



**Top Tier Research, Scholarship and Creative Activities**  
2015 – 2016 Updates

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**SUMMARY**

**Infrastructure 2-3: Increasing Competitive Grant Applications & Funding Opportunities**  
**(Kwang Kim, Barbara St. Pierre Schneider, David Paul, Academic Health Center Rep, Research Council, Associate Deans)**

- This group has prepared a comprehensive analysis of research funding and recommendations for increasing proposals presented in the **Part B**. Summary recommendations include:
  1. Provide the PIs with incentives to faculty (e.g., for proposals, directed toward research-active PIs)
  2. Form task forces and streamline processes for large grant applications and institution-limited (time sensitive) submissions
  3. Assist tenure-track faculty to win Young Investigator awards
  4. Improve Research Space Utilization (RSU)
  5. Evaluate “Entrepreneurial” ways for providing matching (or reallocating the existing resources) toward grant applications
  6. Encourage the UNLV faculty to serve as a program director of federal funding agencies
  7. Further effective utilization of “Centers of Excellence” to help secure external funding and recruit dynamic faculty and capable students
  8. “Distinguished professorships/Endowed professorships” will also help the PIs secure large volume-flagship programs.
  9. Help the PIs bringing “focused workshops” to the UNLV campus.
  10. Use external Input (or consultants) to UNLV’s Research Enhancement
  11. Place some strategic existence and/or collaborations in the DC and northern Virginia areas to have more connections with federal agencies?
  12. Look into a model to hire very capable RESEARCH ONLY FACULTY who can started with some initial investment (University of Central Florida model, most medical schools..?)
  13. Strategically place some “graduate fellowships” that can target upon “High-risk / High-pay-off research.”
  14. Give close attention to National Ranking(s) of UNLV units.

15. Help the faculty build their “informative” research website, research identification, etc... (marketing...)
  16. Collect and publish grant/contract information for college/department/individual faculty (award, expenditure, F&A recovered) as many other institutions are doing routinely as part of their annual report.
  17. Encourage the faculty (particularly TT faculty) to participate in grant writing clubs having a mock review element.
  18. Come up with a flexible and executable course buy-out practice/procedure(s).
  19. Help send the UNLV students internship at national laboratories and federal agencies (seeding process).
- TTGRA competitive GA funding program roll-out in late spring '16 for AY17-20.
  - GC Grad Rebel Success Center workshops on NSF Graduate fellowships. Bring in NSF officer for workshop in AY16-17.



## TOP TIER RSC WORKING GROUP REPORT

### Submitted By:

Kwang Kim	Mechanical Eng.
Name	Department

Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities

Name/Topic of Working Group	Goal #2-3
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### Working Group Members:

Brian Hedlund	School of Biological Science
Name	Department

Barbara St. Pierre Schneider	School of Nursing
Name	Department

David Paul	Sponsored Project Office
Name	Department

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In consultation with Deans Rama Venkat (COE), Tim Porter (COS), and Carolyn Yucha (SON), this working group laid out a number of ideas regarding plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities. The group also collected some data related to recent UNLV's research funding records including National Science Foundation.

### Recommendations:

The committee feels that:

- 1) The faculty researchers probably need to find more time available to write nationally competitive proposals; and
- 2) To further encourage the faculty researchers in writing more proposals, meaningful incentives to them may be needed?

**2016-2017 Goals (Where possible, specify who should be responsible for these next year):**

The committee feels that the UNLV central administration in consultation with UNLV stake-holders, evaluates recommended ideas<sup>1</sup> if i) they are useful and ii) are executables within the context of UNLV's current practice and/or policy.

Responsibility: the UNLV central administration/Deans?

**Notes, Comments, & Feedback:**

See attached.

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<sup>1</sup> For an example, adaptation of UNR's policy on "Non-contractual days available for overload," <http://www.unr.edu/Documents/administration-finance/hr/hr-hiring-compensation/hr-liaison/OverloadCalendarFY15-16.pdf>, or similar ones might be useful and no-cost to UNLV??

# Research, Scholarship, and Creative Activity (RSCA)

(FY 2016: Top Tier Subcommittee #2-3 Assignment)

**“Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities”**

A short report prepared by:

Kwang Kim (Engineering)

Barbara St. Pierre Schneider (Nursing and Allied Health)

Brian Hedlund (Sciences)

in consultation with

**David Paul** (Office of Sponsored Project)

Deans **Rama Venkat** (COE), **Tim Porter** (COS), and **Carolyn Yucha** (SON)

Submitted to:

**Thomas Piechota** and **Kate Korgan**, Chairs of RSCA  
and

Presented to:

UNLV Research Council (on December 11, 2015)

UNLV Associate Deans' Council (on December 18, 2015)

**UNLV Research Cabinet (on January 19, 2016)**

# UNLV



# RSCA Top Tier Subcommittee #2-3 Assignment

## DEVELOP PLANS & STRATEGIES FOR INCREASING COMPETITIVE GRANT APPLICATIONS & ENTREPRENEURIAL FUNDING OPPORTUNITIES!! – A VERY DIFFICULT ASSIGNMENT

### Some Background Information & Urgency of Needs

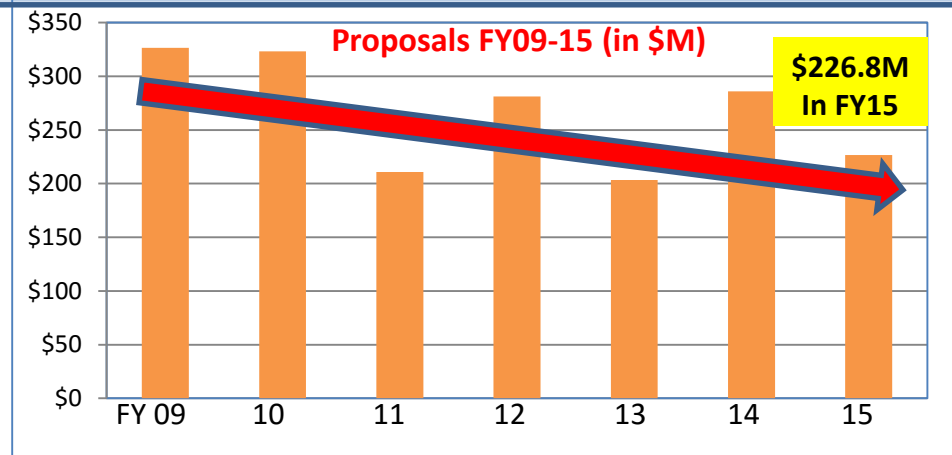
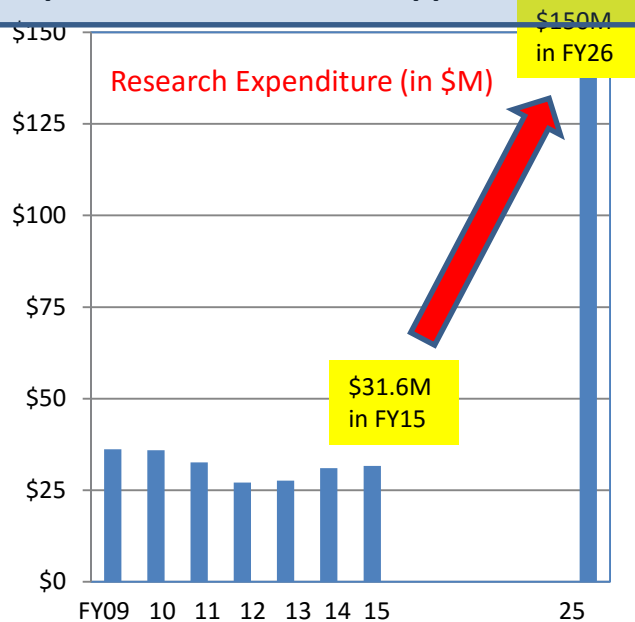
1. One of the major goals of the Top Tier initiative is for UNLV to achieve AT LEAST \$150 M (120M newly adjusted)/YEAR of research expenditure by 2025.

2. Where we are NOW?

- FY15 Research expenditure of \$31.6M.
- FY15 Research awards of \$32.1M.
- FY15 Research proposals of \$226.7M.
- Note: **Approximately 12% (in terms of \$ volume)** of the submitted proposals are materialized.

**FY09-FY15 Total Research Expenditure=\$222 Millions**  
**FY09-FY15 Total Proposal \$ Amount=\$1.858 Billions**

3. To achieve such a challenging goal, the RSCA Top Tier Subcommittee #2-3 **strongly** feels that the UNLV operation for research support, needs to become **MORE RISK-TAKING, CREATIVE, AND BUSINESS-MINDED!**



Considering the success rate at around 12%, UNLV needs to produce more proposal submissions!

➤ For example \$500M/year proposal submission will produce about \$60M.

# Some Naive Comparison (peer institutions?)

- **UNLV**

- FY15 Research proposals of \$226.7M.
- FY15 Research awards of \$32.1M (~14% conversion).

- **Univ. of Houston** ([www.uh.edu/research](http://www.uh.edu/research))

- FY14 Research proposals of \$737.0M.
- FY14 Research awards of \$119.0M (~16% conversion).

- **Univ. of Central Florida** ([www.ucf.edu/research](http://www.ucf.edu/research))

- FY13 Research proposals of \$622.8M.
- FY13 Research awards of \$113.2M (~18% conversion).

- **Univ. of New Mexico** ([www.unm.edu/research-reports](http://www.unm.edu/research-reports))

- FY15 Research proposals of \$402.6M.
- FY15 Research awards of \$124.2M (~30% conversion).

**Our peer institutions  
are annually producing  
# of Proposals > 1,000  
F&A generated > \$20M**

- **Short-term: Some targeted goals(?)** – it could be very stiff goal(s)

- UNLV may need to write proposals at least \$400M annually by 2020.
- UNLV need to improve the winning rate to at least 15% by 2020.

→ **This will help UNLV produce about \$60M research annually by 2020???**

# Some Naive Comparison (a peer institution)

## FY 15 # of Proposals Submitted by UNR

## UNLV

COLLEGE	TOTAL	
SCIENCE	234	
<b>ENGINEERING</b>	<b>Average 168</b>	<b>185 (163/156)</b>
SCHOOL OF MEDICINE	147	<b>Average 169 [178 (AY14) / 205 (AY13) / 143 (AY12) / 149 (AY11)]</b>
AGRICULTURE, BIOTECHNOLOGY..(CABNR)	120	
HEALTH SCIENCES, VP	75	
NV COOPERATIVE EXTENSION	60	
COLLEGE OF LIBERAL ARTS	52	
EDUCATION	43	
BUISNESS	25	
RESEARCH & INNOVATION, VP	21	
ENROLLMENT SERVICES	9	
GRADUATE SCHOOL	7	
POLICE SERVICES, UNIVERSITY	6	
EXTENDED STUDIES	4	
FACILITIES SERVICES	4	
LIBRARIES	4	
OFFICE OF PROVOST	2	
NAASIC	1	
STUDENT LIFE SERVICES	1	
STUDENT SERVICES, VP		
<b>TOTAL</b>	<b>1,001</b>	

## FYI: UNLV Award Data

UNLV AWARD DATA   FY15		
Funding by College/Unit	Awards	Amount
Sciences	109	13,253,233
Student Life	20	11,163,804
Div Health Sciences	59	10,350,011
Engineering	103	9,266,658
Education	22	1,776,332
Urban Affairs	10	1,558,050
Liberal Arts	8	815,220
Provost	6	427,205
VPRED	2	419,500
Business	10	362,335
Library	2	343,770
President's Office	2	337,605
Fine Arts	6	253,837
Law School	4	202,780
Hotel Administration	2	116,000
VPEO	2	12,000
<b>Total</b>	<b>367</b>	<b>\$50,658,340</b>

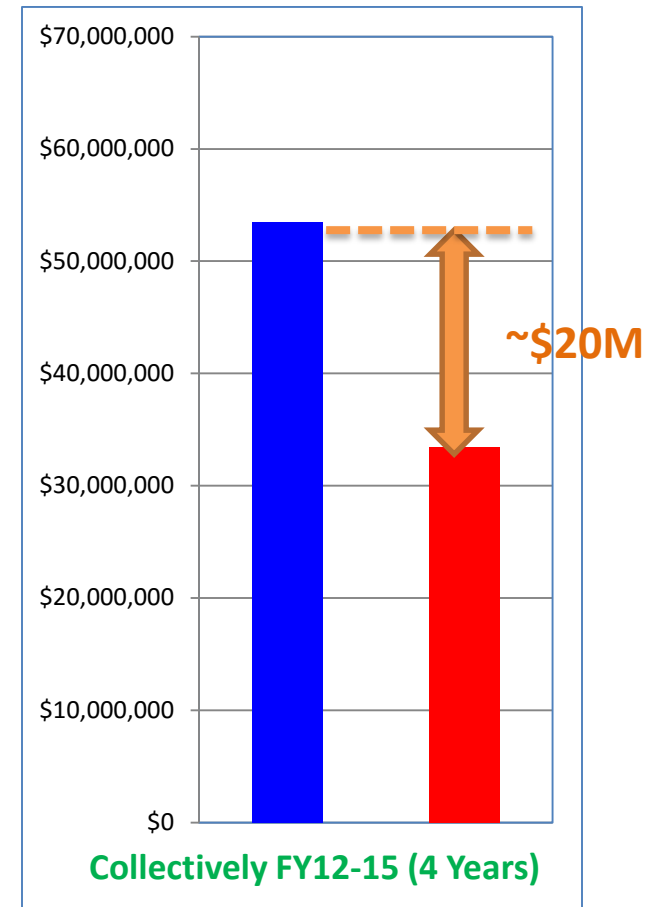
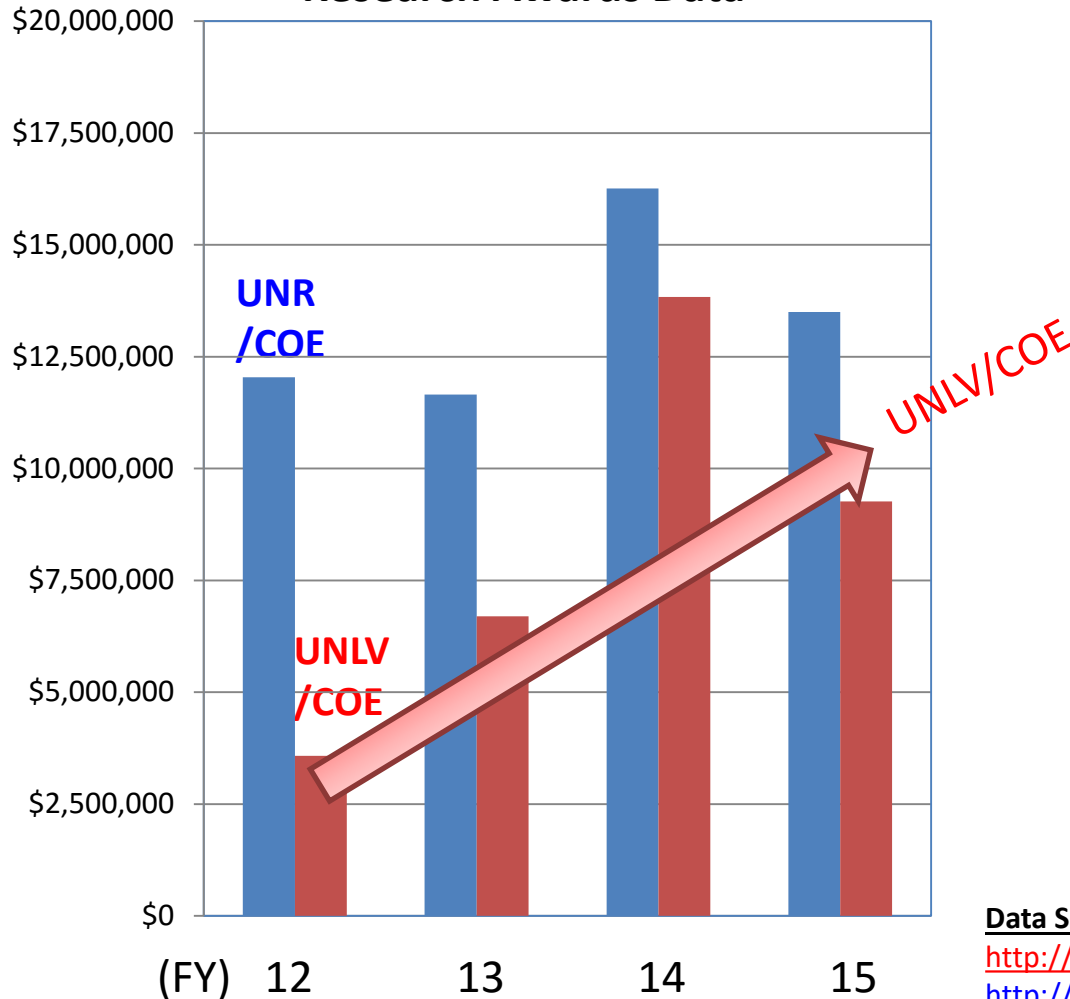
F&A recovery for UNR's FY 15: \$14,922,203



# Some Naive Comparison (continued...)

## An Example: College of Engineering (**UNLV** vs. **UNR**)

Research Awards Data



**Data Sources:**

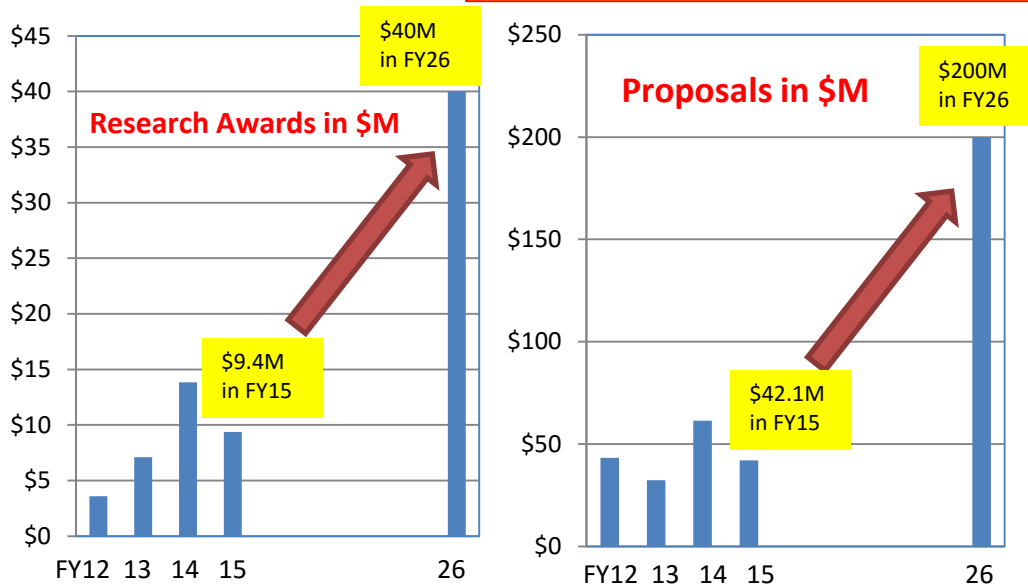
<http://www.unlv.edu/engineering/proposal-award-activities>  
<http://www.unr.edu/sponsored-projects/reports>

# An Example: Status of College of Engineering's Research Productivity: **What that means in 2025**

## Urgency of Needs

1. One of the major goals of the Top Tier initiative is for UNLV/COE to achieve **approximately \$37.5 M/year of research expenditure by 2025** (info provided by Dr. Rama Venkat/COE leadership).
2. Where COE/UNLV is NOW (@70 faculty)?
  - FY15 Research awards of \$9.3M (~\$130K / faculty).
  - FY15 Research proposals of \$42.1M (~\$600K/faculty).
  - FY15 the number of research proposals is 178 (~2.5 proposals/faculty).
  - Note: **Approximately 19% (in terms of \$ volume)** of the submitted proposals are materialized.

**FY12-FY15 4 Years Total Research Awards=\$33.9 Millions**  
**FY12-FY15 4 Years Total Proposal \$ Amount=\$179.0 Millions**



UNLV/COE "MAY" need to submit approximately **500 proposals** of approximate amount **\$200M**. That will potentially lead to approximately \$40M awards in FY2026! This will be a challenging task for the UNLV/COE faculty!

### **In summary (@100 faculty size) by 2025**

5 proposals/faculty/year

→ **Double the number of proposals/faculty**

\$400K awards amount/faculty/year

→ **Triple the amount of awards/faculty**

# An Example Case: UH College of Engineering

Faculty: 110

**NAE members: 10** UNLV has no NAE or NAS member.

NSHE has one NAS member: Catherine Fowler of UNR (elected in 2011 in Anthropology).

Graduate Students: 1,210

Undergraduate Students: 3,282

Alumni: 18,045

**U.S. News & World Report ranking #76** (2015)

**Research Expenditures: \$26M**

**(35% of faculty generates 80% of the research expenditure; \$250K per faculty annually)**

Degrees Awarded (FY 2014):

B.S. 339

M.S. 194

Ph.D. 50

Total 583

**Faculty Highlights**

**John Lee, Ph.D.**  
Dean of the College of Engineering

**Ravi Bafra, Ph.D.**  
Associate Professor

**Ashutosh Agrawal, Ph.D.**  
Associate Professor

**Bora Gencturk, Ph.D.**  
Associate Professor

**Lars Grabow, Ph.D.**  
Associate Professor

**Faculty Growth (Tenured/Tenure-track) 2007-2011**

87, 91, 95, 100, 105

**John Lee, Ph.D.**  
Dean of the College of Engineering

**William Epling, Ph.D.**  
Associate Professor

**Hyonghi Lee, Ph.D.**  
Associate Professor

**Mo Li, Ph.D.**  
Associate Professor

**Kalyani Nakshatrab, Ph.D.**  
Associate Professor

2008: \$13,689,483  
 2009: \$20,463,001  
 2010: \$19,008,433  
 2011: \$22,324,800  
 2012: \$21,322,870  
 2013: \$23,401,647  
 2014: \$26,000,000

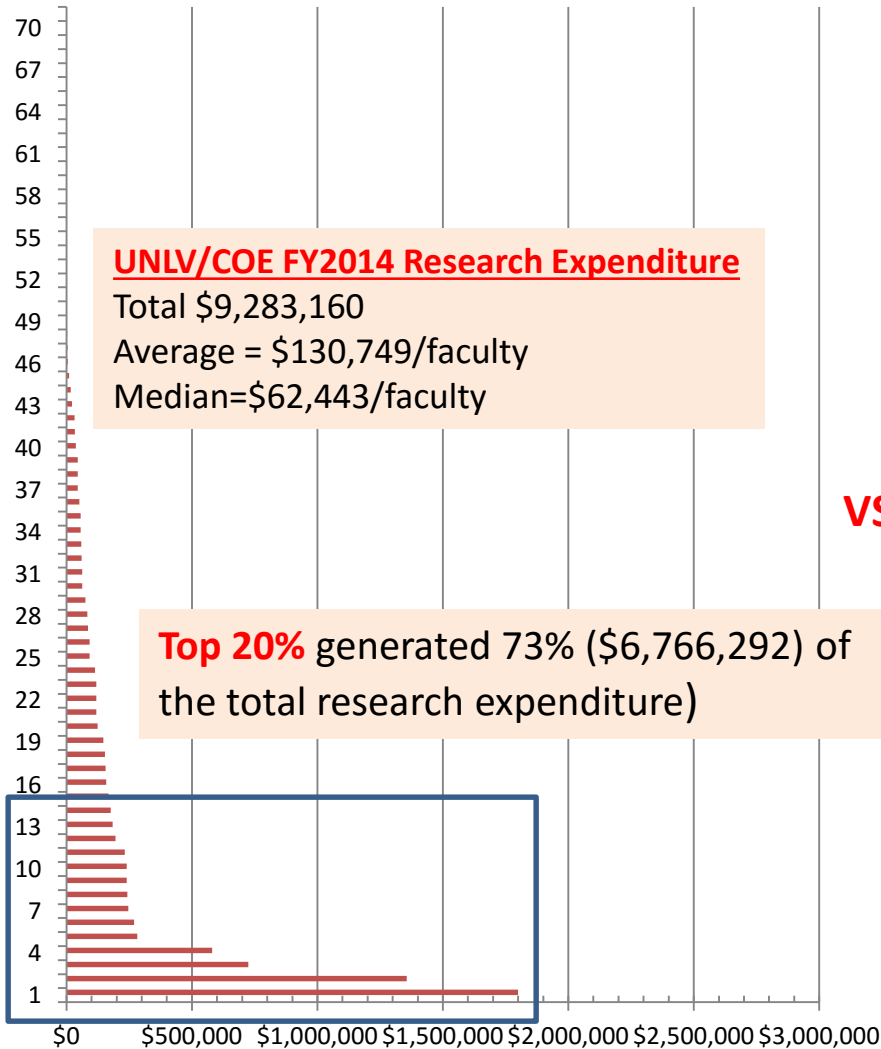
Figure 6. Research Expenditures



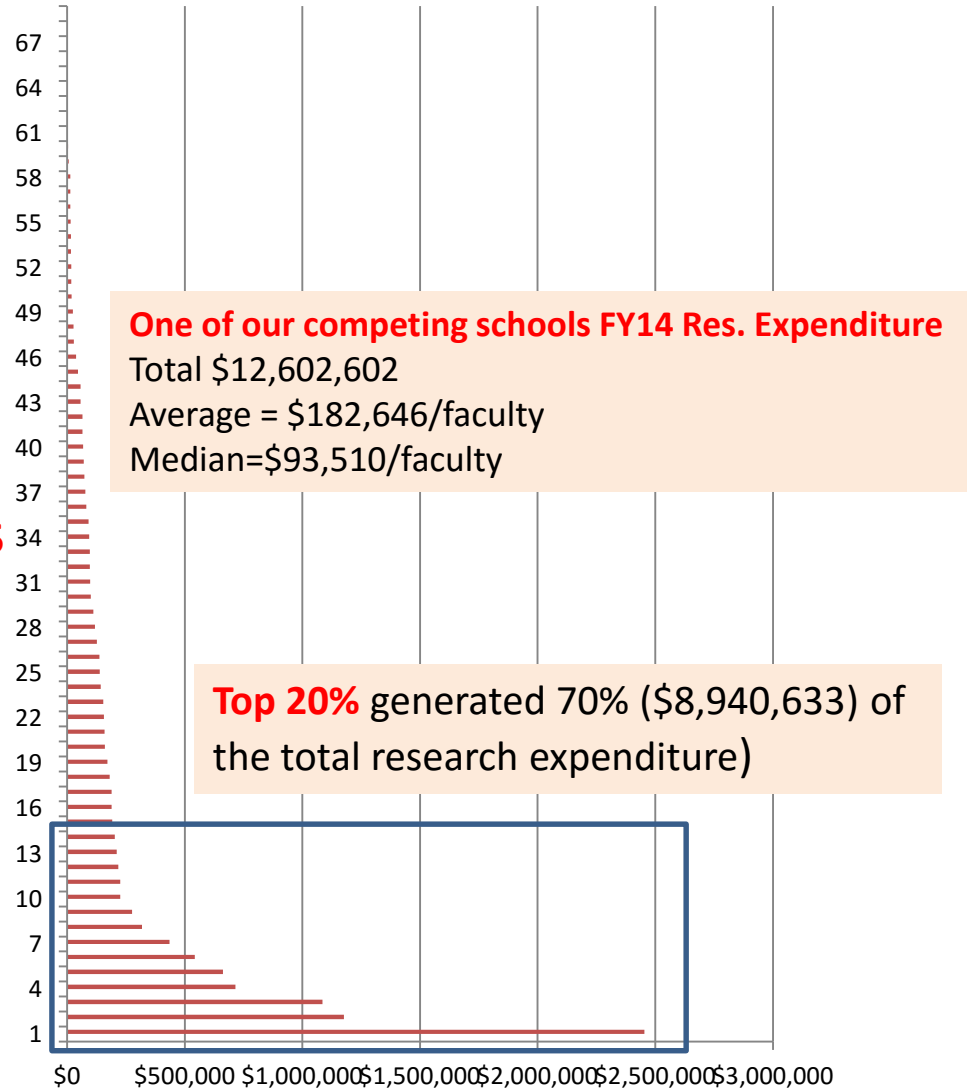
Source: <https://www.egr.uh.edu/our-college/facts>

# Another example comparison (UNLV/COE vs. one competing school)

<http://www.unlv.edu/engineering/research>



VS



# Some Naive Findings / Question(s)

- At the moment, **top 20% of the research active faculty** carries **high load/pressure** in terms of grant/contract activities and, *most likely*, will be in a situation to carry **much more increased pressure** as UNLV wants to become a Top-Tier institution.
- Some operation flexibility or strategic investments are needed (**Q: in where?**) to bring the overall performance up?
  1. **Spread them out (?), Bottom 20% (?), Top 20% (?)**
  2. **What are the associated cost and ROI?**

**Similarities are everywhere!** : Initial investment on the top producers and then expand to others.. (make up the volume first!)

An example: **Univ. of Houston / Cullen College of Engineering's Strategic Plan 2014 to 2020**  
([https://www.egr.uh.edu/sites/ccoe.egr.uh.edu/files/files/strategic-plan-web\\_2014-2020.pdf](https://www.egr.uh.edu/sites/ccoe.egr.uh.edu/files/files/strategic-plan-web_2014-2020.pdf))

**Vision: To become a "Top 50" Engineering Program, as defined by U.S. News and World Report**, in support of the University of Houston's Tier One initiative.

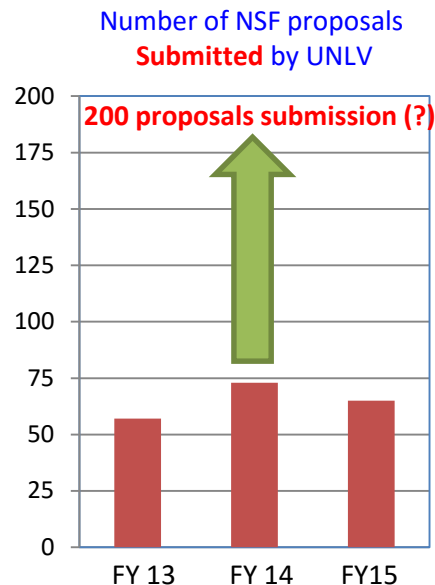
Increase Research Activity across the College: Currently, 35% of CCE faculty generates 80% of the research expenditures for the college. By 2020, **"the CCE's goal is not only to increase overall research activity, but to broaden research activity among faculty so that a substantial majority of faculty are contributing to the research enterprise."** To support this goal, the CCE will ensure.....

# RSCA Top Tier Subcommittee #2-3 Assignment

Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities

## AN EXAMPLE UNLV DATA for FY13-FY15: National Science Foundation

- Number of NSF grant proposals “directly” submitted by UNLV annually is low.
- Large volume (>\$1M)/flagship grants “directly” submitted/received by UNLV is low.
  - 13 submissions/1 funded
  - Since 1976 (Fastlane data): 3 grants > \$1M; 13 grants are between \$500K and \$1M
- Number of NSF CAREER awards directly received by UNLV
  - Total 11 awards: Luke (1998, the first?), Bae\*, Ahmad (2009), Fu\*, Rennels, Sapochak\*, Lee (2009), van Breukelen, Piechota, Hedlund, and Snook\* (\*left UNLV) – **None after 2009.**
  - The NSF/CAREER program is designed for TT faculty to build their academic career via research/education (5 yr. program)



Zip Code	Institution	# of Active NSF Grants	# of Active CAREER Awards
80309	UC Boulder	543	34
84112	U of Utah	278	23
77204	University of Houston	174	20
97403	University of Oregon (no Engineering)	141	4
32816	University of Central Florida	134	10
89557	UNR	81	4
92182	San Diego State University	76	1
89154	UNLV	47	0

(NSF Fastlane data as of August 7, 2015)

# NSF Data (Fastlane as of Dec. 16, 2015)

<b>Zip Code</b> 89154
<b>Active Awards</b> true
<b>Refined by</b>
Refine Search <input type="button" value="-"/>
<b>NSF Organization</b>
<input type="checkbox"/> Office Of The Director(4)
<input type="checkbox"/> Direct For Mathematical & Physical Scien (5)
<input type="checkbox"/> Direct For Social, Behav & Economic Scie (6)
<input type="checkbox"/> Direct For Computer & Info Scie & Enginr (5)
<input type="checkbox"/> Directorate For Geosciences(14)
<input type="checkbox"/> Directorate For Engineering (2)
<input type="checkbox"/> Direct For Biological Sciences(4)
<input type="checkbox"/> Direct For Education and Human Resources (4)
<b>Award Amount</b>
Less than or equal \$50,000(6)
Between \$50,001 - \$100,000(6)
Between \$100,001 - \$500,000(28)
Between \$500,001 - \$1,000,000(3)
More than \$1,000,000(1)
<b>Award Instrument</b>
Standard Grant(27)
Continuing Grant(16)
Fellowship(1)

UNLV

<b>Zip Code</b> 32816
<b>Active Awards</b> true
<b>Refined by</b>
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<b>NSF Organization</b>
<input type="checkbox"/> Office Of The Director(3)
<input type="checkbox"/> Direct For Mathematical & Physical Scien (26)
<input type="checkbox"/> Direct For Social, Behav & Economic Scie (1)
<input type="checkbox"/> Direct For Computer & Info Scie & Enginr (33)
<input type="checkbox"/> Directorate For Geosciences(1)
<input type="checkbox"/> Directorate For Engineering (41)
<input type="checkbox"/> Direct For Biological Sciences(6)
<input type="checkbox"/> Direct For Education and Human Resources (18)
<b>Award Amount</b>
Less than or equal \$50,000(3)
Between \$50,001 - \$100,000(8)
Between \$100,001 - \$500,000(99)
Between \$500,001 - \$1,000,000(16)
More than \$1,000,000(3)
<b>Award Instrument</b>
Standard Grant(102)
Continuing Grant(26)
Fellowship(1)

U Central Florida

<b>Zip Code</b> 77204
<b>Active Awards</b> true
<b>Refined by</b>
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<b>NSF Organization</b>
<input type="checkbox"/> Office Of The Director(3)
<input type="checkbox"/> Direct For Mathematical & Physical Scien (49)
<input type="checkbox"/> Direct For Social, Behav & Economic Scie (4)
<input type="checkbox"/> Direct For Computer & Info Scie & Enginr (25)
<input type="checkbox"/> Directorate For Geosciences(11)
<input type="checkbox"/> Directorate For Engineering (54)
<input type="checkbox"/> Direct For Biological Sciences(10)
<input type="checkbox"/> Direct For Education and Human Resources (13)
<b>Award Amount</b>
Less than or equal \$50,000(10)
Between \$50,001 - \$100,000(17)
Between \$100,001 - \$500,000(113)
Between \$500,001 - \$1,000,000(22)
More than \$1,000,000(7)
<b>Award Instrument</b>
Standard Grant(118)
Continuing Grant(49)
Cooperative Agreement(1)
Fellowship(1)

U of Houston

<b>Zip Code</b> 89557
<b>Active Awards</b> true
<b>Refined by</b>
Refine Search <input type="button" value="-"/>
<b>NSF Organization</b>
<input type="checkbox"/> Direct For Mathematical & Physical Scien (14)
<input type="checkbox"/> Direct For Social, Behav & Economic Scie (8)
<input type="checkbox"/> Direct For Computer & Info Scie & Enginr (8)
<input type="checkbox"/> Directorate For Geosciences(16)
<input type="checkbox"/> Directorate For Engineering(15)
<input type="checkbox"/> Direct For Biological Sciences(19)
<input type="checkbox"/> Direct For Education and Human Resources (4)
<b>Award Amount</b>
Less than or equal \$50,000(5)
Between \$50,001 - \$100,000(6)
Between \$100,001 - \$500,000(59)
Between \$500,001 - \$1,000,000(11)
More than \$1,000,000(3)
<b>Award Instrument</b>
Standard Grant(55)
Continuing Grant(28)
Fellowship(1)

UNR

- NSF funding means to each faculty?
- Need to quickly broaden the exposure to NSF to become a mature institution.
- Need to try large/flagship grants (>\$1M)

# RSCA Top Tier Subcommittee #2-3 Assignment

Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities

## SWOT ANALYSIS

- **Strengths** in:
  1. Small but a number of strong areas of faculty research,
  2. Not enough but good support for faculty grant applications, and
  3. Good investment/intension for faculty grant applications from the administration
- **Weaknesses** in:
  1. Number of grant proposals is low.
  2. Number of large volume/flagship grants is low.
  3. Number of “Young Investigator” awardees is low. → **Questions (Recruiting? Mentoring?)**
- **Opportunities** in:
  1. UNLV Uniqueness: EPSCoR, MSI, KF, others...
  2. Growing interest in UNLV medical school and health care research
  3. Slowly but growing faculty-participation in campus research initiatives (FOA, limited submission, etc..)
- **Threats** in:
  1. Federal budget cut in fundamental research (**except FY16**)
  2. Increasing competition in grant applications as more universities pursue research funding
  3. Limited research infrastructure at UNLV
  4. **UNLV Campus culture on research (need attention from the central leadership\*)**
  5. Difficulty in recruitment of high caliber researchers (**resource, student quality, location..?**)



# RSCA Top Tier Subcommittee #2-3 Assignment

Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities

**Urgency: The TT subcommittee #2-3 noticed that the UNLV's proposal output for FY2015 actually went down!**

Thus, for UNLV to achieve \$150M (or \$120M)/year research expenditure and write more proposals, it is so obvious that UNLV needs to provide the research active PIs with:

1. **More TIME,**
2. **Meaningful INCENTIVES,** and
3. Effective SUPPORT

**A few naive recommendations/ideas to The RSCA Committee for consideration to address (1) low number of grant proposals; (2) low number of large volume/flagship grants; and (3) low number of “Young Investigator” awards**

1. Provide the PIs with **incentives to submit more proposals.**
  - Identify any faculty without federal funding in the last 5 years and help them submit proposal(s) to NSF?
2. **Provide some creative and meaningful incentives to research-active PIs.**
  - For 9 Mon. salary faculty: (1) Allow summer/over-load up to 48% of their salary (**UNR model?**); (2) Allow summer salary saving for rainy days (Penn State model?); (3) Matching (U of Florida model?)
  - For 12 Mon. salary faculty (for example Nursing/Dental faculty & B-contract administrators): Create a mechanism for teaching release or other financial incentives.

# RSCA Top Tier Subcommittee #2-3 Assignment

Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities

3. For **large grant applications** and **institution-limited** (time sensitive) submissions
  - Form a task force (VPR/Deans/other research leaderships) to strategize so the campus infrastructure will support large funded grant applications in an unfragmented and efficient way.
  - Streamline the institution-limited submission process to allow the PI to have enough time to prepare the proposal (if necessary, the executive decisions by the leaderships are needed for decision making.)
4. To help TT faculty to win **Young Investigator awards: very critical!**
  - Providing early-career researchers with seed investment and mentorship support to help them effectively launch their research and prepare to apply for early career or selected research awards (for example, NSF CAREER, DoD/DoE/NASA Young Investigator, and other programs).
    - ✓ Host NSF CAREER workshop(s) at the UNLV campus.
    - ✓ Send TT faculty to “NSF supported” NSF CAREER workshop(s).
    - ✓ Help TT faculty have proposal reviewing opportunities.
    - ✓ Help TT faculty have “NETWORKING” and “BRENDING” (setting up informative websites, etc).
    - ✓ **Special support programs for TT faculty:** mini-sabbatical, appropriate teaching load, first grant program, mentoring...? **TT → help them being/becoming PERSISTENT!**
5. Some **“Improved” Research Space Utilization (RSU)?**
  - The current level of RSU is sitting at approximately **\$150/SF annual expenditure**. This number is expected to go up as UNLV will bring more research \$. A short-term solution to deal with such an increased demand rather than adding more research space, could be more centrally controlled management (**similar to class-rooms that are centrally managed**)? This will create more interchangeable space utilization (and provide the chairs/deans with some tools?)?
  - **An example scenario:** Suppose a PI/team wants to make a bid to bring a federally funded Center of Excellence, one usual evaluation criteria is “availability of space/location of the proposed center.” With the current research space management practice, it is extremely challenging for a PI to propose a convincing Space Management Plan. **Thus, the proposal will be less favored by the reviewers.**

# RSCA Top Tier Subcommittee #2-3 Assignment

Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities

6. **“Entrepreneurial”** ways for providing matching (or reallocating the existing resources) toward grant applications (we recognize that it is a tough issue for resource-poor institutions including UNLV)
  - Often times, grant applications require MATCHING (in particular DOE)! In this regard, the UNLV communities at all levels (central administration/VPR/Graduate School/Deans/Chairs/PIs) may need to look for some aggressive but creative matching mechanisms to overcome this hurdle?
  - **Properly packaged matching plan(s) included in grant proposals will greatly help the PIs win more grants/contacts – in particular for large/flagship grants.**
7. Encourage the UNLV faculty to serve as a **program director of federal funding agencies** (or provide the faculty with some incentives - via IPA / in connection with sabbatical or development leave).
8. Further effective utilization of **“Centers of Excellence”** to help secure external funding and recruit dynamic faculty and capable students
  - College of Eng. and College of Sci.: a targeted volume of \$1.5M expenditure/year
  - Centrally administrative → needs some investment (?) (administrative support (?))
9. **“Distinguished professorships/Endowed professorships”** will also help the PIs secure large volume-flagship programs.

## RSCA Top Tier Subcommittee #2-3 Assignment

Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities

10. Help the PIs bringing “**focused workshops**” to the UNLV campus.
11. Some **External Input (or consultants)** to UNLV’s Research Enhancement
  - UNLV may need to bring some “external advisor groups” from our comparative schools and/or agencies & consultants (some from our targeted schools and agencies and national labs.. consultants??) and look for their advice and wisdom regarding research-enhancement decision-making?
12. Place some strategical existence and/or collaborations **in the DC and northern Virginia areas** to have more connections with federal agencies?
13. Look into a model to hire **very capable RESEARCH ONLY FACULTY** who can started with some initial investment (University of Central Florida model, most medical schools..?)
14. Strategically place some “graduate fellowships” that can target upon “**High-risk / High-pay-off** research.”
15. Give close attention to **National Ranking(s)** of UNLV units.
16. Help the faculty build their “**informative**” research website, research identification, etc... (marketing...)

## RSCA Top Tier Subcommittee #2-3 Assignment

Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities

17. Collect and publish grant/contract information for college/department/individual faculty (award, expenditure, F&A recovered) as many other institutions are doing routinely as part of their annual report.
18. Encourage the faculty (particularly TT faculty) to participate in grant writing clubs having a mock review element.
19. Come up with a flexible and executable course buy-out practice/procedure(s).
20. Help send the UNLV students internship at national laboratories and federal agencies (seeding process)
21. Many others

## RSCA Top Tier Subcommittee #2-3 Assignment

Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities

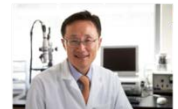
### Concluding Remarks!

For UNLV to increase competitive grant applications and entrepreneurial funding opportunities, the UNLV's research support/operation probably needs

- 1) to become more **AGGRESSIVE, RISK-TAKING, CREATIVE, AND BUSINESS-MINDED.**
- 2) to **AGGRESSIVELY RECRUIT** Outstanding/Top-Tier Students, Faculty, and Staff....!!

UNLV

Many thanks for your attention!



Other info.

Appendix

**Best Global Universities (BGU)  
Ranking**

# RSCA Top Tier Subcommittee #2-3 Assignment

Develop plans & strategies for increasing competitive grant applications & entrepreneurial funding opportunities

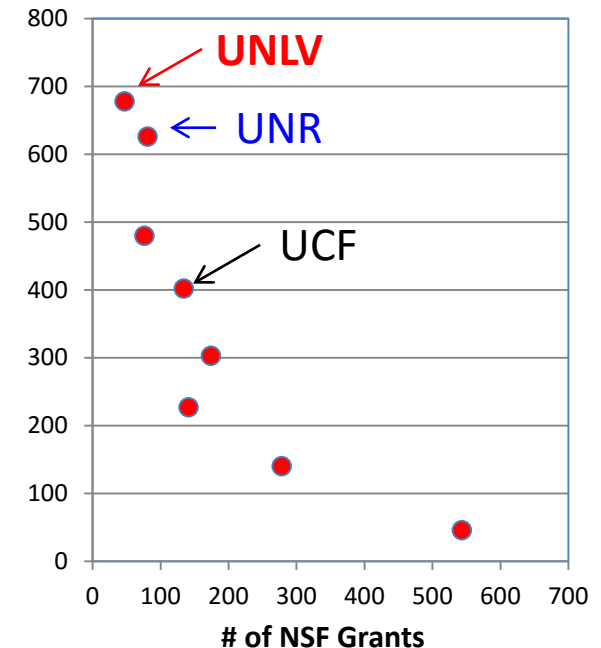
## Best Global Universities (BGU) Ranking



UNLV Referenced/Peer Institutions (?)	# of Active NSF Grants	Best Global Universities Ranking
UC Boulder	543	#46
U of Utah	278	#140
<b>University of Houston</b>	<b>174</b>	<b>#303</b>
University of Oregon (no Engineering)	141	#227
<b>University of Central Florida</b>	<b>134</b>	<b>#402</b>
UNR	81	#626
San Diego State University	76	#480
<b>UNLV</b>	<b>47</b>	<b>#678</b>

(NSF Fastlane data as of August 7, 2015)

BGU Ranking



GU ranking is based upon global/regional research reputation, volume and quality of publications, citations, PhD awarded, etc, of each institution