

UNLV Research Council

Friday, April 22, 2016

MEETING MINUTES

In Attendance: John Mercer, Anjala Krishen, Jennifer Pharr, Ernesto Abel-Santos, Brad Donohue, Tony Lucas, Gary Cerefice, Stan Smith, Zach Miles, David Paul, Lori Olafson, Marty Schiller, Liam Frink, Brian Hedlund, Raegan Pietrucha, Caleen Johnson, John Brodie, Robin Toles, and Jill Zimbelman

*Items in Blue are Action Items

1. General Announcements/Updates – John Mercer
 - a. Memo for the Provost regarding Promotion and Tenure – Jim Thomson
 - i. Memo is attached for your reference
 - ii. Clear guidelines for P&T need to be established for each college/school or department to provide a standard
 - iii. Revise workload policies to incentivize/reward research and creative activities
 - b. Research Council will meet every other month starting Fall 2016
 - i. **Please update your calendars accordingly:**
 1. Sept. 23
 2. Nov. 04
2. 3rd Quarter Reports – David Paul, Lori Olafson, & Zach Miles
 - a. Reports are attached for your reference, including an FY2016 cumulative 3rd quarter report providing graphics
 - b. Electronic copies of quarterly reports will be provided going forward.
3. Office of Undergraduate Research Update – Liam Frink
 - a. Report, one-pager, and 2nd annual Spring OUR forum program is attached for your reference
4. Faculty Opportunity Awards – Brian Hedlund
 - a. Award and regret letters have been sent to individuals, except for the Centers of Excellence awardees which are still being determined.
 - b. List of awardees are attached for your reference.
 - c. Campus-wide announcement has gone out.
5. Faculty Fellow for Research Office – Brian Hedlund
 - a. **Please distribute the Research Faculty Fellow announcement to your faculty.**
 - b. Announcement is attached for your reference.
 - c. If you have any questions, please contact Brian Hedlund at 895-08096.
 - d. Please send letters of application and current CVs to Jill Zimbelman via email at jill.zimbelman@unlv.edu

6. Future Agenda Items

- a. Revisit Promotion & Tenure memo with Jim Thomson in Fall 2016.

Next Research Council Meeting:

Sept. 23, 2016, 11:30 a.m. - 1:00 p.m.

SEB 2251

Memo for the Provost

From The Committee dealing with Top Tier Action RSAC 4-1 (Tenure and Promotion)

Subject: Guidelines and Practices of UNLV Colleges

The charge to this committee was: “Evaluate how Tenure and Promotion standards reward and recognize all research and creative activity including productivity, grant writing, funded research, publications, doctoral mentorship, post-docs, entrepreneurial activities, commercial research, interdisciplinary research, etc. Review and revise university workload policies to incentive/reward research and creative activities. This policy can then be used as a standard for Colleges to further refine.”

Some members of the committee suspect that tenure decisions at UNLV are not always wise because a relatively high fraction (compared to peer institutions) of associate professors slow down or stop their scholarly activities after achieving tenure. This last point is inferred from the relatively low level of papers per faculty member at UNLV.¹ Perhaps the problem is with the university’s promotion and tenure guidelines: hence this task.

In the committee’s judgment, specific guidelines are preferable to generalities. General language is open to interpretation that can lead to misunderstandings and disputes. Of course, specificity has its own problems: it can stimulate a scorecard mentality and overlook outstanding performance that can’t be easily quantified. Wise leadership should overcome that problem. Although the committee recommends greater specificity, it cannot say that that will help solve the problem identified in the previous paragraph.

To accomplish its task, the committee was to review best practices at peer institutions during this year. UNLV made a request for peer information from the Educational Advisory Board, which it has not yet received. The committee doubts that we will get much useful on this topic from peers: guidelines, at least at a university wide level, are likely to be fairly general. At the same time we thought it would be useful to document where UNLV stands on this topic. To that end Jim Thomson met with the deans of 10 colleges (in one case the executive associate dean) and collected related documents.²

The guiding documents from NSHE and UNLV do not provide much in the way of standards. As everyone reading this knows, for achieving tenure NSHE demands excellent performance in either teaching or research and satisfactory performance in the other (if it is not also excellent). The UNLV Bylaws don’t provide much more. The current documents only demand “satisfactory” performance. The attitude of most deans is that the university should demand excellence in research to achieve the rank of full professor. Two colleges state explicitly that “the rank of professor is a mark of distinction that is based

¹ For example, from 2002 through 2012, UNLV had 5.7 papers per faculty member. The numbers at Utah, Colorado-Boulder, Oregon and SDSU were 12.0, 13.4, 7.9 and 7.8 respectively. The numbers refer to articles in journals indexed in the Web of Science. Faculty counts were for 2010.

² He did not meet with the deans of Fine Arts, Medicine and Dentistry.

primarily on the establishment of a national or international reputation for one's research and scholarship."

The committee considered whether it wanted to recommend to the Provost more specificity in the UNLV Bylaws regarding the role of research, scholarship and creative activity in the decisions to promote to associate and to full professor. The committee felt that this would be more trouble than it would be worth (like poking a hornets' nest) and that it would be more fruitful to achieve greater specificity inside UNLV. It will not be possible, given the wording of the NSHE guideline, to make achievement in research the exclusive criterion for promotion. However, it should be possible for colleges, or departments as appropriate, to adopt language like that at the end of the previous paragraph for both promotions to associate and to full. **The committee recommends to the Provost that she consult with the Deans about adding this language to college guidelines, in the event it is not already included.**

Given the general nature of the NSHE and UNLV guiding documents, most colleges have sought to add specificity, as in the committee's view they should.

- Three colleges (plus their departments) probably should consider developing more specificity around the guidelines, one of which is already doing so. These are Liberal Arts, Sciences and Education, which is revising its guidelines at the time of this writing. In both Liberal Arts and Sciences there are well known rules of thumb – books published by professors in Liberal Arts and money awarded to professors in Sciences, but these are not explicitly documented by the colleges. These are large heterogeneous colleges and it will be hard to add a lot more specificity at the college level, especially for Liberal Arts.
 - Most departments in Liberal Arts have their own P&T guidelines – usually the achievement of a scholarly monograph or the equivalent in scholarly output. Almost all departments stress that quality is more important than quantity. It is possible that departments in the social sciences could develop more specific guidelines as is done in other colleges at UNLV.
 - Most departments in Sciences do not have their own guidelines. The notable exception is the School of Life Sciences.

The committee recommends that the Provost ask the College of Sciences to review and update its T&P guidelines at the college and department level and that she ask the College of Liberal Arts to examine whether more specific guidelines could be developed for departments in the social sciences.

The committee also recommends that the Provost review to new guidelines from the College of Education, when they are complete.

- Three colleges have quite specific guidelines regarding productivity, grant writing, funded research, and publications, including quantification of the ones that can be quantified. These are Business (which is updating its guidelines), Community Health (has largely completed the update) and the Greenspun School.

- The rest have developed descriptive language for these measures of productivity. **The Provost should ask these colleges (Nursing, Allied Health, Hotel and Engineering) to update their P&T guidelines with a view toward making them more specific.**

Consider these three examples of specific (first) vs descriptive (the next two) guidelines regarding journal articles:

- (My paraphrase) Excellent performance will normally include at least 12 peer reviewed publications, including at least 4 as first or corresponding author and at least 4 in journals indexed in the SCI or SSCI . . .
- “Publication in high quality journals is of utmost importance and carry the greatest weight . . . Quality includes factors such as journal ranking, impact factor, acceptance rate . . .”
- “Evidence of high quality scholarship can be documented by utilizing rankings from journal ranking services . . . Typically the ‘excellent’ researcher will have a clear program of scholarship from which the faculty member is gaining recognition for the significant contribution . . .”

One college (Engineering) has both scant and general guidelines but has implemented a specific system in practice by collecting and publishing summary statistics over the last N years for Assistant Professors before achieving tenure and Associate Professors before promotion to full, across a range of measures of both teaching and research performance. These provide clear example of what is expected for promotion and might even be stronger than specific criteria – no one wants to be below average, at least we hope not. This provides a neat way around the debate around specific vs general or descriptive guidelines. Aside from some departments in Liberal Arts (and perhaps Fine Arts) the colleges could implement this. **The committee advises the Provost to ask all the colleges to collect past data on pre-promotion performance by Assistant and Associate professors, using measures that the colleges (or departments) choose themselves.** Perhaps this step should be taken before the colleges review and update the P&T standards.

The original charge to this committee also included the productivity measures of doctoral mentorship, post-docs, entrepreneurial activities, commercial research, interdisciplinary research, etc. No college includes these. The number of doctorates granted and the number of non-faculty Ph.D. research employees are important metrics for Top Tier. The committee believes that colleges that are revising their guidelines should include doctoral and post-doc mentoring, but that this is not crucial.

Finally, some deans told us that they have difficulty increasing the teaching load of faculty that have obtained tenure but have ceased to be active in research. They encounter resistance from department heads or from the individuals themselves. Of course, there is an obvious answer to this. We believe the Provost’s office has collected data on workloads. The committee would like to work with the Vice Provost for Faculty Affairs to review this issue in the coming year.

Summary of Recommendations to the Provost

That she:

- **Consult with the deans about adding language to college P&T guidelines that underscored the importance of scholarship in considerations for promotion to full professor. For example, “the rank of professor in a mark of distinction that is based primarily on the establishment of a national or international reputation for one’s research and scholarship.”**
- **Ask all the colleges to collect past data on pre-promotion performance by Assistant and Associate professors, using measures that the colleges (or departments) choose themselves.**
- **Ask the College of Sciences to review and update its T&P guidelines at the college and department level.**
- **Ask the College of Liberal Arts to examine whether more specific guidelines could be developed for departments in the social sciences.**
- **Ask these colleges (Nursing, Allied Health, Hotel and Engineering) to update their P&T guidelines with a view toward making them more specific.**

OSP Quarterly Metrics

TO: Tom Piechota & Stan Smith
FROM: David Paul
DATE: 4/15/2016
SUBJECT: FY16 3rd Quarter Sponsored Program Activity

PROPOSALS FOR QUARTER		
	<u>Dollars</u>	<u>No.</u>
01/01/15 - 03/31/15	\$45,196,511	156
01/01/16 - 03/31/16	\$81,351,435	214
Total Change	36,154,924.00	58
Percent Change	80.0%	37.2%

CUMULATIVE PROPOSALS		
	<u>Dollars</u>	<u>No.</u>
07/01/14 - 03/31/15	\$158,695,527.00	437
07/01/15 - 03/31/16	\$174,152,765.00	506
Total Change	15,457,238.00	69
Percent Change	9.7%	15.8%

AWARDS FOR QUARTER		
	<u>Dollars</u>	<u>No.</u>
01/01/15 - 03/31/15	\$5,873,789	72
01/01/16 - 03/31/16	\$7,942,035	100
Total Change	2,068,246.00	28
Percent Change	35.2%	38.9%

CUMULATIVE AWARDS		
	<u>Dollars</u>	<u>No.</u>
07/01/14 - 03/31/15	\$38,691,641	264
07/01/15 - 03/31/16	\$40,468,009	291
Total Change	1,776,368.00	27
Percent Change	4.6%	10.2%

TOTAL EXPENDITURES FOR QUARTER	
	<u>Dollars</u>
01/01/15 - 03/31/15	\$10,654,793.36
01/01/16 - 03/31/16	\$11,665,697.24
Total Change	1,010,903.88
Percent Change	9.5%

CUMULATIVE TOTAL EXPENDITURES	
	<u>Dollars</u>
07/01/14 - 03/31/15	\$35,803,926.99
07/01/15 - 03/31/16	\$36,061,899.64
Total Change	257,972.65
Percent Change	0.7%

RESEARCH EXPENDITURES FOR QUARTER	
	<u>Dollars</u>
01/01/15 - 03/31/15	\$6,261,934.95
01/01/16 - 03/31/16	\$6,854,666.35
Total Change	592,731.40
Percent Change	9.5%

CUMULATIVE RESEARCH EXPENDITURES	
	<u>Dollars</u>
07/01/14 - 03/31/15	\$22,785,251.20
07/01/15 - 03/31/16	\$22,644,449.97
Total Change	(140,801.23)
Percent Change	-0.6%

RECOVERED F&A FOR QUARTER	
	<u>Dollars</u>
01/01/15 - 03/31/15	\$1,497,412.62
01/01/16 - 03/31/16	\$1,640,864.92
Total Change	143,452.30
Percent Change	9.6%

CUMULATIVE F&A	
	<u>Dollars</u>
07/01/14 - 03/31/15	\$5,200,035.47
07/01/15 - 03/31/16	\$5,495,592.30
Total Change	295,556.83
Percent Change	5.7%

Office of Sponsored Programs
For Period: 3rd Qtr, January - March

PROPOSALS FY16

AGENCY NAME	CURRENT QUARTER						CUMULATIVE TOTALS					
	Proposals FY15	Proposals FY16	Total \$ Change	# FY15	# FY16	Tot Change	Proposals FY15	Proposals FY16	Total \$ Change	# FY15	# FY16	Tot Change
LEE BUSINESS SCHOOL	\$104,390	\$140,363	\$35,973	2	2	0	\$653,695	\$958,437	\$304,742	9	8	(1)
COLLEGE OF EDUCATION	\$207,958	\$1,723,516	\$1,515,558	2	11	9	\$8,511,908	\$10,091,566	\$1,579,658	23	41	18
COLLEGE OF ENGINEERING	\$7,543,193	\$14,793,173	\$7,249,980	42	52	10	\$22,959,922	\$33,457,715	\$10,497,793	118	135	17
COLLEGE OF FINE ARTS	\$160,587	\$295,275	\$134,688	3	5	2	\$261,337	\$416,995	\$155,658	8	7	(1)
COLLEGE OF HOTEL ADMINISTRATION	\$0	\$14,128	\$14,128	0	1	1	\$116,000	\$130,172	\$14,172	2	3	1
COLLEGE OF LIBERAL ARTS	\$1,563,536	\$2,344,852	\$781,316	13	12	(1)	\$8,963,904	\$5,485,822	(\$3,478,082)	22	28	6
COLLEGE OF SCIENCES	\$12,412,024	\$11,966,118	(\$445,906)	44	64	20	\$36,376,463	\$34,463,518	(\$1,912,945)	126	124	(2)
COLLEGE OF URBAN AFFAIRS	\$634,896	\$1,079,274	\$444,378	4	6	2	\$2,565,907	\$2,204,147	(\$361,760)	9	11	2
DIVISION OF HEALTH SCIENCES	\$14,335,217	\$20,550,556	\$6,215,339	35	37	2	\$25,786,666	\$38,267,348	\$12,480,682	79	88	9
DIV of EDUCATIONAL OUTREACH	\$0	\$0	\$0	0	0	0	\$41,991	\$249,966	\$207,975	3	1	(2)
HONORS COLLEGE	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
LAW SCHOOL	\$103,000	\$104,000	\$1,000	1	1	0	\$192,780	\$104,000	(\$88,780)	3	1	(2)
SCHOOL OF MEDICINE	\$0	\$0	\$0	0	0	0	\$0	\$2,794,835	\$2,794,835	0	1	1
PRESIDENT'S OFFICE (Lincy Institute)	\$0	\$313,457	\$313,457	0	1	1	\$156,651	\$583,527	\$426,876	1	4	3
PROVOST	\$50,000	\$1,994,331	\$1,944,331	1	1	0	\$2,784,505	\$2,449,932	(\$334,573)	7	6	(1)
VP FOR RESEARCH & ECON DEV	\$2,881,025	\$13,009,202	\$10,128,177	4	4	0	\$3,484,275	\$14,383,854	\$10,899,579	7	12	5
HARRY REID CENTER	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
VP STUDENT AFFAIRS	\$407,645	\$1,360,390	\$952,745	2	6	4	\$431,405	\$1,386,390	\$954,985	3	7	4
ACADEMIC ENRICHMENT & OUTREACH	\$4,793,040	\$11,343,700	\$6,550,660	3	9	6	\$45,363,949	\$25,235,976	(\$20,127,973)	15	20	5
STUDENT FINANCIAL SERVICES	\$0	\$0	\$0	0	0	0	\$0	\$911,917	\$911,917	0	3	3
VP FOR FINANCE & BUSINESS	\$0	\$11,622	\$11,622	0	1	1	\$4,169	\$17,448	\$13,279	1	2	1
VP FOR DIVERSITY	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
UNIVERSITY LIBRARIES	\$0	\$307,478	\$307,478	0	1	1	\$40,000	\$559,200	\$519,200	1	4	3
GRAND TOTAL:	\$45,196,511	\$81,351,435	\$36,154,924	156	214	58	\$158,695,527	\$174,152,765	\$15,457,238	437	506	69

PERCENTAGE CHANGE:

DOLLARS
3rd QTR: FY15 & FY16
80.0%

NUMBERS
3rd QTR: FY15 & FY16
37%

TOTAL DOLLARS
3rd QTR: FY15 & FY16
9.7%

NUMBERS
3rd QTR: FY15 & FY16
15.8%

DEPARTMENT BREAKDOWN

For Period: 3rd Qtr, January - March

PROPOSALS BY DEPARTMENT FY16

DEPARTMENT NAME	CURRENT QUARTER						CUMULATIVE TOTALS					
	Proposals FY15	Proposals FY16	Total \$ Change	# FY15	# FY16	Tot Change	Proposals FY15	Proposals FY16	Total \$ Change	# FY15	# FY16	Tot Change
LEE BUSINESS SCHOOL												
Dean's Office	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Accounting	\$4,390	\$0	(\$4,390)	1	0	(1)	\$15,565	\$10,400	(\$5,165)	2	1	(1)
Economics	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Finance	\$0	\$0	\$0	0	0	0	\$174,557	\$85,549	(\$89,008)	1	1	0
Ctr for Business & Economic Research	\$100,000	\$100,000	\$0	1	1	0	\$113,339	\$109,000	(\$4,339)	3	3	0
Lied Institute for Real Estate Studies	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Management, Entrepreneurship & Tech	\$0	\$40,363	\$40,363	0	1	1	\$350,234	\$753,488	\$403,254	3	3	0
Management Information Systems	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
COLLEGE OF EDUCATION												
Dean's Office	\$161,649	\$0	(\$161,649)	1	0	(1)	\$161,649	\$0	(\$161,649)	1	0	(1)
Educational & Clinical Studies	\$46,309	\$75,000	\$28,691	1	1	0	\$5,057,299	\$2,656,788	(\$2,400,511)	10	9	(1)
Educational Psychology & Higher Ed	\$0	\$562,965	\$562,965	0	3	3	\$504,980	\$1,956,770	\$1,451,790	3	10	7
Teaching & Learning	\$0	\$1,085,551	\$1,085,551	0	7	7	\$2,787,980	\$5,478,008	\$2,690,028	9	22	13
COLLEGE OF ENGINEERING												
Dean's Office	\$89,031	\$24,238	(\$64,793)	2	2	0	\$247,561	\$2,658,924	\$2,411,363	3	9	6
Civil & Environmental	\$146,652	\$6,025,491	\$5,878,839	2	13	11	\$1,471,813	\$7,899,240	\$6,427,427	12	27	15
Elec & Comp Engineering	\$764,272	\$1,866,181	\$1,101,909	8	3	(5)	\$2,406,249	\$5,243,325	\$2,837,076	21	16	(5)
Mechanical Engineering	\$4,367,506	\$4,662,455	\$294,949	21	20	(1)	\$14,669,626	\$12,976,033	(\$1,693,593)	61	54	(7)
Computer Science	\$2,089,859	\$1,658,891	(\$430,968)	7	7	0	\$2,527,411	\$3,823,859	\$1,296,448	9	16	7
Transportation Research Ctr	\$85,873	\$555,917	\$470,044	2	7	5	\$1,637,262	\$856,334	(\$780,928)	12	13	1
COLLEGE OF FINE ARTS												
Art	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Dance	\$0	\$0	\$0	0	0	0	\$0	\$99,600	\$99,600	0	1	1
Music	\$6,500	\$0	(\$6,500)	1	0	(1)	\$8,250	\$0	(\$8,250)	3	0	(3)
School of Architecture	\$154,087	\$295,275	\$141,188	2	5	3	\$253,087	\$317,395	\$64,308	5	6	1
Theatre	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
COLLEGE OF HOTEL ADMINISTRATION												
Dean's Office	\$0	\$14,128	\$14,128	0	1	1	\$0	\$30,172	\$30,172	0	2	2
International Gaming Institute	\$0	\$0	\$0	0	0	0	\$116,000	\$100,000	(\$16,000)	2	1	(1)
COLLEGE OF LIBERAL ARTS												
Anthropology	\$149,817	\$64,978	(\$84,839)	4	1	(3)	\$149,817	\$90,504	(\$59,313)	4	3	(1)
English	\$0	\$19,679	\$19,679	0	1	1	\$0	\$19,679	\$19,679	0	1	1
History	\$18,747	\$149,013	\$130,266	1	2	1	\$18,747	\$572,381	\$553,634	1	4	3
Political Science	\$86,038	\$290,666	\$204,628	1	2	1	\$86,038	\$290,666	\$204,628	1	2	1
Psychology	\$1,303,934	\$1,815,516	\$511,582	6	5	(1)	\$8,704,302	\$4,416,245	(\$4,288,057)	15	16	1
Sociology	\$0	\$0	\$0	0	0	0	\$0	\$91,347	\$91,347	0	1	1
Black Mtn Institute	\$5,000	\$5,000	\$0	1	1	0	\$5,000	\$5,000	\$0	1	1	0

DEPARTMENT BREAKDOWN

For Period: 3rd Qtr, January - March

PROPOSALS BY DEPARTMENT FY16

DEPARTMENT NAME	CURRENT QUARTER						CUMULATIVE TOTALS					
	Proposals FY15	Proposals FY16	Total \$ Change	# FY15	# FY16	Tot Change	Proposals FY15	Proposals FY16	Total \$ Change	# FY15	# FY16	Tot Change
COLLEGE OF SCIENCES												
Dean's Office	\$35,888	\$0	(\$35,888)	1	0	(1)	\$35,888	\$65,379	\$29,491	1	2	1
Chemistry	\$2,877,776	\$5,134,422	\$2,256,646	8	22	14	\$7,234,017	\$11,002,147	\$3,768,130	22	37	15
Geoscience	\$3,830,776	\$633,812	(\$3,196,964)	12	9	(3)	\$8,494,127	\$2,983,667	(\$5,510,460)	31	19	(12)
Mathematical Sciences	\$6,000	\$352,536	\$346,536	1	1	0	\$3,847,195	\$854,724	(\$2,992,471)	7	4	(3)
Physics & Astronomy	\$2,837,300	\$3,061,324	\$224,024	13	17	4	\$6,983,347	\$7,544,502	\$561,155	34	26	(8)
School of Life Sciences	\$2,824,284	\$2,784,024	(\$40,260)	9	15	6	\$9,781,889	\$12,013,099	\$2,231,210	31	36	5
COLLEGE OF URBAN AFFAIRS												
Communication Studies	\$0	\$0	\$0	0	0	0	\$10,800	\$0	(\$10,800)	1	0	(1)
Criminal Justice	\$634,896	\$797,345	\$162,449	4	5	1	\$651,339	\$1,087,149	\$435,810	5	7	2
Journalism & Media Studies	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
KUNV	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Marriage & Family Therapy	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
School of Env & Public Affairs	\$0	\$281,929	\$281,929	0	1	1	\$14,269	\$695,211	\$680,942	1	3	2
School of Social Work	\$0	\$0	\$0	0	0	0	\$1,889,499	\$421,787	(\$1,467,712)	2	1	(1)
DIVISION OF HEALTH SCIENCES												
School of Allied Health Sciences	\$7,624,476	\$2,614,565	(\$5,009,911)	10	8	(2)	\$8,456,642	\$6,543,852	(\$1,912,790)	16	17	1
School of Community Health Sciences	\$3,937,086	\$17,905,991	\$13,968,905	21	28	7	\$12,286,406	\$26,459,094	\$14,172,688	50	54	4
School of Dental Medicine	\$2,415,178	\$0	(\$2,415,178)	2	0	(2)	\$2,483,178	\$69,700	(\$2,413,478)	3	3	0
School of Nursing	\$358,477	\$30,000	(\$328,477)	2	1	(1)	\$2,560,440	\$5,194,702	\$2,634,262	10	14	4
DIV of EDUCATIONAL OUTREACH												
VP for Ed Outreach	\$0	\$0	\$0	0	0	0	\$0	\$249,966	\$249,966	0	1	1
Public Lands Institute	\$0	\$0	\$0	0	0	0	\$41,991	\$0	(\$41,991)	3	0	(3)
VP STUDENT AFFAIRS												
Ctr for Academic Enrichment & Outreach	\$4,793,040	\$11,343,700	\$6,550,660	3	9	6	\$45,363,949	\$25,235,976	(\$20,127,973)	15	20	5
Financial Aid & Scholarships	\$0	\$0	\$0	0	0	0	\$0	\$860,000	\$860,000	0	1	1
Jean Nidetch Women's Ctr	\$405,645	\$268,008	(\$137,637)	1	2	1	\$405,645	\$281,769	(\$123,876)	1	3	2
Office of Admissions	\$2,000	\$0	(\$2,000)	1	0	(1)	\$25,760	\$26,000	\$240	2	1	(1)
Public Safety	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Student Counseling & Psychological Svcs	\$0	\$0	\$0	0	0	0	\$0	\$38,156	\$38,156	0	1	1
Wellness Promotion	\$0	\$1,092,382	\$1,092,382	0	4	4	\$0	\$1,092,382	\$1,092,382	0	4	4
Veterans Services	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0

Office of Sponsored Programs
For Period: 3rd Qtr, January - March

AWARDS FY16

AGENCY NAME	CURRENT QUARTER						CUMULATIVE TOTALS					
	Awards FY15	Awards FY16	Total \$ Change	# FY15	# FY16	Tot Change	Awards FY15	Awards FY16	Total \$ Change	# FY15	# FY16	Tot Change
LEE BUSINESS SCHOOL	\$100,000	\$167,200	\$67,200	1	2	1	\$346,105	\$272,149	(\$73,956)	8	6	(2)
COLLEGE OF EDUCATION	\$444,979	\$305,667	(\$139,312)	4	3	(1)	\$1,419,613	\$1,931,853	\$512,240	16	19	3
COLLEGE OF ENGINEERING	\$842,121	\$865,708	\$23,587	22	20	(2)	\$7,333,654	\$6,478,977	(\$854,677)	69	68	(1)
COLLEGE OF FINE ARTS	\$47,187	\$295,275	\$248,088	1	5	4	\$146,937	\$321,268	\$174,331	5	7	2
COLLEGE OF HOTEL ADMINISTRATION	\$0	\$14,128	\$14,128	0	1	1	\$116,000	\$130,172	\$14,172	2	3	1
COLLEGE OF LIBERAL ARTS	\$265,993	\$35,554	(\$230,439)	4	2	(2)	\$360,986	\$625,109	\$264,123	6	12	6
COLLEGE OF SCIENCES	\$1,231,835	\$2,203,899	\$972,064	20	34	14	\$10,429,720	\$9,029,558	(\$1,400,162)	82	74	(8)
COLLEGE OF URBAN AFFAIRS	\$486,867	\$190,838	(\$296,029)	2	2	0	\$1,105,966	\$1,701,506	\$595,540	8	8	0
DIVISION OF HEALTH SCIENCES	\$2,152,307	\$443,544	(\$1,708,763)	15	18	3	\$5,918,614	\$3,510,132	(\$2,408,482)	39	46	7
DIV of EDUCATIONAL OUTREACH	\$0	\$0	\$0	0	0	0	\$12,000	\$0	(\$12,000)	2	0	(2)
HONORS COLLEGE	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
LAW SCHOOL	\$103,000	\$104,000	\$1,000	1	1	0	\$192,780	\$143,780	(\$49,000)	3	2	(1)
SCHOOL OF MEDICINE	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
PRESIDENT'S OFFICE (Lincy Institute)	\$0	\$0	\$0	0	0	0	\$337,605	\$667,741	\$330,136	2	3	1
PROVOST	\$0	\$0	\$0	0	0	0	\$377,205	\$312,976	(\$64,229)	5	4	(1)
VP FOR RESEARCH & ECON DEV	\$197,500	\$2,039,280	\$1,841,780	1	4	3	\$197,500	\$3,008,192	\$2,810,692	1	11	10
HARRY REID CENTER	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
VP STUDENT AFFAIRS	\$2,000	\$1,135,720	\$1,133,720	1	6	5	\$97,580	\$1,335,720	\$1,238,140	3	9	6
ACADEMIC ENRICHMENT & OUTREACH	\$0	\$0	\$0	0	0	0	\$9,128,306	\$9,933,672	\$805,366	11	13	2
STUDENT FINANCIAL SERVICES	\$0	\$0	\$0	0	0	0	\$860,000	\$918,156	\$58,156	1	3	2
VP FOR FINANCE & BUSINESS	\$0	\$11,622	\$11,622	0	1	1	\$0	\$17,448	\$17,448	0	2	2
VP FOR DIVERSITY	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
UNIVERSITY LIBRARIES	\$0	\$129,600	\$129,600	0	1	1	\$311,070	\$129,600	(\$181,470)	1	1	0
GRAND TOTAL:	\$5,873,789	\$7,942,035	\$2,068,246	72	100	28	\$38,691,641	\$40,468,009	\$1,776,368	264	291	27

PERCENTAGE CHANGE:

DOLLARS
3rd QTR: FY15 & FY16
35.2%

NUMBERS
3rd QTR: FY15 & FY16
38.9%

TOTAL DOLLARS
3rd QTR: FY15 & FY16
4.6%

NUMBERS
3rd QTR: FY15 & FY16
10.2%

DEPARTMENT BREAKDOWN

For Period: 3rd Qtr, January - March

AWARDS BY DEPARTMENT FY16

DEPARTMENT NAME	CURRENT QUARTER						CUMULATIVE TOTALS					
	Awards FY15	Awards FY16	Total \$ Change	# FY15	# FY16	Tot Change	Awards FY15	Awards FY16	Total \$ Change	# FY15	# FY16	Tot Change
LEE BUSINESS SCHOOL												
Dean's Office	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Accounting	\$0	\$0	\$0	0	0	0	\$11,175	\$10,400	(\$775)	1	1	0
Economics	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Finance	\$0	\$0	\$0	0	0	0	\$83,009	\$85,549	\$2,540	1	1	0
Ctr for Business & Economic Research	\$100,000	\$100,000	\$0	1	1	0	\$113,339	\$109,000	(\$4,339)	3	3	0
Lied Institute for Real Estate Studies	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Management, Entrepreneurship & Tech	\$0	\$67,200	\$67,200	0	1	1	\$138,582	\$67,200	(\$71,382)	3	1	(2)
Management Information Systems	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
COLLEGE OF EDUCATION												
Dean's Office	\$161,649	\$0	(\$161,649)	1	0	(1)	\$161,649	\$0	(\$161,649)	1	0	(1)
Educational & Clinical Studies	\$134,343	\$0	(\$134,343)	1	0	(1)	\$723,706	\$707,986	(\$15,720)	8	6	(2)
Educational Psychology & Higher Ed	\$0	\$2,000	\$2,000	0	1	1	\$176,372	\$219,708	\$43,336	2	5	3
Teaching & Learning	\$148,987	\$303,667	\$154,680	2	2	0	\$357,886	\$1,004,159	\$646,273	5	8	3
COLLEGE OF ENGINEERING												
Dean's Office	\$89,031	\$24,976	(\$64,055)	2	3	1	\$1,342,424	\$71,043	(\$1,271,381)	3	5	2
Civil & Environmental	\$23,701	\$42,776	\$19,075	1	4	3	\$206,662	\$733,961	\$527,299	4	8	4
Elec & Comp Engineering	\$132,330	\$70,000	(\$62,330)	3	1	(2)	\$347,588	\$393,813	\$46,225	8	8	0
Mechanical Engineering	\$423,381	\$640,456	\$217,075	10	10	0	\$4,015,687	\$4,844,529	\$828,842	37	36	(1)
Computer Science	\$84,805	\$25,000	(\$59,805)	4	1	(3)	\$584,500	\$156,758	(\$427,742)	7	4	(3)
Transportation Research Ctr	\$85,873	\$62,500	(\$23,373)	2	1	(1)	\$833,793	\$278,873	(\$554,920)	10	7	(3)
COLLEGE OF FINE ARTS												
Art	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Dance	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Music	\$0	\$0	\$0	0	0	0	\$750	\$3,873	\$3,123	1	1	0
School of Architecture	\$47,187	\$295,275	\$248,088	1	5	4	\$146,187	\$317,395	\$171,208	4	6	2
Theatre	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
COLLEGE OF HOTEL ADMINISTRATION												
Dean's Office	\$0	\$14,128	\$14,128	0	1	1	\$0	\$30,172	\$30,172	0	2	2
International Gaming Institute	\$0	\$0	\$0	0	0	0	\$116,000	\$100,000	(\$16,000)	2	1	(1)
COLLEGE OF LIBERAL ARTS												
Anthropology	\$0	\$0	\$0	0	0	0	\$89,993	\$46,801	(\$43,192)	1	3	2
English	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
History	\$0	\$25,554	\$25,554	0	1	1	\$0	\$44,301	\$44,301	0	2	2
Political Science	\$86,038	\$0	(\$86,038)	1	0	(1)	\$86,038	\$0	(\$86,038)	1	0	(1)
Psychology	\$179,955	\$10,000	(\$169,955)	3	1	(2)	\$179,955	\$530,107	\$350,152	3	6	3
Sociology	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Black Mtn Institute	\$0	\$0	\$0	0	0	0	\$5,000	\$3,900	(\$1,100)	1	1	0

DEPARTMENT BREAKDOWN

For Period: 3rd Qtr, January - March

AWARDS BY DEPARTMENT FY16

DEPARTMENT NAME	CURRENT QUARTER						CUMULATIVE TOTALS					
	Awards FY15	Awards FY16	Total \$ Change	# FY15	# FY16	Tot Change	Awards FY15	Awards FY16	Total \$ Change	# FY15	# FY16	Tot Change
COLLEGE OF SCIENCES												
Dean's Office	\$35,888	\$0	(\$35,888)	1	0	(1)	\$282,330	\$65,379	(\$216,951)	2	2	0
Chemistry	\$400,831	\$470,052	\$69,221	3	5	2	\$2,237,287	\$3,359,528	\$1,122,241	11	19	8
Geoscience	\$512,244	\$144,604	(\$367,640)	6	4	(2)	\$3,705,306	\$2,257,927	(\$1,447,379)	23	8	(15)
Mathematical Sciences	\$0	\$0	\$0	0	0	0	\$142,430	\$0	(\$142,430)	3	0	(3)
Physics & Astronomy	\$213,072	\$1,123,284	\$910,212	6	14	8	\$1,869,596	\$1,611,169	(\$258,427)	23	21	(2)
School of Life Sciences	\$69,800	\$465,959	\$396,159	4	11	7	\$2,162,771	\$1,735,555	(\$427,216)	20	24	4
COLLEGE OF URBAN AFFAIRS												
Communication Studies	\$0	\$0	\$0	0	0	0	\$10,800	\$0	(\$10,800)	1	0	(1)
Criminal Justice	\$6,912	\$190,838	\$183,926	1	2	1	\$150,942	\$999,437	\$848,495	4	5	1
Journalism & Media Studies	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
KUNV	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Marriage & Family Therapy	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
School of Env & Public Affairs	\$0	\$0	\$0	0	0	0	\$14,269	\$280,282	\$266,013	1	2	1
School of Social Work	\$479,955	\$0	(\$479,955)	1	0	(1)	\$929,955	\$421,787	(\$508,168)	2	1	(1)
DIVISION OF HEALTH SCIENCES												
School of Allied Health Sciences	\$21,999	\$15,005	(\$6,994)	2	2	0	\$357,378	\$553,846	\$196,468	5	6	1
School of Community Health Sciences	\$2,130,308	\$384,920	(\$1,745,388)	13	14	1	\$5,451,150	\$2,547,667	(\$2,903,483)	31	36	5
School of Dental Medicine	\$0	\$0	\$0	0	0	0	\$110,086	\$15,000	(\$95,086)	3	1	(2)
School of Nursing	\$0	\$43,619	\$43,619	0	2	2	\$0	\$393,619	\$393,619	0	3	3
DIV of EDUCATIONAL OUTREACH												
VP for Educational Outreach	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Public Lands Institute	\$0	\$0	\$0	0	0	0	\$12,000	\$0	(\$12,000)	2	0	(2)
VP STUDENT AFFAIRS												
Ctr for Academic Enrichment & Outreach	\$0	\$0	\$0	0	0	0	\$9,128,306	\$9,933,672	\$805,366	11	13	2
Financial Aid & Scholarships	\$0	\$0	\$0	0	0	0	\$860,000	\$860,000	\$0	1	1	0
Jean Nidetch Women's Ctr	\$0	\$43,238	\$43,238	0	2	2	\$0	\$143,238	\$143,238	0	3	3
Office of Admissions	\$2,000	\$0	(\$2,000)	1	0	(1)	\$97,580	\$100,000	\$2,420	3	2	(1)
Public Safety	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0
Student Counseling & Psychological Svcs	\$0	\$0	\$0	0	0	0	\$0	\$58,156	\$58,156	0	2	2
Wellness Promotion	\$0	\$1,092,482	\$1,092,482	0	4	4	\$0	\$1,092,482	\$1,092,482	0	4	4
Veterans Services	\$0	\$0	\$0	0	0	0	\$0	\$0	\$0	0	0	0

Office of Sponsored Programs
For Period: 3rd Qtr, January - March

TOTAL OSP EXPENDITURES FY 16

AGENCY NAME	CURRENT QUARTER			CUMULATIVE TOTALS		
	Total Expenditures FY 15	Total Expenditures FY 16	Total \$ Change	Total Expenditures FY 15	Total Expenditures FY 16	Total \$ Change
LEE BUSINESS SCHOOL	\$59,606.15	\$58,374.88	(\$1,231.27)	\$197,924.74	\$176,081.60	(\$21,843.14)
COLLEGE OF EDUCATION	\$253,709.52	\$366,770.80	\$113,061.28	\$1,081,956.96	\$1,221,084.92	\$139,127.96
COLLEGE OF ENGINEERING	\$2,381,216.04	\$1,680,680.32	(\$700,535.72)	\$7,878,521.97	\$6,975,059.08	(\$903,462.89)
COLLEGE OF FINE ARTS	\$5,902.61	\$18,735.87	\$12,833.26	\$111,105.93	\$110,756.45	(\$349.48)
COLLEGE OF HOTEL ADMINISTRATION	\$97,514.10	\$246,033.57	\$148,519.47	\$544,220.83	\$498,700.57	(\$45,520.26)
COLLEGE OF LIBERAL ARTS	\$276,405.54	\$188,322.01	(\$88,083.53)	\$836,034.97	\$693,261.13	(\$142,773.84)
COLLEGE OF SCIENCES	\$2,318,726.58	\$2,828,958.50	\$510,231.92	\$8,111,117.36	\$8,491,624.74	\$380,507.38
COLLEGE OF URBAN AFFAIRS	\$128,813.24	\$174,644.72	\$45,831.48	\$407,406.14	\$890,176.07	\$482,769.93
DIVISION OF HEALTH SCIENCES	\$1,637,537.41	\$2,006,858.69	\$369,321.28	\$6,556,014.61	\$6,324,454.76	(\$231,559.85)
DIV of EDUCATIONAL OUTREACH	\$3,611.40	\$296.94	(\$3,314.46)	\$4,583.54	\$5,090.13	\$506.59
LAW SCHOOL	\$18,388.34	\$26,715.22	\$8,326.88	\$26,513.71	\$77,590.97	\$51,077.26
PRESIDENT'S OFFICE (Lincy Institute)	\$65,532.55	\$71,825.46	\$6,292.91	\$147,045.88	\$234,220.01	\$87,174.13
PROVOST	\$72,462.38	\$64,145.67	(\$8,316.71)	\$241,180.79	\$286,317.81	\$45,137.02
VP FOR RESEARCH & GRAD STUDIES	\$206,908.53	\$884,921.94	\$678,013.41	\$481,861.60	\$1,590,919.54	\$1,109,057.94
HARRY REID CENTER	\$0.00	\$0.00	\$0.00	\$122,853.95	\$0.02	(\$122,853.93)
VP STUDENT AFFAIRS	\$44,161.24	\$64,867.31	\$20,706.07	\$123,951.61	\$151,540.07	\$27,588.46
ACADEMIC ENRICHMENT & OUTREACH	\$2,788,954.65	\$2,724,094.30	(\$64,860.35)	\$8,313,955.24	\$7,715,250.20	(\$598,705.04)
STUDENT FINANCIAL SERVICES	\$241,377.00	\$204,660.00	(\$36,717.00)	\$471,377.00	\$450,709.00	(\$20,668.00)
VP FOR FINANCE & BUSINESS	\$0.00	\$0.00	\$0.00	\$25,730.00	\$4,912.92	(\$20,817.08)
VP FOR DIVERSITY	\$0.00	\$0.00	\$0.00	\$60.41	\$0.00	(\$60.41)
UNIVERSITY LIBRARIES	\$53,966.08	\$54,791.04	\$824.96	\$120,509.75	\$164,149.65	\$43,639.90
GRAND TOTAL:	\$10,654,793.36	\$11,665,697.24	\$1,010,903.88	\$35,803,926.99	\$36,061,899.64	\$257,972.65

PERCENTAGE CHANGE:

DOLLARS
3rd QTR: FY 15 & FY 16
9.5%

TOTAL DOLLARS
3rd QTR: FY 15 & FY 16
0.7%

Note: 1) Includes expenditures in all functions (i.e. instruction, research, public service, academic support, student services, institutional support, operations & maintenance and scholarships & fellowships) for sponsored programs accounts.

Office of Sponsored Programs
For Period: 3rd Qtr, January - March

RESEARCH EXPENDITURES FY 16

AGENCY NAME	CURRENT QUARTER			CUMULATIVE TOTALS		
	Total Expenditures FY 15	Total Expenditures FY 16	Total \$ Change	Total Expenditures FY 15	Total Expenditures FY 16	Total \$ Change
LEE BUSINESS SCHOOL	\$11,514.30	\$3,590.18	(\$7,924.12)	\$77,727.05	\$25,851.30	(\$51,875.75)
COLLEGE OF EDUCATION	\$72,716.59	\$87,640.49	\$14,923.90	\$527,493.68	\$268,167.06	(\$259,326.62)
COLLEGE OF ENGINEERING	\$2,375,176.89	\$1,654,361.51	(\$720,815.38)	\$7,780,446.45	\$6,923,444.53	(\$857,001.92)
COLLEGE OF FINE ARTS	\$3,297.50	\$0.00	(\$3,297.50)	\$71,707.03	\$0.00	(\$71,707.03)
COLLEGE OF HOTEL ADMINISTRATION	\$72,906.16	\$246,033.57	\$173,127.41	\$284,418.15	\$498,524.93	\$214,106.78
COLLEGE OF LIBERAL ARTS	\$275,405.54	\$185,230.98	(\$90,174.56)	\$832,034.97	\$688,270.10	(\$143,764.87)
COLLEGE OF SCIENCES	\$1,993,717.93	\$2,437,797.17	\$444,079.24	\$7,315,413.21	\$7,470,418.76	\$155,005.55
COLLEGE OF URBAN AFFAIRS	\$27,379.67	\$64,073.55	\$36,693.88	\$95,448.91	\$569,394.11	\$473,945.20
DIVISION OF HEALTH SCIENCES	\$1,261,248.62	\$1,313,967.02	\$52,718.40	\$5,254,467.10	\$4,704,889.97	(\$549,577.13)
DIV of EDUCATIONAL OUTREACH	\$1,548.87	\$296.94	(\$1,251.93)	\$2,113.56	\$880.22	(\$1,233.34)
LAW SCHOOL	\$0.00	\$0.00	\$0.00	\$7,918.37	\$5,365.80	(\$2,552.57)
PRESIDENT'S OFFICE (Lincy Institute)	\$33,758.79	\$32,186.59	(\$1,572.20)	\$110,766.66	\$100,175.71	(\$10,590.95)
PROVOST	\$4,296.67	\$1,776.75	(\$2,519.92)	\$4,296.67	\$14,232.92	\$9,936.25
VP FOR RESEARCH & GRAD STUDIES	\$128,619.42	\$825,022.58	\$696,403.16	\$285,239.81	\$1,372,145.52	\$1,086,905.71
HARRY REID CENTER	\$0.00	\$0.00	\$0.00	\$122,853.95	\$0.02	(\$122,853.93)
VP STUDENT AFFAIRS	\$0.00	\$2,689.02	\$2,689.02	\$0.00	\$2,689.02	\$2,689.02
ACADEMIC ENRICHMENT & OUTREACH	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
STUDENT FINANCIAL SERVICES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
VP FOR FINANCE & BUSINESS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
VP FOR DIVERSITY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNIVERSITY LIBRARIES	\$348.00	\$0.00	(\$348.00)	\$12,905.63	\$0.00	(\$12,905.63)
GRAND TOTAL:	\$6,261,934.95	\$6,854,666.35	\$592,731.40	\$22,785,251.20	\$22,644,449.97	(\$140,801.23)

PERCENTAGE CHANGE:

DOLLARS
3rd QTR: FY 15 & FY 16
9.5%

TOTAL DOLLARS
3rd QTR: FY 15 & FY 16
-0.6%

Office of Sponsored Programs
For Period: 3rd Qtr, January - March

RECOVERED F&A FY16

AGENCY NAME	CURRENT QUARTER			CUMULATIVE TOTALS		
	Total Expenditures FY 15	Total Expenditures FY 16	Total \$ Change	Total Expenditures FY 15	Total Expenditures FY 16	Total \$ Change
LEE BUSINESS SCHOOL	\$4,269.68	\$4,836.93	\$567.25	\$18,654.17	\$16,711.58	(\$1,942.59)
COLLEGE OF EDUCATION	\$23,313.46	\$35,584.44	\$12,270.98	\$127,598.05	\$107,314.88	(\$20,283.17)
COLLEGE OF ENGINEERING	\$426,214.14	\$361,755.82	(\$64,458.32)	\$1,529,065.45	\$1,584,010.86	\$54,945.41
COLLEGE OF FINE ARTS	\$0.00	\$1,052.53	\$1,052.53	(\$0.21)	\$1,052.53	\$1,052.74
COLLEGE OF HOTEL ADMINISTRATION	\$2,403.61	\$1,402.58	(\$1,001.03)	\$37,851.35	\$3,539.45	(\$34,311.90)
COLLEGE OF LIBERAL ARTS	\$72,673.87	\$45,263.16	(\$27,410.71)	\$216,688.64	\$178,250.66	(\$38,437.98)
COLLEGE OF SCIENCES	\$500,859.71	\$618,777.74	\$117,918.03	\$1,802,190.57	\$1,992,145.09	\$189,954.52
COLLEGE OF URBAN AFFAIRS	\$15,022.13	\$19,187.25	\$4,165.12	\$52,718.87	\$56,581.46	\$3,862.59
DIVISION OF HEALTH SCIENCES	\$262,104.90	\$254,650.13	(\$7,454.77)	\$850,477.89	\$865,188.84	\$14,710.95
DIV of EDUCATIONAL OUTREACH	\$758.60	\$44.22	(\$714.38)	\$887.99	\$1,208.63	\$320.64
LAW SCHOOL	\$0.00	\$0.00	\$0.00	\$230.63	\$156.28	(\$74.35)
PRESIDENT'S OFFICE (Lincy Institute)	\$0.00	\$2,643.33	\$2,643.33	\$0.00	\$3,259.52	\$3,259.52
PROVOST	\$4,698.63	\$4,305.67	(\$392.96)	\$16,934.15	\$22,358.74	\$5,424.59
VP FOR RESEARCH & GRAD STUDIES	\$11,202.59	\$114,911.24	\$103,708.65	\$18,579.63	\$161,928.24	\$143,348.61
HARRY REID CENTER	\$0.00	\$0.00	\$0.00	\$30,829.09	\$0.02	(\$30,829.07)
VP STUDENT AFFAIRS	\$619.68	\$1,724.84	\$1,105.16	\$2,967.22	\$4,020.33	\$1,053.11
ACADEMIC ENRICHMENT & OUTREACH	\$166,747.87	\$161,128.37	(\$5,619.50)	\$485,019.97	\$463,782.74	(\$21,237.23)
STUDENT FINANCIAL SERVICES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
VP FOR FINANCE & BUSINESS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
VP FOR DIVERSITY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNIVERSITY LIBRARIES	\$6,523.75	\$13,596.67	\$7,072.92	\$9,342.01	\$34,082.45	\$24,740.44
GRAND TOTAL:	\$1,497,412.62	\$1,640,864.92	\$143,452.30	\$5,200,035.47	\$5,495,592.30	\$295,556.83

PERCENTAGE CHANGE:

DOLLARS
3rd QTR: FY 15 & FY 16
9.6%

TOTAL DOLLARS
3rd QTR: FY 15 & FY 16
5.7%

Note: 1) Includes expenditures charged to object code 89 for sponsored programs accounts (funds 2330-2397).

MEMORANDUM

TO: Tom Piechota and Stan Smith
FROM: Lori Olafson
DATE: 4/7/2016
SUBJECT: FY16 3rd Quarter Office of Research Integrity Data

<i>SOCIAL BEHAVIORAL IRBs APPROVED FOR QUARTER</i>	
	<u>No.</u>
01/01/15 - 03/31/15	50
01/01/16 - 03/31/16	46
Total Change	(4)
Percent Change	-8%

<i>CUMULATIVE SOCIAL BEHAVIORAL IRBs</i>	
	<u>No.</u>
07/01/14 - 03/31/15	134
07/01/15 - 03/31/16	167
Total Change	33
Percent Change	25%

<i>BIOMEDICAL IRBs APPROVED FOR QUARTER</i>	
	<u>No.</u>
01/01/15 - 03/31/15	32
01/01/16 - 03/31/16	34
Total Change	2
Percent Change	6%

<i>CUMULATIVE BIOMEDICAL IRBs</i>	
	<u>No.</u>
07/01/14 - 03/31/15	82
07/01/15 - 03/31/16	108
Total Change	26
Percent Change	32%

<i>SOCIAL BEHAVIORAL AND BIOMEDICAL IRBs APPROVED FOR QUARTER</i>	
	<u>No.</u>
01/01/15 - 03/31/15	82
01/01/16 - 03/31/16	80
Total Change	(2)
Percent Change	-2%

<i>CUMULATIVE SOCIAL BEHAVIORAL AND BIOMEDICAL IRBs</i>	
	<u>No.</u>
07/01/14 - 03/31/15	216
07/01/15 - 03/31/16	275
Total Change	59
Percent Change	27%

<i>SOCIAL BEHAVIORAL IRBs SUBMITTED FOR QUARTER</i>	
	<u>No.</u>
01/01/15 - 03/31/15	56
01/01/16 - 03/31/16	58
Total Change	2
Percent Change	4%

<i>CUMULATIVE SOCIAL BEHAVIORAL IRBs</i>	
	<u>No.</u>
07/01/14 - 03/31/15	175
07/01/15 - 03/31/16	203
Total Change	28
Percent Change	16%

<i>BIOMEDICAL IRBs SUBMITTED FOR QUARTER</i>	
	<u>No.</u>
10/01/14 - 12/31/14	38
10/01/15 - 12/31/15	48
Total Change	10
Percent Change	26%

<i>CUMULATIVE BIOMEDICAL IRBs</i>	
	<u>No.</u>
07/01/14 - 03/31/15	96
07/01/15 - 03/31/16	125
Total Change	29
Percent Change	30%

<i>SOCIAL BEHAVIORAL AND BIOMEDICAL IRBs SUBMITTED FOR QUARTER</i>	
	<u>No.</u>
10/01/14 - 12/31/14	94
10/01/15 - 12/31/15	106
Total Change	12
Percent Change	13%

<i>CUMULATIVE SOCIAL BEHAVIORAL AND BIOMEDICAL IRBs</i>	
	<u>No.</u>
07/01/14 - 03/31/15	271
07/01/15 - 03/31/16	328
Total Change	57
Percent Change	21%

MEMORANDUM

TO: Tom Piechota
FROM: Zach Miles
DATE: 4/13/2016
SUBJECT: FY 16 3rd Quarter Status Technology Transfer Data

DISCLOSURES RECEIVED FOR QUARTER	
	<u>No.</u>
01/01/2015 - 03/31/2015	13
01/01/2016 - 03/31/2016	9
Total Change	(4)
Percent Change	-31%

CUMULATIVE DISCLOSURES RECEIVED	
	<u>No.</u>
07/01/2014 - 03/31/2015	29
07/01/2015 - 03/31/2016	42
Total Change	13
Percent Change	45%

APPLICATIONS FILED FOR QUARTER	
	<u>No.</u>
01/01/2015 - 03/31/2015	19
01/01/2016 - 03/31/2016	10
Total Change	(9)
Percent Change	-47%

CUMULATIVE APPLICATIONS FILED	
	<u>No.</u>
07/01/2014 - 03/31/2015	43
07/01/2015 - 03/31/2016	38
Total Change	(5)
Percent Change	-12%

LICENSE AGREEMENTS FOR QUARTER	
	<u>No.</u>
01/01/2015 - 03/31/2015	1
01/01/2016 - 03/31/2016	2
Total Change	1
Percent Change	100%

CUMULATIVE LICENSE AGREEMENTS	
	<u>No.</u>
07/01/2014 - 03/31/2015	29
07/01/2015 - 03/31/2016	26
Total Change	(3)
Percent Change	-10%

INTER-INSTITUTIONAL/TEAMING AGREEMENTS/MOU/MTA	
	<u>No.</u>
01/01/2015 - 03/31/2015	3
01/01/2016 - 03/31/2016	3
Total Change	0
Percent Change	0%

CUMULATIVE INTER-INSTITUTIONAL/TEAMING AGREEMENTS/MOU/MTA	
	<u>No.</u>
07/01/2014 - 03/31/2015	7
07/01/2015 - 03/31/2016	15
Total Change	8
Percent Change	114%

NON-DISCLOSURE AGREEMENTS

	<u>No.</u>
01/01/2015 - 03/31/2015	5
01/01/2016 - 03/31/2016	3
<hr/>	
Total Change	(2)
Percent Change	-40%

CUMULATIVE NON-DISCLOSURE AGREEMENTS

	<u>No.</u>
07/01/2014 - 03/31/2015	12
07/01/2015 - 03/31/2016	9
<hr/>	
Total Change	(3)
Percent Change	-25%

DONATIONS RECEIVED FOR QUARTER

	<u>No.</u>
01/01/2015 - 03/31/2015	10,000
01/01/2016 - 03/31/2016	6,000
<hr/>	
Total Change	(4,000)
Percent Change	-40%

CUMULATIVE DONATIONS

	<u>No.</u>
07/01/2014 - 03/31/2015	2,310,000
07/01/2015 - 03/31/2016	26,000
<hr/>	
Total Change	(2,284,000)
Percent Change	-99%

CSR RECEIVED FOR QUARTER

	<u>No.</u>
01/01/2015 - 03/31/2015	0
01/01/2016 - 03/31/2016	0
<hr/>	
Total Change	0
Percent Change	0%

CUMULATIVE CSR

	<u>No.</u>
07/01/2014 - 03/31/2015	50,000
07/01/2015 - 03/31/2016	353,500
<hr/>	
Total Change	303,500
Percent Change	607%

REVENUE RECEIVED FOR QUARTER

	<u>No.</u>
01/01/2015 - 03/31/2015	16,480
01/01/2016 - 03/31/2016	27,921
<hr/>	
Total Change	11,441
Percent Change	69%

CUMULATIVE REVENUE

	<u>No.</u>
07/01/2014 - 03/31/2015	106,781
07/01/2015 - 03/31/2016	191,241
<hr/>	
Total Change	84,460
Percent Change	79%

SBDC JOBS CREATED/RETAINED FOR QUARTER	
	<u>No.</u>
01/01/2015 - 03/31/2015	18
01/01/2016 - 03/31/2016	83
Total Change	65
Percent Change	361%

CUMULATIVE JOBS CREATED/RETAINED	
	<u>No.</u>
07/01/2014 - 03/31/2015	46
07/01/2015 - 03/31/2016	217
Total Change	171
Percent Change	372%

SBDC NEW BUSINESSES SERVED FOR QUARTER	
	<u>No.</u>
01/01/2015 - 03/31/2015	23
01/01/2016 - 03/31/2016	33
Total Change	10
Percent Change	43%

CUMULATIVE NEW BUSINESSES SERVED	
	<u>No.</u>
07/01/2014 - 03/31/2015	79
07/01/2015 - 03/31/2016	80
Total Change	1
Percent Change	1%

SBDC NEW BUSINESS STARTS FOR QUARTER	
	<u>No.</u>
01/01/2015 - 03/31/2015	1
01/01/2016 - 03/31/2016	3
Total Change	2
Percent Change	200%

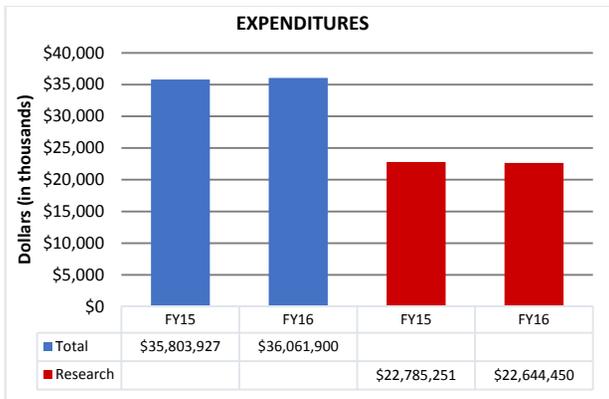
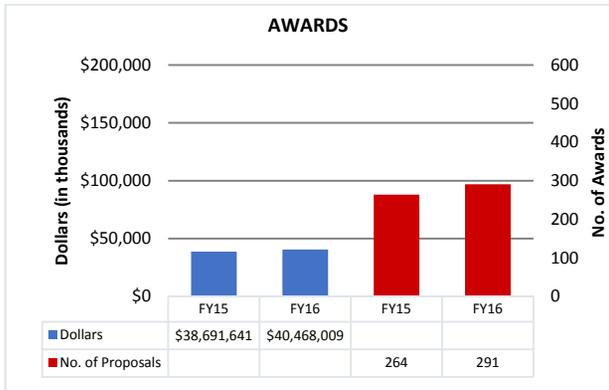
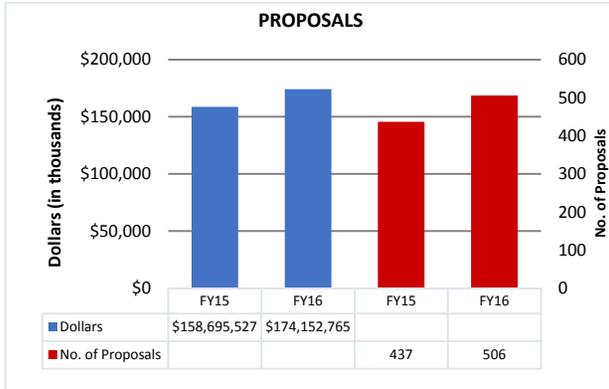
CUMULATIVE NEW BUSINESS STARTS	
	<u>No.</u>
07/01/2014 - 03/31/2015	6
07/01/2015 - 03/31/2016	13
Total Change	7
Percent Change	117%

SBDC CAPITAL ACQUIRED FOR QUARTER	
	<u>No.</u>
01/01/2015 - 03/31/2015	2,688,071
01/01/2016 - 03/31/2016	7,526,100
Total Change	4,838,029
Percent Change	180%

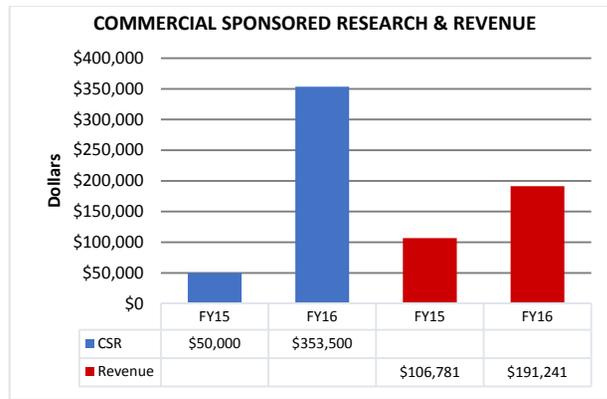
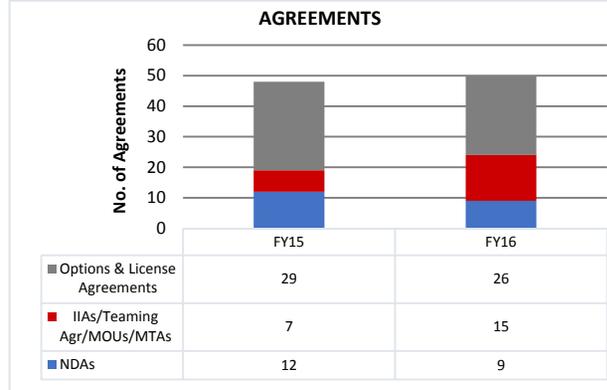
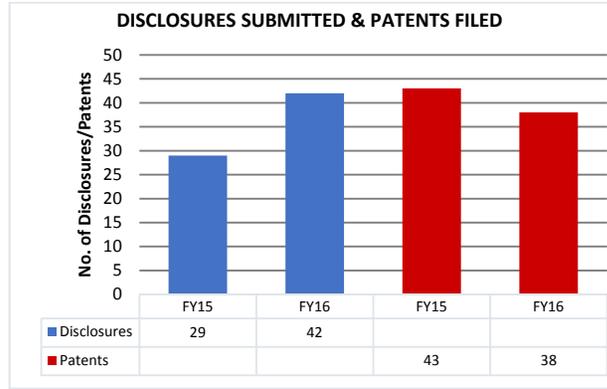
CUMULATIVE CAPITAL ACQUIRED	
	<u>No.</u>
07/01/2014 - 03/31/2015	3,583,276
07/01/2015 - 03/31/2016	11,762,100
Total Change	8,178,824
Percent Change	228%

FY2016 Cumulative 3rd Quarter Report: Division of Research & Economic Development

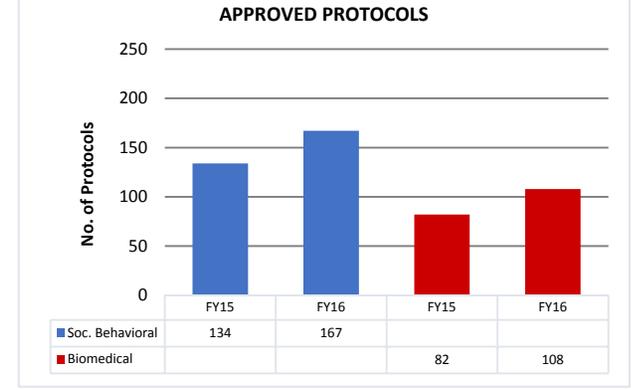
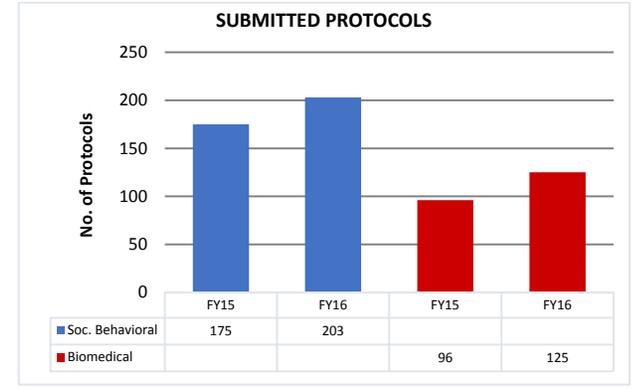
Office of Sponsored Programs



Office of Economic Development



Office of Research Integrity



*All values represent cumulative FY numbers

Report to Research Council, Liam Frink, 4/22/16

Impact:

- OUR Ambassadors involved in events across campus
 - President's office
 - TedX
- College of Education initiating undergraduate research program
- Research Education increase in coursework –
 - Fall and Spring forums as culminating event
 - Offering in-class support workshops
- CSUN increasing their dedicated funds to undergraduate research support
 - Scholarship awards
 - Undergraduate research stipends
 - Undergraduate travel awards

Web Outreach:

- Advertisement and promotion for campus wide undergraduate research activities
- List research credit and research related courses
- List various current research funding opportunities (campus, local, national)
- Facebook followers 124 from 40 in January (0 in Oct, 15)
- Twitter followers 111 from 60 in January (0 in Oct, 15)
- Instagram followers 122 from 0 in Feb, 16
- Working with OIT to track OUR web site users

Events:

Spring Undergraduate Research Forum (email me if you'd like an ecopy of the forum abstract book)

- 250 attended (students, faculty, admin – incorporated alums and community as judges)
- Corby Hovis (NSF Division of Undergraduate Education) keynote
- 50 oral and poster presentations (first time including oral presentations)
- Over 60 students at forum workshop (demonstration/discussion on poster and oral presentations)

Fall Undergraduate Research Showcase will be November 4, 2016

Fall HackUNLV will be November 18, 2016

- Tech hack (Econ Dev)
- "President's Challenge" hack

Funding:

- Awards
 - Conference/Research Travel Awards (sponsored by VPR, Provost, OUR) \$5000
 - OUR Ambassador committee deciding awardees
 - OUR-UNLV Faculty Research Mentor Award (sponsored by VPR)
 - Nora Caberoy, SoLS (\$500)
 - OUR-UNLV Undergraduate Scholar Award (\$500 each)
 - Diana Pena (Kelly Tseng) SoLS
 - Justin Le (Yingtao) Engineering
- NSF INCLUDES grant application (Co-PI) submitted (Apr 15, 16)

- NSF workshop/conference application (Students with disabilities and integration into research opportunities)
- Keck Foundation grant (1 pager July, 16)
- Donor options through Foundation
 - General donations
 - Undergraduate Research Assistantships

Initiatives:

- Undergraduate Research Registry (fall,16)
- Undergraduate Research Certificate (fall, 16/spring17)
- High School student research experience registry
- Community Advisory Board

OUR-UNLV UNDERGRADUATES

D Research enhances a global perspective, interdisciplinary training, and professional opportunities for our students.

I Undergraduate **Alexandria Bragg** works in Dr. Martin Schiller's lab as they continue to study the biology of HIV. This groundbreaking research may enhance and expedite novel drug discovery.

C **Bernajane Palisoc**, a McNair Scholar, has worked in 3 different labs, participated in numerous studies (such as the effects of smoking on schizophrenia), and has presented profession posters in Atlanta, Georgia and Puerto Rico.



N **Weng Chan**, a student in the College of Hotel Studies, invented and filed a patent application for Summon the Dragon, a variation of the traditional Asian dice game Sic Bo that radically modernizes a traditional favorite.

V Founded in 2013 by UNLV undergraduates, **Students for Science** is an inclusive and diverse group of students who work to teach, promote, and advance student involvement in research in the sciences.

E In the research context, new ideas are fostered and implemented with local and global impact.

STEAM (Science, Technology, Engineering, Arts, & Math) is the research word at UNLV and our students are involved in creative and scholarly activities across campus.

Professor David Waldman (Cinematographer for TED talks) is in a unique position to mentor undergraduate students in the Department of Film. Undergraduates **Kimberly Lowe** and **Ryan Galvan** recently worked with Waldman during on-site production re-shoots for the MGM film *Max* with Director Boaz Yakin.



UNLV undergraduates work on research projects in Dr. Tamara Madensen's Crowd Management Research Council with the goal of enhancing public safety at large scale events. Current projects include the development of risk assessment tools to protect tourist/sporting/protest crowds and training to enhance positive police-community relations.

Students get experience in the daily workings at the Clark County Coroner and Medical Examiner's Office and conduct an original research project looking at patterns of violent deaths under the mentorship of Dr. Debra Martin. This research program aims to create more effective interventions that can save lives and aid in public policy that reduces or inhibits violent interactions.

Students learn through hands-on experiences where they are immersed in their field, which supplements coursework for more applicable learning.

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UNLV OFFICE OF UNDERGRADUATE RESEARCH

The **Mission** of the new UNLV Office of Undergraduate Research (OUR-UNLV) is to inspire undergraduates in their efforts to discover, innovate, create, and experience research here on campus and in the community. The goals of OUR-UNLV are to:

DEVELOP

- Create and coordinate effective and best practices training for undergraduate skill building and professional development
- Highlight and foster a diversity of research opportunities and links to recruitment

INTEGRATE

- Effectively foster reciprocal partnerships with our campus community, other NSHE institutions and our community partners
- Increase the number of undergraduate and faculty engaged in mentoring and collaborative research

CONNECT

- Encourage and support our underrepresented and underserved students, with a purposeful commitment to valuing identity and diversity and ensuring equity, access, and social justice
- Connect OUR-UNLV undergraduates to real-world experience and opportunities to work in teams and serve in leadership roles

EDUCATE

- Elevate the role of undergraduate research in UNLV's Top Tier aspirations
- Raise and manage funds to support undergraduate research and promote UNLV undergraduate research as a sound and impactful investment
- Capture and disseminate data on the impacts of undergraduate research at UNLV

WHY RESEARCH FOR OUR-UNLV UNDERGRADUATES?

Research successfully and efficiently promotes recruitment, retention, and degree completion of students, particularly underrepresented students. Undergraduates receive hands-on skill building, integrate into the university mission, engage in peer cohorts and advising, and are mentored by our leading research faculty and community collaborators.

Discover the **innovative** and **creative** work of UNLV undergraduate students, and **experience** the Fall Undergraduate Showcase and the Spring Undergraduate Research Forum!

We are currently housed in the John S. Wright Hall - Building A (WRI-A125)



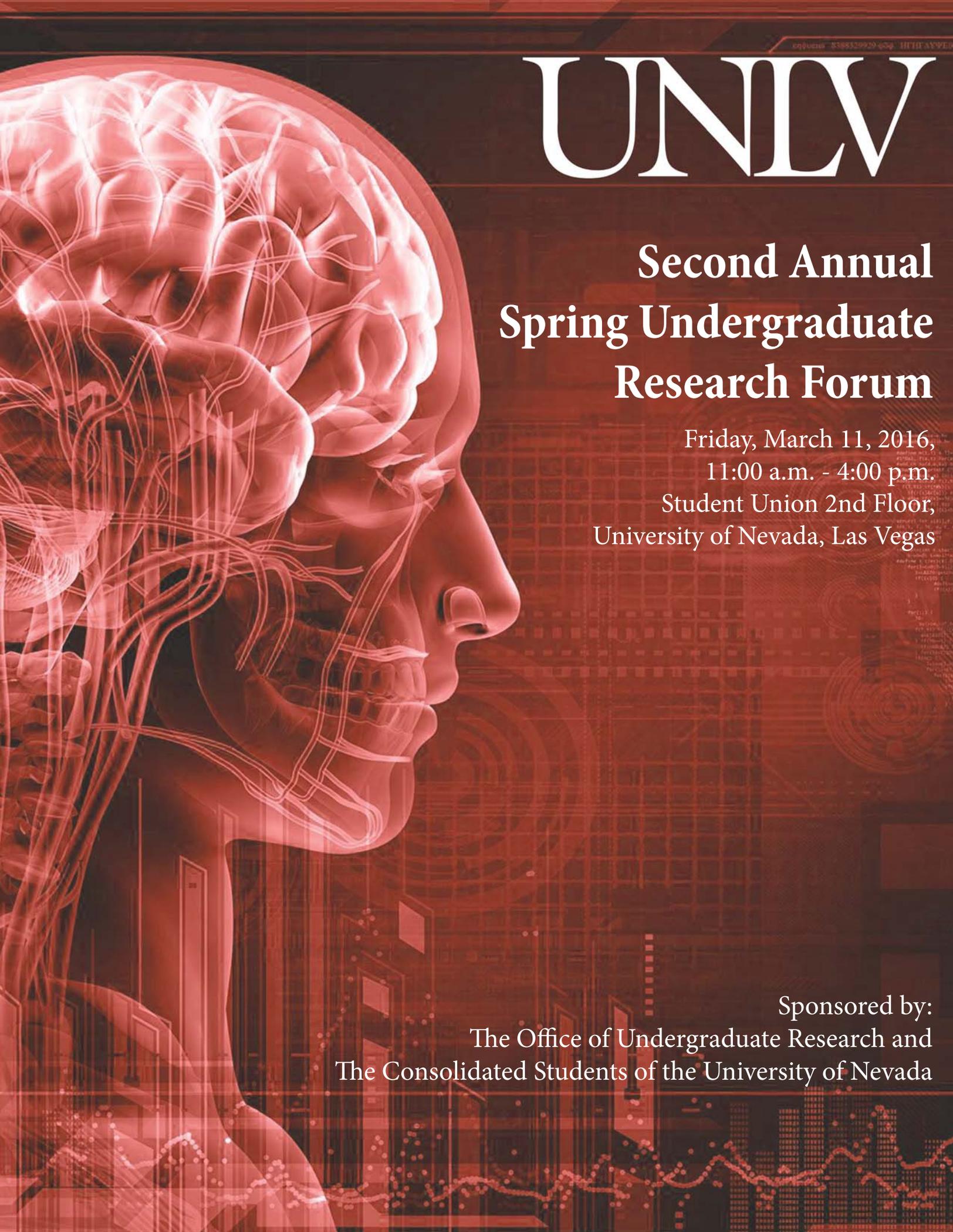
For more information about the Office of Undergraduate Research, contact us at OUR@unlv.edu or visit our website at unlv.edu/OUR.

Phone: 702-895-2367

The Director of OUR-UNLV is Dr. Liam Frink and the program operates within the Division of Research and Economic Development and Office of the Executive Vice President.



UNLV OUR | @OURUNLV



UNLV

**Second Annual
Spring Undergraduate
Research Forum**

Friday, March 11, 2016,
11:00 a.m. - 4:00 p.m.
Student Union 2nd Floor,
University of Nevada, Las Vegas

Sponsored by:
The Office of Undergraduate Research and
The Consolidated Students of the University of Nevada

UNDERGRADUATE

RESEARCH FORUM

Spring 2016

We would like to thank you all for without your collaboration recognition of the efforts of undergraduate researchers and their faculty mentors would not have been possible.

SUPPORTERS

The Division of Research and Economic Development
The Office of the Executive Vice President and Provost

VOLUNTEER JUDGES

Jenny Ballif - INBRE Post-Baccalaureate Coordinator, Nevada State College	Kiran Mathew - School of Life Sciences Alumna
Sheila Bock - Interdisciplinary Degree Programs	Nita Mathews - Universal Health Services, Inc.
Carol Brodie - Office of Sponsored Programs	Miriam Melton-Villanueva - Department of History
Nate Bynum - Department of Theatre	Zach Miles - Associate Vice President for Economic Development, Division of Research and Economic Development
Michele Casella - Special Sponsored Programs Office, Nevada System of Higher Education	Stan Mitchell - Vice President-Project Management, E.Stanley Projects, Inc.
Ramona Denby Brinson - Senior Resident Scholar of Social Services with The Lincy Institute, UNLV School of Social Work	Brendan O'Toole - Department of Mechanical Engineering
Alredo Fernandez-Gonzalez - School of Architecture	Emma Regentova - Department of Electrical and Computer Engineering
Elena Gandia-Garcia - Department of World Languages & Cultures	Kurt Regner - School of Life Sciences
Caleb Green - PA Owens Christian Academy, UNLV Alumnus	Rachael Robnett - Department of Psychology
Katherine Hertlein - Marriage & Family Therapy Program	Anna Smedley-Lopéz - Department of Sociology
Rodney Jordan - UNLV Alumnus	Chelsi Walls - Department of Communication Studies
Yu Kuang - Department of Health Physics and Diagnostic Sciences	Doris Watson - Department of Educational Psychology & Higher Education
Mark Lenker - Libraries, Educational Initiatives Department	Jinger Zeng - Dronesmith Technologies
Linda Lister - Department of Music	

STUDENT VOLUNTEERS

Connor Barlow	MJ Cunca	Mona Molion
Alexandria Bragg	Demi Falcon	Sahar Nadeem
Carriann Cahall	Julio Gullegs	Sophia Phan
Andrew Cardenas	Ross Gutierrez	Kane Sisomphou
Jeff Carroll	Rachel Hershko	Nicole Thomas
Olivier Clavel	Jasmine Jordan	Calvin Tian
Daniel Cordova	Cody McCullough	Pedro Turicos
Natalia Cortez	Andrew Mical	Brian Warren

Thank You!

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MESSAGE FROM THE CHANCELLOR

To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science.” Albert Einstein’s words seem to me to capture the spirit of undergraduate research at our institutions. While Einstein was largely focused on science, this essential human need to explore our universe and question our set ideas is essential in every field, from the sciences to history, business, literature, communications, and beyond.



Being an undergraduate is an exciting time for a student. Before college, our classes and curriculum is largely chosen for us, and after college, we typically have a chosen pathway. In college, students have the chance to pursue the topics that interest them, pique their curiosity. Truly at no other time in our lives are most of us able to seize these opportunities. At the University of Nevada, Las Vegas, new and innovative things are happening all the time, and the Office of Undergraduate Research (OUR) is a prime example. OUR provides the platform and support for undergraduates to explore what they are curious about beyond the classroom, and the Spring Forum showcases their extraordinary, vibrant work. They have challenged themselves, and they will challenge others to consider or reconsider new ideas, theories, and beliefs.

Whether these remarkable undergraduates pursue graduate research or earn their degree and enter the workforce or follow some other life pursuit, they will be better students, better people for their experience. Education – and especially the more intense, in-depth research students may pursue at our institutions – is not only about the knowledge we take away from the classroom and our professors. It’s about expanding our minds, exploring our curiosities, challenging us as human beings. Hopefully – if we’re lucky – it continues for a lifetime. As Einstein also observed, “The important thing is not to stop questioning. Curiosity has its own reason for existing.”

Congratulations to all of our undergraduates participating in OUR’s Spring Undergraduate Research Forum – your achievement is truly something to celebrate!

Daniel J. Klaiich
Chancellor, Nevada System of Higher Education

MESSAGE FROM THE PRESIDENT

Dear students, colleagues, and guests,

Welcome to UNLV's Annual Undergraduate Research Forum, a time when we celebrate the incredible scholarship and creative activity produced by our undergraduate students each year. Enhancing our education, research, and creative activities is a key element of UNLV's Top Tier initiative and drive to rise in national prominence.

I am consistently impressed by the innovation and creativity of our undergraduate students, and even more amazed at how well UNLV's research community fosters and promotes their contributions. We are truly championing a culture that is open to new ideas and collaboration while valuing our diversity and unique academic strengths.



I know from personal experience how conversation can spark a new way of thinking and set a student on a path for world discovery. So I encourage you to be curious and engage in conversations about the projects. Ask participants to share their moments of discovery, as well as their setbacks and how they overcame them. Find out more about the faculty and fellow students who helped along the way. And learn how their work can transform our community and improve your life.

After you spend time learning more about the work that our undergraduate students are doing every day on this campus, I'm sure you will find their achievements as innovating, inspiring, and truly exceptional as I do.

Cordially,

Len Jessup
President, UNLV

MESSAGE FROM THE VICE PRESIDENT & PROVOST

The best part about undergraduate research is that it strengthens people's analytical skills and whets their curiosity. When an undergraduate designs an experiment and then studies the results, he or she realizes that an inquiry ("how does this work/what can we do better?") can help to change the world.

I had the benefit of doing research as an undergraduate at Rice University, studying the effect of time of day on cognitive performance. Other than forcing my friends to let me take their temperatures several times a day (you'd be amazed at the amount of drool that someone can produce), the experiment was a wonderful way to re-test the hypothesis that most of us are best at mental tasks in the morning and at physical tasks in the mid-afternoon. The love of research that I found at Rice has stayed with me to this day, and I hope that the same will be true for all of our undergraduates who get to design and analyze their own experiments.



One caution from my dad, who was a research chemist his whole career: the most dangerous time is when one's results agree with one's hypothesis, because a researcher can forget that, sometimes, results agree by accident, rather than because the experiment actually worked. Always question; always test your assumptions.

Have a great time at the Spring Research Forum!

Nancy B. Rapoport
Executive Vice President & Provost, UNLV

MESSAGE FROM THE SENIOR VICE PROVOST

Your engagement in undergraduate research is where you light the fire of scholarship and discovery that will grow as you continue your research. You will find research and scholarship both exciting and frustrating but in the end the research process is what is important and you will carry this with you into your future endeavors.

The initiation of the Office of Undergraduate Research is vital to UNLV's Top Tier goal. I am delighted to see the progress the office has made in a short time and look forward to seeing our undergraduates' blossom in their research efforts. Dr. Frink and his staff are to be congratulated and I support their continuing success!



As a bench lab researcher myself, I know the rewards that come from the pursuit of knowledge and encourage any student to engage in this process. I engaged in undergraduate research starting as a sophomore which provided the foundation on which I have based my scientific career. And that is why I continue to mentor undergraduate students in my laboratory.

Carl Reiber

Senior Vice Provost, UNLV

MESSAGE FROM THE VICE PRESIDENT OF RESEARCH & ECONOMIC DEVELOPMENT

Welcome to UNLV's spring Undergraduate Research Forum! Here you will see firsthand what happens when the ingenuity and enthusiasm of our undergraduate students meets the expertise and dedication of some of the nation's top faculty, found right here on our campus.

Hosted by UNLV's new Office of Undergraduate Research (OUR), the Undergraduate Research Forum represents the culmination and celebration of undergraduates' efforts to discover, innovate, create, and experience research at UNLV and in the community. Students engaged in research endeavors develop the ability to think critically, learn how to create valuable relationships with educators and peers, and acquire practical skills they can use in their studies and the workplace.



I have long been a supporter of undergraduate research at UNLV. When I first joined UNLV's faculty 16 years ago, the first students to work with me on water resources research were undergraduates. In 2013, I was proud to engage with architecture and engineering undergraduates in research related to UNLV's award-winning Solar Decathlon project. I've worked time and again with UNLV undergrads, I know all they are capable of, and their talent never ceases to amaze me.

Our undergraduates have truly impressive projects to share with you at our spring research forum. Tackling terrorism, fundraising, sustainability, and everything in between, students from across campus in every discipline have been asking mission-critical questions and steering our community toward the answers.

I extend my heartiest thanks to our undergraduates, faculty mentors, and OUR for all their efforts. You are the force driving UNLV to the Top Tier, and I could not be more pleased with your work.

Thomas C. Piechota

Vice President of Research & Economic Development, UNLV

PROGRAM *of Events*

11:00 - 12:00 p.m. : Lunch & Opening Remarks

Dr. Liam Frink, Director of the Office of Undergraduate Research
Dr. Tom Piechota, Vice President for Research and Economic Development
Provost Nancy Rapoport, Executive Vice President and Provost

SU Ballroom



12:00 - 12:15 p.m. : Invited Speaker

Dr. Corby Hovis, Senior Program Officer, National Science Foundation Research Experiences for
Undergraduates Program

SU Ballroom



12:30 - 3:00 p.m. : Presentations

Podium Presentations | SU Meeting Rooms 207 & 209

Posters & Exhibits | SU Room 208



3:00 - 4:00 p.m.: TOPPS Lab Group Presentation

Dr. Brad Donohue, Professor and TOPPS Director, Department of Psychology
Yulia Gavrilova, Performance Coach & Psychology Graduate Student
Gary Frazier, Performance Coach
Andrea Corral, Research Assistant & Psychology and Journalism Undergraduate Student
Summer Millwood, Research Assistant & Psychology Undergraduate Student
Regina Mitchell, Research Assistant & Biological Sciences Undergraduate Student



Awards for Outstanding Presentations

Khamsouk Sisomphou, Fabian Donate & Krystal Madrid, CSUN Scholarship and Grant Chairs



Final Remarks

Kanani Espinoza, CSUN Undergraduate Student Body President
Jasmine Simone Jordan, CSUN Board and Spring Forum Planning Committee Member
Dr. Carl Reiber, Senior Vice Provost
SU 1st Floor Philip J. Cohen Theatre

PODIUM *Sessions*

INTERDISCIPLINARY I

PODIUM SESSION A Student Union Room 207

- 12:30 **Armon Latifi - Engineering**
Effective Power Management of Harvested Power on Small Unmanned Aerial Vehicles
- 12:45 **Sukh Sandhu & Andrew Graves - Health Sciences**
Dysregulation of DNA Methyltransferase (DNMT)-1 and DNMT-3 in Oral Cancers
- 1:00 **Vanessa Alarcia - Liberal Arts**
Reevaluating Migration Patterns in Prehispanic Southern Nevada
- 1:15 **Andrew Donahue - Liberal Arts**
Electoral Incentive: The Financial Impetus to Vote

1:30-1:45 BREAK

- 1:45 **Michele Koanui - Liberal Arts**
Digital Preservation: An Archaeologist's Tool
- 2:00 **Armon Latifi - Engineering**
3D Depth & Visual Study
- 2:15 **Sean Cortney - Liberal Arts**
Revisiting Regulation: Analyzing the Canton System's Failure and Repercussions

INTERDISCIPLINARY II

PODIUM SESSION B Student Union Room 209

- 12:30 **Cynthia Cox - Liberal Arts**
"The Mortar That Binds a Pueblo Together"
- 12:45 **Francesca Romanyshyn - Liberal Arts**
Social and Cultural Conflicts within the Fort Mojave Indian Boarding School
- 1:00 **Daniel Waqar - Liberal Arts**
Assessing Historic Understandings of the Israeli-Palestinian Conflict: A History of Violence and Power in Hebron, the Israeli-Occupied West Bank
- 1:15 **Lee Cannarozzo - Fine Arts**
Photography as Propaganda: A Case Study of German Photography from the Weimar Republic to Rise of the Nazi State

1:30-1:45 BREAK

- 1:45 **McKade Christensen -**
Emotional Hooks: The Impact of Photography in the Media
- 2:00 **Hope Youngblood- Liberal Arts**
Two Faced: Promising Confidence but Promoting Cosmetics
- 2:15 **Gail Guerrero - Liberal Arts**
The Influence of Feminist Fans on the Alteration of "Game of Thrones"

EFFECTIVE POWER MANAGEMENT OF HARVESTED POWER ON SMALL UNMANNED AERIAL VEHICLES

Armon Latifi

University of Nevada, Las Vegas, Department of Electrical and Computer Engineering

Faculty Research Mentor: Venkatesan Muthukumar, Ph.D.

University of Nevada, Las Vegas, Department of Electrical and Computer Engineering

Understandably, the importance of small Unmanned Aircraft Systems (sUAS) in commercial applications is monumental; search and rescue operations, first responder systems, and critical package delivery are all soon becoming a near reality due to this cutting-edge technology. Yet with any novel form of technology, there are tradeoffs; the cost, personnel, physical footprint, flight range, resistance to weather, and takeoff capability all affect the performance of a sUAS. However, a major engineering problem without a definite answer is the flight longevity and endurance of sUAS in commercial, as well as urban, applications. Previous studies have proven a distinct relationship between the flight time of a small Unmanned Aircraft System and the weight of the payload carried. I predict that, in order to maximize the longevity of the sUAS, the payload of the vehicle must be reduced as much as possible. In order to prove this, I will also modify the system to collect solar and vibrational energy (from the motion of the motors) to determine an impact on total flight time. Additionally, I will analyze this added increase to the payload of the sUAS to establish the viability of a system powered by renewable energy.

Funding for this research was provided by the NASA Experimental Program to Stimulate Competitive Research (NASA EPSCoR).

DYSREGULATION OF DNA METHYLTRANSFERASE (DNMT)-1 AND DNMT-3 IN ORAL CANCERS

Sukh Sandhu¹ & Andrew Graves²

¹University of Nevada, Las Vegas, School of Life Sciences

²University of Nevada, Las Vegas, Department of Environmental and Occupational Health

Faculty Research Mentor: Karl Kingsley, Ph.D., MPH
University of Nevada, Las Vegas, School of Dental Medicine

Background: DNA methyltransferase DNMT-1 plays a significant role in the regulation of tissue-specific methylation patterns on cytosine residues to maintain differentiation in replicating cells. Dysregulation of DNMT-1 has been observed in many human cancers, although limited information is available regarding oral cancers. Additional family members, including DNMT-3a and -3b are responsible for de novo methylation and epigenetic modification and are often over-expressed in many aggressive human cancers, including some oral cancers. To date, however, only one study has evaluated DNMT1, 3a and 3b in oral cancers. *Objectives:* Based upon these gaps in evidence, the goal of this project was to examine DNMT expression in well-characterized oral cancer cell lines. *Methods:* Relative endpoint (RE)-PCR was performed on 1 ug of total RNA extracted from 1.2×10^6 cells using primers specific for DNMT1, DNMT3a and DNMT3b mRNA. *Results:* Normal (control) human gingival (HGF-1) and fibroblast (Hs27) cells were found to strongly express the tissue-differentiation DNMT1 mRNA, while expression was comparatively lower (or absent) among four of the five oral cancer cell lines evaluated (SCC4, SCC9, SCC15, SCC25, CAL27). De novo DNA methylation enzyme DNMT3a and DNMT3b mRNA was notably absent in the normal controls, while over-expression was observed among all oral cancer lines. *Conclusions:* These data suggest loss of DNMT-1 expression and concomitant over-expression of DNMT3 enzymes may be characteristic of some oral cancers, although more research is needed to assess the potential to determine utility as biomarkers for tumor staging and aggressiveness.

This research was presented at the 45th Annual Meeting and Exhibition of the American Association for Dental Research (AADR) in Los Angeles, CA, March 2016.

Funding for this research was provided by the UNLV School of Dental Medicine.

PODIUM ABSTRACTS

REEVALUATING MIGRATION PATTERNS IN PREHISPANIC SOUTHERN NEVADA

Vanessa Alarcia, Elizabeth Duffy & Benjamin Van Alstyne
University of Nevada, Las Vegas, Department of Anthropology

Faculty Research Mentor: Karen Harry, Ph.D.
University of Nevada, Las Vegas, Department of Anthropology

Around AD 200-1250, the Virgin Branch Puebloans (VBP) occupied the most western portion of the Ancestral Puebloan cultural tradition. Due to the VBP cultural remains exhibiting similarities to the material culture of the Ancestral Puebloan, archaeologists consider the VBP as the Ancestral Puebloan culture occupying the Virgin River area in Southern Nevada. However, in 2015, Dr. Karen Harry and Dr. James Watson argued for a genetic analysis rather than a material analysis as a means of assessing biological relationships. In their study, non-metric dental traits were used to measure the genetic-relatedness, as opposed to cultural-relatedness, between Lowland VBP and Greater Southwest populations. Their research has revealed a closer genetic relationship between the Lowland VBP and Great Basin communities to the northwest than with the Ancestral Puebloans of the southwest. One site that is in question, as to whether the society is Great Basin or Ancestral Puebloan, is the Bowman site near Pahrump, Nevada. This is because the Bowman site is farther west into the Great Basin region, and a large amount of VBP pottery at the site is indicative of trade and cultural ties with the Ancestral Puebloans. Therefore, this present ongoing research will use similar methods to determine whether the ancient society that occupied Bowman is either genetically related to the Virgin Branch and Great Basin societies or to the Ancestral Puebloans. Thus, the results will indicate whether the Great Basin peoples settled a larger area in Southern Nevada or the Ancestral Puebloan migrated further west.

ELECTORAL INCENTIVE: THE FINANCIAL IMPETUS TO VOTE

Andrew Donahue

University of Nevada, Las Vegas, Department of Political Science

Faculty Research Mentor: Stephen Bates, J.D.¹ & Tim Gauthier, Ph.D.²

¹University of Nevada, Las Vegas, Hank Greenspun School of Journalism and Media Studies

²University of Nevada, Las Vegas, Interdisciplinary Degree Programs

How much is a vote worth? To answer this timely question my research has emerged with an equation which generates demographically specific financial values for campaign issues and legislative actions. My method has two areas of application. This method can be applied legislatively for lobbying purposes, and by lawmakers deliberating on bills. Additionally, the method identifies the financial implications of casting one's vote for a candidate or ballot question. At present I have quantified the variables of legislative action on minimum wage, and prevailing wage. Electorally I have also defined how the Nevada's earning potential hangs in the balance when it comes to nonpartisan initiative petitions that will appear on the 2016 ballot.

Funding for this research was provided by The UNLV Foundation & the Nevada System of Higher Education (NSHE) Board of Regents.

DIGITAL PRESERVATION: AN ARCHAEOLOGIST'S TOOL

Michele Koanui

University of Nevada, Las Vegas, Department of Anthropology

Faculty Research Mentor: Karen Harry, Ph.D.
University of Nevada, Las Vegas, Department of Anthropology

Archaeology is a destructive process that archaeologists have tried to overcome, throughout its history, in an attempt to preserve, record, learn, and share Humanity's past. Today, with the world's ever-advancing technology, archaeologists are now able to collect more data, preserve more sites, and reach out to the public at an unprecedented rate, while nearly eliminating the destructive process. Across the world, archaeologists are using ground-penetrating radar, air and ground based laser-scanning known as LiDAR, and photogrammetry to better understand and discover ancient sites that are obstructed by their surrounding environment. These new recording methods allow archaeologists to preserve sites, with micro precision, as a 3D model digitally. Additionally, it allows archaeologists to investigate a site without causing destruction. With certain areas of the world experiencing devastating turmoil, sites that are significant to the memory and past of individuals, families, communities, and the world are being erased from the landscape. The unavoidable destruction of these significant sites have caused archaeologists to scramble in an attempt to preserve them before they are destroyed. By utilizing these new recording methods, archaeologists are able to save the memory of these sites through digital preservation. Therefore, this ongoing research explores how these digital 3D models can be further investigated to obtain data that can help archaeologists understand the lifeways of ancient cultures. Additionally, this research explores how the past can help inform the present and how the erased past can be brought back through 3D printing.

3D DEPTH & VISUAL STUDY

Armon Latifi¹, Gabriel Quiroz² & Si Jung "SJ" Kim, Ph.D.²

¹University of Nevada, Las Vegas, Department of Electrical and Computer Engineering

²University of Nevada, Las Vegas, Entertainment Engineering and Design

Faculty Research Mentor: Si Jung "SJ" Kim, Ph.D.
University of Nevada, Las Vegas, Entertainment Engineering and Design

Three-dimensional (3D) featured movies and entertainment are becoming ubiquitous through virtual reality, augmented reality and traditional movie theaters. 3D effects are done by polarizing the light in order to provide a visual effect. This trending method of entertainment is associated with human visual perception; which can cause spatial experiences in 3D. For many individuals, 3D movies may cause fatigue, headaches, and/or visual discomfort. This paper questions the current movie industry's standard for distance and depth for 3D movies. Preliminary studies conducted showed subjects' various geometric shapes (a cube, a sphere, a cone, and a rod) at multiple sizes and speeds. Participants rated the overall effect of 3D and their visual fatigue. Potential applications of this research would help 3D related entertainment industries in optimizing the best and most comfortable 3D viewing for their clients in VR, AR, and movies.

PODIUM ABSTRACTS

REVISITING REGULATION: ANALYZING THE CANTON SYSTEM'S FAILURE AND REPERCUSSIONS

Sean Cortney

University of Nevada, Las Vegas, Department of History

Faculty Research Mentor: Mary Wammack, Ph.D.
University of Nevada, Las Vegas, Department of History

This historiographical study investigates the scholarship published since 1936 focused on the Canton System of China. The Canton System existed from the late 18th century to the mid-19th century in China as a means to control all foreign trade during the Qing era by funneling it through monitored factories in today's Guangzhou (Canton). The Qianlong Emperor of the Qing Dynasty instituted the system as a means to retain full control over foreign trade in order to maintain sovereignty and preserve the existing imperial governing structure. All decisions regarding the system were made in Beijing before taking full effect in Guangzhou thousands of miles away. My research analyzes how historians regarded the Canton System's failure as a prelude to the Opium War. While early twentieth-century historians argued the Canton System's failure came as a result of frustration from foreign merchants, later historians asserted the Canton System failed because of the introduction of the steamship and the printing press, which united foreign merchants and defeated the natural forces that originally allowed Chinese officials to control the flow of traffic and communication. Critical to understanding conditions in Imperial China which produced the Opium War and subsequent semi-colonization by international powers, the Canton System's treatment by historians continues to draw a more detailed analysis. This analysis, like that which preceded it, reflects the changing historical developments and perceptions that influence all historians and their work.

"THE MORTAR THAT BINDS A PUEBLO TOGETHER"

Cynthia Cox & Ben Van Alstyne

University of Nevada, Las Vegas, Department of
Anthropology

Faculty Research Mentor: Karen Harry, Ph.D.
University of Nevada, Las Vegas, Department of
Anthropology

Mortar is an important property in construction of historical pueblos throughout the Southwest. This includes the Shivwits Plateau located on the North rim of the Grand Canyon where the ruins of the Virgin Branch Ancestral Puebloan (VBP) are sited. These ruins consist of outlines defining where multi-room pueblos existed about 1000 years ago. The data collected from the excavations on the Shivwits Plateau, point to these pueblos as being constructed with irregular round rubble. The influence of various sand types help modify the mortar into a series of strength properties and according to the research analyzing the VBP pueblos, it suggests that the local smectite clay rich soils would have been used for making mortar. However, it is unknown whether the aggregate existing in the clayey soil was suitable for the mortar to be used in construction and if additional fine aggregate was needed. Thus, this currently ongoing research is to determine whether aggregate was added to the clayey soil and how much was added to make workable mortar. The methods used to determine this are developed from research that processed different types of mortar and cement to determine how much sand and water was added. Furthermore, processed excavation samples will be compared to soil samples from the Shivwits Plateau that were collected by the Department of Agriculture to further determine if sand was added. After obtained results, data will help to better understand how much labor was invested in making these pueblos and adjusting to the harsh semi-arid environment.

SOCIAL AND CULTURAL CONFLICTS WITHIN THE FORT MOJAVE INDIAN BOARDING SCHOOL

Francesca Romanyshyn & Miriam Melton-Villanueva,
Ph.D.
University of Nevada, Las Vegas, Department of History

Faculty Research Advisor: Miriam Melton-Villanueva,
Ph.D.
University of Nevada, Las Vegas, Department of History

I have explored official correspondence from the Fort Mojave Industrial School, which was an Indian boarding school; letters from the Fort Mojave military outpost, which preceded the school; pictures I have taken from the ruins of the school; and topographical maps. I will transcribe and analyze the language for ideas of identity, environment, and conflict. Underpinning these ideas are preconceptions about settlement patterns, labor, and social and cultural norms. The goal of this project is a co-authored article describing the life and context of the indigenous Mojave, Hualapai, and Paiute girls and boys taken away from their homes and living under the control of Superintendent Samuel M. McCowan. The three major aspects of this will be: the soldiers' and superintendent's views on the natives, the life and expectations of the students and employees of the school, and the misconceived ideas that the white migrants had about the environment of the Fort Mojave area.

ASSESSING HISTORIC UNDERSTANDINGS OF THE ISRAELI-PALESTINIAN CONFLICT: A HISTORY OF VIOLENCE AND POWER IN HEBRON, THE ISRAELI-OCCUPIED WEST BANK

Daniel Waqar
University of Nevada, Las Vegas, Department of History

Faculty Research Mentor: John Curry, Ph.D.
University of Nevada, Las Vegas, Department of History

Despite the vast amount of research on the Israeli-Palestinian conflict, little is known about the twentieth century history of peace and conflict efforts in Hebron, the largest city by population in the Israeli-occupied West Bank. The overall image that emerges from the literature on the Israeli-Palestinian conflict is one that excludes Hebron's unique religious, settlement, and power dynamics. This study analyzes the intersecting themes of violence and power in Hebron within the context of the Israeli-Palestinian conflict by utilizing a source base comprised of documents from the United Nations Information System on the Question of Palestine database, Israeli human rights documents, and newspaper archives from the Associated Press and the Historic Jewish Press in the National Library of Israel. Specifically, this study will examine how religious violence and extremism by Jews and Muslims, continued Israeli settlement, and historic flash points affect town dynamics and Israeli-Palestinian peace agreements. In order to understand Hebron's broader impact on the Israeli-Palestinian conflict, this study will develop a specific definition for the characteristic known as "Hebronization," which is a term that has recently appeared in the literature about how trends in cities pivotal to the conflict such as Jerusalem have started to mimic some of the unique settlement, religious, and extremist characteristics once seen only in Hebron. The study adds to contemporary understandings of the Israeli-Palestinian conflict by discussing the hugely disproportionate imbalances of power and violence in Hebron, which will affect a future resolution to the Israeli-Palestinian conflict.

This research was presented at the Western Regional Honors Council (WRHC) Conference, April 2016.

PODIUM ABSTRACTS

PHOTOGRAPHY AS PROPAGANDA: A CASE STUDY OF GERMAN PHOTOGRAPHY FROM THE WEIMAR REPUBLIC TO RISE OF THE NAZI STATE

Lee Cannarozzo

University of Nevada, Las Vegas, Department of Art

Faculty Research Mentor: Susanna Newbury, Ph.D.
University of Nevada, Las Vegas, Department of Art

“Photography as Propaganda: A Case Study of German Photography from the Weimar Republic to Rise of the Nazi State” examines how artists use photography to communicate socio-political ideologies and examines how politicized art reduces to propaganda. Through a visual comparison of three images taken by Weimar era and Post-Weimar era German photographers Heinrich Hoffmann, Hans Bellmer, and John Heartfield, this study demonstrates the photographic medium’s capacity for persuasion. By viewing the digitized work of Heinrich Hoffmann’s Nazi era photographs and visiting the collections department at the Eastman Museum in Rochester, NY to view the works of the photographic artists Hans Bellmer and John Heartfield this discourse was made possible. In its broadest context this study serves as a cautionary tale to multiple disciplines by exemplifying the responsibility the arts and the sciences have in shaping public opinion and the trajectory of history. Photography is a visual language that engages and affects a viewer’s perception of reality and the world at large. It is a highly reproducible medium that has the capacity to disseminate an objective conception of the past to an infinite audience. Its origins and history are bound to the concept of evidence; a photograph is presumed to be true. During the early part of the twentieth century photography still retained the presupposition that the medium was primarily indexical. The work of Hoffmann, Bellmer and Heartfield shattered that assumption, as their images exemplify the medium’s capacity as a form of subjective visual persuasion. The blatant subjectivity evoked by the photographs taken by photographers presented in this study, demonstrates how visual objectivity is a fallacy and how to a greater extent scientific objectivity is liable to be co-opted by contemporaneous political realities.

EMOTIONAL HOOKS: THE IMPACT OF PHOTOGRAPHY IN THE MEDIA

McKade Christensen¹ & Nancy Ross, Ph.D.²

¹Dixie State University, Communication Studies Department

²Dixie State University, Art History Department

Faculty Research Mentor: Nancy Ross, Ph.D.
Dixie State University, Art History Department

The Syrian refugee crisis has been an on-going tragedy for over four years now. Up until September of 2015, the major nations of the world did not do much to address the upheaval in Syrian. Only after the release of a particular photo in the media have world leaders taken a larger stance on accepting more refugees and bringing attention to the crisis. This presentation examines how individuals respond when presented with different types of media including photographs, text, and political cartoons that relay similar kinds of information. I engaged in a class research project aimed at determining the power of photography and the emotions it activates within an individual. In our research we attempted to understand which types of media produced the strongest reactions in an individual's mind. We conducted a survey, gathering data from about 240 individuals spread across the United States and Europe. We asked demographic questions, and then had respondents write down their reactions to the different types of media we presented to them. We coded the responses into different themes to better understand the emotions felt during the viewing of the different media. Preliminary results indicate that photography has a unique impact on media viewers that is greater and different from political cartoons and text. Going forward with the data analysis, I will be able to calculate the strength of each type of media and see which specific emotions are reported by different demographic categories. I think that the data will show that photography is universally preferred as a means of communication. Photography is a unique medium which can relay raw, visual information to a viewer that writing cannot. Photography has the ability to transform a distant viewer into a front row observer.

This research was presented at the Utah Conference on Undergraduate Research (UCUR), February 2016

TWO FACED: PROMISING CONFIDENCE BUT PROMOTING COSMETICS

Hope Youngblood

University of Nevada, Las Vegas, Department of Sociology

Faculty Research Mentor: Kerie Francis, Ph.D.
University of Nevada, Las Vegas, Department of Sociology

With a readership of twelve million people per month, Seventeen magazine is influential in shaping many adolescent girls' concept of body image and confidence. This study examines the prevalence of marketing toward this market by performing a content analysis of advertisements in issues of Seventeen magazine published during 2014. A manifest analysis counted the number of advertisements and categorized them based on type of product and counted the number of pages containing product placement, while a latent analysis noted the absence of pages devoted to improving oneself through experiential, spiritual, or intellectual means. The manifest analysis shows that half of all advertisements found in the magazine are devoted to cosmetics and over a quarter promote clothing. When the pages within the publication were analyzed, more than 70 percent of the pages were found to contain some type of product placement. If Seventeen is fulfilling their mission statement of giving girls "the confidence they need to become strong, self-assured young women," the content of the magazine implies that self-confidence is dependent upon one's appearance and the ability to buy products. This study illustrates the pervasiveness of consumerism in magazines and the consequences this can have on the construction of young women's self-image.

This research was presented at Southwestern Social Science Association 2016 Annual Meeting, March 2016.

THE INFLUENCE OF FEMINIST FANS ON THE ALTERATION OF *GAME OF THRONES*

Gail Guerrero

University of Nevada, Las Vegas, Department of History

Faculty Research Mentor: Marcia Gallo, Ph.D.
University of Nevada, Las Vegas, Department of History

Lately, the feminist movement has been gaining ground. From Emma Watson's HeForShe Campaign to the female lead in the newest Star Wars trilogy, it seems that feminism has been affecting great change in the film industry. Its reach has even impacted HBO's television series *Game of Thrones*, which is notorious for its nearly commonplace portrayals of nudity and rape. Through the investigation of several posts on feminist and liberal blogs and magazines, this study discovers the subculture of the series' feminist fans and how their movement has influenced the *Game of Thrones* writers to have a less misogynistic approach for the show's next season. This study also uses Mary Louise Pratt's "Arts of the Contact Zone," which investigates the 17th century power struggle between the dominant Spanish and the subordinate Andeans, as a framework through which to view the feminist fans' increasing influence over the show's writers and general fan community. Finding, ultimately, that power comes in numbers, as the changes in the writers' approach were put into effect due to the large number of people who cared about issue brought to light, this study will further add to our understanding of the feminist movement's efficacy and to the growing concern regarding female representation in the media.

POSTER *Sessions*

ENGINEERING, HEALTH, & SCIENCE I

ENGINEERING, HEALTH, & SCIENCE II

POSTER SESSION C Student Union Room 208

- 12:30 Vernice Ollano - Health Sciences
Hamstring/Quadriceps Ratio Influence on Hamstring Strain Injuries
- 12:45 Cortney Miller, Charli Aguilar, Dylan Brown & Frank-Aaron Ibarra
The Effects of Post-activation Potentiation on Horizontal Power and Speed: With Relations to a 10 & 20 Yard Resistance Sprint Prior to a 40 Yard Dash
- 1:00 Samantha Yumul, Juliette Nganje, Matthew Rucker, Taylor Hall & Seth Blasco
Isolation of DNA from Clinical Saliva Samples at UNLV School of Dental Medicine
- 1:15 Nicky Chung - Sciences
Using Somatic Mutations to Understand Transposon Expression in Somatic Cells

1:30-1:45 BREAK

- 1:45 Elizabeth Park - Sciences
Looking for Statistical Association between microRNA & Transposable Element Expression
- 2:00 Austin Ross - Engineering
TEDetection; Detecting Novel Transposable Element Insertions in Cancer Genomes
- 2:15 Sally Lee - Engineering
Pressure-induced Tetrahedral to Orthorhombic Phase Transition in MgF₂

POSTER SESSION D Student Union Room 208

- 12:30 Nicholas Hunyh & Randolph Hunyh - Engineering
STEAM Origami: Learning STEM Educational Components via the Art of Paper Folding
- 12:45 Katherine Fisher & Stephanie J. Olson
Cardiovascular and Brain Health and function in Athletic, Recreationally Active and Sedentary Individuals: A Combined Study of BP, RHR, HRV, DASS-42, and EEG Alpha Baseline
- 1:00 Pascal Nilsson-Dimarco - Sciences
Building a Nutrigenetic Database to Enable Genetically-Designed Diets
- 1:15 Delani Denton - Health Sciences
Football Fundraising: A Look into Potential Areas of Focus for Future Program Development

1:30-1:45 BREAK

- 1:45 Daniel Barbosa Maia & Joao Bohatzuk
SLED: Designing a Spatial Font Based on the Human Optical Illusion and Persistence of Vision
- 2:00 Martin Jaime Viveros - Engineering
Flying Orchestra
- 2:15 Kimberly Gonzalez - Engineering
Web-Based Access to Engineering Data on Molten Salts

BUSINESS, LIBERAL ARTS & URBAN AFFAIRS

BUSINESS & LIBERAL ARTS

POSTER SESSION E Student Union Room 208

- 12:30 Dylan Anderson, Carlos Barajas, Rebecca Dunne, Danielle Hester, Haylee Hinton, Brian Kennedy, Brie-Anne Lavoie, Jan Rataj, Edith Robinson & Michaela Tomchek
An Empirical Investigation of Urban Resiliency: Las Vegas Metropolitan Area
- 12:45 Jeffery Gossett, Karley Call & Jasmine Solacito
Sustainable Hope for Las Vegas
- 1:00 Nitzan Barlev, Chloe Bender, Shayla Liller & Alexis Navarro
"A Different Kind of Desert"
- 1:15 Caitlin Mccartan - Sciences
Conserving Outdoor Water Use in Private Homes in the Las Vegas Valley

1:30-1:45 BREAK

- 1:45 Trevor Pollom, Kodi Ballew, Trina Guarino & Carlos Lucero
UNLV and the E-Book Revolution
- 2:00 Marvin Norwood II - Engineering
The Impact a Post-Secondary Institution's Administrative Structure and Expenditures Have on Student Graduation Rates
- 2:15 Michael Cruz & Basma Awada
The Effect of Changes in Welfare Spending on Adoption

POSTER SESSION F Student Union Room 208

- 12:30 Katelyn O'Hara & Kristian Que
Presidential Assassination Attempt
- 12:45 Helen Haile - Business
Leading Factors in Terror Group Growth: Radicalization, Women, and Social Media
- 1:00 Brittany Singh, Natasha Thaweese, Ariana Lopez & Wenjia Li
Accessibility and Affordability of Healthy Food in Las Vegas
- 1:15 Alexia Janda, Hana Gutierrez, Meghan Romane & Kristen Rode
Food Sources and Sustainability of Las Vegas, Nevada

1:30-1:45 BREAK

- 1:45 Heidi Sperling-Gomez, Kelsey Ross, Ashley Verker & Natalie Mermuys
3D Food Printing - The Future of Global Food Production?
- 2:00 Ryan Francis, Andrew Ortiz, Lauren Ender & Kenny Green
Predicting Preference: A Computational Model For Decision Making Behavior
- 2:15 Evan Clarkson & Che'Renee Zaragoza
How Do Individual Differences Affect the Way Adults Detect Changes in Complex Scenes?

FINE ARTS & LIBERAL ARTS

POSTER SESSION G Student Union Room 208

- 12:30 **Sara Meraz - Liberal Arts**
*"Okay Ladies, Now Let's Get in Formation":
bell hooks and Janet Mock on Beyoncé and
Dirty Feminism*
- 12:45 **Brittney Ballesteros - Liberal Arts**
*Reporting Sex Work in Sin City: Depictions
of Prostitution in the Las Vegas Print Media*
- 1:00 **Jordan Campos, Sarah Carnivalli, Jessica
Green & Janice Gurrola**
Hoover Dam - Water Conservation
- 1:15 **Gabriel Zimmerman, Kayla Story,
Michael Pickard & Jared Miles**
*Prospective Depletion Rate of Water in Lake
Mead and Recommended Revitalization
Efforts*
- 1:30-1:45 BREAK**
- 1:45 **Benjamin Martin - Liberal Arts**
Water Crisis, Water War
- 2:00 **Carriann Cahall - Fine Arts**
Montage as Language (Exhibit)
- 2:15 **Kendall Lyons - Liberal Arts**
*Auditory Beat and Meter Perception in
Children*
- 2:30 **Taylor Pease & Corrina Pedregon**
*Musical Rhythms Induce Long-lasting Beat
Perception in Listeners With and Without
Musical Experience*

POSTER ABSTRACTS

HAMSTRING/QUADRICEPS RATIO INFLUENCE ON HAMSTRING STRAIN INJURIES

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Hamstring strain injuries (HSI) are prevalent among athletes competing in high velocity and running intensive sports. Hamstring weakness and decreased hamstring-quadriceps ratios (HQR) have been previously identified as risk factors for HSI. The purpose of this study was to evaluate isokinetic strength measures in individuals who have sustained a previous HSI compared to individuals who remained HSI free. We hypothesize that individuals with a previous medical history of HSI ($n = 4$) will have a lower HQR than controls ($n = 6$). A Biodex dynamometer was used to bilaterally measure concentric hamstring, eccentric hamstring, and concentric quadriceps strength isokentically. Strength data was collected via Biodex software and both conventional (concentric hamstring strength divided by concentric quadriceps strength) and functional (eccentric hamstring strength divided by concentric quadriceps strength) HQR were calculated from the respective means of three trials. Statistical analyses were performed using independent t-test with a priori level of $p < 0.05$. There was a significant decrease ($p = 0.0487$) in eccentric hamstring strength in the HSI group compared to the control group. There was no significant difference in conventional HQR between groups ($p = 0.27$). Individuals that sustained an HSI the previous season had significantly decreased ($p = 0.1$) functional HQR compared to controls. Based upon our findings, functional HQR may be a better indicator of strength deficient following HSI than conventional HQR. Additionally, eccentric hamstring strength remained decreased in our HSI group, despite all athletes having gone through a rehabilitation program and returning to competition. This indicates that rehabilitation programs need to incorporate eccentric focused hamstring strengthening exercises.

THE EFFECTS OF POST-ACTIVATION POTENTIAL ON HORIZONTAL POWER AND SPEED: WITH RELATIONS TO A 10- AND 20-YARD SPRINT PRIOR TO A 40-YARD DASH

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Introduction: Post-activation potentiation (PAP) warm-ups have been suggested to increase acute power performances in explosive based activities. With the use of heavy resistance prior to performance, an individual will call upon faster twitch muscle (Type II) fibers and increase the force production output from the central nervous system. An activity such as sprinting can benefit from PAP, because of the explosive nature of the movement and the short duration it is completed in.

Purpose: The purpose of our study is to determine that post-activation potentiation is effective in increasing horizontal power and speed with sled pulling at 10 yards and 20 yards when it's completed prior to running a 40 yard dash.

Methods: Eight apparently healthy adults, 5 male and 3 female (23.71 ± 2.87 years, 175.09 ± 10.86 cm, and 87.54 ± 26.47 kg), were voluntarily recruited. The 40-yard dash testing protocol was used to determine speed (m-s⁻¹) and anaerobic power (W) during the control 40-yard dash, 10-yard PAP trial, and 20-yard PAP trial. A one-way ANOVA was used to determine the differences between the trials.

Results: No change in performance was observed between test conditions in this study.

Conclusion: Statistical analysis revealed no significant difference between the three conditions. Post activation potentiation had no effect on 40 yard sprint performance.

POSTER ABSTRACTS

ISOLATION OF DNA FROM CLINICAL SALIVA SAMPLES AT UNLV SCHOOL OF DENTAL MEDICINE

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Background: Many studies have evaluated the microbial prevalence of specific pathogens using various isolation methods. More recently, efforts have been made to simplify these methods to improve patient participation. During the past few years, students at the UNLV School of Dental Medicine have collected unstimulated saliva from clinic patients to examine and evaluate the presence of periodontal and cariogenic pathogens. This method is simple and easily performed using minimal equipment and very little additional training. The goal of this project was to perform DNA isolation on the remaining clinical samples that had not yet been processed to determine the quality and quantity of DNA obtained. *Methods:* Using an approved protocol, DNA was isolated from 123 clinical samples, originally collected from Orthodontic, Pediatric and Adult clinic patients following an IRB approved Human Subjects Protocol. In addition, demographic information was available as this had been concurrently collected without any specific patient identifiers. *Results:* Of the 123 samples collected, DNA was successfully isolated from 115 – resulting in a 93.5% success rate, which was well within the expected range (90-95%). Measurements of DNA quantity and purity revealed an average DNA yield of 221.5 ng/uL and purity of 1.62-1.87 (A260:A280 ratio), which was also well within the expected range. No statistically significant differences were observed between the different patient groups (Orthodontic, Pediatric, and Adult) or between males and females. *Conclusion:* Recent evidence has suggested that DNA isolation from unstimulated saliva collected in clinical settings can provide high quality DNA, which is sufficient to perform PCR screening for cariogenic and periodontal pathogens. These data suggest DNA collected in this manner may be of sufficient quality and quantity to be used in these molecular screenings, which may provide more valuable clinical data regarding microbial prevalence and oral disease risk.

USING SOMATIC MUTATIONS TO UNDERSTAND TRANSPOSON EXPRESSION IN SOMATIC CELLS

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Transposons, genetic sequences that are able to move themselves to other loci within the same genome, are often sources of mutation and genetic diversity due to their high mobility and large presence in humans. Due to the abnormally high presence of transposons within genetic samples from the tumors of cancer patients (1), we are studying the relationship between transposon expression levels and somatic mutations. In this study, we are obtaining transposon expression levels using the programs Cufflinks and TETranscript, which measures expression levels in FPKM and RPKM, respectively. In addition, we are using muTect to identify somatic mutations in the genomic sequences of patients. We will then use statistical analysis to analyze the relationship between the transposon expression levels and the number of somatic mutations. Ultimately, we would like to further our understanding of the way transposons are dysregulated in cancer genomes.

POSTER ABSTRACTS

LOOKING FOR STATISTICAL ASSOCIATION BETWEEN microRNA & TRANSPOSABLE ELEMENT EXPRESSION

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Transposable Element (TE) are repeated DNA sequences that jump from one location to another, either copying and pasting or cutting and pasting itself to a new gene location. MicroRNAs (miRNAs) are short non-coding RNA sequences that regulate gene expression of mRNAs. Many research indicates that the origin of some miRNAs may actually be derived from TE sequences. These types of miRNAs would be able to bind to TE mRNAs and degrade them before translation. Our project is to compare miRNA and TE mRNA data between tumor and control cell to find any statistical association between the two by using cancer as a model. So far, we obtained patient IDs from the Cancer Genome Atlas (TCGA) that have both the RNA-seq (TE mRNA) data and the miRNA-seq (miRNA) data. Then we will download the RNA-seq and miRNA-seq data from TCGA for each type of cancer for each patient ID. After that we will calculate the log₂ ratio of expression levels of specific TE mRNA and specific miRNA in tumor and normal cells for each patient ID and create a scatter plot to find any statistical association.

TEDetection: DETECTING NOVEL TRANSPOSABLE ELEMENT INSERTIONS IN CANCER GENOMES

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Transposable Elements (TE) are sequences of DNA capable of copying themselves into other locations in the DNA. This can be harmful to the cell depending on where the TE landed. In most healthy cells, TE activity is regulated through multiple pathways. The exact pathways that healthy cells use to regulate TE activity is still unknown. However, TE activity is dysregulated in cancer genomes, making them a good target for learning more about the mechanisms of TE regulation. We developed a pipeline we call TEDetection to detect TE insertions from whole genome sequences. TEDetection was written with efficiency in mind, running many portions of the pipeline in parallel and analyzing chunks at a time. TEDetection is able to detect novel TE insertions by searching the genome for discordant read pairs, clustering the discordant reads, mapping the discordant mates to a TE reference genome, and searching cluster regions for softclipped reads. The insertion breakpoints and aligned TE family from each called insertion are compared between cancer and normal samples to separate polymorphisms from novel insertions. TEDetection was run on 405 patient samples from The Cancer Genome Atlas and it was found that the median number of novel TE insertions was larger in the cancer sample for all cancer types tested. This supports the current hypothesis that TE activity is dysregulated in cancer genomes. The next step will be to analyze these results to learn more about TE regulation pathways.

POSTER ABSTRACTS

PRESSURED-INDUCED TETRAHEDRAL TO ORTHORHOMBIC PHASE TRANSITION IN MgF₂

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High pressure science is a multidisciplinary field that studies the effect of high pressure on materials. Under a wide range of pressures, materials undergo phase transitions marked by subtle to dramatic structural changes and newfound physical properties. MgF₂ was the focus of the study due to the fact that its model structure could draw parallels to other material studies. Data was collected through the use of synchrotron x-ray radiation provided by the Advanced Photon Source (APS) facility at Argonne National Lab. The synchrotron x-ray radiation is favorable due to its high brilliance and wide range of wavelengths. The study also utilized the diamond anvil cell (DAC) which is a commonly used pressure generating device in high pressure science. The DAC's body allows a load to be applied to the two opposing, aligned diamond anvils. In between the anvil tips, the sample chamber resided containing the MgF₂ sample, ruby spheres (the pressure gauge), and neon (the pressure-transmitting medium). A pressure range from ambient to about 20 GPa was then achieved. Under increasing pressure, MgF₂ was analyzed for changes to its bulk and atomic properties. We will show the change of volume, axial compressibility, and atomic arrangement with pressure. The data was collected using the method of single crystal diffraction and will be compared to data from a literature study that utilized x-ray powder diffraction.

Funding for this research was provided by High Pressure Science and Engineering Center (HiPSEC). HiPSEC is funded by the Department of Energy/National Nuclear Security Administration (DOE/NNSA) Center of Excellence.

STEAM ORIGAMI: LEARNING STEM EDUCATIONAL COMPONENTS VIA THE ART OF PAPER FOLDING

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Las Vegas has iconic buildings that required an immense work of engineering. While these buildings are admired for their provided entertainment, the work made to create them is not highlighted. The focus of the project is to highlight Las Vegas's STEM components to teach middle school students (6th-8th grade) more about Las Vegas City through the perspective of an engineer. STEAM Origami combines the art of paper folding with STEM learning. The purpose of the STEAM Origami is to identify a new, hands-on educational learning tool to engage middle school students by embedding STEM education while incorporating the arts. According to Change the Equation, between 2014 and 2024, the number of STEM jobs will grow 17 percent, as compared to 12 percent for non-STEM jobs. The idea behind this project is that paper folding iconic structures combined with STEM facts, will increase the likelihood of a middle school students' choice to pursue a STEM career. The HIGHROLLER on the Las Vegas Strip was chosen as the first of many STEAM Origami projects. The Highroller's STEM facts were identified and incorporated into a paper fold model, then studied with local students to gain valuable insights.

Funding for this research was provided by the Nevada Arts Council Grants Program.

CARDIOVASCULAR AND BRAIN HEALTH AND FUNCTION IN ATHLETIC, RECREATIONALLY ACTIVE, AND SEDENTARY INDIVIDUALS: A COMBINED STUDY OF BP, RHR, HRV, DASS-42, AND EEG ALPHA BASELINE

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The purpose of this study is to analyze how different levels of physical fitness impact cardiovascular and brain health. In this study, brain health will be quantified using electroencephalogram (EEG), specifically analyzing baseline alpha oscillations. Research has shown that the stronger one's alpha oscillations are at baseline, the more increased neural efficiency one has during cognitive and motor tasks (Babiloni et al., 2010) along with improved attention through the inhibition of visual and other neural processes (Mathewson et al., 2011). Cardiovascular (CV) function and health can be ascertained by non-invasive and accessible measures, including blood pressure (BP), resting heart rate (RHR) and heart rate variability (HRV). There are, however, few comparable methods to examine brain health and the effects of PA and sedentary behavior on its physiology and function. Still more obscure are protocols that measure both CV and brain physiology and function in variously active populations. This study proposes to record, analyze and compare CV function (BP, RHR, & HRV) and brain health and function (DASS-42 survey & EEG alpha baseline) between athletic, recreationally active and sedentary individuals.

BUILDING A NUTRIGENETIC DATABASE TO ENABLE GENETICALLY-DESIGNED DIETS

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The current state of medicine is rapidly shifting toward a more personalized system that caters to the individual by utilizing genomic data. Variation within the genome such as a one letter alteration in the genetic code, known as a single nucleotide polymorphism (SNP), is part of what makes each person unique. SNPs also dictate how we individually respond to diet. Nutrigenetics, the study of how one's genes influence an individual's response diet, holds the potential to decrease the risk of common diseases and promote better health. Although a large amount of studies have been published, there exists no database to format and hold the relevant information. Our goal was to construct a Nutrigenetic database, due to current literature residing in an unstructured free-text format that can be used by to tailor one's diet to reduce risk of disease. To meet this goal we gathered information from several NCBI databases, and some externally run data sources, which contain data on the specific gene, SNP, diet, risk of disease and other relevant information. By reading 300 publications, we have composed over 60 strong SNPs and have established over 120 gene-diet interactions which can be used in conjunction of genome sequencing to optimize one's diet.

This research was presented at the Nevada Institute of Personalized Medicine Annual Retreat, February 2016.

Funding for this research was provided by the Nevada Governor's Office of Economic Development.

POSTER ABSTRACTS

FOOTBALL FUNDRAISING: A LOOK INTO POTENTIAL AREAS OF FOCUS FOR FUTURE PROGRAM DEVELOPMENT

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Faculty Research Mentor: Tony Terrell, Ph.D.
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The focus of this project is to investigate potential methods to improve donor contributions to UNLV's football program. Building donor relations, investigating donor interest and reviewing donation operations are addressed in this project as potential areas of focus to improve football donations at UNLV. There are three different categories of interviews that have been used as data collection. The first category of data has been collected through interviews with football administrative staff at four other Mountain West schools. The second category of interviews has been collected from UNLV athletic fundraising staff and volunteers. The third and final category includes individual interviews with communication, coordinating and fundraising professionals in fields other than college football. The majority of the answers given from all three categories of interviews focused on enhancing the personal relationship between the donors, the athletes and the athletic department. In addition to engaging donors more on a personal level, the other most commonly expressed topic was that of increasing communication to current and potential donors. Investing effort into these two areas for future program development may help gain new donors and raise total donation amount given for the UNLV football program.

SLED: DESIGNING A SPATIAL FONT BASED ON THE HUMAN OPTICAL ILLUSION AND PERSISTENCE OF VISION

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This project is about using the technique of persistence of vision (POV) to create an optical illusion whereby LED's generate a spatial font. There have been many different approaches in creating digital visual signal, although, most of them are based on physical placement of displayed materials such as static LED matrices, this model demands larger dimensions and higher costs. The purpose of this study was to design a device with a spinning array of LED's in a non-fixed position. By having multiple discrete images, the human mind blends them into a single image to make an illusionary effect. With a revolving structure, there is a possibility of displaying a font using only one column of LED's while keeping the same customizable features that can be found on static structures.

Funding for this research was provided by National Science Foundation's Engineering Research Centers (NSF ERC Program).

POSTER ABSTRACTS

FLYING ORCHESTRA

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Flying multiple unmanned aerial vehicles (UAV) in an indoor space by using a system that maintains awareness of the bodies in three dimensional space presents the problem of tracking the drones. There are many indoor positioning systems (IPSs) currently being researched and sold on the market. Current IPSs do not offer the sophistication of global positioning system (GPS) such as orientation or direction of a body. By implementing a commercially available system from MarvelMind Robotics, coordinates in a three dimensional space were produced via an IPS. The IPS implemented in this project offers positional feedback from a mobile beacon that is attached to the drones. Orientation and direction will need to be calculated by using data previously collected in flight as a calibration stage. The goal of this project is to fly multiple UAVs synchronously to emulate an orchestra by producing sounds based on the positions of the drones in three dimensional space and performing choreographed motions for a viewing audience based on patterns on the floor detected by the drones.

Funding for this research was provided by Nevada Governor's Office of Economic Development Knowledge Fund.

WEB-BASED ACCESS TO ENGINEERING DATA ON MOLTEN SALTS

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We are working with a team of engineers from UNLV and the College of William & Mary in Virginia to investigate the problems associated with the use of molten salt energy storage. To assist the engineering community in the use of molten salt energy storage, we have developed a set of computer subroutines that can be used by solar power plant designers in need of the properties for various solar salts. The most commonly used salts include sodium nitrate, potassium nitrate, and solar salt and these are included in the subroutines. These subroutines will be available through a website that allows computer programs to be downloaded. One important feature of this functional database is that it includes the published source of the data, the temperature range, the units used to describe the property, and the uncertainty in the measurements. This data is available in the subroutines and can be called by the programmer, as needed. The website also contains a "calculator" for molten salt properties that computes temperature-dependent properties and presents this data, along with its uncertainty and units.

Funding for this research was provided by the Office of Naval Research (ONR).

POSTER ABSTRACTS

AN EMPIRICAL INVESTIGATION OF URBAN RESILIENCY: LAS VEGAS METROPOLITAN AREA

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The monocentric model is used by urban scholars to examine where people live and willingness to pay to be near or inside the urban core. Recently, community leaders across the country are increasingly interested in examining whether urban areas are resilient. The purpose of this paper is to identify four measures of resiliency (environmental, social, economic and leadership) and test whether there is a difference before and after the recession as well as across locations in the Las Vegas Metropolitan Area. We plan to obtain zip code data from government sources such as the Clark County Assessor's Office, US Census, US Environmental Protection Agency as well as other publicly available data sources before and after 2006. We anticipate finding evidence of resiliency using the social, leadership and economic measures in both rural and urban areas but lack of resiliency in environmental measures across zip codes.

SUSTAINABLE HOPE FOR LAS VEGAS

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Since its inception Las Vegas has exponentially grown, due in part from an ever-expanding population. Utilizing an Anthropological view, this body of work will provide examples of how the city may become self-sustainable following a global disaster, by viewing similar social locations. Such as the Loess Plateau in China; the area was ravished from depleted resources, and mass migrations of peoples contributed to its catastrophic degradation; but through hard work, the Loess Plateau, once again, is a productive agricultural economy. Another example, villagers in Ethiopia created an oasis from a single patch of mud; by replanting indigenous trees, in return, the village has vegetation with ample amounts of water from a flowing spring. So In order for Las Vegas to prepare for disaster its citizens need to become educated and proactive by learning from the past, to change their future.

POSTER ABSTRACTS

"A DIFFERENT KIND OF DESERT"

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As of 2012, over 40,000 Las Vegas residents are living in a food desert. They lack the access, in more ways than simply distance, to nutritious foods. In order to explore a full range of viable solutions, it is of primary importance to understand how these food deserts were created, and why they persist. Our research attempts to first delineate the environmental and sociopolitical frameworks so that we can bring deeper understanding to the root causes of food deserts in the U.S. with Las Vegas as a specific case study. Due to climate change and the Las Vegas Valley's marginal desert environmental setting and constraints therein, however, this scope will present unique challenges that demand attention from the city and state officials. From there, we will probe the pros and cons of proposed solutions from academics, nonprofit organizations, and governmental agencies.

CONSERVING OUTDOOR WATER USE IN PRIVATE HOMES IN THE LAS VEGAS VALLEY

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The United States ranks 9th in the world for energy conservation, much of which is due to water waste. 22% of Las Vegas homes have a private swimming pool, which is costly and detrimental to an already dire water shortage. The Southern Nevada Water Authority has imposed stricter regulations on water use as well as implemented incentives for environmentally conscious construction projects. These do not solve the issue that one in three Las Vegas homes built before 1980 have swimming pools that do not meet the new regulations. The vast majority of water used in the Las Vegas valley is directly for outdoor uses such as lawns and water features. While there has been progress made in the effort to conserve water, it has only been a drop in the bucket when considering the overall water usage. Many things can be done both to new construction as well as to improve conservation in already developed homes. Community pools rather than private pools as well as swimming pool covers have already proven to make a dramatic difference when implemented successfully. More research needs to be done in order to create environmentally friendlier ways for Las Vegas to enjoy their beloved outdoor landscapes and pools. Public awareness campaigns need to be implemented in order to educate and encourage these necessary changes.

POSTER ABSTRACTS

UNLV AND THE E-BOOK REVOLUTION

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Three to fifteen billion trees are felled each year, 25-40% of industrial logging is done to produce paper. University textbooks contribute to the global demand for paper. For example, if every student in a single section of a UNLV biology course buys a textbook this requires 280,608 pages of paper. This is approximately 1,332 pounds of paper, or roughly 11 trees for a single class. It is time UNLV becomes an e-textbook only school, reducing the university's impact on the environment. If converting to e-textbooks caused each of UNLV's 28,600 students to save just one pound of paper, this would equate to saving 243,100 trees and 100 million gallons of water per semester. By offering affordable Kindles and/or tablets to incoming UNLV students, we conclude that it is a realistic goal to make UNLV an e-book only campus by spring of 2017. Deforestation contributes to global warming, which is putting increasing pressure on the world's resources. Considering the feasibility of turning UNLV into an e-book campus, it would be irresponsible for the university to not do so.

THE IMPACT A POST-SECONDARY INSTITUTION'S ADMINISTRATIVE STRUCTURE AND EXPENDITURES HAVE ON STUDENT GRADUATION RATES

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Over the past three decades, there has been a dramatic increase in the availability and options for high school graduates to enroll in some form of post-secondary education or training in the US. Currently, the federal government has recognized about seven thousand institutions of various backgrounds such as: colleges, universities, technical or trade schools that recent graduates and GED recipients can pursue. This past year, the US saw an increased percentage with enrollment for each state; however, these institutions are still observing a decrease in overall retention and a rising delayed graduation rate. Prior studies have looked at factors that contribute to why more students are taking longer to graduate. This study will use longitudinal data provided by the Integrated Postsecondary Education Data System (IPEDS) which collected institutions' finances, enrollment, staffing, completions and student aid data for the academic years of 1987 through 2012. The data will be used to construct a model that demonstrates how an institution's expenditures, revenues and other factors contribute to more students graduating on time. In addition, this study will provide a comparative analysis at how these variables affect the different types of post-secondary institutions currently available.

POSTER ABSTRACTS

THE EFFECT OF CHANGES IN WELFARE SPENDING ON ADOPTION

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Millions of children in the United States are estimated to be living without parents or caregivers. In the United States alone, there are over 120,000 orphans and over 400,000 children living without permanent families (HHS; AFCARS). This is a growing epidemic in the United States and children in foster homes that reach the age of 18 are released into the world with little help to build a life of their own. Could more government spending on welfare programs provide parents, with lower income, more incentives not to put their children up for adoption? The intuition here is that the more welfare benefits available the less likely the parent would put their child up for adoption. The increased benefits essentially lower the direct cost of raising a child. Then the question arises, would the child actually be better off living with their biological parents or would living in a foster home until the age of 18 be more beneficial? What are the long term and short term effects? The purpose of this study is to focus on the socio economic groups that have the highest propensity to give their children up for adoption for financial reasons, most likely groups around the poverty level. We then look at the outcomes for those children and compare them to the typical outcome of a child in foster care. In particular, we would control for average level of schooling, and probability of ending up in poverty or prison as an adult.

PRESIDENTIAL ASSASSINATION ATTEMPT

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This study will attempt to identify individual characteristics of a president, along with the socio-economic environment and the effects each have on the likelihood of an assassination attempt on the president's life by the means of firearms. Moreover, the study will further identify characteristics of the would-be assassin, including variables such as age, gender, marital status, education, military background, and history of mental illness. The research will focus on characteristics in the socio-economic environment and the personal profile of the president in office. The socioeconomic environment variables measured are real GDP per capita and unemployment during the president's term, whether or not the country was in a state of war, and recorded civilian turmoil during presidency. The personal characteristics of the president that will be included are his political and religious affiliation, the percent change in congressional seats (as a proxy for popularity), and the number of opposing political parties during the time of election. Discrete choice models based on the linear probability and probit models will be used to estimate our empirical model. Data provided by experts in their field of history, as well as research done on our own will provide us with information needed to complete the study.

POSTER ABSTRACTS

LEADING FACTORS IN TERROR GROUP GROWTH: RADICALIZATION, WOMEN, AND SOCIAL MEDIA

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Faculty Research Mentor: Djeto Assane, Ph.D.

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9/11, Al Qaeda, Osama Bin Laden, ISIL: Words we think of when we hear the word 'terrorism'. It is the fear of every American when boarding a flight. It is the everlasting topic of the 21st century, a concern that has surely occupied the minds of leaders around the world such as George W. Bush, Barack Obama, Tony Blair, David Cameron, and Francois Hollande. Following attacks such as September 11 and the London bombings of July 7, 2005, numerous questions lie at the hands of not only global leaders, but also global citizens. What has happened? Why has it happened? Who is responsible? How do we prevent this from happening again? What are our next steps? Certainly, the subject of terrorism cannot be regarded in the same manner as it was in 2001. Numerous changes have taken place since September 11, 2001 that have changed the way we must look at terrorism and those who engage in it. In order for us to prevent terrorism attacks, and in a perfect world, put an end to them entirely, we must get to the root of the problem. Who is carrying out these attacks and how do we limit their scope, resources, and tactics to recruit? Since 9/11, terror groups have harnessed and used social media to their advantage. Terror groups are now on Twitter and Facebook, social networks launched in 2004 and 2006. As a result, radicalization among members of society deemed to be of no worry is at an all-time high. The purpose of this study is to determine if and what kind of effect social media has had on terror group growth. It is imperative to know which mediums terror groups are using in order to decrease the likelihood of future attacks and to diminish group strength. By determining the effect social media has had on radicalization, we are one step closer to extinguishing these groups. I will do this by analyzing and examining the relationship between the increase in social network access and radicalization of groups deemed to be of no danger prior to the social network boom, specifically women. I will compile data from databases such as the RAND Database of Worldwide Terrorism Incidents and the Chicago Project on Security & Terrorism to analyze the correlation between social network use and perpetrator gender and nationality among other characteristics that might suggest drastic recruitment and radicalization. I will examine patterns of terrorism and incident perpetrator characteristics prior to 2006 and compare them with patterns of terrorism in the last decade. The overall analysis will illustrate the correlation between social media and terror group growth.

ACCESIBILITY AND AFFORDABILITY OF HEALTHY FOOD IN LAS VEGAS

**Brittany Singh, Natasha Thaweesee, Arianna Lopez, &
Wenjia Li**

University of Nevada, Las Vegas, Department of
Anthropology

Faculty Research Mentor: Levent Atici, Ph.D.

University of Nevada, Las Vegas, Department of
Anthropology

Eating healthy, fresh, and organic foods is a fast growing trend nationwide although accessibility to and affordability of healthy produce vary among communities. This research explores the production and distribution of healthy and organic food sources in Las Vegas with a special emphasis on the underlying causes of differential and asymmetrical access to specialty food stores. We argue that the convenience of "supercenter" markets, high costs of organic produce, and the scanty knowledge about healthy eating habits in general and organic foods in particular account for the current food trends in Las Vegas.

POSTER ABSTRACTS

FOOD SOURCES AND SUSTAINABILITY OF LAS VEGAS, NEVADA

Alexia Janda, Hana Gutierrez, Meghan Romane, & Kristen Rode

University of Nevada, Las Vegas, Department of Anthropology

Faculty Research Mentor: Levent Atici, Ph.D.
University of Nevada, Las Vegas, Department of Anthropology

The state -of Nevada is located in the high deserts of the Mojave, and yet it is filled with an abundance of food resources. The purpose of this project is to investigate the origins of food resources in Nevada; given the lack of farming and ocean resources in Nevada, it is clear much of Nevada's food is not obtained locally. But where are these resources located? As Nevada's population rises it becomes vital to understand where these resources come from, and whether they are sustainable. Without sustainability the population of Nevada cannot be maintained. Where does our food come from? What conditions does our food undergo during transportation? Are these current sources showing promising sustainable conditions for the foreseeable future? In order to maintain the population growth the state is experiencing, the question of sustainable sources is opportune. Through the visitation of local grocery stores and chains, and intensive research, we hope to unearth the nature of Las Vegas' resources.

3D FOOD PRINTING: THE FUTURE OF GLOBAL FOOD PRODUCTION?

Heidi Sperling-Gomez, Kelsey Ross, Ashley Verker, & Natalie Mermuys

University of Nevada, Las Vegas, Department of Anthropology

Faculty Research Mentor: Levent Atici, Ph.D.
University of Nevada, Las Vegas, Department of Anthropology

There is a food crisis in our world. The current world population is nearing 8 billion people, with a projection of over 9 billion by the year 2035. That number is more than the earth can sustain using current food production and distribution methods. A solution to this eminent disaster must be found. Our team is researching the feasibility of using the emerging technology of 3-D printing to create appealing, nutritional food as part of that solution. We are investigating the following questions and considerations: What technology is currently available, hardware, software, edible print material, viability, technology, availability and cost, production logistics, distribution logistics, who could be helped most, people in regions that lack of resources to produce their own food, people in poverty, refugees, space travelers (NASA and private companies), repercussions, nutritional value, appeal, storage, "shelf life," and waste/pollution/recycling. Our poster presentation will show the results of our research and present our solution to feeding the world with new technology.

POSTER ABSTRACTS

PREDICTING PREFERENCE: A COMPUTATIONAL MODEL FOR DECISION MAKING BEHAVIOR

Ryan Francis, Andrew Ortiz, Lauren Ender, Kenny Green, & James Hyman, Ph.D.

University of Nevada, Las Vegas, Department of Psychology

Faculty Research Mentor: James Hyman, Ph.D.
University of Nevada, Las Vegas, Department of Psychology

In order for animals to successfully exploit their available natural resources, they must rapidly update their preferences to adapt to a dynamic environment. To perform this function, the animal must continually monitor and update internal representations of these preferences. To examine this, we utilized a differential reward probability operant task, which allowed us to periodically alter the likelihood of reward following different responses. By interspersing 'choice' trials with training trials, we could assess any changes in the animal's preferences for the different responses. We then used a mathematical model originally developed to describe classically conditioned behavior, and not operator controlled behavior like our current task. Using this computational model we were able to successfully replicate the animal's behavior and preferences, suggesting that choice behavior of this type is more similar to classical conditioning than it is to instrumental learning. Since these two types of learning are known to engage different brain networks, this work has helped to identify unique targets for future neurological research.

HOW DO INDIVIDUAL DIFFERENCES AFFECT THE WAY ADULTS DETECT CHANGES IN COMPLEX SCENES?

Evan Clarkson, CheRenee Zaragoza, Christina M. Vanden Bosch der Nederlanden, & Joel S. Snyder, Ph.D.
University of Nevada, Las Vegas, Department of Psychology

Faculty Research Mentor: Joel S. Snyder, Ph.D.
University of Nevada, Las Vegas, Department of Psychology

There is a growing literature examining the information we use to listen to the sounds around us. Change deafness, the auditory analog of change blindness, is a useful paradigm to understand what factors lead listeners to miss salient changes in their acoustic environment. Attention, semantic category knowledge, and acoustic similarity are key to the detection of changes between scenes composed of everyday sounds (e.g., human voices, animal vocalizations, environmental sounds, and musical instruments). However, there have been no studies examining how individual differences in auditory processing and familiarity relate to change deafness. In the current study, we will examine how a listener's speech-in-noise performance, musical ability, musical experience, executive functioning skills, and familiarity predict overall rates of change deafness. In particular, we are interested in whether listeners' familiarity with human sounds, due to their prevalence in our daily lives, leads to less change deafness than other to other sound types. Beyond familiarity, we examine whether the communicative nature of the stimulus may lead to reduced change deafness when the changing sound is communicative (i.e., laughing, talking), but not non-communicative (i.e., coughing, sneezing). We will also examine how musicianship and musical ability affect the way listeners detect changes to different families of musical instruments (e.g., strings, brass). Finally, we will examine how general auditory and executive functioning abilities alter overall rates of change detection. These findings will be the first to characterize how other auditory abilities and familiarity change the way we detect changes in the world around us.

POSTER ABSTRACTS

"OKAY LADIES, NOW LET'S GET IN FORMATION": BELL HOOKS AND JANET MOCK ON BEYONCÉ AND DIRTY FEMINISM

Sara Meraz

University of Nevada, Las Vegas, Interdisciplinary Degree Programs

Faculty Research Mentor: Brandon Manning, Ph.D.
University of Nevada, Las Vegas, Interdisciplinary Degree Programs

Beyoncé Knowles-Carter is one of the most influential artists of our time and is a self-proclaimed feminist. bell hooks, by contrast, is a critically acclaimed author and prominent Black feminist Theorist in the realm of academia. In a round-table discussion concerning Black feminism, bell hooks accuses Beyoncé of being an “anti-feminist terrorist,” much to the vexation of fellow notable panelist Janet Mock. Mock, an author, former sex worker and transwoman, advocates a strong case for third-wave feminism which delves into the “dirtier” territories of debunking hypersexuality while searching for female pleasure. Mock’s defense of Beyoncé is rooted in her argument that she emulates a type of Black womanhood that is not to be devalued. In this moment, I argue that it is bell hooks who truly embodies the title of “anti-feminist terrorist” in her faulty critiques of Beyoncé and adamant refusal to accept rebuttals from Janet Mock as legitimate. Using intertextual analysis of popular culture, Black feminist theory, and recent publications from third-wave feminist scholars, this research paper critically examines the dialogue between bell hooks and Janet Mock. This research paper argues the issues of agency, respectability politics, hypersexualization, and against hook’s conception of Beyoncé as a neo-liberal capitalist subject, as well as how that ties to hook’s usage of the term “terrorist” in relation to feminism.

REPORTING SEX WORK IN SIN CITY: DEPICTIONS OF PROSTITUTION IN THE LAS VEGAS PRINT MEDIA

Brittney Ballesteros¹, Barbara G. Brents¹, Ph.D., and Jennifer Whitmer, Ph.D.^{1,2}

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Faculty Research Mentor: Barbara G. Brents, Ph.D.
University of Nevada, Las Vegas, Department of Sociology

In this research, we evaluated how previous discourse in the media has framed prostitution and applied this knowledge to how the print media frames prostitution in Las Vegas. Drawing upon previous research and literature regarding how the media frames prostitution we applied this to our own research. We found that pre-existing media frames were also reproduced in our findings, such as reporting the prostitute as a public nuisance, as a criminal, as an exploited victim, a vector of disease, or as a victim of poverty. With these limited ways of speaking about prostitution, we wondered- how does the public regard prostitution in regards to more recent ideologies of free choice, free expression and market morality--the belief that an individual has the right to be, to buy and to sell as they please as long as it does not harm anyone else? Do these neoliberal beliefs influence how prostitution is framed? While there is some research on how these neoliberal ideas influence how we think about sexuality, no research has examined whether these ideologies influence media portrayals of prostitution. This research is based on a qualitative content analysis of 100 articles sampled from the Las Vegas Review Journal and the Las Vegas Sun over the course of 10 years (from 2004-2013). Las Vegas, Nevada is often touted as the symbolic center of the sex industry, but yet has no legal prostitution. It is a major tourist destination that has successfully branded its tourist industry around sexuality and vice. We examine discourses surrounding sex work in Las Vegas and how the ideologies allowing the freedom of sexual expression and the existing of legal prostitution nearby may impact these discourses.

This research was presented at the Pacific Sociological Association Conference in Long Beach, CA, April 2015.

POSTER ABSTRACTS

HOOVER DAM - WATER CONSERVATION

Jordan Campos, Sarah Carnivalli, Jessica Green & Janice Gurrola

University of Nevada, Las Vegas, Department of Anthropology

Faculty Research Mentor: Levent Atici, Ph.D.
University of Nevada, Las Vegas, Department of Anthropology

The water levels of Lake Mead and consequently The Hoover Dam have been steadily decreasing by as much as one and a half to two feet per month. Increased evaporation, decreased snowfall, drought, increasing elevation, and increasing population are all contributing factors in the drastically changing water levels. Not only does the average Southern Nevadan not realize that the Las Vegas Valley is in a drought, but when they learn this information they don't know what they can do to help. With the residents of Las Vegas receiving 88% of drinking water from Lake Mead it is within their best interest to do what they can to conserve water. It's a common misconception that only higher income housing can afford to be water smart, when in fact, there are many ways that everyone of almost any income level can help conserve water. Our research aims to provide solutions to the ongoing water crisis by showing that people of almost every income level can be water smart contributors to the solution.

PROSPECTIVE DEPLETION RATE OF WATER IN LAKE MEAD AND RECOMMENDED REVITALIZATION EFFORTS

Gabriel Zimmerman, Kayla Story, Michael Pickard, & Jared Miles

University of Nevada, Las Vegas, Department of Anthropology

Faculty Research Mentor: Levent Atici, Ph.D.
University of Nevada, Las Vegas, Department of Anthropology

The purpose of this study is to determine the projected rate of water loss in Lake Mead adjusted to the increasing Southern Nevada population and to recommend numerous ways in which the depletion rate can be mitigated and possibly reversed. Lake Mead is a man-made lake bordering the Hoover Dam, which supplies the majority of the water to the Southern Nevada region. Research was broken into two parts. The first part was determining the water use attributed to both the current populations drawing from the lake and for the projected population growth and the effect of this on Lake Mead water levels using government provided census data, depth readings, and Southern Nevada water usage amounts. The second part detailed the possible revitalization efforts, which can be used to mitigate the depletion of water levels or even revitalize them, based off of water conservation in areas with similar water issues. The research findings project decreasing Lake Mead water levels as the population in Southern Nevada increases and the necessity of conserving the water levels presently available. Results also suggest government-funded incentives to decrease water usage function particularly well in the Southern Nevada region in decreasing household water usage. Therefore, Lake Mead should undergo more extreme water conservation measures and the government programs shortening water usage should be promoted and expanded in the Southern Nevada region.

POSTER ABSTRACTS

WATER CRISIS, WATER WAR

Benjamin Martin, Jordan Cuglietta, Mark Garcia, & Dianne Esteller

University of Nevada, Las Vegas, Department of Anthropology

Faculty Research Mentor: Levent Atici, Ph.D.
University of Nevada, Las Vegas, Department of Anthropology

What is the expected output of the Colorado River over the coming decades, and how will the flow affect Las Vegas? Looking at several factors including water levels in Lake Mead and other tributaries of the Colorado River, what the legal levels of water consumption is throughout the Colorado River Compact (is it sustainable for 7 states to pull water from the same river) and how each state in the lower basin of the Colorado River Compact uses its allocated water.

MONTAGE AS LANGUAGE (Exhibit)

Carriann Cahall

University of Nevada, Las Vegas, Department of Film

Faculty Research Mentor: Jason Edmiston, B.A.
University of Nevada, Las Vegas, Department of Film

As part of a prospective graduate thesis, the purpose of this on-going, three-part project is to explore Soviet Montage theory as a semiological system that is not only applicable to the language of film, but also that of Literature and the study of Narrative as a whole. This project primarily focuses on the collective film and written works of such Soviet filmmakers as Eisenstein, Kuleshov, and Pudovkin in comparison with Ferdinand de Saussure's, Course in General Linguistics, and Roland Barthes' Mythologies, as a way to further demonstrate montage's importance within cinematic language. In order to explore what it means to acquire meaning through fragmented imagery, the main part of this project centers on a thesis-level paper meant for academic publication. There are also two interactive elements involved in this research: a short film and a work of short fiction, both of which will be created using Soviet Montage techniques. The short, experimental film will be a single narrative created from 16mm film strips that have been discarded from UNLV's own Production I courses throughout the years. The overall theme of the short will be "unity" and act as a visual representation of the UNLV Film Program at its most introductory, yet collaborative stage. The short fiction will be a story composed using only verbatim lines from ten highly regarded American short stories with the goal of capturing what a truly "American" story would entail. With the support of a heavily-researched, written essay and two creative examples, Montage theory and technique will prove its value to filmmakers and writers who want to advance their work by better understanding the way meaning is developed in their craft.

POSTER ABSTRACTS

AUDITORY BEAT AND METER PERCEPTION IN CHILDREN

Kendall Lyons, Jessica R. Jensen, Jessica E. Nave-Blodgett, Erin E. Hannon, Ph.D., & Joel S. Snyder, Ph.D.
University of Nevada, Las Vegas, Department of Psychology

Faculty Research Mentor: Erin E. Hannon, Ph.D.
University of Nevada, Las Vegas, Department of Psychology

Children experience music in their daily lives, and can tap along with the beat of the music, becoming more accurate with age. In Western cultures, music is often structured metrically, with beats theoretically heard as recurring patterns of stronger (downbeat) and weaker (upbeat) events. Do children perceive these so-called metrical hierarchies in music and match them with auditory realizations of meter? Children aged 5-10 years old listened to excerpts of ballroom dance music paired with auditory (sine-wave beeps) metronomes, and rated how well the metronome matched the music they heard. Children experienced this as a computer game where they “judged” a student drummer on how well they played to the music. There were four metronome conditions: synchronous with the music at the beat and measure level, synchronous at the level of the beat but not the measure, synchronous at the measure level but not the beat, or not at all synchronous with the music. Children at all ages successfully matched the beat level of the metronome with the music, and rated beat-synchronous metronomes as fitting the music better than beat-asynchronous metronomes. However, children did not use measure-level information in their judgments of fit. They rated beat-synchronous metronomes as fitting the music equally well whether they also matched the measure level or not. The ability to extract a beat from music appears to develop in the auditory modality prior to age 5, but perception of multiple levels of metrical hierarchy may develop after age 10.

This research was presented at the 2015 Biennial Meeting of the Society for Music Perception and Cognition (SMPC) in Nashville, TN, August 2015, at the University of Nevada, Las Vegas Graduate and Professional Student Association Research Forum, March 2015, and at the New England Sequencing and Timing (NEST) Conference in New Haven, CT, March 2015.

MUSICAL RHYTHMS INDUCE LONG-LASTING BEAT PERCEPTION IN LISTENERS WITH AND WITHOUT MUSICAL EXPERIENCE

Taylor Pease, Corrina Pedregon, Karli Nave, Joel S. Snyder, Ph.D., & Erin Hannon, Ph.D.
University of Nevada, Las Vegas, Department of Psychology

Faculty Research Mentor: Erin Hannon, Ph.D., Joel S. Snyder, Ph.D. & Graduate Student Karli Nave
University of Nevada, Las Vegas, Department of Psychology

Listeners are exposed to rhythmic stimuli on a daily basis, whether from observing others moving, listening to music, or listening to speech. Humans easily perceive a beat (quasi-isochronous pattern of prominent time points) while listening to musical rhythms, as evidenced by experiments measuring synchronized tapping or perceptual judgments. It is assumed that listeners infer the beat from regularly occurring events in the musical surface, but they sustain an internally driven metrical percept once the beat is inferred. Nevertheless, relatively few studies have attempted to disentangle the surface information from the internal metrical percept. We therefore attempted to measure the robustness of internally driven metrical percepts using a musical rich induction stimulus followed by a beat matching task with metrically ambiguous stimuli. During induction listeners heard an excerpt of unambiguous duple- or triple-meter piano music. They then heard a beat-ambiguous rhythm, which could be perceived as either duple or triple. In the probe phase, listeners indicated whether a drum accompaniment did or did not match the stimulus. Listeners readily matched the drum to the prior musical induction meter after the beat-ambiguous phase. Although musicians outperformed non-musicians, non-musicians were above chance. Experiment 2 examined the time course of the internal metrical percept by using the same task but varying the duration of the ambiguous phase. This revealed that listeners performed accurately and comparably for 0, 2, 4, or 8 measures of the ambiguous stimulus. Overall these results provide additional evidence for perception and long-lasting memory for musical beat.

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RESEARCH *Ambassadors*



CARRIEANN CAHALL



ALEXANDRIA BRAGG



NICOLE THOMAS



OLIVIER CLAVEL



BERNAJANE PALISOC



SOPHIA PHAN



AMBER TURNER

MESSAGE FROM THE DIRECTOR OF OUR-UNLV

I want to thank you all for participating in the Second Annual Spring Undergraduate Research Forum. This is a very special event – one that highlights the incredible campus-wide research of our UNLV undergraduates and their work with our world-class faculty and graduate student research mentors. Research is the heart of your education here at UNLV and undergraduate research is an essential element of our Top Tier aspirations. The research represented at this forum has the incredible and exciting potential to impact our Las Vegas community and beyond.



GREAT job everyone!

Liam Frink

Director of the Office of Undergraduate Research (OUR), UNLV

2016 Faculty Opportunity Awards*	College Breakdown	Total Funded = 22	Total Amount Funded = \$497,408
Individual Investigator	Allied Health Sciences (2) Education (1) Engineering (1) Liberal Arts (2) Sciences (1)	7	\$138,207
Individual/Technology Development	Allied Health Sciences (1) Engineering (1) Sciences (1)	3	\$59,800
Collaborative Interdisciplinary	Education (1) Engineering (2) Liberal Arts (2) Nevada Institute of Personalized Medicine (1) Nursing (2) Sciences (3) Urban Affairs (1)	12	\$299,401

* Does not include Center of Excellence Challenge Grants, which are not yet settled.

The Offices of the President, the Executive Vice President and Provost, and the Vice President for Research and Economic Development are pleased to announce the recipients of the 2016 Faculty Opportunity Awards, which total approximately \$600,000.

The Faculty Opportunity Awards, which were created in 2012, were designed to support faculty research with potential for continued external funding and to provide financial support needed to complete significant scholarly/creative works.

This year, a total of 68 proposals were submitted to this highly competitive awards program in four categories: Individual Investigator Award, Collaborative Interdisciplinary Award, Innovation/Technology Award, and Center of Excellence Challenge Grant Award. Faculty-led review panels made recommendations to the Vice President for Research and Economic Development, the Associate Vice President for Research, Research Division Faculty Fellow, the Chair of the Research Council, and the President, resulting in more than 20 awards for funding.

Congratulations to this year's award recipients! (Updates on the awarding of multiple Center of Excellence Challenge Grant Awards will be provided in the near future.)

INDIVIDUAL INVESTIGATOR AWARDS

Scott Abella, School of Life Sciences, (\$20,000) "Restoring Ecological Functions of Damaged Desert Ecosystems"

Shubhra Bansal, Department of Mechanical Engineering, (\$20,000) "Novel Wide Bandgap Thin Film Materials for Photovoltaic Devices"

Stephen Benning, Department of Psychology, (\$19,800) "Effects of Psychopathic Traits on Social Networks and on Social Support during Stress"

James Hyman, Department of Sociology, (\$18,550) "Examinations of the Effects of Repeated Doses of Ketamine on Memory and Attention Network Function"

Jessica Knurick, Department of Kinesiology and Nutrition Sciences, (\$19,956) "Effects of Postmeal Walking on 24-hour Glucose Control"

Katrina Yan Liu, Department of Teaching and Learning, (\$19,925) "Where Are Our Teachers of Color? Resilience and Diversity in K-12 Education"

Kara Radzak, Department of Kinesiology and Nutrition Sciences, (\$19,976) "Biomechanical Risk Factors for Injuries Commonly Acquired During Military Physical Fitness Training"

INNOVATION TECHNOLOGY AWARD

Nader Ghafoori, Department of Civil and Environmental Engineering and Construction, (\$19,800) "Development of Novel, Sustainable and Cost-Effective Concrete Corrosion Inhibitor"

Yu Kuang, School of Allied Health Sciences, (\$20,000) "Multiplexing Methods for Earlier Detection of Hepatocellular Carcinoma"

Helen Wing, School of Life Sciences, (\$20,000) "Exploiting the Acid Resistance of Shigella to Improve Oral Vaccine Delivery Systems"

COLLABORATIVE INTERDISCIPLINARY RESEARCH AWARDS - EMERGING AREAS SEED GRANTS

Joshua Baker, Department of Educational and Clinical Studies; Nathan Slife Educational Psychology and Higher Education (\$13,173) "Strategies for Making College Campuses Inclusive: Using Universally Designed Instruction to Assist Students with Intellectual Disability (ID) and Autism"

Jacob Baker and Yiyan Li, Department of Electrical and Computer Engineering; Eduardo Robledo, School of Life Sciences (\$29,991) "Microbial Fuel Cell Optimization through Digital Microfluidic Electrochemistry in Single-Bacterium Drops "

Jingchun Chen and Xiangning Chen, Nevada Institute of Personalized Medicine; Justin Zhan, Department of Computer Science, (\$30,000) "Genetic Relationship between Schizophrenia and Autoimmune Disorders"

Catherine Dingley, School of Nursing; Abbie Kirkendall, School of Social Work (\$28,024) "Effects of complementary medical therapies on symptom management and family satisfaction with hospice care"

Elisabeth Hausrath, Department of Geoscience; Jacimira Batista, Department of Civil and Environmental Engineering and Construction, (\$29,864) "Interaction between amorphous materials and Mars-relevant solutions and implications for the aqueous history and habitability of Mars"

Daniel Proga, Department of Physics and Astronomy; Andreas Stefik, Department of Computer Science (\$29,708) "Applied Supercomputing for Astrophysics Research"

Laurel Raftery, Nora Caberoy, and Boo Shan Tseng, School of Life Sciences; Jefferson Kinney, Department of Psychology; Barbara St. Pierre-Schneider, School of Nursing, (\$30,000) "Quantitative Analysis of Cellular Interactions in Clinically Relevant Models"

Barbara St. Pierre-Schneider, School of Nursing; Emma Regentova and Mei Yang, Department of Electrical and Computer Engineering, (\$29,818) "A Computational Model of White Blood Cell Phenotypic Changes During Muscle Recovery"

Andrew Spivak, Department of Sociology; Olesya Venger, Hank Greenspun School of Journalism and Media Studies; Anjala Krishen, Department of Marketing and International Business, (\$8,990) "The Marketing of Electronic Cigarettes: Advertising Messages and Consumer Health Perceptions of Harm, Cessation, and Acceptability"

An-Pyng Sun, School of Social Work; Lawrence Mullen, Hank Greenspun School of Journalism and Media Studies (\$11,289) "Factors Related to the Occurrence and Recovery of Internet Use Disorder"

David Tanenhaus, Department of History; Rebecca Gill, Department of Political Science; Eric Nystrom, History of Engineering, Faculty in Interdisciplinary Humanities and Communication, Arizona State University (\$28,544) "Policy Diffusion and the Puzzle of Juvenile Justice Reform"

Zhiyong Wang, Department of Mechanical Engineering; Robert Schill, Department of Electrical and Computer Engineering; Liping Wang, High Pressure Science and Engineering Center (\$30,000) "Coating Nano-Crystalline diamond (NCD) Composite on Biomedical Materials with Low Temperature Plasma (LTP)"

Faculty Fellow for Research Administration

Description and Responsibilities

A Faculty Fellow is being solicited to work within the Division of Research and Economic Development to help advance initiatives that are important for ensuring that UNLV has the appropriate research infrastructure in place to achieve Top Tier status. These initiatives include:

- Serving on Top Tier committees to promote research as a liaison for the Vice President for Research and Economic Development (VPRED).
- Involvement in research infrastructure issues including the development of a plan for shared core research facilities that support research across campus and are accessible to outside community partners.
- Development of policies and procedures that will support the success of new university-level Centers and Institutes.
- Distribution of information and administration of review panels for the Faculty Opportunity Award program.
- Preparation and distribution of paperwork on federal funding priorities.

The responsibilities will include working with the VPRED, the Associate Vice President for Research, and other campus stakeholders (e.g., faculty, Research Council, Associate Deans for Research, Provost Office) to advance the initiatives above.

Qualifications

The ideal candidate will be a Full Professor with a strong record of externally funded research, dynamic, and be able to bring together diverse groups of researchers and community partners. Associate Professors close to being considered for Full Professor are eligible for this position. The position reports to the VPRED.

Type of Appointment

This is a one-year appointment (starting in July or August 2016) with the potential of future renewals or appointment in research administration. Faculty will be expected to maintain their research program while balancing the administrative aspects of the position. Appropriate workload arrangements will be made with the relevant College and negotiated dependent on the faculty background.

Questions and Applications

If you have any questions, please contact Professor Brian Hedlund (brian.hedlund@unlv.edu). Please send a letter of application and current CV to Jill Zimbelman (jill.zimbelman@unlv.edu) by May 10.