



STATE OF RESEARCH AT UL LAFAYETTE

Annual Report: July 2012 – July 2013

Despite declining state support, the research enterprise at UL Lafayette grows at a fast pace. Against all odds, our researchers continue to generate substantial research funding, enhance our academic pursuit of knowledge, ignite the passions of our graduate and undergraduate students for learning, and enhance the prestige and national recognition of the University.

Our community of scholars engages in these pursuits, while continuing to deliver significant results to our internal and external stakeholders, and applying research to solving some of the toughest challenges we face as a society. At the University, we live by our key message: *“We’re committed to Research for a Reason.”*

On the anniversary of my appointment as interim VP for Research, I am pleased to submit a brief report, chronicling key activities and outcomes of the Office of the Vice President for Research, in support of enhancing our research enterprise.

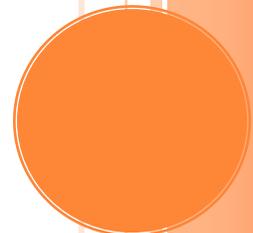
This report is dedicated to our community of scholars, and to all those who support them.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Kolluru".

Dr. Ramesh Kolluru, Interim Vice President for Research

8/13/2013



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STRENGTHENING OF RESEARCH CENTERS & INSTITUTES

- Successful search for director of the New Iberia Research Center (NIRC), UL Lafayette's largest research center. Selection of Dr. Joe Simmons, a nationally recognized expert in non-human primate research, as NIRC director in June 2013.
- Strengthening of the Energy Institute (EI) and appointment of Dr. Mark Zappi as director. Assisted in the development of an \$8M signature public-private partnership between UL Lafayette and CLECO for the development of the Alternative Energy Research Center in Crowley, LA.
- Reorganization of the Louisiana Accelerator Center (LAC) and the development of the Institute for Materials Research and Innovation (IMRi) to coalesce the University's strengths in the area of materials. IMRi incorporates the LAC, the Microscopy Center and the Center for Structural and Functional Materials, under its umbrella.
- Strengthening of the Center for Ecology and Environmental Technology (CEET) and the Institute for Coastal Ecology and Engineering (ICEE), by addressing financial interdependencies between both centers. Allocation of necessary funds to support the strengthening of UL Lafayette's coastal and water management programs, including \$150K in funds for the creation and search of ICEE director.
- Development of a three-year, \$12.9 million contract between the Center for Business and Information Technologies (CBIT) and Louisiana Department of Health and Hospitals (DHH).
- Creation of innovative public-private partnerships between i.) MSTC, American Pollution Control (AMPOL) and the Response Group (TRG) focused on oil-spill response training; and ii.) the NIMSAT Institute and Acadian/Safety Management Systems (SMS) focused on all-hazards training. Both partnerships are expected to significantly enhance revenues for UL Lafayette, as well as increase the number of students served by the University. Working with Academic Affairs team to determine eligibility of student contact hours and certificates.
- Enhancement of organizational structures of Picard Center, Marine Survival Training Center (MSTC) and CBIT to position the centers for growth as well as mitigation of risk.

**Goal 1: \$100M in annual
Research & Development
Expenditures by 2016**

- Allocation of institutional funds for the further development of the NSF Center for Visual and Decision Informatics (CVDI) – the nation’s only NSF-recognized “big-data” center. Submission of a proposal to the Board of Regents for formal recognition of CVDI.
- Establishment of the "*Dean Poirrier Blue Ribbon Commission on Health Care*" to establish strategic directions for the Louisiana Center for Health Informatics (LCHI) and to help develop a broader healthcare strategy for UL Lafayette.
- Economic Development Centers: Addressing immediate financial challenges faced by the University’s four economic development centers, including the Manufacturing Partnership of Louisiana (MEPOL), Procurement of Technical Assistance Center (PTAC), Enterprise Center of Louisiana (ECOL), and Louisiana Small Business Development Center (LSBDC) through a series of steps. These include:
 - Transition of LSBDC from VPR to COBA and alignment with LITE to enhance entrepreneurial services at UL.
 - Closure of the ECOL incubator program and the pending sale of the building in 2014 which is likely to generate \$1.2M in funds to support research efforts at UL.
 - Seeking funds through legislative support for MEPOL and PTAC, while re-allocating \$200K in funds from the NIMSAT Institute to PTAC to support its operations.

ESTABLISHMENT/ENHANCEMENT OF POLICIES & PLANS

- *Win-Win Model for Innovation Support*: Overhaul of intellectual property (IP) policies to facilitate the development of a win-win and equitable model for distribution of revenues. Expanded the policy to distribute revenues not only to the inventors, but also to their supervisory units including departments, deans as well as the office of the Provost/President in an effort to enhance support for the culture of innovation (*Dean Carlson policy of IP Proceeds Distribution*).
- *Incentivizing Sponsored Research Productivity*: Continuation and strengthening of return of indirect policy initiated under Dr. Twilley. Enhanced the policy to include centers as well as administrative units.
- *Student Research Enhancement Initiative*: Enhanced the return of indirect policy to include additional incentives for PIs who include funding to support graduate and undergraduate students within their research grants. This policy is intended to enhance financial resources available to students pursuing their undergraduate and graduate studies at UL Lafayette.
- *Support for Entrepreneurship*:
 - Enhancement of IP policy: Worked with the University Council, Deans Council, Office of Distance Learning and the Faculty Senate to develop an enhanced UL

Goal 2: Support the annual graduation of 100 PhDs by 2018

Lafayette IP policy that clarifies and strengthens support for the creation of startups and spin offs by the University's faculty, staff and students.

- Establishment of AcceleRagin: Partnered with Opportunity Machine, the technology accelerator operated by the Lafayette Economic Development Authority (LEDA), to establish "AcceleRagin", UL Lafayette's own technology incubator. This initiative will provide free space, mentorship support, and other entrepreneurial ecosystem services to UL students, staff & faculty interested in developing startups or spin-off companies. Partnering with the UL Lafayette Office of Communications and Marketing to promote the availability of this asset to UL Lafayette entrepreneurs.
- *MPRAC STEM Priorities Master Plan for BOR*: Worked with the Louisiana Board of Regents Master Plan Research Advisory Council (MPRAC), and leadership of the University in developing the STEM Priorities Master Plan for Research. This master plan is based on findings of the Battelle report, commissioned by Louisiana Economic Development. The UL Lafayette Research Master Plan includes the following five STEM priorities: Life Sciences, Health Care and Wellness; Computing, Digital Media & Software; Energy & Sustainability; Coastal Ecology & Water Management; and Advanced Materials & Manufacturing.

STRENGTHENING OF THE OFFICE OF VP FOR RESEARCH

- Revamp of the Office of Innovation Management (OIM) leadership, priorities, as well as processes, with the following results:
 - Yielded a **133%** increase in technology disclosures (14, FY2012 *versus* 6, historical average).
 - Yielded a **150%** increase in filed patent application (5, FY2012 *versus* 2, historical average).
 - Yielded a **15%** increase in licensing revenue (\$43K, FY 2012 *versus* \$39K, historical average).
 - Filed the University's **1st** international patent application (Dr. Radhey Srivastava,); and conducted **7** individual technology marketing campaigns.
 - Executed **7** confidentiality agreements with companies for IP discussions, including **1** with an international company; liaised with SPFAC to negotiate IP terms of **4** awarded sponsored-research agreements; and executed **2** Legal services agreements with state and national IP law firms.
 - Introduced UL Lafayette intellectual assets to **>250** companies; and conducted **41** individual faculty interviews for IP mining.
 - Released **2** technologies to inventors for commercialization.
- Through OIM, established required infrastructure development & industry engagement models for technology transfer and commercialization

**Goal 3: Support 10 startup /
spin-off companies per year by
2018**

- Installed **template license and option agreements**; liaised with SPFAC to install **prudent IP provisions** in template sponsored-research agreements.
 - Partnered with **Foresight Science & Technology** for technology marketing and licensing analytics counsel.
 - Partnered with **TYNAX**, a global high-tech patent trading exchange, for brokering assignments of University-owned patents.
 - Introduced UL Lafayette technologies to national and international companies via **Open Innovation Marketplaces** inducing FLINTBOX, INNOGET & AUTM, yielding 15 partnership discussions.
 - Registered the University with **PatSnap Global Patent Search and Analysis Platform** for visualization of international patent landscapes, mapping of distinct commercialization markets and identifying company's whose patent portfolios position them as potential licensees.
 - Installed the University's first **IP Management System: INTEUM**; centralized electronic registry for managing disclosures, patents, federal IP reporting, licensing, royalties and related accounting.
 - Discovered the **Acadiana IP Landscape** and met with all major Acadiana IP holders; and offered counsel to several local entrepreneurs.
- *Expansion of Office of Research and Sponsored Programs (ORSP) staff:* In FY 2013, increased ORSP personnel from two pre-award staff members to four. With this increase, the number of units for which each pre-award administrator is responsible was reduced, allowing more time for each to provide assistance in finding funding opportunities and early stage proposal and budget development.
 - During FY 2012-13, ORSP continued to provide service to the University community in seeking external funds to support the research and scholarly interested of the campus community. The number of proposals submitted as well as the number and amount awarded to date is provided below:

Proposals Submitted & Awarded FY 2012-13¹

	<i>Number of Proposals Submitted</i>	<i>Number of Proposals Awarded</i>	%	<i>Amount Requested</i>	<i>Amount of Funds Awarded</i>	%
Federal (<i>Including Flow Through</i>)	183	82	45%	\$ 93,508,095	\$ 9,133,967	10%
State & Local Government	139	56	40%	\$ 34,155,285	\$ 18,013,306	53%
Business ²	26	19	73%	\$ 3,610,245	\$ 1,507,269	42%
Foundation	14	2	14%	\$ 1,992,083	\$ 24,000	1%
Other	26	8	31%	\$ 3,875,849	\$ 1,184,120	31%
Total	388	167	31%	\$ 137,141,559	\$ 29,862,662	22%

¹ These are not R&D expenditures, but just the numbers of proposals routed through ORSP.

² New Iberia Research Center (NIRC) does not route industry proposals through ORSP, *at this time*. This is a significant component of the University's R&D portfolio.

- Over the course of the year, ORSP hosted 17 workshops or seminars to provide information to enhance grant-writing skills generally, as well as to provide information about responding to specific agency or funding programs.
- ORSP electronically distributed 51 issues of *FundingNotice*, a weekly publication of funding opportunities that is designed to provide information about extramural programs available.

PROMOTION OF RESEARCH AND VISIBILITY OF UL

- *Battelle – Louisiana Economic Development Blue Ocean/Emerging Sectors Report*: Worked with the leadership of the University, academic deans and research center directors to compile information to showcase Research and Innovation Assets of UL Lafayette related to enhancing economic development in LED-identified target areas. Hosted authors of the report at UL Lafayette to showcase the University's unique assets, resulting in a very strong and favorable representation of UL Lafayette in the final Battelle Report.
 - Continued coordination with LED, Louisiana Innovation Council (LIC) and the Board of Regents Master Plan Research Advisory Council (MPRAC).
- *Celebration of Research Accomplishments*: Hosted the first-ever Research and Innovation Awards Celebration for UL Lafayette researchers at a reception at the President's Residence. The event recognized the accomplishments of researchers and innovators at UL Lafayette responsible for enhancing the University's resources, innovation assets and reputation.
- *Congressional Briefing*: Partnered with President Dr. E. Joseph Savoie in a presentation of the University's research priorities, progress and vision in Washington, DC to UL Lafayette alumni as well as the Louisiana congressional delegation.
- *Select Visits*:
 - Hosted Mr. Jack Pandol on Congressman Boustany's staff at UL Lafayette with the University leadership to provide an overview of UL Lafayette academic and research priorities.
 - Hosted Dr. Sandra Woodley, President of UL System at UL Lafayette with the University leadership to provide an overview of UL Lafayette academic and research priorities.
 - Hosted the leadership of The Water Institute of the Gulf (TWIG) including Charles Groat, Denise Reed and Nick Speyrer at a day-long showcase of UL Lafayette's assets in coastal ecology, environment, engineering and water management. Presentations from over a dozen researchers from the College of Science, the College of Engineering, ICEE, CEET, and NSF CVDI showcased the strengths of UL Lafayette in this key priority research area.



- Hosted Mr. Bryan Sivak, Chief Technology Officer of the US Department of Health and Human Services (HHS) as a keynote speaker at the CajunCodeFest 2.0. This resulted in a follow-up visit by his leadership team to UL Lafayette to explore opportunities for funding. Participants included LITE, the School of Computing and Informatics, CBIT, and the NSF CVDI.
- Hosted Mr. Jose Vazquez, Program Manager from the U.S. Department of Homeland Security (DHS) and Mrs. Rita Vazquez-Torres, (retd.) Program Manager from the Department of Defense (DOD) to showcase the University's expertise in the area of robotics, cyber-security and homeland security and explore federal funding opportunities. Researchers from School of Computing and Informatics, the College of Engineering, the B.I. Moody College of Business and the NIMSAT Institute participated in the briefings.
- Hosting two meetings with the leadership of Truston Technologies and Gulf Coast Marine Life Center and UL Lafayette faculty in coastal and water management areas to explore collaborative opportunities for industry funding and support.
- Joined Dr. Savoie in hosting a meeting with Mr. Elliott M. Bouillion, CEO of Resource Environmental Solutions, LLC and Dean Mark Zappi for collaborative opportunities in the area of energy development and environmental remediation.

OTHER STATE-WIDE AND CAMPUS-WIDE LEADERSHIP

- Represent UL Lafayette on the Board of Regents MPRAC, and supporting the development of statewide Master Plan for Research.
- Represent UL Lafayette on the Louisiana Universities Marine Consortium (LUMCON) Executive Management Council Serve, in addition to serving as the Chair of LUMCON, and leading the development of a comprehensive 5-year Strategic Plan.
- Established the Undergraduate Research Enhancement Task Force to provide recommendations and develop a comprehensive plan to enhance undergraduate research experiences and funding opportunities for undergrad students at UL Lafayette.
- Financial sponsorship of membership to Center for the Advancement of Research Methods & Analysis (CARMA) to benefit researchers in behavioral sciences such as Psychology, Sociology, Anthropology, Criminal Justice, Sports Management, Nursing, Education, and Communication.
- Continued financial support of Undergraduate Honors conference and sponsorship of Graduate Research paper competitions.



- Financial support to the Center for Louisiana Studies and Department of Biology researcher Dr. Karen Smith to support their IT and cage-washing needs respectively.

ON-GOING & NEW INITIATIVES

- Working with the President and the Office of VP for Administration and Finance in the development of the *Ragin Cajun University Research Foundation* (RCURF). One of the goals of the UL Lafayette Strategic Plan, the RCURF will enhance the entrepreneurial development of UL Lafayette's research enterprise, and accelerate the achievement of UL Lafayette's strategic research goals. *Timeline: 6 months.*
- Development of Industry Engagement Policy to establish UL Lafayette as the preferred innovation partner for the private sector. *Timeline: 6 months.*
- *Enhance Federal Funding* through the development of a contract with McAllister and Quinn, a comprehensive consulting firm that provides services to clients with issues before the federal government. Specifically, the Washington, D.C.-based firm will assist the University with the development of competitive federal research proposals. The contract, which will be partially funded by the Lafayette General Foundation, will concentrate on the five areas which the University has identified as part of BOR MPRAC. The firm will identify opportunities and help bring faculty to meetings with appropriate agency managers. The firm has a high success rate and generally works on multi-year, multi-million dollar grants. *Timeline: 3 months.*
- Working with the Office of VP for Administration and Finance in the acquisition of Electronic Research Administration (ERA) software to streamline the lifecycle of proposal and contract management. This ERA software will eventually interface with the University's main ERP system to provide the services to the research community. *Timeline: 6 months.*
- Establishment of the *Innovation and Research Advisory Council* (IRAC) to provide strategic guidance to the University leadership on the development of research priorities. *Timeline: 6 – 12 months.*
 - The IRAC will facilitate the development of campus-wide *Comprehensive Strategic Research Plan*, and establishment of metrics for research.
 - The IRAC will also support the Office of VP for Research in the nomination and development of a campus-wide Industrial Advisory Board.



- Conduct a nation-wide search for the director of ICEE, to enhance the standing of UL Lafayette within coastal/water management domains. Dr. Mark Zappi will chair the search committee. *Timeline: 6 – 12 months.*
- Working with the Office of VP for Administration and Finance in the establishment of the *Office of Research Integrity* to ensure that UL Lafayette continues to expand its research profile, while mitigating risk to the researchers and the University, and ensuring compliance with evolving federal guidelines on IRB, IACUC, Radiation Safety, Biosafety; Responsible Conduct of Research; Financial Conflicts of Interest; and Export Controls. *Timeline: 12 months.*
- Working with the Office of the Chief Information Officer to explore the development of a centralized *Scientific Research Computing Center* to serve the growing needs for data management, and information security related to the research enterprise. At present, these services are either non-existent or fragmented. *Timeline: 12 months.*
- Establishment of a Chimpanzee Task Force and potential establishment of a separate Foundation to assist the University and the NIRC as federal guidelines evolve on the use of chimpanzees for biomedical research. *Timeline: 6 months.*
- Partnership discussions with Louisiana Fund I, an early stage venture capital fund, for start-up opportunities regarding UL intellectual assets. *Timeline: 12 months.*

