<u>School of Medicine Research Strategic Plan</u>

<u>February 15, 2012</u>

<u>Executive Summary of Reports and Recommendations</u>

These reports include the initial charge to each workgroup, specific recommendations including when appropriate estimated budgets for proposed programs or personnel, and suggested time lines for actions.

Core Facility Workgroup

The initial charge to the workgroup: Because of the complexity and scope of resources included under this workgroup, we propose that four sub-committees be formed: clinical genetics, applied genomics & proteomics; imaging; bio-computing, bio-informatics and bio-statistics; and laboratory animal resources. The charge of this workgroup and each sub-committee includes:

- What are necessary core services?
- How can we attain effective management and budgetary oversight of these services?
- How can we assure that these services accessible, affordable, and sustainable?
- How can we promote transparency of the process to allocate research resources?
- Can we develop a standard "portfolio" model for evaluating investments in new core facilities?

The workgroup reported:

- Core facilities are intended to provide necessary equipment, services and expertise to support experimental protocols and data analysis.
- A "core" may be designated by its original source of funding, the presence of sustaining funding from the University, its accessibility to the University community and by its development of a cost/fee structure for services based on University guidelines.
- OVPR has established a Cores Committee to establish criteria for cores, implement a University wide management and billing system (iLab), and review applicants for and performance of cores. These criteria and processes are in a nascent phase.
- The availability and scope of services of existing cores is not as well known as would be desirable.
- Key core facilities in bio-statistics, bio-informatics, bio-computing and behavioral studies (B4) are lacking or so distributed as to be inaccessible.
- DLAR is lacking a transgenic mouse core, small mouse MRI imaging, and a BSL3 Facility

The workgroup Recommended:

- Define Core Facilities and develop an evaluation algorithm based on cost/revenue and utilization. Bench marking standards should be established for core services to monitor university use, to anticipate new core service needs and to review fiscal status.
- To provide funding and promote sustainability, establish a Centralized Core Facilities Budget (combining funding from the University, SOM, departments and external sources) to provide for annual service contracts, systems upgrades and funding of support personnel.
- To promote accessibility and pilot studies, create a voucher system for investigators to conduct translational feasibility studies. These vouchers should be particularly targeted to recent recruits and junior faculty.
- Charge the Core Committee to review requests for system upgrades and review applicants for vouchers.
- The availability and accessibility of cores should be enhanced through a web based central listing of services with a common format for describing scope of services, availability, and service fees. Complimenting this initiative, cores should initiate workshops, courses, open houses and grand rounds to clinical departments to describe their services and research initiatives they support.

- KCI cores to be available to all of the university will require additional funding from a Core Facilities Budget and promotion of their services to the university community.
- Establish a bio-statistics, bio-informatics, bio-computing and behavioral studies (B4) Core; assess the extent of present expertise in the faculty; identify strategic directions for SOM research and inform B4 of requirements of support and, establish an academic program such as a center of institute
- Implement iLab Solutions for scheduling and invoicing of services.

Technology Transfer Workgroup

The initial charge to the workgroup:

- Identify steps to enhance collaborations with corporations, technological transfer initiatives (Tech Town) and local health providers for clinical studies.
- Identify likely sources of future research funding (ACA, Medicare, industry, venture capitalist) and step/investments necessary to well position the SOM for these opportunities.
- Consider how commercialization may affect the emphasis on and funding preference for problem oriented research.
- Identify opportunities for collaboration of the SOM research office with University Offices of Development, Alumni Affairs and Government Relations.
- Make readily available and accessible to all faculty a description of the process for commercial development

The workgroup reported:

- Technology Transfer (TT) contributes to the research enterprise of the SOM by emphasizing problem based research and translational science
- Funds derived from TT through licenses, royalties or equity income may defray patenting and licensing fees and support future research activities.
- TT may advance the economic growth of the local life science industry through commercialization and public utilization.
- TT may advance non-traditional sources of funding for university research activity including industry sponsored research, venture capitalist, local philanthropies and direct government funding.

The workgroup recommended:

- Multiple University/SOM administrative offices supportive of TT should be better coordinated through strategic changes in infrastructure and targeted personnel changes to facilitate information flow, to respond to new initiatives and to enhance commercialization of new discoveries.
- TT at the SOM should coordinate fully with WSU initiatives especially Tech Town in development of incubator space in a well equipped flexible research facility.
- Establish a TT public website highlighting commercial value to the community and opportunities for investment.
- TT to better attract investors should develop an effective marketing campaign to promote its core research capacities and IP assets including organizing seminars and industry networking events.
- TT to better engage its faculty and students should recognize in its promotion and tenure considerations success in technology development, intellectual property patenting and licensing of biomedical discoveries.
- To advance the TT interests and skills of its faculty and students should continue/initiate new educational opportunities (Business of Biotechnology, certificate in biomedical innovation, graduate and post-doctoral innovation fellowships) and participate in team science mentoring programs.

- Access to TT support would be enhanced by departmental liaisons to counsel faculty on innovation/commercial activities and a transparent and expedient process of reviewing submissions for TT support.
- A unified University and SOM TT Budget should be developed to establish a biotechnology development fund, to create dedicated incubator space, to develop a business mentor program and to decrease fees for research agreements.
- The distribution of funds from successful TT initiatives developed by faculty in the SOM should be revised to allow for a portion of revenue to support the TT activities of the SOM Research Office including a biotechnology development fund and to expand the SOM TT staff.

Program Project-like Grants Workgroup

The initial charge to the workgroup:

- How can the SOM best promote (support, provide incentives, etc) the development of five program project grants in the next five years?
- Are there reconfigurations of departments/centers that would better serve this goal?
- What areas do we have the best likelihood of developing new program project grants?
- Which incubator initiatives are most likely to result in program project grants and why?
- What are the key disciplines likely to collaborate in these areas?
- What are the likely sources for research funding in these areas?

The workgroup reported:

- Program Project-like Grants (PPG) represent one category of collaborative projects along with institutional training grants which require a team science approach to research.
- PPG's require faculty with **strong individually funded research** which share a **significant and unique research focus** brought together through **leadership adept at molding complimentary strengths and identifying areas of opportunity** and facilitated by **an academic administrative structure which rewards those who collaborate in interdisciplinary research and which enables strategic hiring and retention of key faculty and expertise.**
- PPG's as does all of the SOM and WSU research activities depend upon accessible and affordable core facilities, efficient research administration, and faculty engaged in research throughout their careers.
- PPG's are likely to include opportunities for translational research and technology transfer and these three research initiatives will likely form the nexus of the University/SOM marketing campaigns and efforts to seek non-traditional funding.

The workgroup recommended:

- **Strong individually funded research** will be advanced by funded time for clinical faculty to spend on research, university commitment to graduate student stipends, and assisted preparation of F and K awards.
- Facilitate and encourage submissions of institutional training grants (T32).
- **Significant and unique research foci** for PPG's are likely to include elements of basic science, clinical application and public health benefit. Proposed PPG's should be asked the incidence of a clinical condition, the antecedents of this condition and sequelae of this condition. SOM PPG foci should be selected and funded.
- **Leadership** of PPG's should be enabled by significant University support for faculty release time for team leaders, dedicated administrative support and budgets to support seed funding ($100,000 to $300,000 annually for three years) and $10,000 annually for a complimentary seminar series.

Leadership for PPG's should also be evidenced at senior administrative levels to promote strategic cross departmental recruitments and retention of key faculty and expertise.

- **Academic administrative structure** should develop rewards, incentives and appropriate processes for cross departmental and school cost allocation, effort and indirect splits. P&T considerations should value team science as should funding preferences for intramural funding. Current departmental, center and institute structures should be reviewed in terms of their fostering of team science building and engagement of faculty throughout their research careers. A clinical scholar track and career development program should be implemented.

Translational Research Workgroup

The initial charge to the workgroup:

- Identify core facilities necessary to promote translational research and identify means to promote collaboration between basic science and clinical scientists.
- Identify funds available and a means to advance a consensus research agenda for translational research.
- Identify likely sources of future research funding (ACA, Medicare, industry, venture capitalist) and step/investments necessary to well position the SOM for these opportunities
- Consider the value of consolidating (perhaps as a core facility) population studies including epidemiology, statisticians and behavioral health researchers.
- Identify opportunities for collaboration of the SOM research office with University Offices of Development, Alumni Affairs and Government Relations.

The workgroup reported:

- Translational research (TR) requires many of the same administrative, leadership and educational initiatives described for technology transfer and program project grants.
- TR also depends upon key core facilities especially those of bio-statistics, bio-informatics, bio-computing and behavioral studies.
- In addition, TR requires ongoing liaison with community agencies and community advisory boards, to jointly prioritize health needs of our community of service.
- TR provides opportunities for emerging technologies and methodologies likely to compliment technology transfer.
- TR may identify significant and unique research foci using criteria shared with program project grants. Proposed initiatives in TR should be asked the incidence of a clinical condition, the antecedents of this condition and sequelae of this condition. SOM PPG foci should be selected and funded.
- TR is currently represented by the Department of Clinical and Translational Sciences (DCATS) and a primary resource are two clinical research centers one located at Children's Hospital and the other at the Mott Center.

The workgroup recommended:

- Define the scope and resources of DCATS and its relationship to the SOM Research Office.
- Include the MPH and Master's of Medical Research programs into a TR focus within the SOM Research Office.
- Sponsor a grant writing workshop/service for faculty interested in TR.
- Explore opportunities for translational research collaboration of WSU/SOM with the VA and HFHS.
- Develop a complimentary clinical research agenda with Vanguard building upon our shared clinical priorities and clinical material and clinical information systems.

- Explore funding opportunities to support TR through collaboration with Vanguard and the VA and by a marketing campaign describing the community benefit of TR targeting local philanthropies and governmental agencies.
- Establish a community engagement core and a behavioral core to support TR.

Research Administration Workgroup

The initial charge to the workgroup:

- Establish and monitor pre-award administrative and fiscal standards of performance;
- Establish and monitor post-award administrative and fiscal standards of performance;
- Integrate existing research data/tracking systems for both grants and contracts;
- Establish procedures to verify data integrity of research data/tracking systems;
- Establish a data warehouse to include faculty biographic sketches and institutional descriptions (facilities, resources etc) sufficient to answer much of the standard information required in an NIH application; and,
- Recommend to the combined chairs an integrated and accountable SOM grants administrative organization

The workgroup reported:

- Pre-award administrative and fiscal expertise and performance varies significantly across SOM departments exacerbated by the lack of clear delineation of responsibilities between the investigator, the department, the SOM research office and SPA.
- Post-award monitoring of administrative and fiscal performance is hindered by the Banner system's challenges in providing accurate current account balances, projected year end account balances and timely data entry for patient recruitment into clinical trials.
- Present data systems to support managerial decision making, to identify and quantify current research and investigator expertise and to generate standard research reports are either not in place, inadequate or poorly integrated.

The workgroup recommended:

- Establish an advisory panel in pre- and post-award administrative and fiscal management drawn from the SOM and SPA representing expertise in the requirements of key funding agencies.
- This advisory panel would delineate roles and responsibilities of all parties in research submission, monitor performance of research administrators in SOM departments and develop remediation plans were necessary, create a "research administrative blog" to share questions and expertise and improve the eProp system.
- Document and adhere to a uniform set of SOM policies at eh proposal stage including salary commensurate with effort, cost sharing and in-kind matches and indirect cost distribution.
- Implement OnCore System to manage research programs.
- Reluctantly accepting the limitations of the Banner system, the advisory panel would increase training including on-line tutorials on navigating Banner and Dashboard and initiate yearly audits of grants so that reallocation/dispute resolution can occur.
- Expand the charge and membership of the existing WSUPG Data User/Data Design Workgroup to address research management and promotion:
  - Identify research reports routinely requested.
  - Identify both reliable in-house and external data bases to generate research reports.
  - Identify reports available or needed to facilitate collaboration among investigators and to support team science projects in areas of anticipated research growth.
  - Develop processes to verify data integrity periodically and to discuss and resolve data entry problems

Research Faculty Development Workgroup

The initial charge to the workgroup:

- Propose a faculty mentoring program for both junior and senior faculty to maximize their research productivity through-out their careers;
- Establish funding preferences for intramural support for junior faculty and means to fund students and post-doctoral scholars in their research activities; and,
- Establish a dean's reserve of funds and space for promising new areas of research.

The workgroup reported:

- The University and SOM lack consistent and uniform initiatives to actively engage faculty throughout their careers to best match their research interests and skills with departmental resources and expectations. Significantly, a SOM plan is being launched.
- Training and support of faculty to participate in team science to complement individual research is lacking.
- Clinical researchers are increasingly challenged to develop their research with the present emphasis on clinical productivity and declining internal and external sources of research support.

The workgroup recommended:

- Each department should establish a mentor program within the context of the SOM mentoring program especially for new faculty but also for faculty at later stages of their careers.
- The mentoring program should be evaluated each year and reported as part of the chair's review with the dean.
- The SOM should more widely disseminate its formal mentor training program and a system for rewards for departments and individuals that have successfully employed a mentoring program as evidenced by research productivity.
- Each mentee will develop annual and five year goals, a plan to achieve these goals and expected outcomes.
- Mentoring should include an emphasis on team science and actively promote participation in collaborative research. Mentees should be matched to one or more research clusters, likely to bridge departments.
- To further promote team science, the Vice Dean for Research in the SOM will include in the SOM New Faculty Orientation a formal orientation program for faculty on research resources for grant preparation, access to and availability of core facilities, and annual updates of faculty profiles in the Community of Science database.
- Educate those who evaluate faculty for career advancement (Promotion and Tenure committees, chairs, etc.) to favorably weight collaborative research.
- To advance clinicians' participation in research, the committee supported the proposed Clinical Scholar Track with more time for research than currently available for non-funded clinical educators. This research time would be supported initially by SOM and departmental funds, reviewed annually, and likely be available for a limited time.
- Also supported was the proposal for establishing a Clinical Scientist Career Development Track in which a newly recruited assistant professor with demonstrated research potential would receive a three year 40% protected time award (reviewed annually) to develop a research program.
- Establish semi-annual "check-ups" of faculty >40% research.
- The workgroup also recommended contracting with a grant writing agency to assist faculty with grant submission. Participation in this program would be limited and tied to the mentoring program.

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