As many of us transition from one fiscal year to the next, summer is often a good time to reflect on our services and think of ways to improve processes. If you need help in assessing the performance of your office or think you may need an external review, this issue is “just the ticket”! Pam Whitlock, Pamela Napier, and Beth Seaton share information about NCURA’s peer review team and how it can help your institution improve research administration services. Joyce Freedman, Randolph Hall, Sara Judd & Jeri Muniz discuss what to expect in an external review, if your institution chooses to go that route; and Peg Lowry talks about the language of research administration and the importance of mastering its different facets for optimal performance.

Martha Taylor shares her institution’s experiences with both internal and external reviews, and Laura Yeager recounts the experiences of three universities in implementing significant change to their research support areas during turbulent times and suggests common attributes applicable to successful transformation.

We’ve also included information about workshops planned for NCURA’s 53rd Annual Meeting this Fall. And we have included our annual “Summer Reading List” from your editors . . . quite a variety of reads!

Finally, in the true spirit of “going green,” we are reprinting some articles you may have missed from earlier issues; as Jim presents the inaugural “Senior Editor’s Best of the Best Past Articles.”

We hope you will add NCURA Magazine to your summer reading list!

Debbie Smith
NCURA Magazine Co-Editor
ONLINE TUTORIALS
A Primer on Clinical Trials - 7 week program
A Primer on Federal Contracting - 8 week program
A Primer on Subawards - 7 week program
Visit the website for Enrollment Periods

DEPARTMENTAL RESEARCH ADMINISTRATION WORKSHOP
August 10-12, 2011 ...............................................Washington, DC
September 7-9, 2011 ..............................................Boston, MA

FINANCIAL RESEARCH ADMINISTRATION WORKSHOP
September 7-9, 2011 ..............................................Boston, MA
December 5-7, 2011 ................................................Houston, TX

FUNDAMENTALS OF SPONSORED PROJECT ADMINISTRATION WORKSHOP
August 10-12, 2011 ...............................................Washington, DC
September 7-9, 2011 ..............................................Boston, MA
December 5-7, 2011 ................................................Houston, TX

SPONSORED PROJECT ADMINISTRATION LEVEL II WORKSHOP
December 5-7, 2011 .................................................Houston, TX

NCURATV 2011 DVD WORKSHOPS
ABC’s of The Federal Cost Principles.........................Available February 15, 2011
Managing Interactions and Potential Conflicts with
University Spin-Offs and Other Small Businesses...........Available April 18, 2011
International Collaborations: Negotiations and
Compliance ....................................................................Available October 11, 2011

13TH ANNUAL FINANCIAL RESEARCH ADMINISTRATION
(FRA) CONFERENCE
Walt Disney World Swan and Dolphin Resort, Orlando, Fl ......March 26-28, 2012

53RD ANNUAL MEETING
Do It LIVE, Do It NOW - Get Involved!
Washington Hilton Hotel, Washington, DC .......................November 6-9, 2011

DEADLINES FOR SEPTEMBER/OCTOBER 2011 ISSUE:
Submission of Articles to Contributing Editors .................August 5, 2011
Submission of Articles to Co-editors ................................August 12, 2011
Submission of Advertisements ......................................August 12, 2011

DEADLINES FOR DECEMBER 2011 ISSUE:
Submission of Articles to Contributing Editors .....................October 7, 2011
Submission of Articles to Co-editors ................................December 14, 2011
Submission of Advertisements ......................................December 14, 2011

For further details and updates visit our events calendar at www.ncura.edu
The more things change, the more they stay the same. In 1972, the National Science Foundation, recognizing the partnership between sponsor agencies and recipients, funded a series of projects on improvement of sponsored programs management and administration at universities and non-profits. By 1977 the findings of those projects were available for compilation into meaningful recommendations to university leadership. Stauffer (1977) provided 5 major categories of variables to consider as you review your sponsored programs administration. Surprisingly, not much has changed in 34 years. Essentially, he suggests that you evaluate your policies to ensure that they foster a quality sponsored funding program ensuring compliance without stifling the investigator’s creative effort or ability to conduct work. You should conduct a planning exercise to determine if you are operating a compliant program that fits within your policies, procedures, and institutional culture. After policies and planning are completed, you should review your organizational structure to ensure that basic functionality and communication exists for an effective outcome. Next, various administrative procedures should be considered to ensure they are coordinated and consistent to ensure the scientific work can be conducted effectively and efficiently. Finally, if the science is conducted properly and effectively, and the administrative requirements are met, then theoretically the relationship between the institution and the sponsor should be high quality resulting in continued support for your programs.

The business of pursuing, receiving and managing external funds for projects has become increasingly complex since Thomas Stauffer compiled his guidance on behalf of the National Science Foundation in 1977. The past 5 years have seen an increase in oversight and penalties associated with internal control, procedures, policies and financial management of sponsored projects. Economic pressures have increased competition for limited financial resources and state governments continue to increase pressure on universities to become engines for economic growth for their communities. The recent Supreme Court ruling on intellectual property ownership causes us to question if we are on the right path. For these reasons, we should review our procedures and our policies on a regular basis to ensure that we are focused on the right things, are effective in our efforts and are efficient with our limited time or resources.

To begin, you should decide if you want to conduct an internal self-assessment based upon certain criteria or hire outside expertise to assist in reviewing your processes. You may want to combine the two in some way to have access to internal reflection as well as benefits from external comparatives of other institutions and their best practices.

In the late 1990’s our Vice President for Research (VPR) received comments about delays in processing proposals and awards through the Office of Sponsored Programs (OSP). With the assistance of a Professor of Management in our College of Business, we conducted a self-assessment of several of our processes. Our review centered on the idea that any process is a linear flow of tasks and the total time it takes to complete the process is equal to the sum of the length of time consumed by each of the individual tasks. The review looked at the amount of time it took for paperwork to flow through our “system” and targeted each place where it stopped along the way. We created flow charts of the proposal process, the process between notification of award and the establishment of an account for the investigator to begin work, and the accounting process from account establishment to close-out. The resulting charts were frighteningly complex but identified some interesting phenomena. We discovered that the process within OSP was not the problem and that increased communication with faculty about “why” and “how” improved perceptions a bit. Our review helped us to see that some tasks could be per-
formed “just-in-time” and that the risk of skipping, delaying or eliminating some tasks was very small. However, there was little understanding of what to do next so we sought “external” assistance.

In 2000, we hired a consulting firm to review our office and to make recommendations for process improvement. The cost was approximately $50,000 with our office providing administrative services to schedule interviews, locate space for meetings, and arrange entry and exit conferences. The product of the review was a nice report with a list of recommendations for process improvement. It seemed a little bit like a management 101 course with some of the recommendations being obvious, such as improved communication. While it followed a similar path to the recommendations made by Stauffer (1977), the categories of concern increased in number. There were nine (9) general recommendations which focused on:

- Improved Communications
- Implementation of CAS
- Consistency in interpretation of regulations
- Definition of Roles and Responsibilities
- Variable departmental support
- Education and Training
- Customer Relations
- Easy, timely access to useful expense data
- Account establishment process

One of the recommendations was to establish a committee or council to assist with the implementation of the other recommendations. While this activity consumed a fair amount of time, the overall benefits were worth the effort. A small group met frequently and kept track of some of the changes and improvements we made. In addition to the recommendations, we received the benefit of talking with consultants who had knowledge of the best practices of other similar universities and they were able to help us manage risk while reducing some of the administrative burden we had created in our fear of failure at implementing cost accounting standards. Finally, we were able to use the recommendations of the “External Experts” as leverage for further improvement and resource allocation over the next several years. We were not surprised by the recommendations but, to date, not all of them have been implemented.

In 2009, as part of a campus-wide strategic plan implementation and due to the generosity of our Executive Vice President, we were able to again hire outside consultants to assist in evaluation and assessment of not only the Office of Sponsored Programs but the research enterprise as a whole. The new firm was able to build upon the prior work and recommendations made in 2000. This time, the consulting firm operated in relative isolation once preliminary discussions outlined the deliverables and scope of the review. They organized the meetings and scheduled interviews without much, if any, input from the sponsored programs staff or VPR Office. In March 2010, the consulting firm provided a comprehensive final report with extensive comparisons to peer institutions and over 40 recommendations for the research administration functions alone. The recommendations were segregated into those dealing with people, those involving processes, issues associated with technology and reporting and those requiring us to commit to long term process and performance monitoring. I am not sure if this is an increase over Stauffer’s list or a decrease. I do know that it is a large amount of information to reflect upon and to implement. Of these recommendations, various themes from the prior reviews came forward. We continue to have issues with defining roles and responsibilities. We still have inconsistency in interpretation of regulations, with added inconsistency in the level and degree of support and service provided to faculty and staff by individuals within the office. There is still a need for a formal education program to assist faculty and staff in understanding their compliance responsibilities and to provide them adequate tools to make navigation of the process smoother. Technology options and electronic research administration solutions are again a focus of process improvement. Easy, timely and understandable access to financial information is still an issue for many of our faculty investigators.

Clearly, the first two times we gave up a little too soon. We held some meetings and we implemented a few process changes. This time, we have more involvement from Institutional leadership to engage often and over a longer period of time to ensure real change in our procedures. The VPR has provided resources to improve staffing in our office to allow more formal implementation of an education and communication program and has provided funding to procure an electronic research administration system to improve workflow and consistency across the campus. Implementation of both of these activities will necessitate a review, clarification and dissemination of a document explaining roles and responsibilities; will require definition and articulation of new policies and procedures; will improve our communications across campus; and will improve consistency in regulation interpretation and client support.

I assume in 1977 there was an understanding that the research administration environment would continue to increase in complexity, in the volume of funding provided, and in the regulations to govern it all. I suspect some things have happened in the last 30 plus years that Stauffer and the NSF funded investigators could not have imagined. However, those of us who have been in this business for a number of years know that it is dynamic and fluid. Such an environment requires continuous reflection and true management of the program to ensure long term success. I know that in our situation, the third time was the charm. We have a new centralized policy database. We are in the beginning stages of selecting a vendor for an enterprise-wide ERA system. A University Research Council meets quarterly to discuss matters of concern and to collaboratively implement new. Finally, we are working on a strategic plan to ensure we stay on the path of continual review and monitoring of our processes for the long term.

While it would be fairly cost-prohibitive (and time consuming) to suggest that institutions seek assessments such as those that were undertaken at our institution, the best practices that evolved out of these assessments have had a beneficial impact to the faculty and overall research enterprise. Each time we pause to reflect on our program, we learn new techniques and modify our business rules a little to ensure we provide a quality program for management of sponsored funding. There are many options available to you when seeking an assessment of your sponsored programs office (including self-assessment, external consultants and the NCURA Peer Review Program), just be sure to develop a plan of action that works best for your institution and the goals you have set...

Martha M. Taylor is Assistant Vice President for Research and Director of the Office of Sponsored Programs at Auburn University. She oversees the pre-award and non-financial post award functions of the sponsored programs administration effort at Auburn. This also includes the offices responsible for security, export control, compliance, and animal care.
Is Your Institution Really Different or is Different Just an Excuse?

By Vincent A. “Bo” Bogdanski

For as long as I have been attending NCURA training, now thirteen years, I have heard research administrators describe their institutions or some part of their institution as “different” or “unique” or some similar description. Often the word “different” is used in relation to instances of non- or minimal compliance to federal requirements. Since federal compliance policy dictates most institutional internal compliance systems, I have been disturbed at how often I heard the description “different.” Then I began thinking about what is really “different” in research administration from one institution to another in relation to compliance. This article includes my thoughts on the subject. Compliance in this article refers to any compliance from IRBs to export controls to financial activities. I hope these thoughts will cause you to think about your organization and maybe initiate some changes that will call for compliance that is well thought out when implemented or changed.

Federal compliance has not changed much over the years. Sure, there have been updates to IRBs, IACUCs, nuclear safety etc., but these updates usually occurred after there had been abuses or where guidance wasn’t sufficient and clarification was needed. OMB Circulars A-133, A-110 and A-21 have been re-written only a few times, and the changes have not been numerous or far reaching. Even changes to the Federal Acquisition Regulations (FAR) take a relatively long time to implement.

I agree that compliance has become more complicated and in-depth, but it has not changed decidedly or quickly, and the changes have been gradual. I submit that many organizations have not adjusted until there was an absolute need to change at that institution. In the time between knowledge of the requirement and the institutions’ action, many have just declared themselves “different.”

I have been a bureaucrat for some thirty-five years, and from the very beginning I heard “more with less,” “limited or dwindling resources,” “additional oversight requirements with no additional budget,” and similar statements. So I surmise things haven’t changed that much since the dichotomies are the same. As for compliance, none of us are really that “different” although those who realistically and thoroughly address any one issue, using sound management principles, will institute solutions which are not “cookie cutter” but reflect the true needs of the institution.

For purposes of this discussion, labeling as “different” is an attempt to legitimize an excuse for circumstances or situations which result from choices, either informed or uninformed, that do not address or do not adequately address risks. These choices may be based simply on lack of resources available, popularity or unpopularity with the topic, unfamiliarity of the topic, the potential of having to make a change or modify the organization’s thought processes because of the topic, or simple lack of time. Surely I have not addressed all the negative reasons for declaring an institution “different,” but by looking at the listing above, the reader can readily and easily add to the excuses for declaring themselves “different” while thinking about this article.

A decision is a well thought out action developed through in-depth analysis and assessment based on good management principles. Decisions are not made quickly, and when ready to implement, are well publicized to the constituency. They are often in the form of a policy, but at a minimum, they are written and available for common access. They would be used to justify your institution’s position in the event of audit. Constituents may not agree with the decision, but are aware of the final result, and if possible, the reasoning for that decision. The result does not make your institution “different,” but provides a direction for compliance that will meet the societal need for the compliance requirement, address the scrutiny of audit, and hopefully be readily available for adaptation by similar institutions in similar situations.

...A decision is a well thought out action developed through in-depth analysis and assessment based on good management principles.

Here are some of the approaches which I’ve seen used to declare an institution “different.” The approaches provided sometimes gives examples which are specific to U.S. institutions, but these examples are for illustration purposes only and those outside the U.S. can more than likely think of examples which fit your particular circumstances.

Avoid or delay addressing the issue.

No action is a decision. By avoiding and delaying, you are telling your community that the particular compliance issue is of little or no importance, and you don’t think it has any potential negative consequences for your institution. You are declaring your institution as “different” from those who recognize the issue as necessary for compliance.

Nominally address an issue.

Create a procedure, but don’t document or formally develop the procedure for all to use. Put the procedure in some obscure or little-used document, or only use verbal guidelines given to a minimum number of people. This allows for multiple deviations of the procedure because each individual will move toward their own implementation or interpretation and soon many situations become “different.”
Gamble on audit.

Have your words and actions lead to a conclusion that the auditors either won’t catch or if they do catch, it won’t matter at your institution. The compliance issue is of so little importance that your “different” situation will be obvious to any auditor that would bother to address the issue.

Label your institution as different.

Declare yourself as “different,” that is a medical school, a predominantly undergraduate institution, an agricultural school, an East coast school, a predominantly NSF school etc. I am only aware of very few situations where your institution characteristics make any “difference” in the compliance issues. I looked but can’t find anything in A-21 that says, “except for medical schools” and nothing in the FAR says “academic institutions of higher education except agricultural schools.” The federal government will write exceptions in their regulations if they determine those exceptions are appropriate for a particular class of institutions.

Allow your situation to dictate your action.

Are your salaries perceived as too low? Encourage additional compensation. Are you not funded for administrative salaries? Put more administration expenses in your budget justifications. Are IRB activities too slow? Skip the process because you know that the project is exempt. All of these actions allow you to declare yourself as “different” but in most cases it is just cutting corners or rationalizing based on the situation. Rationalization doesn’t fix these issues; good management and leadership principles do.

Let the sponsor’s inaction define your action.

Put it in the proposal and if the sponsor doesn’t object, they must have approved your position as “different.” However, sponsors expect the institution to be following their own internal processes and procedures. A-21 has five criteria for any purchase: allowable, reasonable, allocable, and consistent. By deferring to the agency in the proposal, we often default the consistency criteria to the sponsor’s thus being able to declare ourselves “different.” Sponsors expect well thought out decisions made by each institution and consistent adherence to those institutional policies.

Use an unauthorized or uniformed opinion as the basis for your action.

Program managers are not always knowledgeable of sponsor or federal laws, rules, or regulations or are not capable of waiving them. However, many will either intentionally or unknowingly declare your situation as “different” even if that authority is not within their purview. Even worse, institutions use the program manager’s “permission” as an excuse to declare themselves as “different.”

Use a liberal interpretation.

Allow non-experts to interpret the federal regulations without input or background. The result based on a “gut feel” or a comment like “they really can’t mean it this way” allows for a “different” interpretation. Looking at just the words of the rule without intent, without researching another institution’s implementation, and without considering a strategic implementation for the whole institution makes any situation look “different.” Rationalization is easy, takes no real analysis, and allows for multiple interpretations.

Write a weak or very general policy.

Weak or general policies allow for multiple deviations because there is plenty of room for “different” interpretations. Weak policies make compliance difficult to achieve.

It has always been done this way.

Institutional culture can be an excuse for lack of leadership and is an excuse for being “different.” Cultures change and your goal should be to have a culture of compliance. You need to give everyone at the institution the training to comply and the tools to enforce if necessary.

You don’t have the systems, expertise, or experience.

This doesn’t mean you are “different.” Your institution either by circumstance or decision has a problem. Either change the circumstances or change the decision. Admittedly this will take time and maybe some things cannot be done in the short term. A strategic plan with realistic milestones would be helpful, provided there is a real commitment to the long range goals from the multiple levels of the institution.

You are an Institute, Center or Division.

Institutes, Centers, and Divisions are part of a whole. Awards are given to the institution, not to the Institute, Center or Division. By declaring yourself “different,” you are indicating that your part of the institution doesn’t need to adhere to any institutional policies and procedures or you can “cherry pick” those policies or procedures that fit your needs and declare yourself “different” for others. If you are truly different, the institution should consider “spinning you off” and allow you to develop your own policies and procedures with a separate F&A agreement and your own administrative structure. Either you belong or don’t belong. There is no in-between.

Now, you may think this is just semantics and you may be right for your situation. But considering the number of times I heard “different” and the resulting details, I don’t have the impression that semantics is the rule. If we are going to be leaders in our professional activities, we ought to use language that shows professionalism and action. I’d like to hear research administrators say “my institution decided” or “we chose” or “the option we selected” as more appropriate for our vernacular. Further, those decisions and the resulting decision process should be shared with other institutions for assessment of similarity of issue and to assist those other institutions in making a decision for their situation.

I believe that declaring your institution as “different” has the potential to be a disservice to those that are served by compliance regulations: the taxpayer; the human subject, the people who work within our laboratories, and the people that live in the surrounding community. If there is any sort of adverse event, being “different” is not going to be an easy sell to the auditor, the newspaper, the regulators or others within the academic community. There cannot be a better process than a well thought out decision to make the research administration community and profession respected by those we serve.

Vincent A. “Bo” Bogdanski is the Assistant Director of Sponsored Programs at Colorado State University. These are his own thoughts at do not necessarily reflect the opinions of Colorado State University.
Developing and maintaining your research administration operation is not unlike a child learning their ABCs. In both there are some “basics” that must be mastered and put in place. Then, there is the need to make continual adjustments to achieve the right outcome, a constant striving for stability amongst numerous expectations and new concepts, and a growing awareness for putting the pieces into a larger context.

And sometimes, just when you think that you have mastered your ABCs, you find others are speaking a new language and the cycle of learning and change begins again.

The cycle of change is inevitable and managing and incorporating change into our operations is an ongoing activity. Our challenge in research administration is how to step back from the day-to-day operation and objectively assess where change is needed.

There are numerous assessment techniques of processes or programs that can assist operations in identifying where change is needed. Techniques can be clustered around: self-assessment, constituent assessment of services, audits, and external assessments. Each cluster has multiple approaches and each contains some advantages and disadvantages.

This article will focus on some of the observations made from the reviews of sponsored program offices conducted during the last three years through the NCURA Peer Review Program, which falls
Adaptability

The first broad characteristic evidenced through the NCURA peer reviews centers on adaptability. The effective sponsored program operation adjusts and changes in response to the rapidly occurring shifts that have surfaced in the last several decades. The dramatic increase in complexity of relationships, external oversight, and technology requires operations to be flexible in terms of maintaining operations while incorporating new requirements, regulations, and technology.

However, as seen in the majority of the NCURA peer reviews, flexibility and adaptability have been severely hampered by the lack of institutional resources provided to research administration operations. Although research administrators have broadly recognized the increasing inability of resources to sustain operational needs and the accelerating high-pressure environment resulting in part from stressed infrastructure, it is an interesting phenomena to identify staffing and other resource investments to be so far behind many other institutional operational arenas. This result may reflect the historical adaptability and creativity of research administrators to manage and audit high risk areas to the point that resource needs do not have the same appearance of urgency as the needs of other institutional missions.

A few indicators identified through the review of operations that illustrate the inability to effectively support sponsored program administration include:

- not filling open positions, even when proposal and award volumes remain strong or have been increasing

Within the cluster of external assessment of processes or programs. This particular assessment technique utilizes external experienced research administrators to perform an evaluation of the effectiveness of sponsored program administration. The observations made from the peer reviews represent three broad characteristics of effective operations: Adaptability, Balance, and Culture. These characteristics illustrate the range of struggles that sponsored programs confront in order to maintain effective operations.

Balance

The second broad characteristic identified through the peer review process relates to balance. Effective operations are able to maintain their focus on facilitating research in an environment of shifting funding, sponsor requirements, and institutional priorities. Increases in research funding, especially rapid growth, tends to highlight the need for coordination of many specialized areas within the institution. Two are highlighted below:

a) As proposal volume and research funding increases at institutions, many operations begin to evolve into areas of specialization for staff. Beyond the traditional pre- and post-award specialization, operations begin to focus staff in specific areas such as funding information support, proposal development, contracting, or export controls or to expand their partnerships with college-level staff support. Often the needs of the faculty and priorities for the institution determine some direction, such as a priority for increasing funding may drive a need for more specialization in funding information support. Or faculty needs in contracting may suggest more attention and expertise in contracting and negotiation skills.

b) As research funding increases, often a parallel need arises to better integrate the many business and functional silos within the organization or operation to be more responsive to researchers needs. Management of the additional requirements associated with external funding, and in particular Federal funding, often requires engagement of many institutional offices. These offices may be unaccustomed to dealing with such administrative requirements or the unique needs of managing “research.” Some examples include human resources, purchasing, or travel.

Many of the peer reviews suggest that growth in funding and the resulting increased research needs creates an imbalance between specialized institutional functions. Often, institutions struggle to balance fragmentation in two significant areas: a) adding specialization of sponsored programs expertise that is increasingly needed and inherent with a growing research enterprise and b) working across organizational silos within the organization. Adding or building specialization within the sponsored program operation results in more “moving parts” that require coordination and greater attention to communication. Business silos that are independently effective, now need to address the time-sensitive demands that come with research funding and become more nimble in moving through their review and approval processes (such as hiring personnel for externally funded projects).

A few indicators identified through the peer review of operations that illustrate fragmentation include:

- faculty complaints over delays in business functions, such as hiring personnel or purchasing goods or equipment on grants or contracts
- faculty complaints over delays in processing research-related agreements
- disconnects in research administration process between department or college and central staff, evidenced through complaints and confusion voiced by everybody
- lack of mechanisms for sponsored programs operations to “hear” the faculty “voice” and use that as an indicator of changing or emerging needs
- scarce or no communication between offices or people, even when located in close proximity
• meetings of office or operations leadership at the top, but no commensurate meetings of operational staffs

The peer review process allows the external “expert” the opportunity to illustrate areas of imbalance and to help the institution or the program identify where fragmentation needs attention.

Culture

The third broad characteristic found in effective operations is understanding the multiple cultures within which sponsored programs operate. Every institution has a number of cultures, each with a unique set of expectations, needs, and priorities. Three key stakeholder cultures include the faculty, the senior institutional leadership, and the sponsored programs administration.

Faculty Culture: The faculty drives research successes. They balance their investment in writing proposals and conducting their research activities with teaching, student advising, laboratory management, publication, service commitments to the institution, professional engagements, and other activities as they are called upon by the institution or their profession. The faculty responds to the priorities set by their academic leadership. Faculty work as best they can within the sponsored program policies and procedures; although their entrepreneurial outlook often predisposes them to be creative when interpreting and following policy.

Senior Institutional Leadership Culture: The senior institutional leadership establishes expectations related to research, the research agenda, and the message to the internal and external communities concerning research discovery. They balance research with academic and other institutional priorities and budget needs. They must be responsive to faculty issues brought forward. They must look broadly at institutional needs—across student, faculty, business and administrative arenas and balance needs with operating budgets and future directions.

Sponsored Programs Administration Culture: Sponsored program operations supports faculty in their pursuit of external funding. Their policies and procedures reflect good stewardship and accountability of sponsor support and awareness of state and federal rules and regulations. The sponsored programs staff is responsive to institutional priorities and directions established by senior leadership. They are responsive to the needs of the funding agencies. They fix problems. They meet deadlines. They enforce policy. They work in a constant pressure-driven environment.

All of these cultures intersect when the institution embraces external funding and even more so when there are institutional priorities to grow the research enterprise. Not surprisingly, as new and increased pressures have come to each of these stakeholder groups, the different cultures’ expectations, needs, and priorities are not always well understood by each other. At many institutions, the peer review process suggests that these cultures are clashing to the point that there is widespread distrust, increased risk, and at times loss of funding.

A few indicators identified through the peer review of operations that illustrate when there is disharmony between cultures include:

• faculty choosing to run awards through collaborators or affiliated entities rather than their prime institution, or stopping their efforts toward identifying new external funding altogether

• central research administrative staff not understanding, or wanting to acknowledge, the range of pressures and commitments confronting faculty

• faculty that have little understanding or interest in understanding institutional fiscal realities

• expectations that sponsored programs is the primary driver of increased funding

• assumptions that faculty and senior institutional leadership are as well connected and well versed in the details of research administration (sponsor policies and requirements) as they are in their other professional responsibilities

• central sponsored programs leadership and staff who conduct all assistance via e-mail with little recognition of the value of live, personal contact with faculty and their peers in other institutional offices

The peer review often initiates the process of bringing these different perspectives to the table. This process often engages stakeholders in a form of communication that highlights the shared goals of all stakeholder groups and acknowledges where the cultures need to be better merged.

The Language of Effective Operations

There are many characteristics that reflect effective sponsored program operations. The three broad characteristics highlighted in this article in some ways represent the highly pressurized environment that confronts our faculty, our institution, and our operations and the challenges to maintain effectiveness throughout the change process.

The common theme found in each of the three areas—adaptability, balance, culture—is that there is a partnership within each institution that supports and nurtures the research enterprise. The care and feeding of that partnership requires attention at both an operational and a leadership level as well as a form of communication that enables the partners to understand and contribute to addressing fractures and strengthening the shared goals between them.

As stated at the outset, the challenge in research administration is how to step back from the day-to-day operation and objectively assess where change is needed. Much like learning our ABCs, each operation needs to identify the “language” of its own environment. Incorporating a set of techniques that will help us monitor when the language is changing will allow us to shift with these changes and continue to do what research administrators do best: provide responsible service and support to our faculty, our institutions, and our sponsors. ■

Peggy S. Lowry serves as Program Coordinator for the NCURA Peer Review Program. She has a 38-year career in research administration, spanning research and predominantly undergradu- ate universities. Her responsibilities included oversight for pre-award and non-financial research compliance. Peggy has given over 200 national, regional and local presentations and workshops and served on numerous national NCURA committees and twice served on their Board of Directors.
Reflections on Education

by Rep. Tom Petri

Preface by Senior Co-editor James Casey

The U.S. higher education system, including its research enterprise, is dependent upon a strong and vibrant pool of students at the undergraduate and graduate levels. In fact, one can argue that the nation’s educational and economic success can only continue if increasing numbers of traditional and non-traditional students enroll in undergraduate and graduate education. As a result, student financial aid is a significant issue in higher education, and one that has special importance and linkage to the U.S. research enterprise.

With this background, we turn to an interview with Congressman Tom Petri, a Wisconsin Republican who has been in the House of Representatives since 1979. Congressman Petri’s specialty is student financial aid. This article is the result of a compiled draft article in advance of an in-person interview at his Washington office.

Q: Congressman Petri, how and why did you become interested in the issue of student financial aid?

A: When I was a new member of the Education Committee I was called upon to vote on federal programs to improve access to higher and vocational education. To prepare myself to do that, I talked to people from my state that had educational backgrounds. One was the head of a higher education aid program who suggested a variety of improvements in the way the federal government supplied financial aid.

One suggestion was for a direct loan program, which made sense to me. Then I started looking at income-contingent repayment loans with terms that would automatically be adjusted depending on the borrower’s post-school income, and would be paid along with one’s income taxes. I quickly realized that this could be an exciting innovation which could do some real good by guaranteeing students that their loans would be kept affordable no matter what the highs and lows of a person’s career might be.

I discovered the constellation of forces both for and against my proposal, and well, this has remained interesting and stimulating and, from time to time, quite gratifying.

In the late 1980s I managed to win approval for a limited direct lending program at Marquette University in Milwaukee and some other institutions to demonstrate its cost-effectiveness. In ’93 I worked with President Clinton’s Education Department to have the approach expanded nationwide.

Since then, I’ve had to defend direct lending from numerous attacks by financial institutions which receive subsidies under the older, competing guaranteed loan program. Now, President Obama has come out in favor of winding down guaranteed loans in favor of direct loans, and the Congressional Budget Office estimates that doing so would save us $94 billion over 10 years by eliminating subsidies to the private financial institutions while providing students with the exact same loans. The House seems likely to go along, but the private lenders are managing to keep this interesting.

Q: Everyone acknowledges that education is, for most people, the ticket to a better life in the American economy. Even with this near universal acknowledgment, why is it so hard to achieve consensus across the political spectrum?

A: Think of the story of blind men trying to describe an elephant based on the part that each individual touches. The challenges facing education can appear very different if you are a parent, teacher, administrator, politician, loan officer, whatever. Urban needs differ from rural needs. And it’s difficult for people to separate their own interests from that of education as a whole.

And there is the ideological component - is it most important to help the best reach their potential, or should we emphasize not leaving any child behind? Is education about learning things, or about learning how to think? Is it about individual achievement or about the need for a democratic society to have a literate and numerate citizenry?

Some measure one’s commitment to education largely on how much money we spend on it while others add a concern about making sure that money spent actually produces results for students and the community.

I am particularly concerned that our schools are failing to teach history in ways which will help students understand themselves, our country and the way the world has worked over time. That is why last year I managed to win passage of legislation designed to strengthen postsecondary academic programming in subject areas that are vital to American civic education but which are increasingly omitted from university and college requirements. These include the study of traditional American history, constitutional, political, intellectual, economic and diplomatic history. Without adequate knowledge of their own country, our citizens will be unprepared to make intelligent decisions about public policy.

I am also concerned about financial literacy, which is why I am co-chairman of the Congressional Savings and Ownership Caucus. The results are so much better for people who have been taught about finances compared to those who haven’t. The difference is amazing.
Senior Editor’s Best of the Best Past Articles
THIS ARTICLE ORIGINALLY APPEARED IN THE APRIL/MAY 2009 NCURA MAGAZINE

Q: What has been your greatest achievement in the field of education as a congressman?
A: I beat the drum for direct lending through most of the 1980s and helped lay the groundwork for the Clinton Administration to actually bring it into being. The same goes for income-contingent loans, which I’ve always considered a key potential advantage of direct lending. I consider as accomplishments both that I helped create the Direct Lending Program and that I have helped to defend it against bitter special interest attacks over the years.

I’m also quite proud of my work to create and support the Troops to Teachers Program, which helps retiring military personnel to qualify for teaching positions in public schools which serve large numbers of disadvantaged kids. Troops to Teachers participants fill several critical needs among educators: 82 percent are male, over one-third are ethnic minorities, and a majority brings expertise in science and math to the classroom.

Q: With the election of President Obama, what will be the biggest difference in the substance of educational issues in Congress?
A: The early signs are that the appointment of Arne Duncan as Education Secretary brings someone with real, substantial experience promoting educational innovation. I am hopeful that we will have an active Education Department willing to consider new approaches and ready to tackle problems, especially in inner-city schools.

Q: What are the potential pitfalls in the area of education for President Obama?
A: The President gets to propose, but Congress has a decisive role in designing federal programs while state and local governments do most of the actual administering. If the President proposes changes which threaten entrenched special interests, he is likely to be thwarted unless he is able to mobilize sustained public support.

Q: Is there anything else you want to add in your message to the National Council of University Research Administrators?
A: Research is a critical component of the nation’s educational enterprise. To that end, I appreciate the efforts of organizations such as yours in providing professional development programs to those involved in managing research.

Congressman Tom Petri, who represents Wisconsin’s 6th Congressional District, is serving his 15th term in the U.S. House of Representatives. First elected in April 1976, Petri has been returned to office every two years since. He is a former Vice Chairman of the House Committee on Education and the Workforce, now named the Committee on Education and Labor.
Promoting Objectivity in Research: The Faculty Perspective

In anticipation of the pending Federal regulations NCURA is pleased to announce its newest DVD Workshop.

The program is broken into four brief modules:

Objectivity in Research
- Regulatory Environment
- Disclosing Conflicts
- Faculty Consultant vs. University Investigator

Intellectual Property
- Ownership vs. Exclusivity
- Royalties vs. Publications

Facilities Use
- Use of Facilities
- Cost Recovery
- Risk/Insurance
- Use of Institutional Employees

Conflict of Commitment
- Multiple Demands on Time
- Release Time
- Supporting Students
- Effort Reporting

The workshop is an excellent addition to the continuing education library supporting your institution’s research mission. The workshop was developed for:

✔ Faculty
✔ Post-doctoral researchers and later stage graduate students
✔ Deans, School Chairs and Conflict of Interest Officers
✔ University technology transfer professionals and those involved in the commercialization of inventions and new company formation
✔ University business development officers, incubator professionals, and corporate relations staff

This ninety-five minute DVD includes a workshop guide with supplemental resources. Institutions are granted an exclusive license to use this workshop for on campus education including posting the modules to your secure website.

Presenters: David Richardson, Associate Vice President for Research, Pennsylvania State University; Jilda Garton, Associate Vice Provost for Research and General Manager, GTRC/GTARC, Georgia Institute of Technology; Denise McCartney, Associate Vice Chancellor for Research Administration, Washington University; Lillie Ryans-Culclager, Director of Contracts, SRI International

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Universities Make Transformative Changes to Research Administration in Turbulent Times

By Laura Yaeger
or nearly two decades, research universities have faced many challenges as the regulatory environment continues to evolve and the volume of audits and investigations related to research compliance have dramatically increased. In the first half of the 2011 fiscal year, financial penalties stemming from the U.S. Department of Health and Human Services alone totaled $222 million in audit receivables and $3.2 billion in investigative receivables.1

Many institutions recently have benefitted by a significant boost in research from the distribution of American Recovery and Reinvestment Act (ARRA) funds. At the same time, these institutions have faced unprecedented financial pressures to become more efficient across all administrative functions so the institution can apply more funds to the academic mission. This has limited the ability of many institutions to invest in the research administration support structure.

Several institutions, however, have used these turbulent times as an opportunity to change their research support model to become more service oriented. They are developing stronger partnerships among central and academic unit staff, providing better information and tools to be more transparent and efficient, and re-evaluating processes to eliminate reviews and approvals that do not add value.

Three universities that Huron Education is currently working with—Yale University, the University of California, Los Angeles (UCLA) and the University of Michigan—are in the midst of implementing significant changes to their research support models, and each for different reasons. At Yale, the restructuring was prompted by a federal investigation. At UCLA, the Executive Vice Chancellor became the force of change after numerous complaints about service were lodged by the research community. At Michigan, the need for change was prompted by growth, as the university reached $1 billion in research funding a few years ago, and is preparing to double that total.

We reached out to the leaders of these research transformation initiatives to obtain their insights and perspectives on how to successfully implement change, particularly when faced with increased financial and compliance pressures.

Yale University

Yale has been in the process of transforming its research support model for the past several years. While Yale’s concern regarding a potential federal investigation was the catalyst for initiating an external review, nearly all of the change has been driven by a new vision for providing a stronger service model for research faculty. The service initiative was not driven or dictated by the federal government. When the investigation was formally initiated in 2006, Yale was already in the process of overhauling its support model.

Rather than just reactively tightening rules and adding more layers of approvals, Yale has taken a more thoughtful approach, said Andrew B. Rudczynski, the Associate Vice President for Research. “We asked ourselves, ‘where do we have weak policies and where are we more restrictive than necessary?’” The university conducted a top-to-bottom review of its policies and procedures, and realized that many were overly restrictive and unclear. “It is important to look at policies, especially those that are institutional, and make sure they are aligned with what is actually required,” said Rudczynski. “Sometimes, institutions are causing needless hurdles, which make it harder for everyone.”

Yale clearly had to move quickly to resolve certain issues identified by federal auditors, and reached a settlement in 2008 that included a fine. However, for change to be lasting, the culture had to be more communal, said Rudczynski. Yale has encouraged more face-to-face contact between administrators and investigators, increased focus and investment on training for central and departmental staff, and put greater emphasis on establishing performance standards and metrics to ensure that all units share in the accountability for reaching higher service level goals. Roles and the support model have been clarified and simplified.

“We’ve come a long way, but there is more work to be done. All of the foundational pieces are in place, and we are now focused on standardizing and simplifying business processes while implementing new technology. In addition, we are emphasizing collaboration and integration among the research compliance and administration units and the academic departments,” said Rudczynski. “This element will be important to our ongoing progress, but we know that it’s the ability of our team to change the way they’ve been doing business, not just the systems, that will make us more successful.”

UCLA

“There was this sense of urgency driven by faculty and administrator complaints,” said Marcia L. Smith, the Associate Vice Chancellor for Research. When she arrived in 2009, Smith said, it was clear that the current model for providing research support was not working. An external assessment identified several issues including lengthy delays in processing Institutional Review Board (IRB) applications, backlogs in invoicing and financial reporting, lack of technology tools to support research administration, and ineffective communication between central and departmental administrators.

UCLA quickly sketched a plan called RAPID (Research Administration Process Improvement & Deployment). It called for forming multiple working groups to tackle the highest priority challenges facing the institution—in some cases, she said, it forced central and departmental administrators with icky relationships into the same room to talk through their frustrations with one another. Groups that had not talked in the past began to communicate, and understand one another’s challenges.

1 http://oig.hhs.gov/reports-and-publications/semiannual/index.asp (page i)
Smith said she also looked for quick wins to demonstrate that the culture and administrative structure could be changed. Critics had told her the administrative structure was hopeless, but she made some simple changes to get the RAPID project launched on a positive note. For example, standard tools were implemented for financial reconciliation across all departments and research administration offices.

“We celebrated quick wins, and we celebrated mile- stones, and recognized people as much as we could. With each development, more people began to believe in what we were doing,” Smith said.

The effort has won over most of the critics. “Two years ago faculty had little confidence in research administration,” said Andrew F. Leuchter, Chairman of the Faculty Advisory Committee for RAPID. “I and other faculty members at UCLA have been impressed by the ability of the RAPID team to quickly implement practical changes and find our participation in this initiative to be a productive use of time.”

So far, UCLA has adopted a new web-based IRB system, a web-based portal for investigators and a new structure for its post award office. While there is still much work to be done, the RAPID initiative has positively transformed the institution’s research administration support structure over the last two years.

University of Michigan

Success has caused celebration, but also introspection, at Michigan. The university first reached the $1 billion mark in research activity during 2009. University leaders have a goal to reach $2 billion by the institution’s bicentennial in 2017, said Marvin G. Parnes, the Associate Vice President for Research.

“We asked ourselves ‘are the current structures optimal to support this growth?’ ” said Parnes. “We realized it was an opportune time to evaluate our model and develop a vision that would serve as a guide for future change, priorities and investments.”

Michigan’s priority areas included continuing investment in education and outreach to faculty and academic unit staff, enhancing the level of collaboration and delegation of authority among the central research support units and academic units, and continuing on its journey of more than a decade to implement new tools and systems to improve efficiency and information provided to the research community.

While Michigan has made significant investments in IT, it has emphasized that people and business still need to drive the effective execution. The IT upgrades have required more training for current employees, and different skills in new hires. “I’m very aware of how much harder people are working,” said Parnes. “There is a real intensity to the volume and the complexity of the work that we are doing.”

Michigan has re-doubled its communications to researchers, administrators, and other stakeholders. “These jobs are only getting more complicated, not simpler.”

As Michigan moves forward, Parnes says, “we need to stay in close touch with our stakeholders to build a stronger model for the future – faculty, academic unit support staff and other central support units. We also need to listen to our own staff and their experiences, as the environment is rapidly changing and they have a lot of good ideas on what needs to change.”

Is there any chance Michigan will reach its $2 billion goal? “I laughed at my Vice President when he raised it,” Parnes chuckled. “But, look, in two years, we are at $1.3 billion and we are continuing to diversify our portfolio. It may be here before we know it.”

What We Learned

While the impetus for change was different at these institutions, several common themes contributed to each successful transformation. These attributes are applicable to other research institutions, regardless of the scale of the research enterprise:

- Commitment from senior leadership, including the President/Chancellor, Provost, and Vice President for Research in fostering a strong culture of service and providing unwavering support for implementing changes;
- Dedicated resources to implement the changes necessary to achieve an enhanced support structure for research administration;
- Partnership, with ongoing communication being a key component, between central administration and academic departments to develop a model that works for both groups;
- Development of an “ideal state” vision for the future support model and a plan that has both “quick wins” and longer-term improvement initiatives;
- A strong policy and governance framework that seeks input and participation from research faculty, and which is written in a concise, user-friendly manner;
- An emphasis on education, training and communication within the central and academic units, particularly among academic unit support staff who often work most closely with researchers;
- Redesign of business processes and implementation of new information systems to drive greater efficiencies and compliance; and
- Development and implementation of key performance metrics for both central and departmental research administration units to consistently track the institution’s progress in creating a more effective support structure for researcher administration.

The interest from faculty to see improvements in the research support structure is more prevalent than ever. It is far better to be proactive in seeking change rather than waiting for a crisis to force a reaction. A structured and proactive approach to enhancing research administration will go a long way toward improving communication, service and compliance.

Laura Yaeger is Executive Vice President of Huron Education. She has more than 20 years of consulting experience primarily with research universities and academic medical centers. Huron Consulting Group has worked with more than 90 of the top 100 research universities in the U.S. Laura may be contacted at lyaeager@huronconsultinggroup.com.
Over a decade ago, the NCURA organization conceived of the idea that NCURA could provide a valuable service to the community of research institutions by offering peer reviews. It took years of effort and lots of hard work for NCURA to launch this service.

This article will examine the NCURA Peer Review Program and detail the experience of a review conducted at the University of Southern California (USC).

**Peer Review – Defined and Examined**

Peer reviews are commonplace in the world of academia; the funding agencies perform peer reviews to determine which proposals will be funded and which not; scientific and academic journals conduct peer reviews of articles that are to be published; and academic departments consult outside peer reviewers to assess graduate and undergraduate programs.

What exactly is a peer review and why are they performed? A peer review is an outside evaluation of work or performance by people in the same field in order to maintain or enhance the quality of the work or performance in that field. The word “peer” is often defined as a person of equal standing in the same profession who are of the same or higher ranking.

Peer reviews are based on the concept that a diverse group of people, not directly connected with the work being reviewed, will be able to make an impartial evaluation. Thus most peer reviews will utilize an independent group of reviewers in order to discourage favoritism and obtain an unbiased evaluation. Typically, the reviewers are not selected from among the close colleagues, relatives, or friends and potential reviewers are required to disclose any conflicts of interest.

So how does the NCURA Peer Review Program work and what makes it so special?

**The Peer Reviewers – Selection Process**

NCURA’s Board appointed Peer Review Selection Committee is responsible for reviewing applications for potential peer reviewers and making recommendations to the NCURA Board for appointments of new Peer Reviewers. The requirements for an application to the peer review program include a minimum of ten years experience in the field of research administration with a history of demonstrated expertise and leadership in the field. Applicants also need to provide several references for consideration. Most Peer Reviewers have significantly longer than the required ten years of experience. Applications are carefully reviewed to ensure the highest quality of reviewers possible.

Once selected, Peer Reviewers are provided with training on the NCURA Peer Review process. A Team Lead is provided for all reviews. The Lead assists the reviewers with understanding the process, answers questions and provides guidance. Feedback regarding each of the reviewers is obtained for each review from the participating institution as well as the other reviewers on the team to ensure a consistently high quality level of review.

**The NCURA Standards**

Each peer review is conducted in alignment with the NCURA Peer Review standards. Careful consideration was given in the development of these Standards. They were developed to emphasize the key areas important to a comprehensive research administration program. The Effective Management Practices for managing externally funded research programs developed by the Council for Governmental Relations (COGR) was used as a foundation for the development of the NCURA Standards. The detailed
standards cover concerns within the following topical areas:

- Organizational Structure
- Staffing and Resources
- Communication and Outreach
- Education
- Compliance Risk Assessment
- Electronic Research Administration
- Proposal Development and Assistance
- Proposal Review and Submission
- Collaborative Project Development
- Agency Liaison
- Award Acceptance and Initiation
- Ancillary Agreements Associated with Research Grants and Agreements
- Subawards
- Award Acceptance Process
- Award Activation and Notification
- Award Management
- Research Ethics

The Pre-Visit Planning Process

An institution with an interest in having an NCURA Peer Review conducted should contact NCURA’s Peer Review Program Coordinator, Peggy Lowry, for further information on the process including the cost estimate. The cost varies by size of the institution, as larger institutions generally require additional reviewers and time. Once the institution decides to move forward with the review, Peggy Lowry will work closely with the institution to determine which peer reviewers would be the best match for the institution. The reviews are scheduled according to the institution’s needs and availability.

Once the reviewers are identified and the review is scheduled, the institution is presented with a list of documentation that needs to be provided in advance to the reviewers. This is referred to as the “Briefing Book”. Along with the Briefing Book, the institution also provides a “charge letter”, outlining their expectations for the review. While all peer reviews follow a similar pattern, the institution is given the opportunity to outline the areas that they feel should be given emphasis during the site visit. Peggy Lowry assists the institution in planning who should be included in the interviews that will be conducted as part of the review. The reviewers will conduct an extensive review of this documentation provided prior to a pre-visit phone conference with representatives from the institution. This pre-visit phone conference is generally scheduled approximately two weeks prior to the site visit. During the phone call, the schedule and charge letter are discussed as well as any questions regarding the documentation. This call gives everyone an opportunity to discuss the plans for the site visit and address any questions or concerns regarding the review.

As a result of this pre-visit planning process, NCURA Peer Reviewers begin the review with an established foundation of knowledge regarding how research administration works at the institution.

The Site Visit and Assessment — Here Comes the NCURA Review Team

With the institution’s charge letter and the briefing book in hand, the next step is the site visit. Although, all parties have already put a tremendous amount of work into the preparing for the review, the site visit is the most telling part of the entire process. It is at the site visit that the review team can really get a sense of the dynamics of the institution. The site visit is normally scheduled for two to three days depending upon the size and needs of the institution and is conducted by two to four trained NCURA peer reviewers. Site visits normally start with an entrance meeting and end with an exit meeting, at which time the Review Team presents high-level observations.

What are the real areas of concern for the institution as well as what seems to work for the campus and what doesn’t all come out during the site visit. The most productive reviews usually include the senior leadership. Their support and active participation demonstrates that the institution is dedicated to the review process and committed to process improvement.

Because each review is unique and adapted to the needs of the institutions, site visits will differ from institution to institution. However, what makes the NCURA Peer Reviews so special is that every review is based on the same set of standards, so that each college, university, research institution, hospital, not-for-profit, etc. are reviewed under the same criteria. NCURA, not the institution, has established the standards. The institution determines who will participate, where it will occur and when it will happen.

The NCURA Peer Review Team conducts interviews scheduled from the break of day to the setting sun and spends its evenings occupied with writing up individual observations of the day and executive sessions where the team can discuss progress and determine what high-level observations might be included in the exit interview.

The Report

The real work for the Review Team begins upon returning home. Having pre-assigned standards to conquer, each reviewer now starts to pull together all the information gathered from the briefing book, the institution’s websites, the interviews and site visit sessions. Through this process, the final document starts to come together in one cohesive report.

The report goes through a great number of iterations from rough outline to finished and polished document. The draft materials are sent back and forth from the individual reviewers to the team lead and to NCURA’s Peer Review Coordinator who consolidates the report and edits as well as evaluates the hard questions and formats the report. Strict deadlines are set for each step of the process. From the day the reviewers return home, the clock is ticking. A final draft report is submitted to the institution for their comments within six weeks following the visit. After receipt of any comments from the institution, and incorporating any revisions a final report is submitted to the institution.

The hope of every Review Team is that the process is received well and that recommendations are embraced and implemented. The experience at the University of Southern California (USC) was as good as a peer review could get. To this day, a year after the final report was submitted, USC is working on implementing most of the recommendations. How nice is that?

The Institutional View

University sponsored projects administration offices across the nation face similar challenges: limited resources, negative customer service perceptions, and staff turnover. Like many institutions, USC’s Department of Contracts and Grants (DCG) has long been the focus of faculty frustration with the level of customer service.

In an effort to address these concerns, DCG initiated a three-pronged review — an IT needs assessment, an internal process review and assessment, and a NCURA Peer Review. The
NCURA Peer Review has proven to effect a significant change at USC, largely due to being:

- A 360-degree evaluation of the USC research enterprise, both central and departmental, along with their interactions. A 360-degree review identifies the problematic issues throughout the complex support network of the institution, thereby providing a balanced, comprehensive assessment.

- A review conducted by experts in research administration. A team is assembled that represents expertise throughout the full spectrum of the research administration services. Expertise of this scope and depth provides the foundational knowledge and experience to quickly and effectively identify the challenges that exist within the institution via the interview process, gain an in-depth understanding of those challenges and subsequently develop appropriate recommendations.

- An assessment conducted by external reviewers. An external review provides a balanced, unbiased review and associated recommendations.

In preparation for the site visit, significant organizational information was provided to the NCURA Peer Review Team. Interviews were arranged with key personnel from central offices involved in the research administration process, as well as the faculty and administrative leadership in the major schools and departments. Group and individual meetings were arranged with central DCG staff members at each campus. All of these activities provided context for the reviewers, but more importantly, allowed USC’s research enterprise to come together and personally participate in the review. Participation in the review process facilitated the very collaboration USC needed to implement the recommendations of the Peer Review Team.

Recommendations, provided to senior leadership within 60 days of the review, substantiated many of the issues previously identified in both central and departmental areas; however, the external confirmation provided the needed support and the associated financial resources to move forward with the establishment and implementation of a prioritized action plan to address the institutional issues at every level. USC leadership took the NCURA recommendations and developed an action item matrix and associated timeline for completion, including these results:

- Change in the reporting structure of DCG, so that it now reports to the VP of Research.
- Initiation of development for a “cradle to grave” software system for research administration.
- Formation of a research administration task force, chaired by the Executive Director of DCG, to resolve coordination issues across units of the university.
- Redesign of the DCG website to focus on “how to” information for investigators.

A first order of business was to draft an institutional “roles and responsibilities” document to clearly delineate key processes and the associated responsible party for each. Through this process, USC realigned responsibilities to eliminate duplication of tasks, and to ensure that each task was performed by the unit that is best able to do the job. Senior leadership also drafted and distributed to faculty and staff a document entitled “USC’s Partnership for Sponsored Research and Other Scholarly Activities,” which has been a major step in establishing expectations of faculty and departmental units as well as demonstrating support of the central research administration activities. DCG is also in the process of initiating a new proposal review service, coupled with a “service promise” tied to investigators submitting their proposals on time.

DCG established several internal working groups to solicit feedback from DCG staff and to more directly engage them and to expand avenues of communication and collaboration. DCG has established regular meetings with other central offices to work together on process improvement initiatives for those processes that cross departments.

The NCURA Peer Review has had a significant impact on research administration at USC. Most importantly, DCG utilized the results of the Peer Review to actively engage USC stakeholders in the change process, thereby engendering from participants a feeling of valued participation, buy-in and accountability in the outcomes. DCG has successfully facilitated the proactive and vital collaboration of central offices, such as DCG, Sponsored Projects Accounting and Purchasing, as well as created close working partnerships with Schools and departmental staff. We are confident that this more unified and comprehensive approach to addressing common issues will result in creating enhanced, more efficient institutional support for the research enterprise at USC.

While it is impossible to achieve perfection in any research administration organization, DCG has performed exceptionally well in the year since these changes were enacted, with more compliments than complaints, only moderate turnover, and vastly improved services.

Joyce Freedman is currently a consultant in higher education. Retired from UCSF where she was the Assistant Vice President for Research. She also served in that capacity at UC Berkeley and was the Assistant Vice President for Research at The University of Chicago. She has been a member of NCURA for over 20 years, served as chair of the western region; and elected to the Board of Directors and the Executive Committee, co-editor of the Newsletter for Biomedical topics; co-program chair for a summer conference; faculty on a national video conference and a webinar; speaker at regional and national NCURA meetings. Joyce is currently a peer reviewer for the NCURA Peer Review Program.

Randolph Hall is Vice President of Research and Professor of Industrial and Systems Engineering at the University of Southern California. He also chairs the Executive Leadership Group for Research for the Association for Academic Health Centers, and will publish the Handbook of Healthcare System Scheduling for Springer later this year.

Sara Judd is the Director for the Department of Contracts and Grants at the University of Southern California (USC), overseeing the professional staff responsible for the pre- and post-award non-financial administration activities for sponsored research, training and other activities supporting an institutional annual award volume of approximately $561M. As an active member of the Federal Demonstration Partnership (FDP), Sara currently serves as Co-Chair of the Subaward Committee and is a member of the American Recovery and Reinvestment Act (ARRA) Subcommittee. Sara is an active member of both the the National Council of Research Administrators (NCURA) and is a frequent presenter at regional and national meetings in the areas of negotiation, staff training and development, ARRA and FFATA.

Jeri Muniz is the Executive Director for the Department of Contracts and Grants at the University of Southern California. As Executive Director, she is responsible for the overall management and administration of pre- and post-award non-financial services related to extramural proposals and awards. Jeri is an active member of the National Council of University Research Administrators (NCURA) and is currently Chair for Region VI (Western Region). Jeri is frequent presenter on such topics as subrecipient monitoring, working with industry, and strategies for successful negotiations.

Kerry Peluso is Associate Vice President for Research Administration at Emory University and has over 22 years experience in research administration. She currently serves as an NCURA Peer Reviewer.
NCURA 53rd Annual Meeting Workshops

The theme for NCURA’s 53rd Annual Meeting—Do It Live! Do It Now! Get Involved!—challenges us as research administrators to also be prepared! The workshops and senior forums scheduled for this year are slated to help participants brush up on old skills, learn new ones and share their experiences with others from around the country. We all want to learn in order to “do it right” back at our institutions.

AM53 will see the return of annual favorites along with the addition of several new offerings. There are workshops to meet needs at all experience levels (basic, intermediate and advanced); for pre-award, post-award, departmental administrators, and compliance specialists; for PUIs and minority serving institutions; and covering topics such as troublesome clauses, export controls, designing and delivering in-house training, and risk assessment. There really is something for everyone.

You’re invited to take a close look at the descriptions. In the spirit of Do it Live! you’ll find many workshops include hands-on examples or case studies that will allow you to practice the craft as you explore it.

If you are new to the field, you might want to consider one of the full-day workshops in Pre-Award Basics, Post-Award Basics or Current Issues in Departmental Administration, each focusing on the fact you have to Do It Now! Wish you knew more about NIH or NSF? Plan to attend one of the two popular full-day workshops on Thursday presented by program officers and officials from the agencies.

Half-day workshops allow attendees the option of focusing their day in a single area or mixing and matching their interests. Focused pairings might include A Team Approach to Developing Competitive Proposals in the morning followed by Thinking Like a Grant Reviewer in the afternoon. Or perhaps you’d be interested in Introduction to the FARs followed by FAR and Federal Contracting. If you’d like to vary your selections, consider Subawards and Subrecipient Monitoring in the morning and Fun with Effort Reporting in the afternoon. Take a look at the 35 workshop descriptions in the program available at http://www.ncura.edu/content/educational_programs/sites/53/workshop.php and choose the ones that are right for you.

And in order to really help you Get Involved! check into the free workshop offering—Effective Presentations-NCURA Style. Designed to help improve presentations, this workshop will discuss battling the occasional deadly silence during Q&A, rethinking the structure of your informative content, incorporating adult learning styles, and tackling the creation of presentations in conjunction with other presenters. If you are interested in presenting at NCURA events, this may be a good workshop to pursue.

Senior Forums this year are on Monday and Tuesday, focusing on hard decisions in the department, encouraging industry collaboration, strategic planning, issues that are present at medical institutions, and close look at policies. These sessions, aimed at more senior level administrators, run during two concurrent slots to allow for an in-depth dive into the topic, but are structured as limited-participation discussion sessions to offer the opportunity to share issues and solutions in a highly interactive environment. There is no additional cost to participate in these discussions, but advanced registration is required. Descriptions are available at http://www.ncura.edu/content/educational_programs/sites/53/senior-forum.php

Most importantly, Do It Now! Registration is well under way and spaces are filling fast. Don’t miss the opportunity to Do It Live! Do It Now! Get Involved!

Heather Offhaus is AM53 Workshop Co-Coordinator and serves as Director, Grant Review & Analysis, Office of Research at University of Michigan Medical School

Toni Shaklee is AM53 Workshop Co-Coordinator and serves as Assistant Vice President for Research at Oklahoma State University
WORKSHOPS SCHEDULE AT A GLANCE

Sunday, November 6, 2011

8:30 am – 5:00 pm
FULL DAY WORKSHOPS

WS #1: Pre-award Basics
WS #2: Post-award Basics
WS #3: Current Issues in Departmental Administration: What's Going On and What You Can Do About It
WS #4: Caught Between a Rock and a Hard Place: Dealing with Troublesome Terms from Non-Profits, Foundations and Industry
WS #5: Reviewing and Negotiating MTAs, NDAs, MOUs, IPAs, CRADAs and OTAs

8:30 am – Noon
MORNING WORKSHOPS

WS #6: Introduction to the Federal Acquisition Regulations (FAR)
WS #7: Understanding and Negotiating Basic Contract Terms (Legalese for Beginners)
WS #8: A Team Approach to Developing Competitive Proposals
WS #9: Cost Sharing: “Do it Live, Do it Now (and why you have to) Get Involved”
WS #10: PUIs and Minority Serving Institutions: Issues and Strategies
WS #11: Creating Career Paths: Finding, Hiring and Managing
WS #12: Financial Compliance in the Real World
WS #13: Advanced BIS and OFAC
WS #14: Financial Conflicts of Interest: New Regulations/New Policy?
WS #16: The Alphabet Soup of NIH Training and Career Development Awards
WS #17: Subawards and Subrecipient Monitoring: The Basics and Beyond
WS #18: Service Centers – How to Open and Operate – Legally!
WS #19: Developing Curriculum and Designing Effective In-House Education Programs

1:30 – 5:00 pm
AFTERNOON WORKSHOPS

WS #20: FAR and Federal Contracting
WS #21: Thinking Like a Grant Reviewer
WS #22: Fun with Effort Reporting
WS #23: Compliance Issues for PUIs
WS #24: Risk Assessment
WS #25: Technology Transfer, Start-Ups and Industrial Collaborations
WS #26: ITAR – Hot Topics
WS #28: Intro to Compliance in Research: An Overview of Governing Boards (IRB, IACUC, COI, etc.)
WS #29: Export Controls at Proposal and Award
WS #30: Preparing for and Surviving Audits
WS #31: A Workshop Designed to Provide Actionable Insight into the Kaleidoscope of Clinical Trials and Research Administration
WS #32: How Do You Choose the Best Delivery Method for the Training You Develop?
WS #33: (NO FEE) Effective Presentations - NCURA Style

Thursday, November 10, 2011

8:30 am – 4:30 pm
FULL DAY WORKSHOPS

WS #34: NIH Day
WS #35: NSF Day

Monday, November 7, 2011

2:45 – 5:00 pm
SENIOR FORUMS

SF #1: (NO FEE) You Make the Call! Tough Decisions for Departmental Research Administrators
SF #2: (NO FEE) Engaging in Effective Research Strategic Planning
SF #3: (NO FEE) Medical School Senior Management Issues

Tuesday, November 8, 2011

8:30 am – Noon
SENIOR FORUMS

SF #4: (NO FEE) Creating a Culture of Industry Collaborations
SF #5: (NO FEE) How Many Policies Does it REALLY Take to Run an Institution?
BRINGING EXCELLENCE ACROSS THE INSTITUTION.

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The University of Aveiro – UA – was created in 1973, in the city of Aveiro, Portugal. On December 22, 2008, the University made the important decision to become a public Foundation, operating under private law, a process to be completed this year.

Since its beginning, UA has transformed itself into one of the most dynamic and innovative national universities. Student enrollment is approximately 14,700 and approximately 2,000 highly qualified teaching staff work on campus. The teaching staff utilize practical and experimental teaching methods. The University offers a variety of undergraduate degrees and over 100 graduate degree programs. Electronics and Telecommunications, Engineering, Mathematics, Health and Life Sciences, Environment and Planning, Economics and Management, Communications and Art, Education and Humanities, and Social Sciences are the key scientific and technological fields of the University.

UA is composed of seventeen academic departments, which work together in an inter-disciplinary manner, according to their academic and research affinities. Apart from University-level higher education, UA also offers Polytechnic-level higher education in its four Higher Schools distributed throughout the Aveiro District, in order to meet the regions’ needs of more practice-oriented curricula.

UA is, as well, a place for research where innovative products and solutions are developed, not only to contribute to the advance of science and technology, but also for the public good. The university has currently fourteen research units and four associated labs. The latter can be broadly defined as those laboratories systematically evaluated by the Portuguese government under previously defined national scientific and technological political programs and tools, and which integrate the coordinating legal structures of scientific and technological politics. Partnerships with companies and other national and international organizations are established, both for collaborative research and the provision of services.

The mission of the University is to create knowledge and extend its access to and for the community, through teaching, research and cooperation.

**UATEC: MISSION, VISION, AND COLLABORATORS**

The Technology Transfer Unit of the University of Aveiro (UATEC) helps meet the above mentioned purposes – the latter, in particular. Its mission is to support UA in its aim of being a national excellence center of knowledge creation and dissemination, through: (1) promotion of its technologies in the marketplace; (2) intellectual property management and protection; (3) identification of industry needs; (4) promotion of entrepreneurship; and (5) support of technology-based company creation. Through these means, UATEC will help foster the social-economic development of the region by making it competitive at the national and international levels.

As an institutional partner of the UTEN program (University Technology Enterprise Network) which is described below, UATEC’s vision is to increment technology licensing and spin-out creation in the global market, in order to increase knowledge valorization and provide value to Portuguese society.

UATEC, under the direct supervision of the University’s Vice-Rector for Research, Innovation and Technology Transfer, is composed of five people: one coordinator – Dr. José Paulo Rainho – and four project managers, who specialize in different areas (see photo on left).

[From left to right: Marlos Silva, PhD student; Ana Rita Remígio, PhD student; José Paulo Rainho, PhD; Lúcia Oliveira, MBA student; Ana Teresa Pinto, MBA]
NOLOGY TRANSFER at the UNIVERSITY OF AVEIRO

MOVING TOWARDS SPECIALIZATION & INTERNATIONALIZATION

UATEC: FUNCTIONAL AREAS

UATEC was created in 2006, having as its primary goal knowledge valorization.

As a result, it engages in value creation activities such as start-up and spin-off creation, business alliances, sponsored research contracts, collaboration contracts, IP protection and prosecution, licensing, and marketing, among others.

This technology transfer office covers four main interrelated functional areas – Intellectual Property Management, Licensing, Entrepreneurship, and Industry Liaison (see Figure 1, below).

FIGURE 1 – UATEC FUNCTIONAL AREAS

- Intellectual Property Management

This area focuses on management and information dissemination activities for intangible assets, namely patents, trademarks, utility models, design, and copyright. These activities are for the national and international levels. IP prosecution and agreement celebration are tasks that are as well comprised in IP management.

Many success stories could be told in this specific functional area. I will, however, refer to two specific ones that led to licensing agreements, and subsequent product commercialization: Courseware Ser\(_e\) and Learning Portuguese is so easy!, both protected by copyright and with registered trademark.

- Licensing

Licensing, which is the area I am specializing in, aims to bring into the marketplace technologies with IP and commercial value, via exclusive or non-exclusive licensing agreements. Broadly speaking, our strategy comprises technology scouting, evaluation, valuation, negotiation, and post-negotiation activities.

UATEC’s IP portfolio has technologies from almost every field of knowledge – from Civil Engineering to Educational Sciences. Actually, it reflects the variety of scientific and technological fields the university has to offer. Very recently, an undergraduate degree in medicine was approved by the Portuguese Government, and is available beginning in the 2011-2012 academic year. As a consequence, we foresee that more Health Science technologies will become integrated in our IP portfolio. These areas comprise a small portion of our IP portfolio at the present time.

Working with technologies from a wide variety of fields of knowledge constitutes a daily, but rewarding, challenge. Every day I learn new concepts, new methods, new scientific and technological tendencies, which keep me up to date as far as high tech knowledge is concerned. Since I have a background in Applied Linguistics, more precisely in Terminology – where we study and create databases with technical terms from different special subject fields – I have developed the ability to better and more easily decode the dense and opaque language that frequently constitutes the discourse produced by faculty and researchers. On the other hand, the awareness of the importance of communication – of knowing the target audience, their needs and level of understanding, and of, consequently, adapting our discourse and language register – facilitates contact with potential licensees.

I would now like to describe in more depth the two above mentioned inventions: the Ser\(_e\) Courseware – The Human Being and Natural Resources – and the multimedia project Learning Portuguese is so easy!

The first one was developed by a multidisciplinary team from the Department of Didactics and Education Technology at UA. Created in the context of Education for Sustainable Development, it responds to a need for quality computerised didactic resources for students between 8 and 12 years of age. It was in the scope of its valorization and knowledge transfer policy that UA, through UATEC, in partnership with a Portuguese company – Ludomedia, has turned Ser\(_e\) into educational software.
The second invention, Learning Portuguese is so easy! – Portuguese as a foreign language, was, on the other hand, developed by a research team of the UA Educational Sciences Department, to respond to a need of educational resources and programs, in the context of language didactics. This CD-ROM is an innovative device in assisting Portuguese as a Foreign and Second Language teaching and learning process.

Likewise, in the scope of its valorization and knowledge transfer policy, UA, through UATEC, in partnership with the Portuguese company I-ZONE, which among its goals aims for the development and implementation of IT systems, e-learning and training, has turned this project into an interactive CD-ROM. The device is directed towards immigrant and emigrant students who live inside or outside the country and who need incentive and support in learning the Portuguese language. Both products are now available on the national market. An international market approach, particularly as far as the second product is concerned, is currently under analysis.

**Entrepreneurship**

This functional area fosters entrepreneurship through four groups of activity: business development, capital sourcing, mobility and training. The first one – business development – focuses on start-up and spin-off creation, business planning, and technology transfer promotion. As an example of activity of this functional area, one success story, among many others, can be named: Biodevices. This company is a spin-off from the University of Aveiro, which, through a successful valorization of R&D developed within the University and materialized by a technology transfer agreement, has developed an innovative product named VitalJacket – a wire-embebbed t-shirt, which helps athletes and people with heart conditions to monitor their heart beat in an easy and comfortable way.

Capital sourcing, on the other hand, focuses on networking with venture capital firms, business angles and grant programs. Carbono Eficiente is an excellent example of a company formed with the aid of capital sourcing. The company develops entire biogas production systems to large farms. The venture was created by a Masters student from our University. UATEC helped him set up a business plan and a persuasive proposal. Last year, through our networking, the company got its first major funding from a venture capital firm. Nowadays, Carbono Eficiente has a developed product already and got its second major funding source, through a Spanish company. Recently it also secured its second client.

Mobility concerns partnerships and student internships in existing companies, and, lastly, training comprises technology-based entrepreneurship courses and business plan competitions that take place at UA.

**Industry Liaison**

The industry liaison functional area aims to promote and maintain the university-company connection. Requests from companies, which intend to develop collaborative research with UA, are received on a regular basis. Some other companies, on the other hand, envision R&D services provided by the University. In that way, we celebrate and promote collaborative R&D and sponsored research contracts, in which the cooperation between our researchers and the companies has our full support from the very beginning.

In the near future we have as the main goal a more proactive approach, in which a direct contact with specific companies is established and a challenge to work in collaboration with our faculty and researchers is proposed. For that purpose, and also in order to obtain more and even better collaborative projects, dissemination and awareness-raising events are planned and scheduled throughout the year.

This functional area has shown great outcomes, in particular as far as applications to financing sources are concerned, having, consequently, high funding rates. It is hoped that these successful applications will result in more funding to support R&D at UA and, obviously, new products and services with commercial viability. Nevertheless the outcomes are beneficial not only for the University, but also for the companies and the socioeconomic development of our country.
UTEN: University Technology Enterprise Network

UTEN Portugal is a network of technology transfer and commercialization offices supported by the Portuguese Science and Technology Foundation (FCT), a governmental entity aiming to support the Portuguese research and technology community, within its program of international partnerships, in collaboration with the Portuguese Institute of Industrial Property (INPI). In March 2007, FCT working with the IC² Institute and The University of Texas at Austin (CoLab), launched the UTEN program with the mission of fostering “entrepreneurial attitudes and international business competitiveness of Portuguese science and technology, facilitating access to market opportunities worldwide” (UTEN Portugal – 2008-2009 Annual Report, 2009-4).

UTEN activities focus on three main areas, aiming at building sustainable, value-added partnerships and networks in Portugal, between UTEN Portugal and UTEN Austin and its Texas network. MIT, Carnegie Mellon University, Harvard Medical School, Cambridge University and the Fraunhofer Institute, as well as other potential participants, are part of this growing network.

The above-mentioned areas of focus include:
- Specialized training and networking
- On-the-job practice
- Continuous support and assessment on technology transfer practices and results

For this article, the second area is most pertinent. Training Portuguese technology transfer managers and staff, through internships in diverse centers of expertise for “on-the-job” competence building, skills acquisition and enhanced network development, is among UTEN’s goals. UTEN provides both short- and long-term internships, aimed at technology transfer and commercialization expertise and know-how and building on entrepreneurial capacity within Portuguese universities. At the same time, assessment of Portuguese technologies with international market potential is envisioned, and market access is facilitated.

Individual Specialized Internship in Technology Transfer

The goals of my Individual Specialized Internship in Technology Transfer, which took place from mid-August to October 2009, consisted of skills and experience acquisition and improvement in licensing-related issues, in order to meet UATEC needs. The main goal was to provide UA with more effective and efficient services.

The main part of my internship took place at South Texas Technology Management, a regional technology transfer office supporting The University of Texas Health Science Center at San Antonio (UTHSCSA), The University of Texas at San Antonio (UTSA), The University of Texas at Pan American (UTPA), and The University of Texas at Brownsville (UTB). During the 10-week internship, my mentor was Sean Thompson (MS, MBA, CLP), as I assumed the duties and responsibilities associated with being a STTM Licensing Associate. I also worked closely with Licensing Associates John Fritz (M.S., MBA) and Christine Burke (PhD).

This on-the-job training provided me with a deep dive into the world of technology transfer with all the challenges, expected and unexpected outcomes, and successes that are likely to occur in a U.S. university-based technology transfer office.

Systematization and documentation of licensing processes and frameworks at STTM, and acquisition of licensing skills and experience through real case management were among my internship goals. The medium and long-term objectives at my home institution are to effectively and efficiently enhance knowledge valorization and commercialization practices and procedures in licensing, and to further promote collaboration between STTM and UATEC.

Conclusion and Future Directions

The purpose of this article was to depict two main tendencies in technology transfer at the University of Aveiro: specialization and internationalization. The former comprises the four functional areas of UATEC: Intellectual Property Management, Licensing, Entrepreneurship and Industry Liaison, which were here described along with some success stories. The latter concerns the UTEN program. These two tendencies are, however, interrelated; and that connection is intimately related to the Individual Specialized Internship in Technology Transfer promoted by the UTEN program.

The value of the Individual Specialized Internship in Technology Transfer, comprising both training and internship components, is of undeniable importance. This distinguishing characteristic is of special relevance for interns with early-stage experience, who are acquiring and developing TT skills. The best way to learn is to learn with the best and most experienced people and institutions.

Moreover, the contact and interaction with different TTO officers and industry players allows for the creation of valuable networks and contacts, which will lead to future partnerships and collaborative projects.

My internship, in particular, focused on licensing processes and frameworks, with the aim to accelerate the movement of our technologies to the marketplace at a national and international levels. Skills regarding technology cases management, prior art search, technologies’ evaluation through IP and commercial value analysis, marketing, negotiation, among many others, were acquired and improved, and will definitely be applied in my everyday practice at UATEC.

We hope and expect to see a considerable growth in our licensing rates over the next year. That is the challenge for us in 2010.

Acknowledgments

I wish to thank our coordinator, Dr. José Paulo Rainho, as well as my colleagues, Lúcia Oliveira, Marlos Silva, and Ana Teresa Pinto, for their contribution in writing this paper.

Ana Rita Remigio is a Project Manager at UATEC. She is about to defend her Ph.D. thesis in Linguistics – Terminology – at the University of Aveiro, with co-supervision from the Faculty of Human and Social Sciences, New University of Lisbon.
Have you ever wondered what the best practices are for the sponsored programs activities you and your office staff perform every day? Have you ever wondered if there might be improvements you can make to ease the paperwork burden on yourself and your faculty? Are you ready for a thorough analysis of your policies and procedures? Do you have the necessary ones? Are they up to date? Is your information clearly articulated to all of the parties involved in sponsored programs activities—including your own staff, other administrative and clerical staff, faculty, and your senior administration? An NCURA Peer Review might help answer some of your questions.

Site visits are led by the Team Leader who has conducted numerous sponsored program reviews. The team will consist of two or three on-site reviewers. One institution that participated in the Peer Review process is Western Kentucky University (WKU), which invited an NCURA Peer Review Team to analyze its Sponsored Programs Office last year. The site visit came after a period of personnel and administrative changes at the campus, and helped the new administration plan for the future.

It boosted our confidence by confirming that we were doing the right things the right way, already, for the most part. But since everyone can use feedback and try to improve their services, the peer review allowed us to decide where to concentrate our efforts. We learned that we DID have policies and procedures in place and the OSP staff knew what they were doing but some roles and responsibilities were not always clearly defined to ALL constituents and lines of authority and levels of authority were sometimes confused (which is common when there is a turnover).—Pamela Napier

The NCURA peer review process begins with that critical first step when an institution decides to implement a peer review. Working with NCURA’s Peer Review Program Coordinator, the dates, itinerary and the Review Team are established. Each Peer Review Team (senior level experienced research administrators with broad experience) is designed to meet the institutional needs in terms of expertise and the institutional profile (research, medical, predominantly undergraduate). The peer review is completely confidential. The final report is distributed to only those individuals so designated by the institution. Benefits to the institution are individual for each institution, depending upon their current status and the commitment of upper administration, and individual organizational culture. Each institution requesting a peer review will have different issues and objectives that will guide the review and report. Extensive materials are provided the Peer Review Team prior to the site visit. The review utilizes National Standards that represent the core and vital functions of sponsored programs—regardless of size and type of institution. Questions and clarifications are noted for on-site discussion. These materials and notes are the basis for the interviews that are scheduled during the visit.

The site visit is an in-depth discussion for two to three days with many key partners in the sponsored programs enterprise across the campus. Often the same questions will be asked of multiple participants in order to fully understand both the campus culture and the current state of the research infrastructure. The Peer Review Team is expected to be familiar with the many variations of “this is how it is done” and understand that each Peer Review and institution are individual. The issues may be similar, but the recommendations made speak to best practices and recognize it is the improved outcome that is important and that there is no one right way for every institution.

Benefits of Peer Review for Predominantly Undergraduate and Emerging Research Institutions

By Pam Whitlock, Pamela Napier, and Beth Seaton
Throughout the entire review process, the Peer Review Team seeks feedback from the host institution. Sometimes partners in the process have multiple “understandings” of a process, a policy, or the reasoning behind requirements. The Peer Review Team can do a bit of evaluation and clarification as they conduct the interviews. The interaction between the prime contacts and the Peer Review Team does not end when the Team leaves the site. As the Team members review their notes, compare their information against the Standards, and write the report, more information is often needed from the host institution.

As external reviewers, Peer Reviewers need to build a level of trust and respect with the constituents. It is critical that everyone interviewed understands that his or her input is anonymous and generally summarized with others’ to preserve the integrity of the interview process. A Peer Review is most often supported throughout the campus as recognizing the current status has weaknesses that the institution has chosen to face in order to improve service to the research community at that campus. Cooperation is normally freely provided.

At the completion of the on-site visit, the team works closely with the Peer Review Coordinator who assists them in preparing a detailed confidential report that provides valuable feedback addressing program strengths and areas for improvement. This feedback assists the sponsored programs office in providing quality services, minimizing risk, and promoting a positive culture for research administration.

At WKU, the process of reviewing our policies and procedures led us to update several policies, and streamline many procedures. The review team asked the OSP staff probing questions and their report let us know how our campus constituents felt about our efforts and services. We’ve been encouraging our counterparts at other institutions to learn more about the Peer Review process, and to invite NCURA to send a team to visit their campuses. —Pamela Napier

To learn more about the NCURA Peer Review process and how your institution can benefit from it, contact Peggy Lowry at (503) 364-1847 or peerreview@ncura.edu

Pamela Napier is the Associate Director of Sponsored Programs at Western Kentucky University, a predominantly undergraduate institution in Bowling Green, Kentucky. Currently serving as the chair of the NCURA PUI Neighborhood Committee, Pamela is a mentor in the PUI mentoring program. She has been involved in NCURA activities since entering the research administration field in 1996, having served on numerous committees, and presented sessions at regional and national meetings. Pamela holds a B.A. in English and an M.A. in organizational communication.

Beth Seaton is the Director of Sponsored Projects at Western Illinois University in Macomb, Illinois where she has worked for 22 years and where she oversees pre-award and non-financial post-award functions as well as the compliance area. Prior to coming to WIU she was a research administrator at Texas A&M University. Beth has served as an NCURA volunteer in many capacities and is currently a member of the NCURA peer review team and an NCURA Fundamentals faculty member. Beth has B.S. and M.A. degrees in Economics.

Pamela Whitlock served as the Director of the Office of Sponsored Programs at the University of North Carolina at Wilmington for nearly twenty-three years prior to her retirement. She has served as peer reviewer for NCURA’s Peer Review program several times. Pam received her B.S. in Management and her M.B.A. from the University of North Carolina at Wilmington and holds the CRA designation.

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Pamela Whitlock
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American science is in the midst of one of the most exciting and challenging times in its history. I often think we are living that purported ancient Chinese curse “May you live in interesting times!”

On the one hand, scientific progress has never been greater. We have seen both rapid incremental advances in every field and many nearly transformative advances, most a result of the emergence of new technologies that allow us to attack questions we never could ask before. As just one example, in my own field of behavioral neuroscience, who thought 50 years ago that we could look into the brains of living, awake, behaving individuals and watch their minds in action, as we can using modern neuroimaging technologies? These kinds of abilities are transforming our understanding of how brain activity can generate mental activity, and revolutionizing our concepts of phenomena like mental illnesses and addiction.

At the same time that the science is going so well, the economy is in terrible shape, and we are in the fourth year in a row of decreased research funding, when measured in constant dollars. On the optimistic side, President Obama appears to value science greatly, and his early appointments to science leadership positions are superb. His campaign rhetoric included recognition of the need to invest heavily in science and technology to fuel economic growth and solve science-related problems, like climate disruption and energy shortages.

Early indications are that President Obama will at least try to deliver on those promises. The economic stimulus package includes large investments in science, science infrastructure and science education, but there is no way to know yet whether those investments will survive the inevitable negotiations. Moreover, if they do come about, will they be short-lived, one time infusions of money, or can they survive through very constrained budget processes over the next few years and remain in the funding base? We certainly do not want continuing rollercoaster science funding levels as we have seen for the National Institutes of Health (NIH) over the last few years; it disrupts our system badly. Let us hope that we can at least find a stable rate of funding growth that exceeds inflation, even if it does not meet our greatest hopes on a year-by-year basis.

No matter how the funding situation evolves, everyone expects the new President to trigger many dramatic changes in America’s social, economic and political systems. With those changes will come opportunities and challenges for the U.S. science and technology enterprise. We need to work now to ensure that the scientific community is prepared to meet them effectively.

For example, whether long- or short-lived, any large amount of additional funding, though welcome, will inevitably challenge greatly not only the funding agencies that need to dispense and administer the funds but also universities and their research administrators. Proposals will have to be written very rapidly and reviewed pre-submission through greatly streamlined internal processes that still maintain high levels of quality control and accountability. The amount of energy expended in compliance oversight for the myriad regulations and policies surrounding the conduct of research will increase exponentially. And new facilities will have to be planned and built.

As we deal with these pressures, we might also seize the mood of change and reform and attend in a focused way to some long-standing problems impeding the progress of science and technology that go beyond funding levels and their direct consequences. Problems that need addressing are both internal and external to the enterprise.

A major, mostly externally controlled problem is how to maintain the flow around the world of scientists, their students and ideas in the face of real security concerns. The "visa problem" has gotten better in the last few years, but it is by no means resolved. Ambiguous export control regulations and information classification schemes also impede progress unnecessarily. As the new administration is re-committing the country to using science to deal with global problems like climate disruption, energy shortages and environmental degradation, American scientists and policymakers need to be able to draw on the entire world-wide science community. Moreover, American science benefits greatly from progress in other places in the world. We need to increase the pressure on policymakers to find solutions to visa, export control and similar impediments. Our system needs to reflect fully the fact that, in the 21st century, science is truly global in character and that it requires the free flow of people and their ideas.

We should also seize the spirit of "change" and address in a significant way the ever-increasing burden of regulation compliance that surrounds the conduct of science. I argued this point in a recent editorial in Science (Science, 322: 2008, 1609) but it merits mention again here. Over the past decades, the administrative burden on both scientists and the institutions that support them has risen to an untenable level. A 2007 study by the Federal Demonstration Partnership (A Profile of Federal-Grant Administrative Burden among Federal Demonstration Partnership Faculty) reported that 42%
of an average scientist’s research time is devoted to pre- and post-award administrative and regulatory compliance tasks. The most time-consuming of these include too frequent progress-report submissions, complex and inconsistent rules for project-revenue management, and institutional review board (IRB) protocol development and revisions. The need to respond to new post-9/11 security concepts like “dual use research” or “sensitive but unclassified” science has added substantially to the workload. And a great burden is imposed by the variation among the rules propagated by different funding agencies and sponsoring institutions. It would seem appropriate for university research administrators to join the call for significant regulatory reform surrounding the conduct of science, recognizing both the need to satisfy the justified intent of the diverse regulations and policies while at the same time rationalizing and streamlining them.

Finally, the relationship of science to the rest of society has been experiencing significant tension, and there is a central role for universities in addressing scientific issues in the public realm. The health of American science is dependent on public confidence and support, and there are problems within the scientific enterprise that are undermining them. Moreover, as science progresses and at times abuts heavily against issues of core human values – like embryonic stem cell research or teaching evolution versus creationism in public schools — there is a great need for a new paradigm of science communication with the public, and universities can play a role there as well.

In the first case, we need to do a better job making clear to the public that we are working seriously to address oversight and handling of such issues as scientific misconduct, human subjects concerns, and animal welfare. We need to articulate more clearly that we understand conflict of interest issues and are working intensively to develop better guidelines and enforcement mechanisms. Public confidence depends on the belief that the scientific community can keep its house fully in order. This is difficult to achieve in the face of a public press that relishes any hint of scandal in the ivy towers, but it merits increased energy.

We also need both to increase the extent and change the form of our communications with the rest of society. We need to adopt a public “engagement” model, rather than simply relying on the traditional public “education” or public “understanding” model. I have argued this point in detail elsewhere (e.g., Science 299: 2003, 977; Am. J. Bioethics 5: 2005, 1-2; Chron. Higher Educ., October 13, 2006) but mention it here because I believe universities could be central players in public engagement with science. The traditional approach of trying to educate our way out of contentious science-society controversies is no longer working. In many cases, the public does understand enough of the science to know it does not like what it is revealing, and therefore chooses to disregard or distort the science. And, of course, only scientists are bound by scientific discoveries. Other people can take them or leave them as they choose.

The approach many of us advocate is to forge a dialogue with the public, rather than communicating at or to the public. We need to work to find areas of common ground and ways to move forward while recognizing, respecting and responding to the public’s reasonable concerns. This approach, typically called “public engagement with science,” has taken hold in many places in Europe, Canada, and Asia, and is slowly gathering adherents in the United States as people recognize its benefits. The domain where this strategy has been most visibly successful is the array of issues surrounding the Human Genome Project and subsequent genetic discoveries. Engaging the public in the issues surrounding advances in genetic understanding has helped forestall many potential problems.

Universities have an important leadership role to play in this. They are ideal venues through which to develop public engagement programs, and they should encourage their faculties to participate. Effective public engagement is an acquired skill, so faculty and students will need some training. But it will be worth it. The resultant benefits will be less science-society tension and greater public support of the scientific enterprise.

My bottom line, then, is that in these interesting times, we should exploit the mood of change and opportunity. There are some long overdue systemic changes that need to be made in the American scientific enterprise and how it is regulated and funded. There is much we can do to strengthen the relationship of science to the rest of society. We in the scientific community should take the lead, seize the moment, and ensure we get those changes made.

Alan I. Leshner is the chief executive officer of the American Association for the Advancement of Science (AAAS) and executive publisher of Science. Dr. Leshner may be reached at aleshner@aaas.org.
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Recent Developments in Technology Transfer and Industry Interactions

by Robert Hardy and James A. Severson

Research conducted at research institutions is predominantly discovery driven, or what is commonly known as “basic research,” and is largely funded by the federal government. However, new innovations of interest to companies can and do occur. As a result, research institutions are increasingly involved in research collaborations, consortia, and business transactions with the private sector. Increasingly, these research relationships are actively encouraged by states and the federal government to spur innovation and economic development.

It is important to note at the outset that commercial outcomes are not the primary mission of most research institutions. However, technology transfer is one tool that research institutions use to fulfill their missions of teaching, research, and service. While there are many positive outcomes to technology transfer, its primary goal is to ensure that university innovations are diligently developed into goods and services that are ultimately made available to the public. This is an outcome that is entirely consistent with a university’s mission of public service.

It is worth noting some key indicators of success of academic technology transfer. Using the annual survey of licensing activity conducted by the Association of University Technology Managers (AUTM), over the past nine years approximately 3,600 new products have been introduced that resulted directly from university research. These products come from a broad array of research areas including medicine, public safety, food and agriculture, new materials, semiconductor devices, education and communications; 527 new products were introduced in 2005 alone. More than 5000 companies have been spun off from universities since passage of the Bayh-Dole Act in 1980, contributing to the creation of over 260,000 new jobs. (For specific examples of successful academic technology transfer, see AUTM Better World Report, http://www.autm.org/Report.cfm).

The past year has been a busy one for anyone who has an active interest in the interaction of research institutions and industry. Proposed changes to patent law, new initiatives that have at their surface the goal of speeding and simplifying transactions between universities and industry, a recent emphasis on licensing practices that support the development of technologies for global health, and the continued funding and implementation of state and local programs to enhance economic development through the transfer of new ideas that are created in research laboratories are all topics that have been in play recently. Also, lest we forget, there is the continued drumbeat from critics that the increasing involvement of research institutions and their faculty with companies will lead to a diversion of mission and to a loss of objectivity of science.

In the summer of 2006, the senior research officer and the senior technology transfer officer from a number of universities were invited to participate in a 2-day meeting at Stanford University to discuss current developments in research and technology transfer. The result of these discussions is a document titled “Nine Points to Consider in Drafting Technology Licenses” (http://www.autm.org/aboutTT/Points_to.Consider.pdf). (http://chronicle.com/weekly/v53/i28/28a03502.htm).
Following its distribution, the document was endorsed by AUTM which also encouraged research institutions that were not part of the initial discussions to endorse the document.

“Nine Points” was in no way intended to be a prescriptive or exhaustive document, and clearly articulates that each transaction should be considered on a case-by-case basis. “Nine Points” may not be well received by some policymakers and business people who want to see the doors flung wide open, but it does provide a set of principles for dealing with common sticking points in license transactions.

In a similar context, the Council on Governmental Relations (COGR) has recently released a new document to address topics that are commonly raised in discussions about technology transfer with policy makers and businesses. This document is entitled “21 Questions about University Technology Transfer” (http://www.cog.edu/files/publications_intellectual.cfm). “21 Questions” is presented in a Q&A format and addresses some of the myths and misconceptions about technology transfer. Some of the topics overlap with topics covered in the “Nine Points,” but are dealt with in more depth and with the goal of helping the reader respond to these questions when they occur in discussions with industry or policy leaders.

COGR has also updated its document entitled “University Industry Research Relationships” (www.cog.edu). This document takes a higher level view of these relationships and includes a discussion of differences in mission and organization of universities and businesses, and provides perspective on some of the classic sticking points in negotiations. Research institutions and for-profit entities have largely divergent objectives. However, these differences can be easily overcome when all parties recognize the objectives and limitations of the other parties. Industry sectors differ from one another in their relationships with universities, as do companies within sectors. Similarly, universities differ from one another in many significant ways (e.g. public vs. private, mission, size, history, culture, etc.). The COGR document recognizes that in order to craft a mutually agreeable research relationship, both parties need to appreciate the differences between each other and work toward solutions that take into account the varied needs of the parties.

The April 2006 formation of the University-Industry Demonstration Partnership (UIDP) under the auspices of the National Academies (http://www.uidp.org/) provides a forum for research institutions and businesses from many industry segments to find common ground and to seek approaches that allow both research institutions and companies to achieve their goals in a research relationship.

In addition, the House Science and Technology Subcommittee on Technology and Innovation held a hearing recently to discuss the future of the Bayh-Dole Act. Subsequently, COGR and three other higher education associations jointly submitted a statement for the record to the Subcommittee. The statement addresses concerns raised by some industry representatives at the hearing that universities’ intellectual property practices can make collaborations difficult. “We note that significantly, all of the witnesses testified that they see no need for major legislative changes to Bayh-Dole,” said the letter. The statement added that other factors of academic culture may contribute to challenges in university-industry collaborations, including “freedom to publish (including the ability to publish negative results), sustaining an open environment for faculty and students conducive to training new scientists and workers, management of conflicts of interest, honoring philanthropic commitments, and generally safeguarding an institution’s academic mission.” (A copy of the association’s statement is available on the AAU Web site at: http://www.aau.edu/intellect/Stmt_Assn_Bayh-Dole_8-8-07.pdf).

Research institutions are deeply committed to preserving the integrity of their research and the public’s confidence. While true conflicts and bias are rare, the academic community nonetheless recognizes the importance of addressing them in a responsible manner. As a result, most institutions require disclosure of all financial conflicts, active management of most and, in some cases, such as where human subjects are involved, prohibition of the conflicted activity.

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This past summer, the Federation of American Societies for Experimental Biology (FASEB) launched a website (http://cpa.faseb.org/pages/Advocacy/coi/ToolKit.html) to help investigators and institutions better manage outside activities and financial interests. The website and tools were an extension of an initiative that started as a workshop hosted by FASEB in 2005 entitled “Shared Responsibility, Individual Integrity” (Brockway LM and Furcht LT. Conflicts of interest in biomedical research—the FASEB guidelines. FASEB Journal, 202:235-243, 2006). This initiative was developed through funding provided by ORI and represents a coalition of organizations including AAMC and COGR to provide guidance and tools for investigators.

We anticipate that the fast-moving environment around the relationships between research institutions and companies will continue. Pending legislation in Congress to address perceived deficiencies in competitiveness and innovation are likely to drive further debate and scrutiny. While specific outcomes are almost impossible to predict, the pressure will be for research institutions to alter their partnering practices and transaction models to facilitate relationships with companies. The challenge for research institutions will be to how best accommodate these expectations while preserving the fundamental nature of academic research.

Robert Hardy serves as Director, Contracts and Intellectual Property Management, Council on Governmental Relations. James A. Severson serves as Vice Provost for Intellectual Property and Technology Transfer, University of Washington.
Scientific Cooperation with **China** in the Face of

By Eugene B. Skolnikoff

Technology export controls have bedeviled American science, trade, and international industrial relations for many years. Originally intended to prevent American technology from reaching unfriendly hands where it could be used against the U.S., the controls were largely a response to the Cold War confrontation with the Soviet Union. The controls have not been significantly eased since the end of the Cold War, with terrorists in general and China specifically (among some officials) providing the continuing rationale. Visa restrictions on foreign scientists and students, made considerably more stringent after 9/11, have also had a negative effect on scientific relations with other countries, though the student and professional interactions with China appear to have largely recovered. It is the controls on the export of scientific and technological information and products that today have the greatest impact on cooperation with China.

Evaluation of the role of export controls must be seen in the context of a significant evolution over the past decade or more in the international political system. China, and some other developing nations notably India and Brazil, have become much larger economic, and thus political, players. China in particular has been growing economically at unprecedented rates that are continuing even in the face of the global recession. Along with, and largely a product of, its expanding economic strength, China’s international posture has become more assertive as it increasingly takes positions in negotiations that do not follow or accept U.S. or other Western nation’s preferences; the U.N. negotiations over Iran and nuclear weapons are a vivid example, and climate change another. China’s moves to invest substantially in energy resources, particularly oil, around the world have aroused the concern (often exaggerated) of other nations also dependent on imported energy resources.

Domestically, China has been moving to become not just a rapidly developing economy, but also one that is leading the way in adoption of the latest technologies and taking the steps to become a leading scientific nation. Its installation of high-speed trains, use of new building materials, construction of modern nuclear plants, and emphasis on the latest low-emission coal technology in its enormous investment in electricity generation, are indeed impressive. These investments are in the face of continuing major problems of pollution, poverty, and political unrest which have not, however, deflected China from attempting to achieve technological excellence at the same time.

For the long run, and of the greatest significance to American science and technology, is the Chinese investment in their universities and particularly in scientific research. China has sharply increased its proportion of citizens attending universities and graduates more scientists and engineers than does the US, though the quality of the education makes direct comparisons difficult and often misleading. Between 1995 and 2006, China’s gross expenditure on R&D grew at an annual rate of 18 per cent. China now ranks third on that measure, just behind the U.S. and Japan and ahead of any
U.S. Controls on Technology

individual European Union state. Its output of scientific papers, some 112,000 peer-reviewed articles per year according to Thomson Reuters is one-third of the American total, but rising much more rapidly. The Chinese are well aware that the growth of their paper output may not mean as much as it appears, for they realize their papers do not have the scientific impact they seek. Whatever the comparisons today, the breadth and scale of resources devoted to education and R&D clearly indicates China’s ambitions and serious commitment.

At first blush, it would seem that the investment China is making in science and technology, which will inevitably hold significant long-term economic and military implications, should make the U.S. even more concerned about maintaining control over science and technology that could be valuable to China. Whatever justification for that position vis-a-vis the Soviet Union in the past, the situation today with China dictates the opposite. The growth of scientific competence throughout the world, making the U.S. but one of the world’s leaders in science, not the dominant scientific leader, has fundamentally altered the landscape.

Now, it is critical for the health of U.S. science, as well as for national security, that the country stay abreast of research wherever it is conducted. That is as essential for maintaining scientific excellence as it is to protect against unwelcome surprises. Moreover, in such an environment, scientific knowledge cannot long remain secret; even details of technology will eventually migrate or be developed elsewhere. This does not mean that no controls over export of technology may ever be warranted, but they must be minimal and targeted only on subjects that have an immediate bearing on security (e.g., technology for operation control of weapons). For, quite quickly, the unique military value of a particular technology will erode, and unnecessary controls will have the anomalous effect of reducing security by undermining the strength of the American scientific and technological enterprises.

Scientific cooperation in today’s world is not a zero-sum game (if it ever was); both sides benefit. The stronger China becomes in science and technology, the more important it is to be working with Chinese scientists and their growing community and resources. But the export controls presently in place in the U.S. militate against open cooperation. Any subject that might be on the “munitions list” (not necessarily known in advance) that could be weaponized, requires prior license before it can be disclosed to a foreign national. The licensing process can be long and arduous, and the outcome is often uncertain. The American corporate world has been most directly hurt, with loss of contracts and creation of incentives for emergence of competition in other countries where none existed before. The American space satellite industry in particular has been eviscerated by the export control impediments put in the way of corporate involvement in international space collaboration. But, scientific cooperation has been deeply affected as well and will be more so as long as the present controls are in place.

The effects of the controls have potentially been made more draconian by the concern over “deemed” export. A report of the Inspector-General of six Federal agencies in 2004, asserted that giving information that might be on the controlled list to a foreign student or scientist in the U.S. is tantamount to exporting the information out of the country. Information that is covered explicitly includes the technology used in research, not just the subject of the research. If rules were promulgated to require licensing of potentially controlled information before sharing with foreign students, it would in effect turn American research universities into fragmented laboratories requiring prior vetting of foreign students or scientists for each laboratory. It would be an intolerable burden on the universities and on any open movement of science. Such rules were actually proposed in March, 2005 for 60-day review before promulgation in the Federal Register, but were withdrawn when cooler heads prevailed and in the face of vehement protests.

Nevertheless, the export control situation has become such an albatross around American scientists and corporations that President Obama in his January 2010 State of the Union address announced his intention to review the subject, and the administration has begun publicly to indicate the need for change. Discussions were held with Congressional leaders in January with the Secretary of Defense, the National Security Adviser and other senior administration officials making clear their dissatisfaction with the current legislation and control process. It is an open question as yet as to how the controls will be changed or if they will. Senior

3 National Research Council’s “Beyond Fortress America: National Security Controls on Science and Technology in a Globalized World” (2009) describes the changed and changing international scientific environment well.
Congressional figures have tended to be exercised about China and its future challenges without, apparently, recognizing the costs to American security of attempting to protect the nation by denial rather than cooperation.

In any case, it is essential to recognize that it is not the specific scientific or technological knowledge that is the most important for a nation’s economic and military strength, but the ability of an economy to use that knowledge. So far, the U.S. economy is still unparalleled in its ability to innovate, to turn scientific and technological knowledge into useful applications and products. The Chinese are well aware of this. It is one of their motivations in allowing, nay encouraging, Chinese students to come to the U.S. for university study and to work in technology industries. Now, China is attempting to lure back those who have been successful innovators in the U.S. environment. So far, the returning numbers are small, but as China pours more resources into its universities, into research, and into providing venture capital for start-ups, those incentives will become more attractive. In this context, it is essential that the U.S. not only focus on policies to spur innovation, but as a necessary concomitant, to support R&D at a level necessary to continue to be a scientific leader (both of which the administration is now trying to do).

Whatever efforts China makes to become a major scientific player on the world’s stage will eventually be limited as long as it maintains policies that restrict open availability of data and that impose restraints on individuals, including those arising from what they term ‘political activity.’ The continuing attempts to limit access to the global web and to punish seriously those who publicly report government malfeasance or publicize domestic economic data will in time hurt China more than it will protect the regime. These will certainly have a limiting effect on their scientific achievements and reduce both the attractiveness of scientific careers in China and the appeal of international cooperation with them. Whether China will be willing to accept the political implications of genuine open communication remains uncertain.

Conclusion
In sum, unfettered international cooperation in science is of prime importance both to the U.S. and China. For the U.S., it is to keep abreast of and benefit from collaboration with a growing scientific power; for China, it is to recognize and adopt the norms that will enable it to become that scientific power.

Eugene B. Skolnikoff, Emeritus Professor of Political Science at MIT, has focused his research and teaching interests in the fields of science and public policy, and of government organization in a technological age. He received S.M. and S.B. degrees at MIT (1950), subsequently a B.A. and M.A. in politics and economics at Oxford studying on a Rhodes Scholarship (1952), and then a Ph.D. in political science from MIT in 1965. He was with the White House in the office of the Science Adviser in the administrations of Eisenhower, Kennedy (1958-63) and Carter (1977-81). From 1970-74 he was Head of the MIT Political Science Department and from 1972-87, Director of the Center for International Studies. He was Chair of the Board of the UN University Institute for New Technology (UNITECH) in Maastricht, Holland from 1997-2005 and Member and Chair of the Board of Trustees of the German Marshall Fund of the U.S., on American foundation, from 1980-86. He is a Fellow of the American Academy of Arts and Sciences and of the AAAS. Professor Skolnikoff has published many articles and several books, including particularly, The Elusive Transformation: Science, Technology, and the Evolution of International Politics (Princeton University Press, 1993).

Summer Reading Lists
NCURA Magazine asked some of its members and staff what books were in their beach bags:

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John Carfora, Loyola Marymount University: The Enquiring University: Compliance and Contestation in Higher Education by Stephen Rowland

Jim Casey, University of Texas at San Antonio: Gaudi: The Entire Works by Joan Bassegoda i Nonell, Pere Vivas, Richard Pla

Carolyn Elliott-Farino, Kennesaw State University: Stones into Schools by Greg Mortenson

Kristine Kulage, Columbia University: Patti LuPone: A Memoir by Patti LuPone

Kathleen Larmett, NCURA: Pillars of the Earth by Ken Follett

Robyn Remotigue, Mississippi State University: The Castaways by Elin Hilderbrand

Craig Reynolds, University of Michigan: Last Call: The Rise and Fall of Prohibition by Daniel Okrent

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