Dear New Faculty Member:

Welcome to the University of Missouri–St. Louis. The Office of Research Administration provides operational support in sponsored research, technology transfer and economic development throughout the University of Missouri–St. Louis. As an integral part of this mission, the Office of Research Administration supervises a select group of interdisciplinary research centers on campus and startup incubators off campus to leverage university resources for the benefit of students, faculty and the community at large.

The Office of Research Administration staff work diligently to support faculty, students, and staff with proposal submissions and award management while ensuring compliance with the federal and state regulations and university policies and procedures. Compliance relates to fiscal issues and inventions that result from federally funded research as well as practices in the use of human subjects and animals in research.

In the coming academic year we look forward to working with you as we continue to promote an exciting array of research, technology transfer and economic development initiatives. I invite you to visit our office soon. My staff and I would be delighted to share with you more details about research and related university activities and to facilitate collaborations with campus faculty.

Sincerely,

Nasser Arshadi, Ph.D.
Vice Provost for Research
Professor of Finance
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Overview

MISSION: The Office of Research Administration (ORA) provides support services to faculty, graduate students, and staff seeking external grant funds for research, instruction, and service from federal, state, and local government programs, as well as private foundations.

The ORA works together with faculty committees to award and administer internal research grants, including coordination of the University of Missouri Research Board competition, UMSL Small Grants, the Chancellor’s Award for Research and Creativity, and the Grants Incentive Funds. The ORA also works through faculty committees to monitor University compliance with various federal and state regulations for research, grants, and commercialization of inventions.

In addition, the ORA facilitates technology transfer activities at UMSL via protecting intellectual property (copyrights and patents), marketing faculty and staff inventions to industry, and helping establish start-up companies.

Several research and entrepreneurial units report to the ORA including the Animal Welfare Unit, the Center for Nanoscience and its Medicinal Chemistry Group, the Center for Neurodynamics, and ITE: Innovative Technology Enterprises.

ORA WEB SITE: Visit the ORA web site (www.umsl.edu/services/ora) for the most up-to-date information, policies and procedures, and forms related to research, grants and contracts, technology transfer and economic development, and compliance.

NEWSLETTER: We distribute a monthly newsletter via email (“UMSL Innovator”), which is designed to keep faculty, staff and grad students apprised of funding opportunities, external awards, updates to federal regulations concerning research and commercialization, upcoming workshops and seminars, successful commercialization of UMSL technologies, and more.

CONTACT US: ORA staff are here to help. Please contact us with any questions about research, compliance, technology transfer or economic development at UMSL.

✉ ora@umsl.edu
☎ 516-5899
<table>
<thead>
<tr>
<th>Name, Title</th>
<th>Responsibilities</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arshadi, Nasser</strong></td>
<td>Oversees the mission of the ORA, collaborates with chief research officers within the UM system, promotes UMSL projects and research, and supervises UMSL’s research and entrepreneurial operations on- and off-campus.</td>
<td><a href="mailto:arshadi@umsl.edu">arshadi@umsl.edu</a> 516-5899</td>
</tr>
<tr>
<td><strong>Schulte, Abigail</strong></td>
<td>Serves as assistant to the Vice Provost for Research.</td>
<td><a href="mailto:schulteab@umsl.edu">schulteab@umsl.edu</a> 516-5899</td>
</tr>
<tr>
<td><strong>Accurso, Anthony</strong></td>
<td>Oversees financial compliance for activities of the ORA and its affiliated units. Also provides accounting services in the distribution of the Grant Incentive Fund. Financial Conflict of Interest committee administrator.</td>
<td><a href="mailto:accursoa@umsl.edu">accursoa@umsl.edu</a> 516-5859</td>
</tr>
<tr>
<td><strong>Boyd, Karen</strong></td>
<td>Oversees pre- and post-award and grant accounting activities, internal and external grant audits, policies and procedures and grant compliance.</td>
<td><a href="mailto:boyd@umsl.edu">boyd@umsl.edu</a> 516-5923</td>
</tr>
<tr>
<td><strong>Laurenti, Melissa</strong></td>
<td>Assists faculty and staff including MIMH in preparing budgets and submitting funding applications ensuring that all documents comply with University and granting agency regulations.</td>
<td><a href="mailto:laurentim@umsl.edu">laurentim@umsl.edu</a> 516-5894</td>
</tr>
<tr>
<td><strong>Ellis, Charles</strong></td>
<td>Provides financial oversight to non-grants related activities including incubator operations and research centers. Monitors compliance issues with large grants and handles technology transfer accounting and invoicing.</td>
<td><a href="mailto:cellis@umsl.edu">cellis@umsl.edu</a> 516-5865</td>
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<tr>
<td><strong>Newlin, Joe</strong></td>
<td>Handles post-award accounting (invoicing, financial reports, closeouts) for Arts and Sciences.</td>
<td><a href="mailto:newlinj@umsl.edu">newlinj@umsl.edu</a> 516-5862</td>
</tr>
<tr>
<td><strong>Stutte, Brenda</strong></td>
<td>Assists faculty with the submission of externally funded research proposals and manages UMSL Junior Faculty Travel Grants and UM Research Board proposals.</td>
<td><a href="mailto:stutte@umsl.edu">stutte@umsl.edu</a> 516-5897</td>
</tr>
<tr>
<td><strong>Wilgers, Tamara</strong></td>
<td>Oversees all campus technology transfer and commercialization activities and related regulatory compliance to help faculty bring research discoveries to market and expand UMSL’s role in regional economic development. Technology transfer-related Conflict of Interest committee administrator.</td>
<td><a href="mailto:wilgerst@umsl.edu">wilgerst@umsl.edu</a> 516-6884</td>
</tr>
<tr>
<td><strong>Hancock, John</strong></td>
<td>Oversees the operations of UMSL’s research animal facility, satellite facilities and labs; monitors training and maintenance; and maintains financial and research records to ensure compliance with regulations. Serves as campus IRB and IACUC administrator.</td>
<td><a href="mailto:hancockjc@umsl.edu">hancockjc@umsl.edu</a> 516-5928</td>
</tr>
<tr>
<td><strong>Hinkle, Larry</strong></td>
<td>Provides daily care to all lab animals, maintains facility equipment, orders supplies, and assists researchers with technical services.</td>
<td><a href="mailto:hinkleg@umsl.edu">hinkleg@umsl.edu</a> 516-5928</td>
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</tbody>
</table>
Sponsored Programs

The ORA is the central office for managing proposal submissions, contract negotiations, award acceptance, and research compliance and ethics. The office assists faculty in obtaining and administering externally funded research grants and contracts and administers internal grant programs. We also subscribe to the PIVOT COS – the most comprehensive database of external funding and researcher collaboration opportunities available, to which all UMSL employees and students have access.
Grants & Contracts Fact Sheet

Applicant Organization
Mailing Address
The Curators of the University of Missouri on behalf of the University of Missouri – St. Louis
Office of Research Administration
341 Woods Hall (MC 88)
One University Blvd.
St. Louis, MO 63121-4400
Telephone (314) 516-5897
Fax (314) 516-6759

URL
www.umsl.edu/services/ora
Email
ora@umsl.edu

Business Officers
Awards to be sent to
Dr. Nasser Arshadi, Vice Provost for Research
Primary official signing documents
Dr. Nasser Arshadi, Vice Provost for Research
Checks Payable to
The Curators of the University of Missouri
Checks mailed to
University of Missouri – St. Louis AR
PO Box 808008
Kansas City, MO 64180-8008

Financial Officer
Karen Boyd, Manager, Business/Fiscal Operations

Organization Type, Tax Exempt Status, Legislative Districts & Agreement Numbers
Organization Type
Institution of Higher Education and a Public Corporation under the laws of the state of Missouri (Sec. 172.020 R.S.Mo.)
Tax Exempt
Exempt by virtue of being an organization as described in Section 115 of the Internal Revenue Code of 1954; the University of Missouri is an instrumentality of the State of Missouri
Congressional District
MO-001
County
St. Louis
State Legislative District
House 85; Senate 14
Employer/Federal Tax ID Number
43-6003859
1436003859A1 (NIH only)
D&B Number
804883825

Lab Animal/IRB Approval (Must have current approval)
Animal Assurance Number
A3398-01
Human Subject Assurance
Federalwide Assurance (FWA) number 00000011

Fringe Benefit Rates
Personnel employed 75% time or more
July 1, 2013-June 30, 2014: 35.37%
Personnel employed <75%
7.65%

Facilities and Administration Rates* (Applied to modified total direct costs**)
Cognizant Agency
DHHS
F&A Rate Agreement Date
Dated 07/23/12 effective 7/1/12-6/30/16
Point of Contact
Theodore Foster (214) 767-3261
On Campus*** Off Campus***
Research
51% 26%
Instruction
51.5% 26%
Other Sponsored Activity
35% 26%

SPONSORED PROGRAMS

Updated August 2013
*One of these negotiated rates must be used for all projects unless either:
   1. The agency has a policy statement applying to all awards and specifically limits F&A costs; or,
   2. The Principal investigator has received approval from the Vice Provost for Research.

**Modified Total Direct Costs (MTDC) are total direct cost minus
   • All capital expenditures (buildings, significant renovations, etc.)
   • Individual items of equipment with a single unit value of $5,000 or greater, and an estimated useful life of more than one year
   • That portion of each individual sub-award (subcontract) in excess of $25,000, whether the services are obtained from an owned, related, or third-party hospital or other medical facility
   • All rental/maintenance of off-site activities (space)
   • All student support costs (e.g., student aid, stipends, dependency allowances, scholarships, fellowships)

***On campus vs. Off Campus rates
Activities conducted in facilities not owned by the University of Missouri–St. Louis are considered off campus.
Proposal Checklist

Any exception to the procedures below must be approved by the Vice Provost for Research.

- Notification to ORA, of intent to submit proposal and Link to Request for Proposal (RFP)/sponsors website at least 2 weeks prior to proposal due date.
- Budget and budget justification submitted to ORA at least 2 weeks prior to proposal due date.
- Signed PeopleSoft Signature Routing Sheet (PSRS) at least 1 week prior to proposal due date.
- Financial Disclosure Forms (NIH & NSF)
- Conflict of Interest Forms (if applicable)
- Subcontract documents
  - Budget and budget justification
  - (2 weeks prior, should be included with primary budget)
  - Copy of subcontractor’s negotiated F&A rate.
  - Letter of intent consortium/commitment
  - Scope of Work
  - Contact information

Depending on the sponsor, other items or forms may need to be included with proposal but not necessarily reviewed by ORA.

Any proposal greater than $3 Million or that contains cost share/match is required to be submitted in full to the ORA TWO (2) WEEKS prior to the proposal due date.
Budget Preparation Checklist

Below is a checklist to help you prepare a proposal budget draft.

Salaries and Wages

- List all the positions and names (if known) of individuals who will be working on this project.
- List salary and wage amounts for each individual and designate whether the amounts are for FY (fiscal year) or AY (academic year).
- Indicate the number of months or percentage of effort or course release time for each position.
- Include summer effort for faculty with nine-month appointments.
- If submitting a multiple-year budget, estimate future years' salaries based on increases of 2%.
- Designate all cost-share dollars.

Fringe Benefits

- Use the grant proposal budget fringe benefit rate of 37% (non-Federal) or 34% (Federal) for all full-time UMSL faculty and staff.
- Use the standard rate of 7.65% for part-time or student employees receiving grant-funded stipends (FICA plus Workman's Compensation).
- Designate all cost-share dollars.

Equipment

Note: for external funding purposes, UMSL defines "equipment" as an article of non-expendable, tangible personal property having a useful life of more than one year and an acquisition cost of $5,000 or more per unit.

- Identify each item of equipment using model number and manufacturer, if possible.
- Determine the cost of the equipment based on the latest catalog or a vendor quote.
- Designate all cost-share dollars.

Materials and Supplies (i.e., those items that “cannot stand alone”)

- List each subclass of consumable supplies along with an estimate of cost.
- Designate all cost-share dollars.

Travel

- List the purpose and destination of each trip.
- Make sure you have obtained reasonable price quotes for airfare.
- Unless the proposal guidelines indicate other computational methods, make sure you use the correct, current University per diem rates for domestic travel of $42.00.
  Note: reimbursements will be for actual expenses.
Use the correct, current State Department per diem rates for international travel. These rates include hotel, meals and incidental expenses.

For international travel, base your estimated airfares on those rates listed for U.S. carriers.

Make sure to include in your calculations the number of individuals traveling and the number of days traveling.

Designate all cost-share dollars.


Other Costs

Determine what other direct costs you will incur.

If graduate students are part of your program, include tuition.

Listed the names (if known) of consultants along with an estimated cost.

Include all subcontracts (and collect all required information, authorizations, etc., from subcontractees).

List any participant costs (travel, fees, meals, etc.).

Determine what services you will need and related costs (teleplex, computer services, satellite feeds, etc.).

What about publication costs, long-distance telephone and fax, postage, etc.?

Designate all cost-share dollars.

Facilities and Administrative Costs (Indirect Costs)

Check the proposal guidelines to determine whether the sponsor/agency states how F&A (indirect) costs are to be handled.

Include the correct facilities and administrative cost calculation (see below).

Facilities and Administrative Cost Rates in effect until June 30, 2016:

<table>
<thead>
<tr>
<th></th>
<th>On Campus</th>
<th>Off Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>51% MTDC</td>
<td>26% MTDC</td>
</tr>
<tr>
<td>Instruction</td>
<td>51.5% MTDC</td>
<td>26% MTDC</td>
</tr>
<tr>
<td>Other Sponsored Activity</td>
<td>35% MTDC</td>
<td>26% MTDC</td>
</tr>
</tbody>
</table>

Modified Total Direct Costs (MTDC) consist of all salaries, wages, fringe benefits, materials, supplies, services, travel, and subgrants/subcontracts up to the first $25,000 of each subgrant/subcontract (regardless of the period covered by the subgrant/subcontract). Modified Total Direct Costs exclude equipment, capital expenditures, charges for patient care, tuition remission, rental costs of off-site facilities, scholarships, and fellowships, as well as the portion of each subgrant/subcontract in excess of $25,000.
If permitted by the agency, designate as cost-share dollars the balance of F&A costs that would not be funded by the grant.

**Final Steps**

- Check and recheck the program guidelines and requirements.
- Make certain your calculations are correct.
Roles & Responsibilities

Also see: www.umsl.edu/services/ora/training/roles-responsibilities-grants-admin-web.ppsx and www.umsystem.edu/ums/fa/controller/compliance/ for training.

Principal Investigator (PI)

The PI has overall responsibility for the award, but shares financial administrative management responsibility with the Research Administrator (RA). Specifically, the PI is responsible for:

- Technical/programmatic negotiation with sponsors.
- All expenditures charged to a sponsored project
- Knowing and adhering to:
  - The specific limitations and restrictions of the sponsor and award documents
  - All administrative and financial compliance requirements of sponsors, regulators, and the University
- All technical reporting and deliverable requirements.
- Complying with Federal, State and University policies relating to human subjects, animal welfare, human use of radioisotopes, Conflict of interest, and other similar policies as appropriate. (*Per Business Policy Manual - BPM 210 – Sponsored Programs*)

1. General Compliance and Oversight

   The PI is responsible for:

- Being knowledgeable of and complying with applicable Federal, sponsor, and University requirements. This includes:
  - Office of Management and Budget (OMB) Circulars A-21 and A-110
  - The terms and conditions of each award
  - Related University policies and procedures
- Participating in compliance training
- Ensuring those working with the PI participate in compliance training
- Working with the Office of Research Administration (ORA) to ensure sufficient financial administrative oversight to manage the award
- Bringing any issues of research and/or financial compliance to the attention of the appropriate individuals

2. Project Planning and Proposal Submission

   The PI is responsible for:

- Completing the proposal in a timely manner and obtaining required approvals. This includes:
  - Ensuring the proposal meets all requirements
  - Ensuring the Proposal Signature Routing Sheet (PSRS) is reviewed and updated August 2013
signed by appropriate individuals

• Discussing whether a pre-award project is necessary and obtaining approvals
• Determining the nature of the activity as research, instruction, or other sponsored activity

3. Award Set-up
The PI is responsible for:

• Ensuring all appropriate individuals are notified when an award is received.
• Reviewing and approving the Notice of Grant Award (NGA)
• Creating a revised budget if necessary
• Notifying the sponsor about any changes in project scope, budget, cost share, and/or F&A return
• Delegating authority for authorization on the award
• Determining payroll distribution on awards
• Notifying ORA of any award funded non-owned assets/equipment for tracking

4. Operations During the Award – General
The PI is responsible for:

• Maintaining oversight for individual awards to ensure compliance.
• Monitoring projects on a monthly basis to ensure:
  • All expenditures are authorized by the PI or delegate
  • All charges are allowable, allocable, reasonable, and consistently treated
  • All charges are within the period of availability
  • Budget is available and deficit spending is addressed
  • Documentation is maintained
  • Important dates and deliverables are met
• Authorizing any financial and human resource transactions. These may include:
  • Hiring or assigning personnel to the project
  • Re-budgeting of costs on the project
  • Proposing resolution of any cost overruns
  • Requesting approvals for a no-cost time extension, budget revisions, change in cost share commitment categories, carry forward or significant change in effort for PI or key personnel
  • Timely completion of interim reports to sponsor

5. Effort Verification Reports (EVRs)
The PI is responsible for:

• Communicating to individuals that all EVRs need to be reviewed, signed and submitted by due date
• Verifying effort on EVRs is reasonable for each award

Updated August 2013
- Determining and monitoring payroll distribution to awards
- Ensuring payroll records reflect updated EVRs

6. Cost Transfers
The PI is responsible for:
- Ensuring all cost transfers are:
  • An allowable and allocable charge,
  • Sufficiently documented, and
  • Made in a timely manner

7. Cost Sharing
The PI is responsible for:
- Obtaining appropriate approval for funding sources for proposed cost sharing
- Determining that costs being committed are allowable for cost sharing
- Ensuring cost sharing and/or matching requirements are met and correct for each award
- Ensuring all cost sharing is documented

8. Subawards
The PI is responsible for:
- Determining the need, scope, and budget for a subaward
- Working with ORA to negotiate the terms and contract
- Monitoring progress and approving invoices, final technical reports, and other deliverables

9. Award Close Out and Reporting
The PI is responsible for:
- Reviewing 60 and 30-day advance notice of award closings
- Taking actions to ensure:
  • All costs are documented
  • Deficits are cleared
  • Personnel Action Forms (PAFs) are updated, purchase orders and requisitions are closed, feeder systems are cancelled, P-card charges are posted, and any encumbrances are cleared
  • Documentation is retained per the record retention requirements. The PI is responsible for retention of scientific data
- Providing information to ORA to close out awards in a timely manner
- Preparing and submitting final technical reports
- Certification that all costs are allowable on the award

Updated August 2013
Roles & Responsibilities

Research Administrator (RA)

The RA is the person working directly with the Principal Investigator (PI) in the department/unit on the project. While the PI has overall responsibility, the RA shares responsibility with the PI for financial administrative management of the project. The RA may be involved in any aspect of the project administration, from the initial proposal through the close out of the award. The RA is the liaison between the PI and the Office of Research Administration (Sponsored Programs).

1. General Compliance and Oversight
The RA is responsible for:

• Being knowledgeable of and complying with applicable Federal, sponsor, and University requirements to assist the PI with compliance. This includes:
  • Office of Management and Budget (OMB) Circulars A-21 and A-110
  • The terms and conditions of the award
  • Related University policies and procedures
• Participating in compliance training
• Working with the PI to ensure sufficient financial oversight to manage the award.
• Being familiar with the award budget and any unique sponsor requirements
• Bringing issues of research and/or financial compliance to the attention of the appropriate individuals

2. Project Planning and Proposal Submission
The RA is responsible for:

• Assisting the PI with preparing the proposal as needed. (e.g. review of budget)
• Ensuring the Proposal Signature Routing Sheet (PSRS) is reviewed and signed by appropriate individuals
• Discussing whether a pre-award project is necessary and obtaining approvals
• Providing other information to ORA as needed

3. Award Set-up
The RA is responsible for:

• Ensuring all appropriate individuals are notified when an award is received
• Working with the PI to create a revised budget if necessary
• Verifying the budget information within the financials system
• Setting up payroll distributions in the human resources system
• Ensuring any award funded non-owned assets/equipment are properly tracked
4. Operations During the Award – General
The RA is responsible for:

- Providing budget and project information on a monthly basis to the PI to evaluate the financial status of the project. This may include:
  - Processing requests for re-budgeting of costs
  - Providing information to help resolve project deficits or excess costs
- Preparing and processing financial, human resources, and other documents, after the PI or delegate’s authorization
- Processing transactions in the financials system. The RA should review for:
  - Allowable, allocable, reasonable, and consistent treatment
  - Period of availability and charging to the proper project
  - Available budget
  - Documentation for all charges
- Working with ORA to obtain sponsor approvals for:
  - Significant changes in effort or budget as required
  - No-cost time extensions
  - Carry forward of funds
  - Change in cost sharing commitment categories
- Assisting with preparation of interim financial reports
- Monitoring to meet important dates and deliverables

5. Effort Verification Reports (EVRs)
The RA is responsible for:

- Distributing EVRs with instructions for review and verification
- Reviewing collected EVRs for accuracy and completeness
- Ensuring all EVRs are reviewed, signed, and returned to ORA by the due date
- Following up on delinquent EVRs
- Processing Payroll Correcting Entries (PCEs) to adjust payroll distributions to reflect EVRs

6. Cost Transfers
The RA is responsible for:

- Processing cost transfers at the direction of the PI. All cost transfers should be:
  - An allowable and allocable charge,
  - Sufficiently documented, and
  - Made in a timely manner
- Sending PCEs over 60 days to ORA to process

Updated August 2013
7. Cost Sharing
The RA is responsible for:
- Monitoring to ensure cost sharing and/or matching requirements are met for each award
- Preparing any cost sharing and/or matching documents
- Ensuring all cost sharing is documented

8. Subawards
The RA is responsible for:
- Working with the PI to evaluate whether the project is a subaward or vendor

9. Award Close Out and Reporting
The RA is responsible for:
- Bringing items to the PI attention after review of 60- and 30-day advance notice of award closings
- Providing information to the PI and ORA to close out awards in a timely manner. This may include ensuring:
  - All costs are documented and retained in accordance with record retention requirements
  - Deficits are cleared
  - Personnel Action Forms (PAFs) are updated, purchase orders and requisitions are closed, feeder systems are cancelled, P-card charges are posted, and any encumbrances are cleared
  - Final adjustments are timely processed (e.g. cost transfers)
The University will seek and accept support of sponsored projects related to the normal programs and recognized objectives of the University.

Definition of Key Terms:

Proposal
A proposal is a description of the work University personnel propose to complete on a sponsored project. The details included in a proposal depend on the project’s scope and who will read the document. Ideally, the proposal will persuade readers to support the proposed project. Proposals are usually discipline and funding-source specific.

Sponsored Project
The characteristics of a sponsored project are:

- activities relating to a proposal funded by an entity outside the University,
- funded for a specific purpose,
- an exchange transaction where the sponsor receives value in return for the funding provided to the University,
- executed by an award, contract, cooperative agreement, memorandum of understanding, or other formal mechanism,
- for the purpose of supporting any research, scholarly, instructional or public service activity,
- the sponsor may retain some claim (option or otherwise) to intellectual property that may be developed as a result of a sponsored project,
- the sponsor may have a direct interest in the development and ownership of the intellectual property resulting from the activity, and
- the project may have restrictions requiring regulatory compliance.

Student Loan Activity
Funding resulting from student loans guaranteed by the federal government with federal audit requirements such as OMB A-133.

Processing Requests
All awards are sought in the name of The Curators of the University of Missouri.

A Proposal Signature Routing Sheet (PSRS) must be signed by the Principal Investigator and processed through campus channels (department, unit, school/college) for approval by the Chancellor, Vice President, or designee prior to the submission of any application or proposal to a prospective sponsor, which includes any technical and cost information and may result in an award.

Note: “SPO” is the Sponsored Projects Office. At UMSL, the SPO is the Office of Research Administration (ORA)
of any sponsored project to the University. Projects involving multi-campus programs and personnel must receive approval from all participants at each of the campuses involved.

**Submitting Proposals**

After review and approval by the appropriate campus Sponsored Programs Office (SPO), proposals are submitted to the sponsor except for proposals which:

- Involve multi-campus programs and personnel when the award is to be centrally administered by the UM System. Such proposals are processed by the Columbia SPO acting on behalf of UM System.
- Involve classified contracts (security). Such proposals are reviewed and approved by the campus Facility Security Officer (FSO), sent to the System FSO for review and approval, and submitted to the sponsor by the System FSO acting on behalf of UM System.
- Require legal review, or are legally binding at the time of submission, including Quotations and Bids. Campus SPO will forward proposals requiring legal review to the Office of the General Counsel.
- Waive any rights in data (publication, patent, copyright). Campus SPO will forward these proposals to the campus office responsible for intellectual property for review and approval.

**Proposals Providing for Extra Compensation**

Proposals for grants providing compensation in addition to an employee’s regular salary must clearly state this fact and must have final approval of the Chancellor or designee (President or designee for UM System) prior to submission to the prospective sponsor.

REFERENCE: HR 214 Extra Compensation

**Negotiation and Acceptance**

**Sponsor Negotiation**

Technical/programmatic negotiations with the sponsor are the responsibility of the Project Director/Principal Investigator.

Fiscal/business/legal negotiations with the sponsor are the responsibility of the SPO of each campus (Columbia SPO for UM System).

**Authority to Determine Acceptability**

Decisions concerning the acceptability of a specific sponsored project under the terms of an award are made by the President, or authorized designee.

**Accepting or Executing Award**

All awards are accepted or executed by the campus except multi-campus awards to the UM System administration in which case they are accepted and executed by the Columbia SPO on behalf of UM System.

All awards must be made in the name of The Curators of the University of Missouri.

*Note: “SPO” is the Sponsored Projects Office. At UMSL, the SPO is the Office of Research Administration (ORA)*
Notification of Acceptance of Award
The SPO of each campus will advise the Project Director and other interested persons of the acceptance of a grant.

Security Responsibilities
Requirements set by the FSO on each campus must be met for all awards requiring the use of classified matter. Receipt of classified matter and the procurement of security clearances must be discussed with the System FSO. NOTE: The University is cleared for Secret, Confidential and Restricted but not Top Secret material.

Receipt of classified matter and the procurement of security clearances must be discussed with the UM System Government Security Office (Office of Vice Chancellor for Administrative Services for UMR).

Publicity Regarding Awards
All publicity regarding an award must be authorized or cleared by the campus public information office (University Communications for UM System).

Expending Funds
All expenditures of funds received from an award must be made in accordance with standard University policies governing the expenditure of funds, and/or sponsor requirements.

Financial commitments or expenditures are normally not to be made before an award is officially accepted. Pre-award expenditure arrangements can be made under certain circumstances if the expenditures are backed by a commitment of funds from the manager of a currently existing source, and such pre-award expenditures are allowable under the terms of the anticipated award. Expenditures may not be made after an award has terminated.

REFERENCE: APM-60.35 Establishing an Award

Property and Equipment Associated with External Sponsors
All property or equipment obtained from or purchased with funds from external sponsors shall receive the same care and safeguards as all other University property.

Property purchased or constructed with external funding or provided by an external sponsor must be inventoried, tracked and disposed of in accordance with the terms and conditions of the external sponsor’s requirements.

REFERENCE: APM-60.65 Reconciliation of Federally Funded Assets

The Campus Procurement Service Center must be consulted prior to the disposition of any non-expendable sponsor-owned property and/or equipment.

REFERENCE: BPM-407 Inventory

Submitting Required Reports/Billings
Where required, each campus SPO will prepare and submit necessary expenditure reports and/

Note: “SPO” is the Sponsored Projects Office. At UMSL, the SPO is the Office of Research Administration (ORA)
or billings to sponsors. When appropriate, copies of these documents (or files) will be provided to University administrators for review and approval prior to submission to sponsors.

The official University files pertaining to sponsored projects will be maintained on each campus.

REFERENCE: BP-1001 Records Retention Summaries

Responsibilities

Principal Investigator:

- Technical/programmatic negotiations with sponsors.
- All expenditures made against a sponsored project.
- Knowing and adhering to the specific limitations and restrictions of the sponsor and of the award documents.
- Knowing and adhering to all administrative and financial compliance requirements of sponsors, regulators, and the University.
- Knowing and adhering to all technical reporting and deliverable requirements.
- Complying with Federal, State and University policies relating to human subjects, animal welfare, human use of radioisotopes, Conflict of Interest (COI), and other similar policies as appropriate.

Campus Sponsored Programs Office:

- Fiscal/business/legal negotiations with sponsors.
- Perform all project-specific sponsored program functions, to include proposal review and approval, award negotiation and acceptance, and all post-award administration except for those activities for which UM System has retained responsibility as defined elsewhere in this document. Overall administration of multi-campus awards will be the responsibility of the lead campus. For this purpose, lead campus is defined as that campus which submitted the proposal and accepted the award. The exception will be those multi-campus sponsored projects awarded to UM System units, for which Columbia SPO will retain this responsibility. Each campus will be responsible for the normal oversight of funds awarded to them under a multi-campus sponsored project.
- Provide assurance that all sponsored projects are administered in accordance with OMB Circulars A-21, A-110, and A-133 Compliance Supplement, and with any other general or specific regulations issued by Federal, State or other sponsors.
- Maintain official files to include award, correspondence, accounting reports, invoices and financial or other types of non-technical/non-programmatic reports submitted to sponsors, and any other documents generated in the administration of sponsored projects and required for the purpose of reviews to be conducted by external or internal auditors. Retain all documents for periods specified by sponsoring agency regulations or University policy.
- Provide auditors with any information they require in their review of sponsored projects.

Note: “SPO” is the Sponsored Projects Office. At UMSL, the SPO is the Office of Research Administration (ORA)
Provide the Office of the Controller with a copy of all resulting audit reports issued to the campuses. Prepare responses to all auditor findings and recommendations and submit them to or review them with the Office of the Controller prior to their submission to the auditors.

- Ensure that the PeopleSoft Grants module is maintained to appropriately and accurately calculate and record all Facilities and Administrative costs and cost sharing in the financial system for sponsored projects.
- Promptly deposit all receipts pertaining to sponsored projects other than those funded by letter of credit.
- Provide all required documents necessary for letter of credit management to the Office of the Controller.
- Enter data pertaining to proposals and awards into the PeopleSoft Grants Module. Each campus will also be responsible for the integrity of its data.
- Submit contractual documents to the Office of the General Counsel for legal review and approval as set forth in the Collected Rules and Regulations of the University of Missouri.
- Submit materials to other university offices (e.g., Research and Economic Development, Environmental Health and Safety, Procurement Services) as appropriate for their use in the review of proposals and awards.
- Gather and provide to the Office of the Controller all information necessary for the development and negotiation of Facilities and Administrative cost rates.
- The Columbia SPO will also be responsible for all project-specific activities as defined elsewhere in this document for sponsored projects awarded to UM System units except for those awards for which UM System will retain responsibility as described elsewhere in this document.
- SPO on each campus will advise the Principal Investigator and other interested persons of the acceptance of a sponsored project.
- The campus SPO will advise the FSO of the acceptance of a classified contract.

**Columbia SPO on Behalf of UM System**

- Perform all project-specific administrative and financial functions pertaining to those multi-campus sponsored projects awarded to UM System units.
- Award documents for which UM System has responsibility shall be maintained at the Columbia SPO.

**UM System**

**Office of the General Counsel**

- Provide legal review and approval for all contractual documents as set forth in the Collected Rules and Regulations. Participate in reviewing changes in laws affecting sponsored programs administration and in the development of procedures where appropriate.

*Note: “SPO” is the Sponsored Projects Office. At UMSL, the SPO is the Office of Research Administration (ORA)*
Office of the Controller

- Coordinate all audits to be conducted by external audit agencies and by internal auditing, and final responses to all findings and recommendations resulting from system audits. Review individual contract closing audits prior to submission of campus responses.
- Coordinate the effort of all campuses in the gathering of data necessary for determining Facilities and Administrative (F&A) costs and assist campuses in designing and conducting special cost studies for this purpose. Design, prepare and submit the F&A cost proposals for all campuses and negotiate the resulting F&A cost rates.
- Coordinate all requests from the campuses for enhancements to the accounting system as it pertains to the administration of sponsored projects. Implement such changes when approved. Provide all accounting system special reports required by campuses in the administration of sponsored projects. Coordinate the development of new reports as necessary.
- Maintain the PeopleSoft Grants module functionality to accurately calculate and record all F&A costs and cost sharing in the accounting system for sponsored projects as configured by the campus SPOs.
- Maintain the grant/contract database management system, not including data entry, and coordinate all requests from the campuses or other UM System administrative units for system enhancements. Upon approval, implement such enhancements with the assistance of appropriate technical staff.
- Perform all aspects of letter of credit management, including monitoring of cash on hand, drawdown of cash when necessary, and preparation of periodic cash reports as required.
- Oversee accounting, financial reporting, cash management, and the financial portion of all audits related to Federal Student Aid Programs.
- Assist or perform all financial administrative requirements, and/or prepare financial reports for federal and state appropriations; e.g., federal appropriations for the Agricultural Experiment Station, Cooperative Extension, and Veterinary Medicine appropriations.

Note: “SPO” is the Sponsored Projects Office. At UMSL, the SPO is the Office of Research Administration (ORA)
University of Missouri System
Accounting Policies & Procedures

The following pages include Accounting Policies & Procedures of the University of Missouri System, which are authorized and issued by the UM Office of the Controller, 118 University Hall, Columbia, MO.

APM-60.07: Allowable Costs and Cost Principles
APM-60.07.01: Activities Allowed or Unallowed - Certification
APM-60.32: Effort Verification Reports
APM-60.35: Establishing an Award
University of Missouri System
Accounting Policies and Procedures

Policy Number:   APM-60.07
Policy Name:   Allowable Costs and Cost Principles

General Policy and Procedure Overview
This policy outlines the general policies for allowability and the importance of assigning correct Account numbers to expenses to ensure proper treatment of costs. The cost principles also identify those charges that typically cannot be charged to sponsored awards and are considered unallowable expenses. Office of Management and Budget (OMB) Circular A-21, Cost Principles for Educational Institutions (A-21), identifies costs that may be charged to federal awards.

Definition of Key Terms:

Allocable: A cost incurred specifically for the program, or several activities but can be distributed between them in reasonable proportion to benefits received, and is clearly necessary to the program.

Allowable: Costs directly related to the performance of a sponsored award and permitted under its terms and OMB circulars that must be reasonable, necessary, allocable, and treated consistently with generally accepted accounting principles.

Departmental Administrator: Individual designated by the department or Principal Investigator; responsible for the financial accounting, budgeting and administration of the department’s sponsored awards.

Deficit Spending: Costs expended that exceed the awarded budget where additional funding is not expected or has not been verified by a multi-year agreement or some other documentation (e.g. e-mail or some other written correspondence).

Direct Cost: Costs specifically identified with a sponsored award that can be readily and specifically assigned to such award (e.g., salaries, fringe benefits, consultants, equipment, travel, participant costs, and subcontracts).

Expenditures: Cash disbursements for goods and services, Facilities and Administrative costs, in-kind contributions applied, employee payroll, contractors, subrecipients and other cost outlays necessary for a sponsored award.

Facilities and Administrative (F&A) Costs: Costs incurred for common or joint objectives and therefore cannot be identified readily and specifically with a particular sponsored award (e.g., depreciation of buildings and equipment, computing infrastructure, administrative services, utilities, and custodial services).
Principal Investigator (PI): Individual recognized by the sponsor and the University as responsible and accountable for the proper conduct and direction of the award or activity.

Reasonable: Costs that do not exceed those that would normally be incurred by a prudent person.

Detailed Policy and Procedure:

Cost Principles

To ensure all costs recorded on an award are allowable, the accounting treatment of costs for sponsored awards must be consistent with generally accepted accounting principles. The University must use a general ledger Account on all transactions that reflects the true nature of the transaction. Transactions for sponsored awards should be authorized and recorded by skilled, trained staff with appropriate authorization as provided in APM 2.25.55 Segregation of Duties and APM 2.25.55.01 Segregation of Duties-Sponsored Programs. The Sponsored Programs Office (SPO) and the Accounting Office should be consulted when the appropriate Account number to use is uncertain.

Unallowable costs included in a proposed budget and subsequently in the award do not ensure allowability as a cost to the award. The PI must ensure that specific approval is obtained from the sponsor for costs normally unallowable. It is the responsibility of the PI, not the sponsor, to ensure costs budgeted and/or charged to a sponsored award are allowable.

The PI on an award or cooperative agreement is responsible for all costs charged to that agreement. The total costs of a sponsored award are comprised of the direct costs integral to the performance of the award, allowable F&A of the institution, and all committed cost sharing for an award.

Post-award and Monitoring

After the University accepts an award, it is established in the financial system by SPO and assigned to a PI as the person responsible for expenditures and programmatic performance on the award. SPO must review the budget categories, cost share information, specific award limitations and allocations to ensure proper recording in the financial system.

The PI should review expenditures to ensure they are allowable and within the period of availability. The PI may delegate some of the duties associated with daily financial management of the award to appropriate staff in accordance with APM 2.25.55.01 Segregation of Duties-Sponsored Programs, however, the PI retains full responsibility for all activity on the award. The fiscal or business manager may also assist with financial review regarding appropriate accounting treatment and financial reporting. The fiscal or business manager should support the PI as needed to provide the financial status of the award, budget forecasts, and assist the PI with identifying known unallowable costs and making timely transfer to other funding sources.

The University follows the guidance provided in OMB A-21 to identify unallowable expenditures on all awards including cost share. The departmental fiscal staff are responsible for...
timely transfer of unallowable costs to appropriate ChartField strings in accordance with Business Policy Manual Section 213 (BPM 213). If the transfer is not made timely by the department, the Sponsored Programs Office (SPO) may transfer the expenditure to the department’s appropriate ChartField string within 30 days. SPO must periodically review sponsored award costs for OMB A-21 exclusions.

At the end of the award, the PI must certify that all expenditures reported in the general ledger for an award are allowable in accordance with provisions of the award documents and, where required, corrections have been or will be made. The certification (APM 60.07.01) must be signed by the PI, and returned to the SPO no later than 30 days from the date sent by the SPO.

Expenditures for goods and services near the end of an award that will not directly benefit the award or will not reasonably be used in the execution of the award are unallowable. The PI should review expenses at the end of an award for this possibility. Expenses incurred near the end of an award may only be allocated to the award based on the benefit to the award.

Subaward:

The PI is responsible for monitoring invoices submitted by subrecipients for allowability in accordance with APM 60.85 - Subrecipient Monitoring. The department is responsible for transferring unallowable subrecipient expenses to the department’s appropriate ChartField strings. SPO will monitor subrecipient expenses for proper documentation and compliance with University policy on a test basis.

Deficit Spending:

The PI is responsible for monitoring the award for cost overruns, or deficit spending, and taking corrective action. A deficit occurs when the total costs recorded on the sponsored award ChartField string exceed the total budget for the sponsored award. Cost overruns must not be billed to the sponsor. All deficits must be resolved in a timely manner by one of the following options:

1. Supplemental Award—The sponsor provides supplemental funding that covers the deficit. SPO must have documentation of the supplemental increase within two months after the end of the month in which the deficit occurred and no transfer is necessary.
2. Future Budget—If the sponsored award documentation includes multiple periods and the sponsor allows current period expenditures that will be covered by future budget periods, then no transfer is necessary after appropriate validation with SPO.
3. Correcting Entries—Departments must remove any deficit from the sponsored award within two months after the end of the month in which the deficit occurred (see BPM 213).

The SPO monitors sponsored awards and will take corrective action as necessary to address deficits not corrected timely by departments.

Responsibility:

Principal Investigator (PI):
Ensure that all disbursements from the award are:
- Reasonable and necessary to accomplish the project goals
- Allowable per the terms of the award and applicable regulations
- Properly authorized and documented
- Charged to the appropriate general ledger Account and award
- Within budget
- Within the period of availability
- Reviewed timely and documented

Department Fiscal Staff:
- Monitor for unallowable costs
- Timely transfer of unallowable costs to unrestricted operating funds

Sponsored Programs Office (SPO):
- Process salary transfers that are older than 2 months after the original payroll posting date.
- Monitor sponsored awards for unallowable costs and overruns and take corrective action as necessary

Effective Date: July 1, 2009
Revised Date: April 23, 2009

Questions and Comments?
Any questions regarding the approved Accounting Policy and Procedure should be directed to the Controller’s Office, 118 University Hall, Columbia MO 65211, phone 573-882-4286.
University of Missouri System
Accounting Policies and Procedures

Policy Number: APM-60.07.01
Policy Name: Activities Allowed or Unallowed—Certification

Appendix A

I certify that all expenditures as reported in the general ledger and related budget variances
as of (date): ______________________, are for appropriate purposes and allowable in accordance
with the provisions of the application and award documents and, where required, corrections have been
or will be made through the accounting system for the projects noted below.

This certification is for the:

☐ fiscal year-end
☐ award end date

Principal Investigator’s Signature _________________________________ Date _______________

This form must be signed and returned no later than 30 days from the date sent.

Project Number __________ Project Name __________________________________________

Project Number __________ Project Name __________________________________________

Project Number __________ Project Name __________________________________________

Project Number __________ Project Name __________________________________________

Project Number __________ Project Name __________________________________________

Effective Date: January 1, 2008
Revised Date: March 28, 2008

Questions and Comments?
Any questions regarding the approved Accounting Policy and Procedure should be directed to the
Controller’s Office, 118 University Hall, Columbia MO 65211, phone 573-882-4286.

Official Accounting Policies and Procedures of the University of Missouri System are Authorized and Issued by the Office of the Controller, 118 University Hall
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University of Missouri System  
Accounting Policies and Procedures 

Policy Number: APM-60.32  
Policy Name: Effort Verification Reports

General Policy and Procedure Overview:

The federal Office of Management and Budget (OMB) Circular A-21, Cost Principles for Educational Institutions, requires University of Missouri employees who work on activities related to federal awards to complete time and Effort Verification Reports (EVRs). The University uses the “Plan-Confirmation” method for effort reporting as described by OMB Circular A-21.

Definition of Key Term:

- **Allowable** – Costs or revenues permitted under the terms of the Notice of Grant Award and OMB Circular A-133.

- **Effort Verification Report (EVR)** – Report that lists an individual’s base pay, payroll funding sources, plan for payroll distribution at the beginning of the reporting period, and actual payroll distributions (dollars and percentages) during the reporting period. The EVR is designed for input and verification of Modified Effort.

- **Plan Confirmation Method** - Under this method, the distribution of salaries and wages of professorial and professional staff applicable to sponsored agreements is based on budgeted, planned, or assigned work activity, updated to reflect any significant changes in work distribution.

- **Modified Effort** – An estimate of how an employee’s time was spent during the period.

- **Payroll Correcting Entry (PCE)** – A correcting journal entry made to redistribute payroll.

Detail Policy and Procedures:

The principal investigator (PI) is responsible and accountable for compliance with all federal regulations associated with sponsored projects awarded under his or her supervision. Effort verification is a compliance requirement of accepting federal awards.

Effort allocation is based on an employee’s total activity within her or his University appointment and includes all research, teaching, clinical service, and administrative duties the employee performs. Effort is not based on a 40-hour workweek, nor is it based on full time equivalent (FTE). Part-time personnel should report 100% effort on the EVR regardless of what FTE the appointment represents. Personnel who work more than 40 hours per week should report 100% effort on the EVR regardless of how many hours they work. Modified Effort to various funding lines is expressed in whole percentages and must total 100%. The individual signing an effort report confirms that the Modified Effort on the report represents a reasonable estimate of the work performed by the listed employee for the documented period.
Federal compliance requires adherence to University policies and procedures. Timely verification and return of EVRs within University established deadlines is a federal compliance requirement. Fiscal Officers, Departmental Administrators, and Subjects of the EVRs share responsibility for ensuring 100% effective and timely completion of the EVR verification process. Failure to complete an EVR means that any costs included in an unverified or incomplete EVR are unallowable, and the University could be required to refund those amounts to the sponsor. Under University policies, the department responsible for the sponsored project is responsible for any disallowed or unallowable costs.

An EVR is produced for each individual who received all or part of their salary from:

- A sponsored project (including cost share);
- Work Study students paid from Work Study Project ChartField strings;
- Federal appropriations, which are indicated by a Federal program code, such as E8008 or C8010.

Subjects of the EVR should complete the Modified Effort which is an estimate of how time was spent during the reporting period. This estimate should be made and entered in whole percentage increments. Rounding to increments as large as 5% is considered to constitute a valid estimate. If significant (>5%) differences exist between the Modified Effort and Payroll Data for any funding line, a Payroll Correcting Entry (PCE) must be entered to produce reasonable congruence between the Modified Effort and payroll distribution.

Modified Effort is reported and based on how time was spent, not based on budgeted percentages or paid percentages. Effort must be estimated and certified by first hand knowledge of an individual’s activities. If the subject of the EVR is not available, a person with direct knowledge of 100% of the subject’s effort may sign the report. If the person on the EVR is no longer employed by the University, the supervisor or other responsible person with first-hand knowledge of how the person on the report spent 100% of their time should review and sign the report.

PCEs should be entered no later than 2 months from the end of the month in which the original transaction posted (see BPM-213 Adjustment of Income and Expense Items). If significant (>5%) differences exist between Modified Effort and payroll distribution percentage for any funding line, the necessary PCE(s) must be made. Within 10 working days of the signature on the EVR, PCEs triggered by effort reports must be made or the process must be initiated for approval of a late PCE. A revised EVR will not be produced. Other than PCEs necessary to align Modified Effort with payroll distribution percentage on a certified EVR, PCEs impacting a certified EVR should not be made without approval by the Sponsored Programs Office (SPO).

The EVR is typically a semi-annual certification covering the periods of July 1 through December 31 and January 1 through June 30, but may be on a more frequent basis if required by the sponsored agreement (such as the Agriculture Experiment Station requirement to report on a monthly basis). The Controller’s Office will generate and reconcile the EVRs for each Campus. The reconciliation is performed by generating the EVRs from the financial system for the time frame required and comparing the EVRs with results from a query from the financial system.

The Controller’s Office will send the EVRs to each campus SPO once the reconciliation is performed. Each SPO is responsible for the timely distribution to the departments and collection of the EVRs by the designated due date.

Effort Reports must be returned to the SPO within thirty (30) days of distribution to the Departmental Fiscal Officers and Grants Managers. Each campus SPO will review all EVRs as they are returned to
ensure they are properly completed, certified, signed and dated. The Controller’s Office will monitor the return of the EVRs to each SPO.

If an EVR is not received within 30 calendar days of the due date, the SPO manager will prepare notification for the Research Officer. The Research Officer will send the notification to the designated departmental fiscal officer/manager, the supervisor of the employee whose EVR is delinquent and the Department Head(s) of outstanding EVRs to identify future consequences of non-compliance.

If the EVR is not received within 45 calendar days of the due date, the SPO manager will prepare notification for the Research Officer to send to the Chancellor, Provost and Department Head, that sponsored project (including federal appropriations and cost share) payroll amounts for the outstanding EVR reporting period may become questioned costs that could be required to be returned to the sponsor.

Responsibilities:

**Fiscal Officer**
- Ensure distribution of EVRs with instructions to Departments.
- Monitor compliance of 100% return of properly completed, signed and dated EVRs by the established deadline.
- Transmit properly completed EVRs to the SPO

**Research Officer**
- Send notification to the designated departmental fiscal officer/manager and the Department Head(s) of any employee whose EVR is not received within 30 calendar days of the due date.
- Send notification to the Chancellor, Provost and Department Head of EVRs not received within 45 calendar days of the due date.

**Departmental Administrator**
- Distribute EVRs with instructions to the subjects of the EVR for review and certification.
- Prepare necessary and timely Payroll Correcting Entries (PCEs) relating to the period covered by the EVRs mirroring significant changes on the certified EVRs.
- Accumulate all EVRs and return to SPO for the respective campus.
- Ensure 100% of the EVRs are properly completed, signed, dated and returned by the established deadline.

**Subject of the EVR**
- Complete the Modified Effort, which is an estimate of how you spent your time during the reporting period.
- Sign and Date the EVR.
- Return the completed EVR to the departmental administrator.
- Specify to the departmental administrator, any necessary PCEs based upon the verified EVR.

**SPO**
- Maintain verified effort reports for review purposes;
- Review all EVRs as they are returned to ensure they are properly completed, verified, and signed/dated;
• Provide assistance to Departmental Administrators/Fiscal Office personnel with the effort reporting process;
• Timely distribution of EVRs to the departments.
• Initiate escalation procedures to facilitate timely collection of the EVRs by the designated due date.
• SPO manager will prepare notification for the Research Officer to send to the Chancellor, Provost and Department Head for EVRs not received within 30 calendar days of the due date.
• SPO manager will prepare notification for the Research Officer to send to the Chancellor, Provost and Department Head for EVRs not received within 45 calendar days of the due date.

**Controller’s Office**
• Produce the EVRs
• Monitor departmental responsibilities related to effort reporting to help ensure University compliance, including the timely return of the reports,
• Provide assistance to Departmental Administrators/Fiscal Officers with the effort reporting process.
• Monitor the submission of the EVRs to each SPO.

*Effective Date: January 1, 2008
Revised Date: December 11, 2009*

**Questions and Comments?**
Any questions regarding the approved Accounting Policy and Procedure should be directed to the Controller’s Office, 118 University Hall, Columbia MO 65211, phone 573-882-4286.
University of Missouri System  
Accounting Policies and Procedures  

Policy Number: APM-60.35  
Policy Name: Establishing an Award  

General Policy and Procedure Overview:  
The Curators of the University of Missouri receive funds to support sponsored awards from federal and non-federal funding agencies/sponsors. This policy provides guidance for the University to process and set up an Award and/or process a Pre-Award project request.

Definition of Key Terms:

* Award – Agreement providing or obligating funds from a funding agency/sponsor in support of a sponsored project.

* CFDA number – Catalog of Federal Domestic Assistance (CFDA) number associated with an award. The CFDA is a federal government-wide compendium of financial and non-financial assistance programs. External auditors may request this number and seek to verify it with external documentation available.

* Fully Executed Award – A document signed (executed) by both the University and Sponsor to provide funding for a sponsored project.

* Negotiation – Any exchange of information pertaining to, or that may lead to an alteration of, the terms of an agreement.

* Pre-Award Project – This is a project established in the financial system prior to receiving a fully executed award document.

* Proposal – A document sent to a potential sponsor seeking funding for a project.

* Proposal Signature Routing Sheet (PSRS): Report generated out of the financial system with proposal data and signature lines, where signatures signify approval of the proposal to be submitted. It is also used to document approval of cost share and time commitments included in the proposal.

* Project— The characteristics of a sponsored project are:
  • activities relating to a proposal funded by an entity outside the University,
  • funded for a specific purpose,
  • an exchange transaction where the sponsor receives value in return for the funding provided to the University,
  • executed by an award, contract, cooperative agreement, memorandum of understanding, or other formal mechanism,
  • for the purpose of supporting any research, scholarly, instructional or public service activity,
  • the sponsor may retain some claim (option or otherwise) to intellectual property that may be developed as a result of a sponsored project,
  • the sponsor may have a direct interest in the development and ownership of the intellectual property resulting from the activity, and
  • the project may have restrictions requiring regulatory compliance.

Official Accounting Policies and Procedures of the University of Missouri System are Authorized and Issued by the Office of the Controller, 118 University Hall
Detail Policy and Procedure:

• Proposal Submission

In accordance with the University’s Business Policy Manual for Grants and Related Contracts (BPM 210), all proposals seeking funding from a potential sponsor must be reviewed and approved by the campus Sponsored Programs Office (SPO) before being submitted to the sponsor.

The Principal Investigator (PI) completes the proposal, with the required approvals documented on the Proposal Signature Routing Sheet (PSRS). When appropriate signatures are obtained from the department and division or college, the PI forwards the proposal and the PSRS to SPO for review. The SPO review includes matters of sponsor and University compliance, budget calculations, setup in the PeopleSoft system, and ensures the PSRS is proper and complete. A proposal checklist (included in the Pre-Award Standard Operating Procedures) is used to guide the reviewer and to ensure no major points are overlooked. The SPO evidences the completion of the review by the SPO signature on the PSRS. When the review is completed, the proposal is routed for the authorized institutional signature.

• Receipt of Award

All awards must be reviewed by the SPO before being set up in the financial system.

The University receives award notifications in various locations on campuses that a sponsor has decided to fund a proposal. If a department receives a notification of award, the department must transmit the award to SPO. Upon receipt of the award, the review and processing by the SPO is documented using notes in the PeopleSoft Proposal Note Pad.

The SPO is responsible for:
- Reviewing the terms of the award,
- Obtaining review from other University representatives as required (minimally to include the Principal Investigator and General Counsel),
- Negotiating any terms that require negotiation,
- Executing any agreement that is finalized,
- Ensuring that regulatory approvals are in place as required,
- Creating the award in the financial system.

The SPO review of the completed award is a control to ensure the final award agrees with the proposal authorized by management and that other University policies are complied with.

• Award Setup

No spending or work on a sponsored project may take place related to an award or pre-award project until the Project ChartField string has been created and activated. The ChartField string will not be created and activated until the reviews and approvals noted above have been completed (except execution of the agreement in the case of a pre-award project).
Once an award has been fully executed (or accepted by the University, in the case of unilateral awards; or guaranteed by the department in the case of pre-award projects) and received by the SPO, the award must be set up in the financial system. Setup of the award consists of making the appropriate entries in the financial system and notifying the PI so that funds can be expended. A review of the award package must be performed by the SPO to ensure completeness and accuracy of the set-up.

The Catalog of Federal Domestic Assistance (CFDA) number associated with federal and federal flow through projects should be obtained as early in the process as possible. If available at the proposal stage, CFDA data should be entered in the Maintain Proposal page. By federal law (Public Law 106-107 (1999), the CFDA number is usually specified on the face page of the Request for Proposal (RFP) or Request for Application (RFA). The CFDA number may also be stated within the program guidelines. Awards from federal agencies such as NIH, NSF, Dept. of Education, etc. will normally include the CFDA number in the award notice. On any award where the status of federal funding and CFDA number is not clear from the documentation received from the sponsor in connection with the award, a written request (including fax or email) must be made to the sponsor to obtain this information and documentation maintained in the award file. Once a project has been created, it is the responsibility of the SPO Accountant to follow up on any outstanding CFDA questions.

The cluster associated with the project should be determined before an award is created, and should be confirmed with the PI. The confirmation of cluster should be part of the PI approval process for acceptance of the award as a whole. The cluster is generally indicated by the scope of the work to be performed. The individual creating the Project ChartField string must determine the cluster before finalizing the award in the financial system.

Once the SPO Accountant receives the project file from the individual who set up the award, the SPO Accountant reviews the setup for accuracy and completeness.

The SPO Management will periodically review awards to verify the accuracy of the setup information in the system, including the CFDA and cluster information. Documented evidence of this review will be retained.

The Controller’s Office will test a sample of awards quarterly to ensure the CFDA and cluster information have been obtained and accurately documented to agree with the award. Documented evidence of this review will be retained.

- **Pre-Award Project Setup**

Under certain circumstances, a pre-award project will be set up for activity where a fully executed award is not yet in place. Care must be taken by SPO managers, PIs and departments to ascertain from RFPs, RFAs, or bid solicitations, that federal grantors and state contracting authorities will cover pre-award expenses should any be incurred before the start date of an eventual award.

The following criteria must be met in order for a pre-award project to be set up:

1. A proposal has been submitted to the potential sponsor.
2. The academic unit creating the proposal agrees to cover any costs that are not covered by an eventual award (or by an award not materializing), and notifies the SPO to that effect.
3. A pre-award request must be authorized and approved by the PI, Department Head and Dean or equivalent.
4. The academic unit notifies the SPO in writing (including email or fax) of:
   a) their desire to begin work on the project before an award is finalized;
   b) compliance with pertinent requirements (e.g., IRB (Institutional Review Board), IACUC (Institutional Animal Care & Use Committee), etc.);
   c) the discretionary spending source to be charged for any costs not covered by an eventual award or due to an award not being granted.
5. These reviews and guarantee of funding by the PI, Department Head and Dean or equivalent are noted and documented in the PeopleSoft Awards Note Pad.
6. Any Pre-Award project in place for more than 6 months must be reviewed and its continuation affirmed by written approval of the PI, department chair and dean or equivalent. If the existence of the pre-award project is not affirmed at that time, and an award has not been made, the pre-award project is to be closed with all expenses transferred to the discretionary spending source committed by the academic unit.

Once these criteria are met, a pre-award Project is set up and spending on that Project can begin. After a fully executed or unilateral award is received, the pre-award Project is converted to fully awarded status. The status of the Project is changed from Pre-Award to Awarded and appropriate billing information is entered.

• Pre-Award Monitoring

Quarterly, a Pre-Award Project review must be conducted by the SPO pre-award individual responsible for handling the award. A summary of this review will be provided to the Pre-Award Management in the SPO. The Controller’s Office will prepare and disburse a quarterly report of Pre-award Projects older than 90 days (based on the project start date), and provide the report to SPO Management. The SPO should review the listing to ensure there is no build-up of unfunded Projects and that appropriate follow-up occurs with the PI and departmental administrators. The review of this listing ensures that management is aware of the existence of Pre-award Projects and provides the opportunity to question the status.

A Pre-Award Project will be terminated and expenses transferred to the discretionary spending source controlled by the academic unit immediately upon receipt of knowledge that an award will not be issued or at the withdrawal of department’s commitment to cover expenses that was given at establishment of a Pre-Award Project.

Responsibilities

PI:
• Completes the proposal and routes it for approvals and submission.
• Authorizes all spending.
• Obtains departmental and college/division approval for the proposal.
• Confirms accuracy of information for proposal and award set up within PeopleSoft.
• Obtains departmental approval and backup funding source for pre-award project.
• Gives formal acceptance and approval of Award to the SPO.

**Department Head (Chair/Director/Dean or designee):**
- Approves the Proposal
- Agrees to cover any pre-award spending not covered by an ensuing award.

**Controller’s Office:**
- Prepare and disburse a quarterly report of Pre-award Projects older than 90 days (based on the project start date) to the SPO for follow-up.
- Perform quarterly review of Awards to ensure the CFDA and cluster information is obtained and accurately documented to agree with the sponsored agreement.

**SPO**
- Reviews proposal ensuring appropriate approvals are in place.
- Check proposal for compliance requirements.
- Tests proposal and award budget calculations.
- Ensures proper proposal and award setup in the financial system.
- Reviews award for consistency with proposal.
- Ensure PI approval and acceptance of the award.
- Managerial review of award setup and PSRS to ensure the review is complete, approvals exist, and all steps have been followed.
- Follow-up and managerial review of Pre-Award Projects.
- Ensure that spending ceases on Pre-Award Projects if departmental backing is withdrawn.
- Obtain award review from other University representatives as required (minimally to include the Principal Investigator and General Counsel).
- Review and negotiate the terms of the award.
- Execution of any agreement that is finalized.
- Creation of the award in the financial system.
- Managerial review to ensure all approvals/authorizations are in place as finalized awards are set up.
- Verify CFDA number and cluster during award set-up.
- Complete follow up on any outstanding CFDA questions once award is set up.

*Effective Date: January 1, 2008*
*Revised Date: October 5, 2007*

**Questions and Comments?**
Any questions regarding the approved Accounting Policy and Procedure should be directed to the Controller’s Office, 118 University Hall, Columbia MO 65211, phone 573-882-2411.
Funding Opportunities

Internal Funding and Collaboration Opportunities
Opportunities include the following, but make sure to watch the ORA newsletter and web site for other internal funding and collaboration programs and deadlines. Also visit www.umsystem.edu/ums/aa/funding_opportunities for additional UM System-wide funding opportunities.

• UM RESEARCH BOARD
  FY2014 Proposal Deadlines:
  Oct. 8, 2013 and Feb. 11, 2014

  The purpose of the UM Research Board is to enhance the long-term quality and quantity of scholarship throughout the University by supporting meritorious research projects. An important goal is to leverage external funds by UM faculty by supporting promising new faculty and funding high-quality new initiatives of senior faculty. Award limit: $75,000.

  Information & Guidelines: www.umsystem.edu/ums/aa/research
  Contact Brenda Stutte (stutte@umsl.edu; 314-516-5897) with questions.

• UMSL JUNIOR FACULTY TRAVEL GRANTS

  Open to full-time, untenured tenure-track faculty. Awards up to $1,000 are given for expenses to attend professional conferences at which the application will be making a presentation.

  Watch the ORA newsletter and web site or contact Brenda Stutte, stutte@umsl.edu, 314-516-5897 for deadlines and more information.

External Funding and Collaboration Opportunities

• PIVOT COS DATABASE
  UMSL subscribes to PIVOT, the largest and most up-to-date database of external funding opportunities. PIVOT also provides a powerful tool for researchers to connect with other investigators within their own institution and at other universities. You can access the database from any computer on the UMSL network or create an account and access PIVOT from any computer.

  Log on at http://pivot.cos.com
Where funding connected with researcher expertise turns into success.

Pinpoint global funding and collaborative opportunities simultaneously. Log on at http://pivot.cos.com

For more information, contact the UMSL Office of Research Administration at wilgerst@umsl.edu or 314-516-6884.
Research Compliance

Research activities are governed by a number of regulatory and compliance committees imposed by federal and state laws. Non-compliance can result in severe penalties to the University and, in some instances, to the individual. It is the responsibility of each faculty member to be familiar with University policy as it relates to these research compliance areas. In the following pages, you will find information on some regulated areas that are commonly identified with certain research activities of faculty and staff.
**Human Subjects Research**

Human Subjects Research includes ANY data gathering on humans for scientific purposes. Data gathering for purely administrative or pedagogical purposes is not included. Review of Human Subjects Research is mandated by the National Research Act (Public Law 93–348) and implemented by Federal Regulations (45 CFR 46). The research of faculty, staff, and students of UM-St. Louis that involves human subjects requires review. A university not in compliance with the law could lose all federal funding of its programs, including funding of student programs. From an ethical standpoint, such review is useful because even the most moral scientist may not fully consider the perspective of the research subject.

The Institutional Review Board (IRB) reviews Human Subjects Research at UMSL. Members of the committee come from a variety of disciplines, including at least one member whose primary concerns are nonscientific and one member who is not affiliated with the University.

**Applications for Full IRB Review**

Applications for FULL committee review must be submitted online via IRBNet (www.irbnet.org) at least 10 days before the scheduled meeting in order to be reviewed that month (NO EXCEPTIONS). The IRB meets the 3rd Thursday of each month.

**Computer-Based Training for Human Subjects Research**

Certificates of training for investigators and faculty mentors must be on file in the ORA before your protocol will be approved. Also see NIH Protection of Human Research Subjects.

**IRB Registration:** IRB Number IRB00000756

**OHRB Federal-Wide Assurance:** FWA 00000011

**Contact**

John Hancock
Manager - Animal Welfare Unit and Compliance

hancockjc@umsl.edu  516-5928

**Animal Subjects Research (IACUC)**

The UM-St. Louis Institutional Animal Care and Use Committee (IACUC) is required by federal regulations to review all projects (research, teaching, or other) involving the use of live vertebrate animals. This includes new or competitive renewal research proposals as well as the use of live vertebrate animals in teaching demonstrations and/or student laboratory studies. This review is necessary for compliance with provisions of the Animal Welfare Act, for federal granting agencies, and for maintaining our accreditation by the American Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) International. UM-St. Louis is fully accredited by AAALAC International.

Applications: Applications for full committee review must be submitted online via IRBNet (www.irbnet.org) at least 10 days before the scheduled meeting in order to be reviewed that month (NO EXCEPTIONS).
IACUC Meetings
IACUC meets at least semiannually for Facility Inspection and Program Review, and as needed.

Contact
John Hancock, Manager - Animal Welfare Unit and Compliance
hancockjc@umsl.edu 516-5928

Grants and Contracts
The federal government provides the majority of external support for sponsored activities. Therefore, this section divides then summarizes the major federal regulations that affect the University if it accepts external support into fiscal and regulatory compliance. Some issues apply to all grants and contracts, and others to particular funding mechanisms.

Fiscal Compliance: The Office of Management and Budget (OMB) has established the following circulars that describe how the federal government monitors funds provided through federal assistance or procurement. The appropriate federal funding agency applies these circulars in monitoring the activities of its programs.

• COST PRINCIPLES FOR EDUCATIONAL INSTITUTIONS OMB Circular A-21 (Appendix OO) establishes cost principles for grants, co-operative agreements and contracts with educational institutions.
• GRANTS AND AGREEMENTS WITH INSTITUTIONS OF HIGHER EDUCATION, HOSPITALS, AND OTHER NON-PROFIT ORGANIZATIONS OMB Circular A-110 (Appendix PP) describes uniform administrative standards for consistency among federal agencies in administration of grants and other agreements.
• AUDITS OF INSTITUTIONS OF HIGHER EDUCATION AND OTHER NON-PROFIT INSTITUTIONS OMB Circular A-133 (Appendix QQ) establishes audit requirements and federal responsibilities for institutions of higher education and non-profit institutions that receive federal funding.

The Federal Audit Clearinghouse operates on behalf of the Office of Management and Budget (OMB) and its primary purposes are:

• To disseminate audit information to Federal agencies and the public.
• To support OMB oversight and assessment of Federal award audit requirements.
• To assist Federal cognizant and oversight agencies in obtaining OMB Circular A-133 data and reporting packages.
• To help auditors and auditees minimize the reporting burden of complying with Circular A-133 audit requirements.

Contact
Karen Boyd
Manager Business Fiscal Operations, Office of Research Administrat
boyd@umsl.edu 516-5923

Updated August 2013
**Export Controls**

The increase in homeland security combined with the growing foreign national employee and student populations and the increase in government and industry defense-related research has resulted in the University’s exposure to export control restrictions.

Export control is defined very broadly by the government and relates to “the transfer of controlled technology, information, equipment, software or services to a foreign person in the U.S. or abroad by any means.”

The penalties are very severe both to the individual and the University, therefore if you:

- Ship technical equipment or sensitive products to a foreign country?
- Collaborate with foreign colleagues in foreign countries on subjects not in the “Public Domain”?
- Train foreign nationals in using technical equipment?
- Work with a country subject to a U.S. boycott?
- Work with proposal requests marked “Export Controlled”?
- Work with a Defense Department Contract or Subcontract?
- Work with sponsors who demand pre-approval rights over publications or the participation of foreign national persons?

If you answered “Yes” to any of the questions above you should contact ORA to discuss whether “Export Control” restrictions apply.

**Contact**

**Anthony Accurso**  
Director – Research Enterprises Financial Services  
✉ accursoa@umsl.edu  ☎ 516-5859

**Conflict of Interest**

The University of Missouri encourages interactions and the establishment of relationships between its employees and federal, state, and local governments, and business and industry as important parts of their research, education, and public service activities including economic development. External corporate relationships enrich teaching and research, expand career and research opportunities for students, and provide the obvious mechanism for the translation of university developed intellectual property into commercial ventures that benefit the public.

However, employee interactions with the private sector also carry with them an increased potential for conflict of commitment and financial conflict of interest, or at least the perception of the potential for conflicts. Because of its role as a steward of public funds and the public trust, the University assumes the responsibility to assist its employees in identifying activities that present the potential for conflicts and in managing or eliminating these potential conflicts to ensure they do not threaten the integrity of the University’s and
employee’s core activities as viewed by an independent prudent person. To do otherwise could impair the credibility of the academic enterprise.

To achieve these goals, the University has developed Conflict of Interest Policies (UM Collected Rules & Regulations 330.015, 410.020 and 420.030 -- links listed below). Employees should be aware that conduct that violates these rules and regulations pertaining to conflict of interest shall constitute a breach of the employment contract and may lead to disciplinary action.

330.015 Policy on Conflict of Interest, Employee Conduct:

410.020 Institutional Conflicts of Interest in Human Subjects Research:

420.030 Conflict with the Interests of Federal Grant Agencies:
www.umsystem.edu/ums/rules/collected_rules/research/ch420/420.030_conflict_with_the_interests_of_federal_grant_agencies

The ORA administers the UMSL Conflict of Interest Committee and review of potential conflict of interest disclosures related to grants, research and commercialization submitted by faculty and staff.

Submitting a Potential Conflict of Interest Disclosure
Potential Conflict of Interest disclosures related to grants, research and commercialization must be submitted online via IRBNet (www.irbnet.org) to the UMSL Conflict of Interest Committee for review and management.

Contacts for Potential Conflict of Interest

PHS/NSF Grant Applications:

Anthony Accurso
Director – Research Enterprises Financial Services
accursoa@umsl.edu  516-5839

Technology Transfer (equity, license agreements, startup companies, etc):

Tamara Wilgers
Director – Technology Commercialization and Economic Development
wilgerst@umsl.edu  516-6884

Updated August 2013
Technology Transfer & Economic Development
Commercializing Research Discoveries

Technology Transfer & Economic Development is housed within the Office of Research Administration (ORA) at UMSL. We work with UMSL faculty and staff, often including graduate students and post docs, to facilitate the transfer of research discoveries and inventions from the University to the private sector where they can be further developed for public use and benefit.

The successful commercialization of research also:

- encourages discovery of new knowledge and technology
- provides career and financial incentives for inventors
- attracts sponsored research
- develops and strengthens ties with industry
- provides faculty consulting opportunities
- enriches the student experience and helps create opportunities for graduates
- ensures stewardship of intellectual assets
- generates income for researchers and the University, and
- enhances regional and national economies through new products and new companies based on University technologies.
Services

Principal functions of the Technology Transfer Office at UMSL:

- Educate faculty on intellectual property and technology transfer while encouraging invention disclosure from faculty.
- Review invention disclosures for patentability, freedom to operate and marketability.
- Maintain federal and grant compliance regarding intellectual property.
- Oversee the filing of provisional and non-provisional patent applications.
- Facilitate commercialization of technologies and collaborations with outside organizations via non-disclosure, material transfer, inter-institutional collaboration, sponsored research and fee-for-service agreements.
- Work with the ORA's sponsored programs administration staff to review and approve intellectual property language in grants and contracts.
- Actively market and promote technologies to commercial entities.
- Negotiate, draft and maintain license agreements.
- Maintain technology transfer tracking database regarding all UMSL invention disclosures, patent applications and patents, and IP-related agreements.
- Help faculty identify collaborators for grant submission and development of their technologies.
- Provide guidance to faculty regarding establishing a startup company and helping faculty entrepreneurs connect with potential investors.
- Provide assistance to UMSL's biotechnology and IT incubator, ITE.
- Administer the UMSL chapter of the National Academy of Inventors (NAI).

Disclosing Your Invention to the University

Every invention made by an employee of the University engaged in academic work utilizing facilities of the University needs to be reported to the University. (UM Collected Rules & Regulations, Section 100.020)

Faculty, staff and students are welcome and encouraged to present their innovation concepts to UMSL's technology transfer staff early in the process to get an initial idea whether a full disclosure is needed and/or what needs to be done before a full disclosure is filed.

Federally Funded Inventions

Under the 1980 Bayh-Dole Act, Universities can choose to retain rights to discoveries made in the course of federally funded research. However, the University has a responsibility to report such inventions and commercialization progress to the funding agency; such reporting is handled by the University's technology transfer staff. It is extremely important to notify the ORA of any invention that comes out of federally funded research.
Invention Disclosure Forms
Once an invention/discovery is ready to be fully disclosed to the University, the researcher needs to complete form UM-16C (Invention Disclosure) and submit it to Tamara Wilgers, Director of Technology Commercialization & Economic Development (wilgerst@umsl.edu or x6884).


IP Ownership
Inventions made by UMSL employees in the course of their employment, using University time, facilities, or funds, are considered the property of the institution. If you have any questions about ownership rights to an invention, an analysis will be conducted by the University. You will need to inform the University about the circumstances involved in making the invention and your role in its conception and development. Please contact Tamara Wilgers, Director, at wilgerst@umsl.edu or x6884.

Invention Evaluation and Commercialization
Once a disclosure is received, technology transfer staff evaluate the technology to determine patentability and marketability and consults with the inventor to determine next steps. Possible outcomes include:

- Intellectual property protection is pursued, using the most appropriate practice of stewardship (e.g., patents, copyrights, trademarks, trade secrets) and potential licensees are sought.
- The technology is considered as the basis for a faculty or other start-up company. The University may accept equity in exchange for licensing rights.
- The technology is determined not to be commercially viable. In this case, the technology is moved to an inactive status and is no longer managed, or, if requested by the faculty/staff member, the University will consider a waiver of rights to the inventor(s).

Patents and Publication
Seeking a patent does not preclude publication of research results and does not have to delay publishing. To find out if your discovery should be patented, contact the ORA. Technology transfer staff will work with outside patent attorneys to accommodate your publication dates. Best results are achieved, however, if you submit your invention disclosure to the University at least three months prior to the first public disclosure. This allows time to assess patentability and commercial potential and to draft a patent application to protect rights to your invention. Please note: the 2011 Leahy-Smith America Invents Act (AIA) switches the U.S. patent system from a “first-to-invent” to a “first-inventor-to-file” system. Its central provisions went into effect on March 16, 2013. Please contact us for information on how that affects protection of your research discoveries.

Inventor Involvement
Inventor involvement is important to the entire technology transfer process. Your expertise is especially helpful during the evaluation for patentability, in the patent application process, in identifying licensing prospects, and in meeting with companies.
expressing interest. Inventors typically provide technical evaluation of previous patents and publications in their field, supply information to the patent attorney and review draft applications and responses to government actions, and discuss technical aspects with interested companies. Regardless of the amount of involvement, inventors are kept informed of the evaluation process and any actions taken, and their input is considered in making decisions about the University’s protection and licensing of the invention. However, final responsibility for such decisions rests with the Office of Research Administration.

License Revenue Share
Any income resulting from licensing patent rights are distributed among the inventor, the inventor’s department, and the University as follows:

- Inventor(s): 1/3 of income, before patent expenses
- Department(s): 2/9 of income after patent expenses to the inventor’s department(s)
- Campus/ORA: 2/9 of income after patent expenses to the ORA to support research and technology transfer activities
- University System: 2/9 of income after patent expenses to the UM Office of Intellectual Property Administration to support system-wide technology transfer activities and partial support of the campus offices

What is Patentable?
There are three types of patents:

Utility patents may be granted to anyone who invents or discovers any new and useful process, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof; design patents may be granted to anyone who invents a new, original, and ornamental design for an article of manufacture; and plant patents may be granted to anyone who invents or discovers and asexually reproduces any distinct and new variety of plant.

Patent laws set forth classes of inventions eligible for patenting: New or useful process, machine, manufacture, or composition-of-matter; or any new and useful improvement thereof.

The word “process” is defined by law as a process, act or method, and primarily includes industrial or technical processes. The term “machine” used in the statute needs no explanation. The term “manufacture” refers to articles that are made, and includes all manufactured articles. The term “composition of matter” relates to chemical compositions and may include mixtures of ingredients as well as new chemical compounds. These classes of subject matter taken together include practically everything that is made by man and the processes for making the products.

Things that cannot be patented in the United States include:

- Laws of nature
- Physical phenomena
- Abstract ideas
Patent law specifies that the subject matter must be “useful.” The term “useful” in this connection refers to the condition that the subject matter has a useful purpose and also includes operativeness, that is, a machine that will not operate to perform the intended purpose would not be called useful, and therefore would not be granted a patent. A patent cannot be obtained upon a mere idea or suggestion. The patent is granted upon the new machine, manufacture, etc., as has been said, and not upon the idea or suggestion of the new machine. A complete description of the actual machine or other subject matter for which a patent is sought is required. To be patentable, an invention must also be novel and non-obvious.

Technology Transfer, Step-by-Step

Step 1. Disclosure
The technology transfer process begins when you submit a confidential University of Missouri Invention Disclosure Form to the ORA technology transfer staff. The form asks for information such as a description of the invention, inventor contact information, relevant funding sources, prior art, prior and upcoming public disclosures of the invention, and commercial contacts in the field of the invention.

(UM 16C - Invention Disclosure Form: www.umsl.edu/services/ora/pdfs/tech-transfer-econ-dev/UMSL_Invention_Disclosure.pdf.

Step 2. Evaluation
Tech transfer staff evaluate the invention disclosure, conducting a patent and literature search to evaluate the uniqueness of the invention and a marketability survey of the literature and industry contacts. This evaluation will help the University determine whether your invention meets patentability requirements (new, useful and non-obvious) and is licensable (whether a company will pay UMSL for the right to commercially practice the invention).

The University of Missouri campus Technology Transfer Offices use TechValue, a disclosure analysis and tracking tool, to help work through disclosure evaluation and marketing and to increase communication between the TTOs and inventors. The TechValue system sends disclosure evaluation status updates to inventors via email.

Step 3: Patenting
In the patenting process, inventors typically supply information to the patent attorney and review draft applications and responses to government actions. The ORA will select either internal counsel (provisional patents only) or external counsel to draft, file and prosecute patent applications, working with both the inventors and the TTO. After filing a patent application, it can take from one to three years for the patent to be issued or denied by the U.S. Patent and Trademark Office.

Step 4: Commercializing an Invention
As mentioned above, a viable technology can be commercialized either by licensing it to industry or establishing a business start-up company around the technology. A license of patent rights allows a company to make, use and/or sell your invention.
Marketing the invention is key to successful licensing. You can make a valuable contribution here as you are likely familiar with potential markets and licensees for the invention.

The University pursues an aggressive licensing program for the development of mutually advantageous license agreements with industrial partners. The license agreement can be either exclusive or non-exclusive and can be adapted as necessary for each situation. There is no way to predict how long it will take to negotiate the agreement or how soon royalties will be received once an agreement is in place. The ORA’s technology transfer staff handles licensing negotiations.

**Contact**

Tamara Wilgers  
Director – Technology Commercialization and Economic Development  
✉️ wilgerst@umsl.edu ☎️ 516-6884
Animal Welfare Unit

About
The Animal Welfare Unit works to provide the optimum in facilities, environment and care for research animals and the personnel who work with them, allowing researchers to focus on the science and further the University’s goal of research excellence.

The Unit strives for continuing accreditation and citation-free federal inspections. The animal care and use programs, developed and maintained by the combined efforts of the Manager, the consulting veterinarian and the Institutional Animal Care and Use Committee (IACUC), assure that animals receive the best of care, personnel are protected and all regulatory requirements are met on a continuing basis. Researchers can be confident that the only variables are those that they experimentally introduce.

Registration and Accreditation

- UMSL is registered with the Office of Laboratory Animal Welfare (OLAW) and is an assured institution. Our assurance number is A3398-01.

- UMSL is also fully accredited by the American Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) International.

Contact
John Hancock
Manager, Animal Welfare Unit; Administrator, IACUC and IRB
✉ hancockjc@umsl.edu ☎ 516-5928
Vision
To advance nanoscale science and technology to improve the quality of life and to be a powerful engine driving the economic growth of St. Louis and the State of Missouri.

Mission
To serve as a nexus for fundamental interdisciplinary research and to elevate the research capacity of our faculty and students for cutting edge research, technology transfer, cooperative and educational outreach and workforce development.

Strategy
To attract scientists and students from diverse backgrounds to study nanoscale phenomena and to develop novel technologies with a focus on energy, food, health and environment. Center members focus on fundamental research with a clear goal to translate breakthrough discoveries into practical applications. The Center works closely with local industries and other scientific communities to enhance scientific activities, to develop novel technologies, and to train capable scientists to serve the economic growth of St. Louis and the State of Missouri. The Center for Nanoscience (CNS) at the University of Missouri-St. Louis was established to both facilitate collaboration among university and industry scientists and engineers and provide interdisciplinary opportunities for faculty and students. Its mission is to enhance the research capacities of its faculty members and students and serve the region through research and technology transfer, cooperative and educational outreach programs and workforce development. The CNS has approximately 16,000 square feet of assignable space, including 11,300 square feet of research laboratories and 2,700 square feet for research support space. In addition, there are 14 offices and a conference room. The CNS also houses the Microscopy Image and Spectroscopy Technology (MIST) Lab and the X-ray Diffraction Facility.

History
Located in the William L. Clay building, the Center had its beginnings in a federal grant proposal initiated in 1988 by M. Thomas Jones, chemistry professor and deputy chancellor. The CNS facility took real shape with the help of Congressman William L. Clay and his support of a $10 million funding proposal that was awarded in July 1991 — $7.5 million was used for building construction and $2.5 million was used for research instrumentation and building furnishings. The building, named in honor of Congressman Clay, was completed in early summer 1997. Originally named the Center for Molecular
Electronics, the facility was renamed as the Center for Nanoscience in early 2007 to better encompass the research being conducted by members.

**Facts**
The Center for Nanoscience was established to facilitate collaboration among university and industry scientists and engineers and provide interdisciplinary opportunities for faculty and students.

- 16,000 square feet of assignable space
- 11,300 square feet of research laboratories
- 2,700 square feet for research support space
- State-of-the-art conference room
- Home to the Microscopy Image and Spectroscopy Technology (MIST) Lab and the X-ray Diffraction Facility
- Instrumentation List: www.umsl.edu/services/ora/cns

**Research Areas**

**Energy and Nanomaterials**
Energy is not only the driver for improving the quality of human life but it is critical to our survival. To power the planet for a better future, development of sustainable and clean energy resources is imperative. This interdisciplinary area is dedicated to fully utilizing nanoscience to perform transformational research in order to develop alternative energy sources that are sustainable, affordable and environmentally friendly. The cluster focuses on design, synthesis and testing of novel materials for energy conversion, energy storage and energy utilization.

**Nanomedicine and Nanobioscience**
To create new ways to diagnose disease, monitor health and deliver therapeutic drugs, this cluster merges new concepts and technologies from nanoscience to chemical biology, biology, biotechnology and biophysics to develop novel molecules, materials and systems for drug delivery, disease diagnosis and therapy, and other biological or biotechnological applications. This area fosters vast potential of nanobioscience through the integration of multidisciplinary research developments with a focus on developing transformational approaches to improving human health.

**Nanosensors and Chemical/Biological Sensing**
Researchers focus on the fundamental study of novel nanostructures that enable significantly improved schemes to detect chemical and biological species. The section emphasizes translational research with applications to disease diagnosis and monitoring, food safety and security, environmental monitoring, and detection of toxic species. The research group consists of interdisciplinary PIs working synergistically to develop molecular and biomolecular sensors/detectors with high sensitivity and selectivity toward the targeted analytes. They also seek to develop nanosensors that can be introduced non-invasively into the targeted environments which are not accessible to traditional sensors.

**Contact**
Kendra Perry, at (314) 516-4626 or perryk@umsl.edu.
The Medicinal Chemistry Group (MCG), a unit within the Center for Nanoscience, was established in 2010 by a group of former Pfizer scientists. The incorporation of applied industry skill within the university’s collaborative research environment positions the MCG to deliver high quality strategy and execution of medicinal and synthetic chemistry services in areas such as design and synthesis of novel small molecules as potential therapeutic agents, general organic synthesis, and development of methods to identify potential clinical or lead candidates. MCG chemists have demonstrated success in identifying tractable leads from high-throughput screens, hit-to-lead optimization and in silico based design. A special emphasis exists in the area of neglected diseases, particularly those of the developing world. The group seeks to discover and develop novel small molecule therapies in a wide range of therapeutic areas with the goal of bringing safe, effective and affordable new medicines forward and translating basic research discoveries into clinically relevant therapies.

The MCG chemists have demonstrated expertise in the design, synthesis and development of drug candidates with the pre-requisite efficacy, safety, pharmaceutical, pharmacokinetic and pharmacodynamics properties. They have extensive experience in evaluating and writing pharmaceutical based patents and at identifying and synthesizing tool or early lead compounds and utilizing structure-based drug design. Practical medicinal chemistry experience is used to transform leads into promising pre-clinical candidates. Skills also include synthetic route optimization, scale-up synthesis and working with other contract research organizations (CRO).

Contact John Walker, walkerjoh@umsl.edu, (314) 824-1991.
Center for Neurodynamics (CND)

Mission

- Maintain a commitment to advance knowledge as part of a comprehensive research university
- Contribute significantly to theoretical and applied research in the fields of its faculty scholars
- Provide quality undergraduate and graduate research experiences to students from the urban St. Louis region
- Form successful collaborative partnerships regionally within the metropolitan community, as well as internationally, and
- Help to raise the University's national and international profile by publications in major scientific journals and presence at major scientific meetings both within the United States and abroad.

Overview

The Center for Neurodynamics was founded in 1996 by Frank Moss, Lon Wilkens, and Steve Lehmkuhle. Initial studies focused on the role of noise and nonlinear dynamics in biological systems, leading to the first demonstration of behavioral stochastic resonance in a living animal, the paddlefish.

The Center, which has been funded by grants from the Office of Naval Research, the National Institutes of Health, DARPA, and the National Science Foundation, has branched out into many areas of complex dynamics in biological systems, ranging from the complex neuroanatomy of the paddlefish, to synchronization in the crayfish mechanoreceptor-photoreceptor system, to the role of noise in human sensory perception, to the complex behavior of foraging zooplankton.

Joining the Center as faculty in 2004, Sonya Bahar added the spatiotemporal imaging of neural systems to the Center’s roster of projects. Her group is imaging the changes in neural synchronization that accompany seizure activity in the neocortex. The new decade brings a big step forward for the Center, as we are joined by three members of UMSL's Department of Psychology, Rob Paul, Brenda Kirchhoff and Mike Griffin, as well as Gualtiero Piccinini from the Department of Philosophy, whose research includes the philosophy of cognition and computation.

Contact

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ITE: Innovative Technology Enterprises at UMSL

MISSION
ITE: Innovative Technology Enterprises at UMSL* is designed to be a major force in translating innovative ideas into thriving businesses across industries such as the life sciences and information technology. To succeed in this mission, ITE offers state-of-the-art infrastructure and access to the expertise of University faculty and students. In concert with the University of Missouri’s fourth mission, ITE fosters innovation to support knowledge-based economic development.

LONG-RANGE STRATEGIC GOALS
ITE works closely with corporate and research entities in the region to accomplish the following in economic development, technology transfer and expended research and educational opportunities:

- House multiple startup companies formed by entrepreneurs in high-growth, high-technology fields such as the life sciences and information technology providing necessary facility resources and access to UMSL faculty and students in all disciplines to advance their work.
- Develop new startup companies from University inventions, which in turn provide high-paying job opportunities for UMSL graduates and others in these fields.
- Provide computing resources and broadband connectivity to tenant companies, academic researchers and industry through the High-Performance Computing (HPC) Center.
- Serve as a cross-discipline research center of excellence supporting all academic and industry researchers requiring high-performance computing.
- Operate as a springboard for major external funding that supports research, technology transfer and economic development.

SITE SPECIFICATIONS

- 2.1 miles from campus, I-70 frontage, near Lambert International Airport
- 56,300 gross square feet; 42,200 rentable space including offices and wet labs
- 3,000 square foot HPC Center (offices and data center)
- 256 parking spaces (6 spaces/1,000 square feet)
ITE: Innovative Technology Enterprises at UMSL was formerly known as IT Enterprises.

CONTACT

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The Missouri Institute of Mental Health (MIMH) strives to be the leading provider of science-based research, program management and continuing education to organizations and communities delivering behavioral health services.

Specific areas of interests include substance abuse prevention and treatment, mental health promotion and treatment, mental health and substance abuse recovery, suicide prevention, violence prevention, behavioral health, behavioral informatics, epidemiology, and health literacy. Areas of expertise include quantitative and qualitative research methods, information technology, web site design and applications, process and outcome evaluation, and program and curriculum development.

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