

Applicant	Partner	Date Awarded	Award End Date	Amount Awarded	Amount Disbursed	Match Amount
<b>Base Realignment</b>						
<b>UND</b>						
Beyond Visual Line of Sight Radar for Unmanned Aerial Systems		3/1/2017	6/30/2019	\$1,212,145.00	\$998,955.00	

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<b>Research ND</b>						
<b>NDSU</b>						
Design and Development a low-cost, high reliability, high accuracy IMU	Axelo Inc.	6/1/2017	8/31/2018	\$103,458.00	\$51,729.00	\$103,500.00
Optimization of the Production of Cyclohexasilaine (CHS) from Trichlorosilaine in Partnership with 3DIcon Corp.	The Coretec Group	7/1/2017	6/30/2018	\$150,000.00	\$75,000.00	\$150,000.00
Additive Manufacturing for Mattress Comfort Customization	Comfort King Mattress Factory	6/1/2017	8/31/2018	\$32,000.00	\$16,000.00	\$32,000.00
Determining Crop Harvest Readiness Using UAV and Thermal Infrared Sensors	IntelinAir, Inc.	11/1/2015	3/31/2018	\$62,291.00	\$62,291.00	\$62,291.00
Development of Wireless Energy Transfer within the Human Body	Boston Scientific Corp	2/15/2016	10/15/2016	\$40,000.00	\$30,348.70	\$40,000.00
Large-scale UAS Data Collection, Processing and Management for Field Crop Management	Elbit Systems of America	4/1/2016	12/31/2017	\$357,546.00	\$355,096.04	\$357,546.00
UAS Sensor Payload Development for Rescue Operations	CYCLOPS Technologies Inc	9/1/2015	9/1/2017	\$291,784.00	\$291,784.00	\$292,864.00
<b>UND</b>						
Physiological and subjective assessment of workload in an air-traffic control environment	Honeywell			\$164,480.00		\$164,480.00
Simulation of Hydraulic Fracturing and Re-frac Operations to Enhance Oil Production from Bakken and Three Forks Formations	McKenzie Energy Partners LLC			\$300,078.00		\$310,875.00
Converting UAS-Acquired Thermal Images into Heat Loss Cost Assessments for Infrastructure Assessment	SkySkopes, Inc.	6/15/2017	8/31/2019	\$431,983.00	\$174,325.00	\$449,079.85
Smart Scale Inhibition for Improved Well Performance in Williston Basin, ND	Creedence Energy Services LLC					
AltaAir: Prevention and Treatment of Pressure Ulcer Using a Smart Seating System	MobiSafe Systems Inc	9/15/2017	9/15/2020	\$178,000.00	\$100,000.00	\$258,000.00

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A Path to a Quantitative Clinical Method for Early Diagnosis of Breast Cancer Based on Cell Mechanics	Lillestol Research LLC	10/9/2018	6/1/2020	\$178,000.00		\$178,000.00
Enabling UAS Operations through support of a UAS Network Infrastructure	Harris Corporation	1/1/2017	12/31/2019	\$500,000.00	\$249,427.00	\$502,956.00
Application of Unmanned Aerial Systems (UAS) to Electric Distribution Infrastructure Damage Assessment and Restoration	Xcel Energy	8/1/2016	6/15/2018	\$499,891.00	\$410,974.00	\$558,498.00
Coherent Backscattering of Cloud Particles	Rosemount Aerospace, Inc	7/1/2016	6/30/2019	\$300,000.00	\$150,000.00	\$300,000.00
Powerline Component Failure Identification – UAS	Minnkota Power Cooperative Inc	6/14/2016	12/31/2018	\$300,000.00	\$150,000.00	\$305,855.00
Evaluation of Commercially Produced Ice Nuclei	Weather Modification LLC	11/1/2016	10/31/2019	\$111,770.00	\$55,885.00	\$111,770.00
Management and Monitoring of Psoriasis and Melanoma Patient Treatment using Smartphones	Spectral Molecular Imaging (SMI) Inc.	1/1/2017	1/9/2018	\$300,000.00	\$36,428.28	\$300,000.00

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<b>Research ND BIO</b>						
<b>UND</b>						
Development of Therapeutic Ig for Influenza A: potential in poultry, canine, and human markets	Avianax LLC	12/1/2015	9/30/2018	\$1,000,000.00	\$400,000.00	\$1,055,850.00
RD&C of Antibody Therapy for Metabolic Stimulation in Animals	Zyme Fast LLC	2/1/2017	1/31/2019	\$1,000,000.00	\$425,000.00	\$1,000,000.00

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<b>Venture Grant Phase I</b>						
<b>NDSU</b>						
A Novel Battery-Less Radio Requency Energy Harvester IC Chip Development for Low Power IoT Applications				\$100,000.00		
Assessing the clinical feasibility and FDA approval pathway for a new antimicrobial bone filling putty		4/1/2017	12/31/2018	\$100,000.00	\$50,000.00	\$0.00
Development of Adaptive Energy-Harvesting Building Envelopes Using Rapidly Renewable Biobased Materials				\$100,000.00		
Development of Low-Cost Portable Embedded Device for Welding Quality Monitoring		5/1/2017	4/30/2019	\$100,000.00	\$50,000.00	\$0.00
Ultra High Density Power Conversion Systems using Gallium Nitride Power Devices		4/1/2017	8/15/2018	\$100,000.00	\$100,000.00	\$0.00
Novel pregnancy test development in mammals				\$100,000.00		
New Renewable Polymers from Plant/Vegetable Oils		1/1/2016	3/31/2018	\$99,989.00	\$99,989.00	\$0.00
A New Design to Improve Life Expectancy of Total Ankle Replacement (TAR)		1/1/2016	3/31/2017	\$99,995.00	\$93,923.47	\$0.00
Tunable Power Amplifier for Smart Phones		2/1/2016	12/31/2017	\$100,000.00	\$95,808.56	\$0.00
Production of Modified Silicon quantum dots for Sensor Applications		11/1/2015	10/31/2016	\$100,000.00	\$99,704.12	\$0.00
Discovery and development new cancer therapeutic drugs via inhibiting D5D and targeting over-expressed COX-2		1/1/2017	8/31/2018	\$100,000.00	\$50,000.00	\$0.00
Development of Intelligent Integrated Networks for Rapid Pipelines Damage Detection and Health Monitoring		6/15/2016	7/31/2019	\$100,000.00	\$100,000.00	\$0.00

**Research North Dakota  
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Development of novel anti-microbial materials for clinical and food processing applications		6/15/2016	12/15/2018	\$100,000.00	\$100,000.00	\$0.00
Assessing the feasibility of a start up business centered on high performance spider silk production		3/1/2016	6/30/2017	\$100,000.00	\$96,385.00	\$0.00
Soy Based Road Dust Suppressant Scale Up and Field Testing		11/1/2016	12/31/2018	\$100,000.00	\$100,000.00	\$0.00
An innovative approach to heal nonunion bone defects in humans		11/1/2016	12/31/2018	\$100,000.00	\$50,000.00	\$0.00
New Sustainable Concrete for North Dakota		11/1/2016	6/30/2018	\$72,250.00	\$75,250.00	\$0.00
Low-Cost Self-Cooling for Microchips Using Advanced Composite Coating		11/1/2016	10/31/2019	\$100,000.00	\$50,000.00	\$0.00
<b>UND</b>						
Detection of Blockage in Petroleum Pipelines		9/1/2017	8/31/2019	\$99,932.00	\$49,966.00	\$0.00
On the Potential Commercialization of Next Generation Ultra High Performance Functional Materials by Smart Manufacturing Methods				\$99,834.00		
Biocompatible Wireless Implanted Dielectric Sensors				\$100,000.00		
An Integrated Software Package for Data Processing, Modeling and Simulation of Unconventional Reservoirs		4/1/2017	3/31/2018	\$100,000.00	\$100,000.00	
Radio Frequency Wireless Power for Industrial Sensors		1/2/2016	12/30/2018	\$100,000.00	\$100,000.00	\$0.00
Development of Remote Patient Monitoring System-Vita WiPs		2/1/2016	10/15/2018	\$100,000.00	\$100,000.00	\$0.00
Continued Development of Commercialization of Quality Characterization Technology for 3D Printing		1/1/2016	12/31/2017	\$99,954.00	\$98,415.76	
Development of Next Generation Agricultural Soil Amendments		7/15/2016	7/14/2017	\$93,661.00	\$92,817.40	\$0.00

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2,3-Butanediol Production via Fermentation, an Alternative Route to Chemical Synthesis, Using Synthesis Gas from Lignite Coal Gasification		8/29/2016	2/28/2019	\$100,000.00	\$100,000.00	\$0.00
Unmanned Aircraft System (UAS) Support to Environmental Assessments for Industry Applications		7/1/2016	6/30/2018	\$99,976.00	\$99,976.00	
Commercialization of Novel Lignin Reinforced Bioplastics by Using Game Changing Additive Manufacturing Practices		7/1/2016	7/30/2019	\$99,852.00	\$99,852.00	
SmartSealz: Pilot/Operator Navigation Augmentation and Physiological Monitoring Headset		7/1/2016	7/1/2018	\$100,000.00	\$100,000.00	\$0.00
Technical and Economic Feasibility Analysis of Next Generation Valley City State University Heating Plant		3/1/2016	2/28/2017	\$99,987.00	\$99,967.85	\$0.00
Graphene-based Near-Infrared Fluorescent Quantum Dots for Biodetection and Bioimaging		2/15/2016	2/14/2017	\$100,000.00	\$99,987.25	\$0.00
Development of A Novel Carbon Adsorbent for Removal of Pharmaceuticals, Herbicides and Other Emerging Contaminants from Drinking Water		1/1/2017	6/30/2018	\$84,890.00		\$0.00

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<b>Venture Grant Phase II</b>						
<b>NDSU</b>						
A New Design to Improve Life Expectancy of Total Ankle Replacement (TAR) - Phase II	Dark Horse Technology			\$50,000.00		
Sensing Earth Environment Directly (SEED) Sensor - Phase II	C2sensor Corporation	5/1/2017	12/31/2019	\$150,000.00	\$75,000.00	\$150,000.00
<b>UND</b>						
Development of Next-generation Agricultural Soil Amendments-Phase II	JTF LLC	6/1/2018	12/31/2019	\$70,000.00		\$70,000.00

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<b>Venture Grant Phase III</b>						
<b>UND</b>						
A Low Cost and Reproducible Synthetic Procedure for Mass Production of Lithium ion batteries	Clean Republic LLC	12/12/2016	6/30/2018	\$148,105.00	\$98,924.50	\$98,883.00