VPRED Update

FY17 & FY18 VPRED Seed Funding *Awarded* Total: $2,820,232

FY17 VPRED Seed Funding Programs Summary:

	Proposals Submitted	Awarded	Total Awarded
Post-Doctoral Research Program	32	10 @ ~$120,000*	~$1,200,000
Early Career Award Program	21	5	$85,607
TOTAL			**$1,285,607**

*$60,000 per year for two years (second year match from college/school)
VPRED $600,000 + College/School match $600,000

FY18 VPRED Seed Funding Programs Summary

	Proposals Submitted	Awarded	Total Awarded
Post-Doctoral Research Program	39	10 @ $120,000*	$1,200,000
Early Career Award Program	32	7	$103,625
Biomedical Health Challenges	10	3 @ $50,000**	$150,000
Energy and Environmental	19	12 @ $2,500	$30,000
Rural Communities	7	5 @ $3,200	$16,000
UAS	18	4	$35,000
TOTAL			**$1,534,625**

*$60,000 per year for two years (second year match from college/school)
VPRED $600,000 + College/School match $600,000
**Includes $25,000 VPRED + $25,000 department match

FY18 VPRED Seed Funding DETAIL:

Total Seed Program Funding Awarded FY18: $1,534,625

VPRED (and UND Alumni Association and Foundation)	$859,625
College/School Matching	$675,000

Matching Funds	**Post-Doctoral**	**Biomedical Health Seed**
Dean Storrs (Arts & Sciences)	$180,000	
Dean El-Rewini (Engineering and Mines	$180,000	
Dean Lindseth (Aerospace)	$60,000	
Dean Wynn (Medicine and Health Sciences)	$180,000	
Department of Biomedical Sciences		$50,000
Department of Pathology		$25,000

Total Investment in computational infrastructure in the past year (storage, cores): $910,000

Grand Challenge Seed Programs

The number of proposals submitted for the Grand Challenge seed programs, the winning proposals including PI's and titles of the proposals.

Biomedical Health Challenges Seed Awards:

Kumi Nagamoto-Combs (PI) SMHS, Pathology $50,000
Suba Nookala, Biomedical Sciences
Match: Department of Pathology
Food-allergy-induced behavioral abnormality and functional modifications in the brain

Saobo Lei SMHS Biomedical Sciences $50,000
Match: Department of Biomedical Sciences
Therapeutic basis of vasopressin V1a receptor antagonists in anxiety

Archana Dhasarathy SMHS Biomedical Sciences $49,600
Junguk Hur, Biomedical Sciences
Adam Scheidegger, CoBRE Epigenetics Computational Core
Match: Department of Biomedical Sciences
Transcription proteins and mRNA splicing: a novel molecular mechanism influencing cancer progression

Energy and Environmental Seed Awards:

Rebecca Romsdahl, Earth System Science & Policy $2,500
Identifying Strategies Toward Sustainable Energy Transformations

Sima Noghanian, Electrical Engineering $2,500
Jason Jensen, Political Science & Public Admin
Prakash Ranganathan, Electrical Engineering
Legal Consideration in Safe and Secure Radio Frequency Wireless Power Transfer

Surojit Gupta (PI), Mechanical Engineering $2,500
Yun Ji, Chemical Engineering
Foundation of High Impact Sustainable Materials Research Program in University of North Dakota

Risa Madoff, Geology & Geological Engineering $2,500
Proposed Research for Earth Surface Processes and Critical Zone Matters Related to Energy Vulnerabilities Resulting from Climate Change

Will Gosnold, Geology & Geological Engineering $2,500
Kris Keller, Institute for Energy Studies
Bradley Meyers, School of Law
Scott T. Johnson, SysDynX
Williston Basin Geothermal Energy Industry Growth Plan

Maeysam Haghshenas, Mechanical Engineering $2,500
To Establish Microstructure/Mechanical Property/Processing Correlation in Magnesium Nanocomposites: Light Materials of Future
Elizabeth Legerski, Sociology $2,500
Changing Population Dynamics, Community Satisfaction, and Well-being across the Oil Development Life Cycle

Wendelin Hume (PI), Criminal Justice $2,500
Yi-Ping Hsieh, Social Work
Improving the Human Variable in Relation to Energy Cybersecurity

Sheila Hanson, Entrepreneurship $2,500
Regional Small and Family Business Energy & Environmental Sustainability

David Delene, Atmospheric Sciences $2,500
Understanding the Sources and Sinks of Volatile Organic Compounds for a Sustainable Environment and Energy Future

Minou Rabiei, Petroleum Engineering $2,500
Enhancing Regulatory Compliance by Capitalizing on Big Data Analytics and Artificial Intelligence: A Mutually Beneficial Regulators-Industry Collaboration

Daniel Laudal, Institute for Energy Studies $2,500
Bruce Folkedahl, Energy & Environmental Research Center
Robert Wood, Political Science & Public Administration
Kris Keller, Institute for Energy Studies
Brittany Rew, M.S. Candidate in Chemical Engineering
Rare Earth Elements: Understanding the Economic and Environmental Impacts of New Large Scale U.S.-based Production

<u>Rural Communities Seed Awards</u>
Courtney Souvannasacd, American Indian Student Services $3,200

Eric Souvannasacd, Rural Health
Supporting Indigenous Research Capacity

James M Grijalva, School of Law $3,200
Development of an Online Tribal Court Advocate Training Program

Yvonne Jonk, Public Health $3,200
David Schmitz, Family & Community Medicine
Heidi O'Connor, Population Health
Don Warn (NDSU), Public Health
Targeting avoidable hospital admissions & non-emergent ER visits within rural populations

Shawnda Schroeder, Population Health $3,200
Fluoride Varnish Application in Primary Care Settings

Amir Alakaam, Nutrition & Dietetics $3,200
Breastfeeding Support in Rural and Urban Area across North Dakota

<u>UAS Seed Awards</u>

Naima Kaabouch (PI), Electrical Engineering $10,000
Suroji Gupta, Mechanical Engineering
Chris Theisen, UND Test Site
Power Efficient Systems Enabling Beyond Line-of-Sight Small UAS Operations

James Higgins, Aviation $10,000
William Semke, Mechanical Engineering
Nick Wilson, Aviation
"Gannet UASS": Rapid Deployable Air and Water Unmanned Vehicle

Dana Harsell, Political Science & Public Administration $5,000
Thomasine Heitkamp, Nursing
Attitudes and Perceptions of Unmanned Ariel Systems (UAS) in North Dakota

Alena Kubatova, Chemistry $10,000
Frank Bowman, Chemical Engineering
David Delene, Atmospheric Sciences
Steven Hawthorne, EERC
Evguenii Kozliak, Chemistry
James Moe, Aviation
Alex Kubat, Independent Consultant & UAV Operator
Development of Particulate Matter Sampler and Sampling Protocol for UAVs

Post-Doctoral Research Program
The number of proposals submitted to the post doc program, the winning proposals including PI's and titles of the proposals.

Proposals Submitted: 39
Awards: 10
Award Amount: $60,000 per year for two years (second year match from college/school)
Total: VPRED $600,000 & College/School $600,000 = **$1,200,000**

PI	Department	Match
Catherine, Brissette	Biomedical Sciences	SMHS
Exploring Epithelial to Mesenchymal Transitions in Lyme Arthritis Through a Systems Approach		
Othman Ghribi (Co-PI)	Biomedical Sciences	
Donald Jurivich (Co-PI)	Geriatrics	SMHS
Fatty Acid Regulation of Transcriptional Switches Controlling Neuroprotection in Alzheimer's Disease		
Gautham, Krishnamoorthy	Chemical Engineering	CEM
Super-Critical CO2 Cycle Design and Analytics: A Disruptive Technology for North Dakota Lignite Coal Utilization		
Alena Kubatova	Chemistry	A&S
Unmanned Aerial Vehicle Sampling of Carbonaceous Atmospheric Aerosol		
Gretchen Mullendore	Atmospheric Science	JDOSAS
Determination of Regional Convective Detrainment Levels to Improve Convective Parameterizations in Global Weather and Climate Models		
Sergei Nechaev	Biomedical Sciences	SMHS
Transcriptome-wide responses of human cells to heat shock stress analyzed by experimentally informed mathematical modeling.		
Prakash Ranganathan	Electrical Engineering	CEM
Electronic Systematic Corruption Of Remotely-piloted hosTile UAS (ESCORT-UAS.), a Multi-Tier, Rapid Deployment Proximity-Based Counter-UAS System		
Kouhyar Tavakolian	Electrical Engineering	CEM
Towards an Unobtrusive System for Assessing Orthostatic Hypotension and Fall in Parkinson's Disease Patients		
Julia Zhao	Chemistry	A&S
Development of Novel Nanoparticle-Surfactant based Fluid for Enhanced Oil Recovery in Bakken Formation		

Manu	Biology	A&S
	Data-Driven Inference and Modeling of Stem Cell Gene Regulatory Networks	

Early Career Award Program
The number of proposals submitted for the Early Career Award Program, the winning proposals including PI's and titles of the proposals.

Proposals Submitted: 32

Awards: 7

PI			**Amount**
Ali Alshami	Engineering & Mines	Chemical Engineering	$13,196.00
Adam Matz	Arts & Sciences	Criminal Justice	$13,903.00
Deniz Cakir	Arts & Sciences	Physics & Astrophysics	$9,400.00
Mehdi Ostadhassan	Engineering & Mines	Petroleum Engineering	$20,000.00
Minou Rabiei	Engineering & Mines	Petroleum Engineering	$20,000.00
Aaron Kennedy	JDOSAS	Atmospheric Sciences	$9,987.00
Arielle Selya	SMHS	Population Health-MPH	$17,139.00
TOTAL			**$103,625.00**

Alshami: Biomimetic Membrane Separation: Ethanol dehydration using aquaporin based biomimetic membranes
Matz: Risk Assessment Validation Needs of the North Dakota Juvenile Court: An Evaluability Assessment of the Youth Assessment and Screening Instrument (YASI)
Cakir: Novel Materials for Enhanced Thermoelectric Power Production and Energy Storage
Ostadhassan: Nanomechanical Evolution of Organic Matter During Hydrocarbon Generation
Rabiei: A Case-Based Reasoning Approach for Harnessing Big Data in Unconventional Petroleum Projects
Kennedy: Low-Cost Observations of Precipitation in the Atmosphere
Selya: Are E-cigarettes Replacing or Expanding Conventional Cigarette Use in Youth?