

UNLV Research Council
Friday, February 27, 2015
MEETING MINUTES

In Attendance: Bo Bernhard, Brendan O'Toole, Gwen Marchand, John Mercer, Greg Borchard, Anjala Krishen, Erin Hannon, Jennifer Pharr, Sajjad Ahmad, Brad Donohue, Len Jessup, Tom Piechota, Zach Miles, David Paul, Lori Olafson, Robin Toles, Monica Lounsbery, Martin Schiller, Brian Hedlund, Joe Lombardo, Carol Brodie, Calleen Johnson, Kristin Bloomquist, Sue DiBella, and Jill Zimbelman.

1. Welcome President Jessup
 - a. Governor Brian Sandoval; new taxes and new spending
 - b. Tier One Initiative and the UNLV Medical School; economic impact on Nevada
 - c. UNLV Foundation is planning for a Capital Campaign
 - d. Technology Transfer
2. Switch and Dedicated Research Network – Joe Lombardo (handout)
 - a. Current compute resources at UNLV's Supercomputing Center and the dedicated research network were discussed
3. Technology Transfer – Zach Miles
 - a. [Submit non-funded research proposals for commercial sponsored research](#)
 - i. [TTO wants to adjust these proposals to be used as research and development projects for commercial entities](#)
 - b. Economic development/technology transfer departmental training will be offered regarding policies and procedures
 - c. Inventor Portal for Research Disclosures
 - i. Inventors will be able to login, submit online research disclosure forms, and track their intellectual property process.
4. Export Control – Kristin Bloomquist/Lori Olafson (presentation)
 - a. Applicable when:
 - i. The export has a potential military application
 - ii. There are concerns over the destination country/user
 - iii. There are concerns over the end-use(r)
 - b. Deemed Exports:
 - i. Transferring technology or information to a foreign national in the U.S.
 - ii. Providing controlled technology to a foreign person is deemed equivalent to physically exporting the technology to the country of the person's nationality
 - c. If you have any export control questions, please contact Kristin Bloomquist

5. Faculty Opportunity Awards Analysis – Tom Piechota (handouts)
 - a. Provided 2015 FOA submissions breakdown by type, college, and amount requested
 - b. Provided 2012 and 2013 FOA analysis to show investment payout (\$1 to \$5.70) and proposals approved for funding (about 31%)
6. Promoting Research Successes – Sue DiBella
 - a. To increase research news output through institutional messaging, please refer your public relations contacts to Sue DiBella and use her as a resource.
7. Future Agenda Items
 - a. Limited Submission – David Paul (March)
 - b. Office of Undergraduate Research (follow-up) – Liam Frink (April)
 - c. Tier One Planning follow-up) – Nancy Rapoport (April)

Upcoming Meetings & Events

Mar. 12 – UNLV Town Hall, Student Union Ballroom

Mar. 13 – Centers/Institutes Brown Bag Working Group Meeting, SU 205

May 01 – Presidential Inauguration, TBD

Next Meeting: Friday, March 27, 2015, 11:30 a.m. – 1:00 p.m., in SEB 2251

Current Compute Resources at UNLV's Supercomputing Center



Figure 1: UNLV's data center located at the Switch SuperNap

Cherry Creek: 26,000 cores and 16TB of RAM achieving approximately 600 TFlops

- After the upgrade in March 2015, Cherry Creek will be (an Intel approximation until we run LinPack) the 15th fastest machine on the Green500 list and 200th fastest machine on the TOP 500 list. The upgrade and configuration should be accomplished by early March 2015.
- Interconnect: Intel True Scale.
- Cluster Management: Altair PBS Pro.

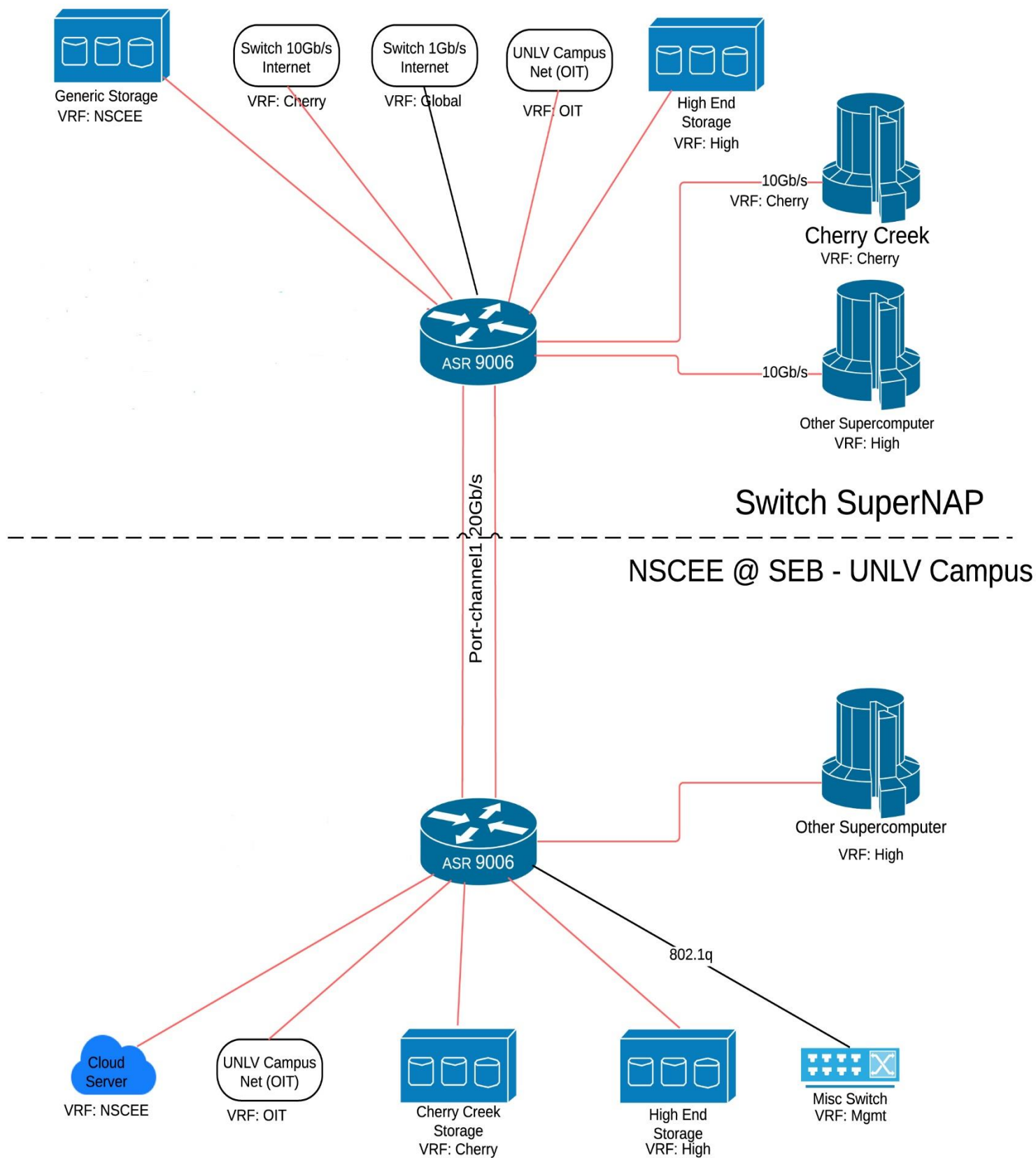
Cray CX1000:

- 2000 cores SMP/GPU/Distributed Compute Environment and 37TB of RAM achieving approximately 40 TFlops.
- Interconnect: QDR Infiniband Cluster fabric achieving 160Gb/Sec bandwidth with Mellanox Connect-X IB (homogenous IB switch and HCA silicon).
- Cluster Management: Altair PBS Pro.

Networking and Communications:

- **Dedicated Research Network**
 - Cisco ASR 9006 achieving 20 Gb/s fiber connectivity to the Internet with a 400Gb/s potential.
 - Optimized for high dense 10G & 100G aggregation
 - IOS-XR and High Availability
 - L2 & L3 Forwarding Architecture
 - Internet2 and National LambdaRail access (OC-192/ Dense Wavelength Division Multiplexing).

UNLV's Dedicated Research Network (Science DMZ)





EXPORT CONTROLS @ UNLV

Kristin Bloomquist

Export Control Officer, Office of Research Integrity

February 2015

What are Export Controls?

Applicable when:

The export has a potential military application

There are concerns over the destination country/user

There are concerns over the end-use(r)

U.S. laws and regulations that regulate the distribution of **technology, services and information** to foreign persons for reasons including foreign policy and national security

What is an “Export”?

DEEMED EXPORT

Transferring technology or information to a foreign national in the U.S.

Providing controlled technology to a foreign person is deemed equivalent to physically exporting the technology to the country of the person's nationality

- ❑ an actual shipment outside the U.S.
- ❑ a visual inspection in or outside the U.S.
- ❑ a written or oral disclosure

Regulating Authorities



- International Traffic in Arms Regulations (ITAR)
 - items on the U.S. Munitions list

- Export Administration Regulations (EAR)
 - items on the Commerce Control List (“dual use” technologies)

- Office of Foreign Assets Control (OFAC)
 - Regulate economic trade with foreign countries and administer economic trade sanctions (Balkans, Burma, Cuba, Iran, Iraq, Liberia, Libya, N. Korea, Sudan, Syria, and Zimbabwe)

Penalties

Contravening the ITAR, EAR and OFAC carry steep **criminal** and **civil** penalties:

- ▣ Between \$50K and \$10 million per violation
- ▣ 10 – 30 years in prison



Dr. Reece Roth





Export Control Licenses

You might require an export control licence if...

- ❑ Presentation/discussion at conferences or meetings where foreign nationals might be attendees
- ❑ Research collaborations with foreign nationals
- ❑ Transfer of research equipment
- ❑ Visits by foreign scholars



Technical Control Plan (TCP)



- In some situations it is possible to put a TCP in place instead of applying for a license
- A TCP outlines the procedures to secure controlled technology (technical info, data, materials, software, hardware, etc.) from use and observations by unlicensed non-U.S. citizens
 - ▣ If this is not possible, a license or technical assistance agreement would be necessary

UNLV Export Control Initiatives



- **NSHE Export Control Compliance Policy**
- **Outreach and Collaboration**
 - General Counsel, Office of Sponsored Projects, Shipping, Purchasing, International Programs, High-risk programs (Engineering, Science, etc.), National Supercomputing Center, FBI
- **Ad-hoc Compliance Committees for Specific Emerging Technologies**
- **Training – CITI online, small groups, project groups**



Questions?

Kristin Bloomquist
Export Control Officer
Office of Research Integrity
kristin.bloomquist@unlv.edu
(702) 895-0905

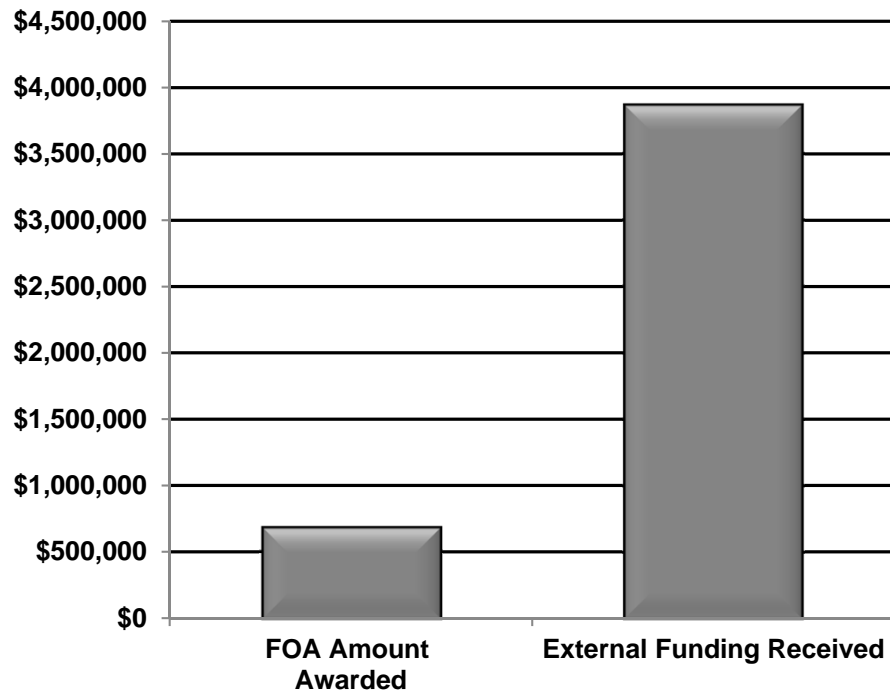
Thank you!

**UNLV's Science and
Engineering Building**

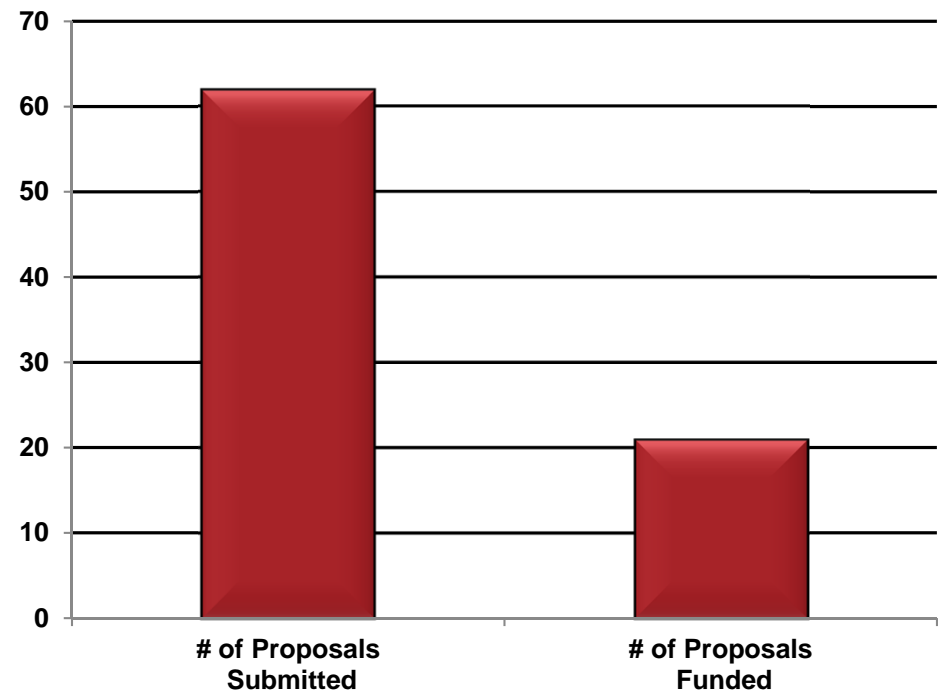


2015 Faculty Opportunity Award Proposals Received	College Breakdown	Total Number = 44	Total Amount requested = \$1,080,483
Collaborative: Center of Excellence	Engineering (1)	1	\$100,000
Collaborative: Emerging Areas	Allied Health Sciences (3) Education (5) Engineering (3) Liberal Arts (3) Sciences (2)	16	\$452,526
	Allied Health Sciences (3) Community Health Sciences (2) Education (4) Engineering (2) Fine Arts (1) Liberal Arts (6) Sciences (7)	25	\$487,958
Individual Investigator			
Innovation/Technology Development	Sciences (2)	2	\$40,000

Faculty Opportunity Awards Impact



Investment Payout
\$1 : \$5.70



Proposal Success
~31%

9 Research Disclosures Submitted & 7 Patent Applications Filed

2012 FOA RECIPIENTS PROPOSAL SUBMISSION AND FUNDING SUMMARY

2012 FACULTY OPPORTUNITY AWARDS				External Proposal Submissions (data to 3/6/14)					
First Name	Last Name	Award Amount	Title	# Proposals submitted	# Funded	# Pending	Source of Funded Proposals	Role	\$ Funded Proposals
COLLABORATIVE AWARDS		\$283,770		70	28	32			\$1,688,336
ALLEN	GIBBS	\$25,000	A Model Systems Approach to Identifying Obesity-Related Genes	1		1			\$0
Andrew	Andres		Co-PI	0					\$0
ERIN	HANNON	\$28,770	Development of Perceptual Skills Across Domains	1		1			\$0
Jennifer	Rennels		Co-PI	1		1			\$0
DAVE	HATCHETT	\$25,000	Direct Dissolution and Electrochemical Recovery of Rare Earth Metals from Ionic Liquid	6	3	2	Global Medical Isotope Systems	Co-PI	*\$140,000
Kenneth	Czerwinski		Co-PI	13	5	6	Global Medical Isotope Systems	PI	\$102,000
							Reactive Innovations, LLC	PI	\$29,961
							Global Medical Isotope Systems	PI	\$140,000
							Los Alamos Nat'l Lab	PI	\$190,450
							U.S. Civilian Resrch and Development Fdn.	PI	\$6,052
							National Security Technologies	PI	\$64,000
							Los Alamos Nat'l Lab	PI	\$40,002
ELISABETH	HAUSRATH	\$25,000	An investigation into transitions in layer silicate chemistry on Mars	8	3	4	NASA	PI	\$64,351
							NSHE /NASA	Co-PI	\$19,995
							NSTec	Co-PI	\$95,190
BRIAN	HEDLUND	\$30,000	Informatics and functional metagenomics focusing on viral polymerases in Nevada hot springs	6	2	4	EPSCoR / NASA	PI	\$8,640
STAN	HILLYARD	\$25,000	Paradoxical anaerobism:using anaerobic metabolism when oxygen is available	2	1	NV Dept of Wildlife	EPSCoR / NASA	PI	\$5,216
Frank	van Breukelen		Co-PI	6	3	1	NV Department of Wildlife	PI	\$46,800
							US Bureau of Land Management	Co-PI	\$28,000
							US Fish and Wildlife	PI	\$12,000
MONICA	LOUNSBERY	\$25,000	Children's Activity and Policies at Schools	7	2	5	Univ of California, San Diego	PI	\$44,594
Shannon	Monnat		Co-PI	0			NV State Division of Health	PI	\$44,020
									\$0

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First Name		Last Name	Award Amount	Title	# Proposals submitted	# Funded	# Pending	Source of Funded Proposals	Role	\$ Funded Proposals	
COLLABORATIVE	BRENDAN	O'TOOLE	\$25,000	Exploring the near space environment with high altitude balloon sensors (HABS)	8	5	1	National Security Technologies	PI	\$70,000	
								National SecurityTechnologies	PI	\$3,839	
								Blast Containment Inc	Co-PI	\$79,598	
								National Security Technologies	PI	\$23,937	
								National Security Technologies	PI	\$76,746	
	Robert	O'Brien		Co-PI	4	4		National Security Technologies	Co-PI	\$48,001	
								National Security Technologies	PI	\$40,000	
								National Security Technologies	PI	\$169,382	
								National Security Technologies	PI	\$50,000	
	JOEL	SNYDER	\$25,000	The role of sleep in generalization of auditory learning	1		1				\$0
YING	TIAN	\$25,000	Structural performance of flat-plate buildings under fire	4	2	1	NV Department of Transportation	Co-PI		*\$27,684	
Aly	Said		Co-PI	6	5	1	NV Department of Transportation	Co-PI		*\$57,174	
							NV Department of Transportation	PI		\$27,684	
							NV Department of Transportation	PI		\$57,174	
							Missouri Univ. of Science & Technology	PI		\$32,238	
							Missouri Univ. of Science & Technology	PI		\$37,148	
							U.S. Department of Transportation	PI		\$31,318	
MEI	YANG	\$25,000	High-Performance and Scalable 3-D Photonic-Electronic Network-on-Chips	4		4				\$0	
SINGLE INVESTIGATORS			\$116,846		19	5	14			\$470,724	
SINGLE	JANET	DUFEK	\$20,000	Pediatric Patient Falls: Biomechanical and Ergonomic Contributors to Occurrence and Injury Severity	9	1	8	Nationwide Children's Hosp		\$5,850	
	RON	GARY	\$19,000	Novel Regulation of an Alzheimer's Disease-Associated Protein	1	1		INBRE: Genomics Core		\$180,843	
	REBECCA	GILL	\$19,486	Assessing Judicial Performance Evaluations for Race and Gender Bias	1	1		National Science Foundation		\$85,206	
	JEFF	KINNEY	\$18,800	Examination of alterations in kalirin in developmental models of schizophrenia	4		4				
	GARY	KLEIGER	\$20,000	Determining the Molecular Mechanism of Action...	3	1	2	University of Nevada, Reno/INBRE		\$143,825	
	DAVID	LEE	\$19,560	Biomechanical progression of spontaneous knee arthritis in an animal model	2	1	1	UNLV / IDeA		\$55,000	
TOTAL	TOTAL AWARDED Collaborative & Single		\$400,616	Submission Totals	89	33	46	TOTAL FUNDED PROPOSALS		\$2,159,060	

2014 FOA RECIPIENTS' PROPOSAL SUBMISSION AND FUNDING SUMMARY

2013 FACULTY OPPORTUNITY AWARDS				External Proposal Submissions (data to 5/23/14)					
First Name	Last Name	Award Amount	Title	# Proposals submitted	# Funded	# Pending	Source of Funded Proposals	Role	\$ Funded Proposals
INDIVIDUAL AWARDS		\$157,728		15	1	11			\$57,192
INDIVIDUAL INVESTIGATOR	AMEI	AMEI	\$14,000	Time-Dependent Random Effects Poisson Random Field Model for Cancer Gene Detection					
	DANIEL	GERRITY	\$25,000	3	1	2	Couer Alaska	Co-PI	\$57,192
	SZU-PING	LEE	\$24,268	Influence of Foot Strike Pattern on Lower Back Muscle Activation during Running: Clinical Implications for Preventing Lower Back Pain in Runners					
	GUOGEN	SHAN	\$20,000	Efficient one-stage and two-stage phase II clinical trial designs based on exact unconditional tests					
	PENGTAO	SUN	\$24,460	Modeling and Numerical Studies for a Two-phase Transport Model of Polymer Electrolyte Membrane Fuel Cells (PEMFCs)					
	AI-SUN	TSENG	\$25,000	4		4			
	HUI	ZHAO	\$25,000	8		5			
INNOVATION / TECH		\$124,333		37	11	19			\$1,408,809
INNOVATION / TECHNOLOGY	YINGTAO	JIANG	\$25,000	3		1			
	JUYEON	JO	\$24,480	1		1			
	Yoohwan	Kim		1		1	National Security Technologies	PI	\$52,493
	MARTIN	SCHILLER	\$25,000	11	4	7	National Institutes of Health	PI	\$122,157
							National Institutes of Health	PI	\$148,114
							National Institutes of Health	PI	\$172,396
							Univer of Nevada, Las Vegas	PI	\$54,912
	WOOSOON	YIM	\$24,853	9	5	2	EPSCoR / NASA	PI	\$8,640
							EPSCoR / NASA	PI	\$5,216
							Sandia National Laboratories	PI	\$20,022
						Sandia National Laboratories	PI	\$60,000	
						*EPSCoR / NASA	Co-PI	*\$446,494	

2014 FOA RECIPIENTS' PROPOSAL SUBMISSION AND FUNDING SUMMARY

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First Name	Last Name	Award Amount	Title	# Proposals submitted	# Funded	# Pending	Source of Funded Proposals	Role	\$ Funded Proposals	
INNOVATION / TECHNOLOGY	Kwang	Kim	Co-PI	15	5	7	EPSCoR / NASA	PI	\$446,494	
							U.S. Army Research Office	PI	\$248,495	
							University of Nevada, Reno	PI	\$69,870	
							*EPSCoR / NASA	Co-PI	*\$8,640	
							*EPSCoR / NASA	Co-PI	*\$5,216	
	HUI	ZHANG	\$25,000	Development of Novel Chemical Inhibitors Targeting Epigenetic Regulation of Cancer/Cancer Stem Cells		2		2		
	Pradip	Bowmik	Co-PI	1		1				
TOTAL	TOTAL AWARDED Individual & Tech		\$282,061	Submission Totals		52	12	30	TOTAL FUNDED PROPOSALS	\$1,466,001
										TOTAL