Technology Corporation (STC) asked the Bureau of Business and Economic Research (BBER) to conduct a study of the economic impact of start-up companies using STC technologies on the economy of New Mexico. BBER conducted a similar analysis in 2004 and is available on the STC website (<http://stc.unm.edu/about/metrics.php>). This analysis updates the 2004 study and emphasizes the impact of high-tech start-up companies that have had a relationship with STC from 2004 to the present. Of the 16 companies included in the survey, 12 are headquartered in New Mexico. Nevertheless, all companies conduct operations within New Mexico. Table 1 shows the relevant companies along with start-up date and a short company description.<sup>1</sup>

**Table 1: STC Start-ups in New Mexico**

<b>Company Name</b>	<b>Date of Start-up</b>	<b>Company Description</b>
AVANCA	2004	Medical devices and syringes
Avisa Pharma	2010	Breath tests and diagnostics for pneumonia and cystic fibrosis
Azano Pharmaceuticals	2006	Protein development to reduce chronic kidney inflammation
CoMet Solutions	2003	Computational modeling toolkit for engineering
Intellicyt	2006	Cell screening and analytical devices
K&A Wireless	1999	Wireless video transmission devices
Lotus Leaf Coatings	2010	Water-repellent coatings
MesoSystems (acquired by ICX)	2000	Airborne bio-safety and security products
Nanocrystal	2007	Nanowire light emitting diodes
nanoMR	2007	Diagnostic medical devices to detect bloodstream infection
ProteaSure	2010	Non-invasive, proteomic diagnostics and screenings
ProtoHIT	2009	Analytical tools to improve workers' compensation clinics
Quatros	2007	Drug development
Respira Therapeutics (Cottonwood Tech Fund)	2010	Drug delivery devices (seed stage venture investor)
SK Infrared	2009	Infrared camera devices
ThermoDynamic Films	2008	Thin-film heat switches and thermodynamic research

Source: UNM-STC; Company surveys and websites

The level of STC's involvement varies from company to company. Some of the start-ups simply license the technology from STC and obtain financing and venture capital on their own. Others have relied on STC's expertise in writing business plans, providing university resources and setting up shop. A final note is that the companies listed in this study are considered start-ups by STC and not necessarily the company.

A simple accounting of STC's direct impact on the state of New Mexico compiles the number of jobs, the amount of payroll, the level of sales and the amount of outside venture capital attracted to the state.

<sup>1</sup> Detailed company descriptions are available in the appendix.

**Table 2: Direct Impact of Start-ups**

Millions of 2009 dollars except for employment

<b>Employment</b>	88
<b>Labor Income</b>	\$5.8
<b>Sales</b>	\$7.0
<b>Venture Capital (since 2004)</b>	\$12.4

Source: Company surveys

The analysis in this report is composed of five sections. The first section describes the methodology used, including a basic description of input-output modeling and software. The second section uses the amount of venture capital received by each company, each company's sales and company compensation (in 2009) to determine the direct economic impact of STC start-ups. From this data, indirect and induced impacts are estimated. The third section shows the industrial sectors for which the STC start-ups belong and the corresponding levels of output, employment and compensation in those industries in New Mexico. The fourth section shows STC's available, but not yet licensed technologies. These technologies are matched against existing industrial data so that industry output, employment and compensation may be ascertained. The final section (appendix) provides a detailed description of each company. These descriptions were obtained from company surveys and, in some cases, company websites.

### **Methodology**

The data presented here is either industrial in nature or in aggregate to protect the confidentiality of the companies who have provided information. The data was compiled from surveys, NM Department of Labor data, Bureau of Economic Analysis data and various proprietary data sources. Each company was sent an online survey with follow-up phone calls. Some of the companies are still in the early stages of viability and so have neither sales nor employees while others have matured into revenue-generating employers.

Using an input-output model, appropriate multipliers for the indirect and induced effects can be developed that will show how the production in a particular industry affects the rest of the regional economy. A standard input-output model measures the interactions amongst hundreds of industries using the Bureau of Economic Analysis's "Make and Use" tables.<sup>2</sup> Each industry in an economy makes a certain amount of goods or services that are used by other industries, purchased by institutions (households, government, etc.) or exported outside of the region of analysis. Additionally, each industry uses as inputs goods and services from other industries as well as purchases (labor) inputs from

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<sup>2</sup> The BEA produces these tables as part of their Regional Economic Information Service (REIS) and updates them every five years.

households and imports from outside the region. These transactions create *indirect* effects as goods producers and service providers demand various subsidiary goods and services in order to complete production. Indirect effects, therefore, account for all successive rounds of industrial spending required to create a good or provide a service. The transfers to institutions (including households via salary and compensation) create *induced* effects as those institutions spend income on goods and services in the region. These transactions are assembled mathematically to determine the multiplier effect, or the resulting impact on a particular economic variable with the introduction of an additional unit of that variable into the system.<sup>3</sup>

For this study, IMPLAN 3.0 (IMPLAN) was used to determine the multipliers.<sup>4</sup> IMPLAN is a regional economic modeling and impact analysis application that works with a proprietary New Mexico input-output database using 2007 data with North American Industry Classification System sectors. IMPLAN calculates how much of any given expenditure stays in-state and traces the economic impact on New Mexico industries. The software takes into account the fact that some output (venture capital plus revenues) is “leaked” out of the state by way of domestic and international trade. This is particularly important for high-tech industries as they are likely to be engaged in interregional trade. IMPLAN is widely used in performing economic impact analyses. BBER has validated IMPLAN results for New Mexico in other studies, where both IMPLAN and BBER’s FOR-UNM model have been used to estimate economic impacts.

### **Economic Impact**

An important characteristic of high-tech start-up companies is their ability to draw venture capital investment dollars to the state that would otherwise be invested elsewhere. Since 2004, STC companies have drawn \$12.4 million to the state from venture capitalists who invest nationally and internationally. These funds are typically spent on infrastructural investment, such as investment in plant and equipment, preparing the products for the marketplace and compensation. While most of the start-ups are still in the development phase, some of them have begun to generate significant revenues. Sales revenue generated by STC companies in 2009 totaled \$7.0 million, while total resources available were nearly \$9.5 million (revenue plus venture capital funding). Additionally, STC companies employed 88 full and part-time employees and contractors and offered over \$5.8 million in labor income.

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<sup>3</sup> The multiplier effect can be computed for income, output, employment, value added or any other related metric. For instance, with respect to employment, the multiplier effect provides an estimate of the (fractional) number of jobs that are created by employing another individual in a particular industry.

<sup>4</sup> Minnesota IMPLAN Group, Inc., IMPLAN System (data and software), 1725 Tower Drive West, Suite 140, Stillwater, MN 55982 [www.implan.com](http://www.implan.com)

Because of the various interrelationships between STC companies and local New Mexico suppliers, indirect economic output totaled \$3.3 million. Recall that indirect effects exist because a producer of a good or service is a component of the supply chain and often must purchase inputs of production in order to fabricate its final product. As a result, a demand for the final product creates an indirect demand for the input and therefore creates an indirect, but traceable, economic effect. These inter-industry transactions created 25 jobs and \$1.1 million in labor income.

One way that high-tech start-up companies distinguish themselves from other start-up companies is the relatively high levels of compensation that they provide. Whether it is because of the skills and education required or a premium for the risk of joining an unproven company, the average compensation of the surveyed start-ups was \$66,225, well above the average New Mexico compensation (\$43,283).<sup>5</sup> These high wages create significant induced impacts to the state economy, as earnings are spent by institutions (including households) on goods and services. The demand for these goods and services created \$5.3 million of economic output, 49 full and part-time jobs and \$1.6 million in labor income. Note that the average compensation for workers whose jobs were created through this induced effect (\$33,048) is significantly lower than the average compensation for workers employed by STC start-ups. This is due to the fact that the types of goods and services demanded by households tend to be from relatively lower-paying industries, such as retail sales, restaurants, etc., and those industries are relatively less likely to provide compensation in addition to base wage or salary.

Nevertheless, the combination of the direct, indirect and induced effects created a positive economic impact on the New Mexico economy of over \$18 million in output, 162 jobs and over \$8.5 million in labor income. Table 3 shows the detail of the direct, indirect, induced and total effects.

**Table 3: Economic Impact of STC Start-ups**

2009 dollars except for employment

	<b>Direct Effect</b>	<b>Indirect Effect</b>	<b>Induced Effect</b>	<b>Total Effect</b>
<b>Output</b>	\$9,448,892	\$3,310,066	\$5,319,260	\$18,078,217
<b>Employment</b>	88	25	49	162
<b>Labor Income</b>	\$5,827,835	\$1,089,426	\$1,616,043	\$8,533,304

Source: UNM-STC; BBER, using IMPLAN

<sup>5</sup> The average New Mexico compensation figure was obtained from the Bureau of Economic Analysis. Included are wage and salary disbursements, supplements to wages and salaries (i.e. employee benefits) and proprietors' income. In 2009, total compensation was approximately \$46,544,650,000. Total wage and salary employment and proprietors employment was 1,075,339. Dividing total compensation by total employment elicits an average compensation of \$43,283.

### Industry Analysis

One way to assess STC's role in economic development in the state is by looking at the industries for which the start-up companies belong. Table 4 shows each start-up company's name along with appropriate NAICS code and short industry description. The following columns provide New Mexico-specific industry data on sales, employment, compensation and output.<sup>6</sup> Notice that several of the companies have the same NAICS code, and thus show the same industry data. To reiterate: the data shown in Table 4 is for the entire industry and not company specific data.

**Table 4: STC Start-ups with New Mexico NAICS Industry Information<sup>7</sup>**  
Millions of 2009 dollars except employment

Company Name	NAICS	Industry Description	Industry Sales in NM millions	Industry Employment in NM	Industry Compensation in NM millions	Average Industry Compensation in NM	% of NM Output
AVANCA	339110	Surgical and Medical Instrument Manufacturing	121	440	35	\$79,827	0.15%
Avisa Pharma	339112	Surgical and Medical Instrument Manufacturing	121	440	35	\$79,827	0.15%
Azano Pharmaceuticals	541712	Research and Development in the Physical, Engineering, and Life Sciences	4,157	31,522	2,364	\$74,993	5.08%
CoMet Solutions	541511	Custom Computer Programming Services	247	2,439	133	\$54,524	0.30%
Intellicyt	334516	Analytical Laboratory Instrument Manufacturing	6	16	1	\$81,250	0.01%
K&A Wireless	334300	Audio and Video Equipment Manufacturing	138	190	10	\$52,715	0.17%
Lotus Leaf Coatings	541712	Research and Development in the Physical, Engineering, and Life Sciences	4,157	31,522	2,364	\$74,993	5.08%
MesoSystems (acquired by ICX)	541710	Research and Development in the Physical, Engineering, and Life Sciences	4,157	31,522	2,364	\$74,993	5.08%
Nanocrystal nanoMR	334413	Semiconductor and Related Device Manufacturing	1,523	5,289	557	\$105,361	1.86%
	339110	Surgical and Medical Instrument Manufacturing	121	440	35	\$79,827	0.15%
ProteaSure	541710	Research and Development in the Physical, Engineering, and Life Sciences	4,157	31,522	2,364	\$74,993	5.08%
ProtoHIT	511210	Software Publishers	247	2,439	133	\$54,524	0.30%
Quatros	541712	Research and Development in the Physical, Engineering, and Life Sciences	4,157	31,522	2,364	\$74,993	5.08%
Respira Therapeutics (Cottonwood Tech)	339110	Surgical and Medical Instrument Manufacturing	121	440	35	\$79,827	0.15%
SK Infrared	541712	Research and Development in the Physical, Engineering, and Life Sciences	4,157	31,522	2,364	\$74,993	5.08%
ThermoDynamic Films	541710	Research and Development in the Physical, Engineering, and Life Sciences	4,157	31,522	2,364	\$74,993	5.08%

Note: Some technologies are cross-listed; Source: UNM-STC & BBER, using IMPLAN

Table 5, below, compiles the data from Table 4 in an effort to show how the represented industries compare to the overall New Mexico economy.<sup>8</sup> The highlighted row, "All Listed Industries," aggregates the data for all of the industries listed in Table 4 while excluding entries that appear more than once. This is done to ensure that an industry is only counted once.

The industries for which the companies belong contribute 5% to the New Mexico economy, employ 4% of the workforce and comprise approximately 7% of all paid compensation in New Mexico. From this data, it is clear that these relatively small industrial sectors are highly productive and offer a non-trivial amount of employment. Even more enlightening, however, is the last column which shows the relatively high average compensation for workers in the represented

<sup>6</sup> Again, compensation refers to wage and salary disbursements, supplements to wages and salaries (i.e. employee benefits) and proprietors' income.

<sup>7</sup> The source for this table is IMPLAN and may not match exactly the employment figures published by the NM Department of Labor.

<sup>8</sup> Industry-specific data was obtained from IMPLAN. Data pertaining to the entire state was obtained from 2009 Bureau of Economic Analysis wage and employment data.

industries compared to the average salary for workers in New Mexico. In the represented industries, average salaries of \$76,380 are more than 76% higher than the New Mexico average of \$43,283. This translates into significant induced economic impacts as employees spend their earnings in the local economy.

**Table 5: STC Start-ups with New Mexico NAICS Industry Information – Aggregate**

Millions of 2009 dollars except employment

	Total Industry Sales	Percent of New Mexico Output	Total Industry Employment	Percent of New Mexico Employment	Total Industry Compensation	Percent of Total Compensation	Average Total Compensation
	millions				millions		
<b>All Listed Industries</b>	6,439	5%	42,334	4%	3,234	7%	\$76,380
<b>All Industries in New Mexico</b>	125,005	100%	1,075,339	100%	46,544	100%	\$43,283

Source: Bureau of Economic Analysis; UNM-STC & BBER, using IMPLAN

### Available Technologies

In addition to the technologies currently being licensed by the start-ups, there is an array of engineering & physical-sciences and life-sciences technologies that are awaiting entrepreneurs. Table 6 shows the available technologies as of 2011 along with the number of specific technologies within each general technology category. In addition, an effort was made to match each general technology type with appropriate NAICS codes in order to obtain IMPLAN generated industry information. Note that figures in Table 6 may not exactly match government agency data because the software uses a variety of sources to generate results.

It is also important to note that STC has increased its technology portfolio over the last several years and is positioned to provide an even greater array of technologies to entrepreneurs. In 2004, when BBER conducted a similar analysis, STC had 98 engineering & physical-sciences technologies and 59 life-sciences technologies available. Currently, STC has available 295 engineering and physical-sciences technologies and 149 life-sciences technologies, an increase of available technologies of 201% and 152%, respectively.

**Table 6: STC Available Technologies with NM Market Information**  
Millions of 2009 dollars except employment

Technologies	# in Portfolio	% of Total	% of Group	Implan Sector(s)	NAICS Code	Industry Sales in NM millions	Industry Employment in NM	Industry Compensation in NM millions	Average Industry Compensation in NM	% of NM Output
<b>Engineering &amp; Physical Sciences</b>	<b>295</b>	<b>66%</b>	<b>100%</b>							
Computer Technologies and Algorithms, Circuit Design and Signal Processing	34	8%	12%	Custom computer programming services	541511	247.1	2,439.3	133.0	\$54,524	0.20%
Environmental Engineering and Hazardous/Radioactive Waste Technologies	17	4%	6%	Environmental and other technical consulting services	541620	232.3	1,896.1	103.5	\$54,586	0.19%
Lithography, Semiconductor Fabrications and Electronic Materials	58	13%	20%	Semiconductors and related device manufacturing	334411	1,531.9	5,288.50	557.2	\$105,361	1.23%
Materials, Chemistry and Chemical Engineering	115	26%	39%	Scientific research and development services	541710	4,156.5	31,521.8	2,363.9	\$74,993	3.33%
				Other basic inorganic chemical manufacturing	325181	108.2	174	31.1	\$178,736	0.09%
Mechanical Engineering and Miscellaneous Devices	26	6%	9%	Semiconductors and related device manufacturing	333295	1,531.9	5,288.50	557.2	\$105,361	1.23%
				Scientific research and development services	541710	4,156.5	31,521.8	2,363.9	\$74,993	3.33%
Optoelectronics and Lasers	45	10%	15%	Optical instrument and lens manufacturing	333314	42.5	166.1	15.7	\$94,521	0.03%
<b>Life Sciences</b>	<b>149</b>	<b>34%</b>	<b>100%</b>							
Compounds/Other Therapeutic Agents and Methods	58	13%	39%	Pharmaceutical and medicine manufacturing	325411	286.7	499.5	60.9	\$121,922	0.23%
				Other basic organic chemical manufacturing	325191	96.3	42.5	7.5	\$176,471	0.08%
Diagnostic Testing	38	9%	26%	Other ambulatory health care services	621910	1,706.9	12,575.50	639.0	\$50,813	1.37%
Medical Devices	14	3%	9%	Surgical and medical instrument manufacturing	339112	120.6	439.7	35.1	\$79,827	0.10%
Other Assay Methods and Research Tools	39	9%	26%	Scientific research and development services	541710	4,156.5	31,521.8	2,363.9	\$74,993	3.33%

Note: Some technologies are cross-listed; Source: UNM-STC & BBER, using IMPLAN

Table 6 shows that the average compensation in many of the IMPLAN (industry) sectors is high and that the industries contribute a non-trivial volume of output in New Mexico. However, with the exception of the “% of NM Output” column, Table 6 does not indicate how the listed industries compare to the overall New Mexico economy. Therefore, Table 7 is included to show how the listed industries compare to the New Mexico economy in sales, employment, total industry compensation and average compensation in aggregate.<sup>9,10</sup>

**Table 7: STC Available Technologies with NM Market Information – Aggregate**  
Millions of 2009 dollars except employment

	Total Industry Sales millions	Percent of New Mexico Output	Total Industry Employment	Percent of New Mexico Employment	Total Industry Compensation millions	Percent of Total Compensation	Average Compensation
<b>All Listed Industries</b>	12,643	10%	55,043	5%	4,504	10%	\$81,829
<b>Total For New Mexico</b>	125,005	100%	1,075,339	100%	46,544	100%	\$43,283

Source: Bureau of Economic Analysis; UNM-STC & BBER, using IMPLAN

As table 7 shows in the highlighted row, the industries for which STC’s technologies most likely apply, produce approximately 10% of all output, employ approximately 5% of all workers and comprise approximately 10% of all paid

<sup>9</sup> Industries listed more than once in Table 6 were counted only once for the purpose of constructing Table 7. This was done in order to prevent double-counting.

<sup>10</sup> As before, compensation refers to wage and salary disbursements, supplements to wages and salaries (i.e. employee benefits) and proprietors’ income. Additionally, industry-specific data was obtained from IMPLAN. Data pertaining to the entire state was obtained from 2009 Bureau of Economic Analysis wage and employment data.

compensation in New Mexico. Additionally, the average compensation in those industries of \$81,829 is nearly 90% higher than the New Mexico average of \$43,283. Further, most of the industries making up Table 7 are "export" industries meaning that the products and services produced in New Mexico are sold on the larger national and international markets. Therefore, revenues generated by companies in these industries are inflows into New Mexico, where they are in turn spent, to a certain extent, locally on goods, services and employment.

## Appendix

**AVANCA Medical Devices** [www.avancamedical.com](http://www.avancamedical.com)

AVANCA designs, develops, and commercializes disposable procedure and interventional devices that feature cutting-edge form and functionality. AVANCA products are engineered and designed to be highly differentiated and meet the needs of the physician procedure specialist. AVANCA's products satisfy the procedure device market's demand for innovative products that optimize performance, safety and patient care

NAICS Industry: Surgical and Medical Instrument Manufacturing

**Avisa Pharma** <http://avisapharma.com/>

Avisa Pharma is in the process of creating and refining breath test technology for testing and monitoring *Pseudomonas aeruginosa* infections in the lungs of patients with Cystic Fibrosis and Ventilator Acquired Pneumonia.

NAICS Industry: Surgical and Medical Instrument Manufacturing

**Azano Pharmaceutical** [www.azanopharma.com/](http://www.azanopharma.com/)

Azano Pharmaceutical's mission is to develop C-reactive protein (CRP) (Az121) and an anti-inflammatory derivative of CRP (Az175) for the prevention and reversal of nephritis in patients with systemic lupus erythematosus (SLE). The anti-inflammatory mutant of CRP has FcγR specificity that predicts more selective anti-inflammatory activity than that of natural sequence CRP.

NAICS Industry: Research and Development in the Physical, Engineering, and Life Sciences

**CoMet Solutions** [www.cometsolutions.com/](http://www.cometsolutions.com/)

CoMet Solutions' Virtual Prototyping Environment allows manufacturing companies to make more effective use of existing resources, such as software for computer-aided design and engineering, while at the same time reducing the need for physical prototype testing prior to manufacturing.

NAICS Industry: Custom Computer Programming Services

**Intellicyt** [www.intellicyt.com/](http://www.intellicyt.com/)

IntelliCyt Corporation develops and markets innovative high throughput cell screening solutions using flow cytometry technology for drug discovery and life science research. Intellicyt offers innovative products, cell-screening expertise, technological advances and services that make it possible for researchers to handle large-scale cell-based assays faster than previously possible.

NAICS Industry: Analytical Laboratory Instrument Manufacturing

**K&A Wireless**

**[www.ka-wireless.com/](http://www.ka-wireless.com/)**

K&A Wireless is a leading provider of wireless video transmission systems for the first responder market, including fire fighting, law enforcement, defense and security/surveillance companies and personnel.

NAICS Industry: Audio and Video Equipment Manufacturing

**Lotus Leaf Coatings**

**[www.lotusleafcoatings.com](http://www.lotusleafcoatings.com)**

Lotus Leaf Coatings commercializes an environmentally friendly superhydrophobic (water-repellent) coating jointly developed at University of New Mexico and Sandia National Laboratories. The coating may be applied using a variety of methods such as aerosol spraying, dip-coating, spin-coating, or blade casting and it can be produced consistently with extremely low refractive indices as well as optical clarity. Unlike similar coatings it may be used in biological applications.

NAICS Industry: Research and Development in the Physical, Engineering, and Life Sciences

**MesoSystems (acquired by ICX)**

**[www.icxt.com](http://www.icxt.com)**

MesoSystems, acquired by ICX Technologies, designs, develops and markets technologies and products that test the air for bio-hazards.

NAICS Industry: Research and Development in the Physical, Engineering, and Life Sciences

**Nanocrystal**

**[www.nanocrystal.com.tw/](http://www.nanocrystal.com.tw/)**

Nanocrystal is involved in the research and development of nanowire light emitting diodes for solid state lighting. Nanocrystal services high volume markets for lighting applications by offering devices with a more compact and aesthetic design, longer operating lifetime and richer optical spectrum than it's competitors. In addition, its products can result in 50% lower energy consumption and significant energy savings.

NAICS Industry: Semiconductor and Related Device Manufacturing

**NanoMR**

**<http://nanomr.com/>**

NanoMR is developing a diagnostic medical device to detect bloodstream infections to replace blood culture. NanoMR's technology detects and identifies pathogens in less than 2 hours directly from blood samples. Early detection allows appropriate treatment of infected patients, reducing mortality and healthcare costs.

NAICS Industry: Medical Equipment and Supplies Manufacturing

**ProteaSure**

**N/A**

ProteaSure is a life sciences company focused on the development of non-invasive, proteomic diagnostics and screening to meet a clear and unmet clinical need in the early detection of endometrial pathologies. ProteaSure intends to conduct at least its initial product development and further research at UNM through an SRA. ProteaSure looks to conduct additional business as opportunities present themselves.

NAICS Industry: Research and Development in the Physical, Engineering, and Life Sciences

**ProtoHIT**

**<http://protohit.com/>**

ProtoHIT provides integrated service and software to assist Workers' Compensation clinics optimize patient treatment by providing treatment guidelines, managing case information, facilitating communication with the clinic's employers and providing measurement tools to track patient outcomes against treatment options. Some case management tools are also offered. ProtoHIT improves patient outcomes and reduces medical costs by 15% for Workers' Compensation clinics.

NAICS Industry: Software Publishers

**Quatros**

**N/A**

Quatros is a biomedical R&D company that seeks to improve the value of intellectual property developed at UNM and owned by STC, specifically in the area of drug development.

NAICS Industry: Research and Development in the Physical, Engineering, and Life Sciences

**Respira Therapeutics**

**<http://respiratherapeutics.com/>**

Respira Therapeutics, funded by the Cottonwood Technology Fund, is an early-stage product development company focused on pulmonary delivery of therapeutics for respiratory diseases with unmet medical needs.

NAICS Industry: Medical Equipment and Supplies Manufacturing

**SK Infrared**

**<http://www.skinfrared.com/>**

SK Infrared an Albuquerque based high technology company that specializes in research and development of next generation infrared cameras for a variety of government, medical and civilian applications. SK Infrared's areas of expertise include development of infrared detectors and focal plane arrays using Type II InAs/GaSb strained layer super-lattices and nanoscale quantum dots.

NAICS Industry: Research and Development in the Physical, Engineering, and Life Sciences

**ThermoDynamic Films**

**N/A**

ThermoDynamic Films was developed in an effort to commercialize technologies by founders at University of New Mexico and Los Alamos National Laboratories. Specifically, ThermoDynamic Films seeks to exploit the thermodynamic properties of thin-film heat switches for various scientific and commercial purposes.

NAICS Industry: Research and Development in the Physical, Engineering, and Life Sciences

