

**RESEARCH GRANT APPROVAL – DECEMBER 2010**

COLLEGE OF	INVESTIGATOR	PROTOCOL TITLE	SPONSOR	AMOUNT
Allied Health and Nursing	Adrienne Lauer, Ed.D.	Providing Independence and Access for People with Physical Limitations Through Use of the Apple iPad	NSU-HPD	\$5,049 for two years
Optometry	Kimberly K. Reed, O.D.	Nutritional Counseling in the Eye Care Practice	NSU-HPD	\$4,750 for two years

**RESEARCH GRANT APPROVAL – JANUARY 2011**

COLLEGE OF	INVESTIGATOR	PROTOCOL TITLE	SPONSOR	AMOUNT
Dental Medicine	Shiva Khatami, D.D.S., Ph.D.	Coping with Uncertainty in Clinical Reasoning: A Conceptual Framework for Dental Education	HPD Educational Research Grant	\$10,000 for one year
Dental Medicine	William B. Parker, D.D.S.	Histological Comparison of Bone to Implant Contact Between NobelActive and NobelReplace Tapered Implants in Human Cadaver Mandibles	NSU-HPD	\$4,999.80 for two years
Pharmacy	Elizabeth Sherman, Pharm.D.	A Randomized Controlled Trial Evaluating the Use of Daily Short Message System (SME) Text Message Reminders to Increase Antiretroviral Adherence in a Primary Care Clinic	NSU-HPD	\$5,000 for two years

**RESEARCH GRANT APPROVAL – FEBRUARY 2011**

COLLEGE OF	INVESTIGATOR	PROTOCOL TITLE	SPONSOR	AMOUNT
Dental Medicine	Dana Michelle Busciglio, D.M.D.	Effect of Thread Design of Orthodontic Mini-Screws on High Point Stresses	NSU-HPD	\$5,000 for two years
Osteopathic Medicine	Michael Wolwa, M.D.	Cervical Cancer Knowledge and Perceived Susceptibility Among Women	NSU-HPD	\$3,000 for one year

**RESEARCH GRANT APPROVAL – MARCH 2011**

NO AWARDS GIVEN

**RESEARCH GRANT APPROVAL – APRIL 2011**

COLLEGE OF	INVESTIGATOR	PROTOCOL TITLE	SPONSOR	AMOUNT
Dental Medicine	Matthew H. Miller, D.M.D.	Evaluation of the In Vitro Effects of Root Canal Irrigants and Disinfectants on Dental Stem Cells	NSU-HPD	\$4,866.24 for two year
Dental Medicine	Kiran Sreekantaiah, D.D.S.	Evaluation of Regenerative Therapies to Replant Teeth	NSU-HPD	\$2,500 for one year

**RESEARCH GRANT APPROVAL – MAY 2011**

COLLEGE OF	INVESTIGATOR	PROTOCOL TITLE	SPONSOR	AMOUNT
Dental Medicine	Zulima Munoz, D.D.S.	Flexural Strength and Diametral Tensile Strength of Condensable Glass Ionomers	NSU-HPD	\$2,500 for one year
Pharmacy	Ioana Popovici, Ph.D.	Variability in Response Rate and Bias and Cost Effectiveness in Survey Data Collection Among Practicing Pharmacists	NSU-HPD	\$5,000 for two years

Nova Southeastern University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur Georgia 30033-4097. Telephone number: 404-679-4501) to award associate's, bachelor's, master's, educational specialist, and doctoral degrees.

Nova Southeastern University admits students of any race, color, sex, age, nondisqualifying disability, religion or creed, sexual orientation, or national or ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the school, and does not discriminate in administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other school-administered programs.



**Save the Date**

**Brown Bag Book Club**  
Starting June 21 and continuing every Tuesday throughout the summer, the Center for Teaching and Learning will host a lunchtime book club on David Allen's *Getting Things Done*. Allen is a widely respected productivity expert whose books have attracted millions of readers. The meetings will take place from 12:00-1:00 p.m. in room 3142 of the HPD Library. (Enter the library, make a left, go through the Quiet Zone, take the left side of the study rooms, and room 3142 is the last door on the left.)

You are on your own for food (hence the name of the book club), but the Center for Teaching and Learning is buying 15 of the books for faculty members to use. If you are too late to request one of the free books for yourself, they are reasonably priced at a number of bookstores (e.g., \$8.78 from Amazon).

**Technology Transfer in U.S. Research Universities:  
*Dispelling Common Myths***

**Myth: The new emphasis on technology transfer is diverting universities from their main mission of education and research.**

**Reality:** Technology transfer is not a new phenomenon for universities. Dating from the early 1800s in Europe, companies are known to have been developed around the expertise of faculty at universities. Research universities have historically transferred technology through the traditional methods of publication, the training of students, and through their extension programs. Formal technology transfer through the licensing of university-owned intellectual property adds new educational dimensions and research opportunities for students and faculty.

**Myth: The government is better at commercialization through technology transfer than universities are. Therefore, the government should regain control of university patents that have come from federally funded research projects.**

**Reality:** The university sector has been highly successful in its technology transfer efforts since it was given the right to own and license university inventions under the Bayh-Dole Act in 1980. Prior to 1980, when university patents were generally owned by the federal government, no more than 10 percent of those patents were licensed to industry for commercialization. Data for FY98 on university licensing activities show that universities are filing in excess of 4,000 patent applications a year and issuing more than 3,500 licenses or options to license annually.[i] Trend data show a cumulative total of licenses and options issued since 1991 standing at over 20,000 and that the percentage of licensing activity has doubled between 1991 and 1998.[ii] Anecdotal reporting from

universities shows a licensing-to-patenting ratio of better than 1:3. There is general consensus that licensing is most effective if it directly involves the inventor and the inventor's institution.

**Myth: University technology transfer is an unnecessary barrier to effective commercialization. More rapid commercialization would be achieved if universities gave their inventions to industry.**

**Reality:** As owners of their inventions, universities have established procedures for the earliest possible identification of inventions. The patenting and commercialization process benefits from day-to-day communication with inventors, access to complementary technology that may be under development within the university, and awareness of continuing efforts on the part of the inventor to enhance a technology. Through licensing, universities ensure diligent efforts toward commercialization by the licensee, or require the license to be returned to the university to be issued to a more serious commercial partner. Universities have both the incentive and the ability to build internal relationships and structure to make certain rapid and effective commercialization occurs.

**Myth: Most university patents come from federally funded research paid for by U.S. taxpayers. Neither the U.S. government nor the taxpayer is benefiting.**

**Reality:** Recent data and the application of impact models[iii] show a return to the U.S. government and the national economy from university licensing of \$33.7 billion, and supported 280,000 jobs during the university fiscal year ending June 30, 1999. The return to the federal government in taxes paid on university technology transfer in-

duced corporate and individual earnings, alone, equals a 15 percent return on sales of licensed products.[iv] The public is currently benefiting from the products, processes, and services available in the marketplace as a result of more than 17,000 active university licenses.

**Myth: Technology transfer is a major source of revenue for universities.**

**Reality:** While successful technology transfer activities may be an important source of discretionary revenues for universities, comparison data[v] show that annual gross revenues generated from a university's technology transfer activities generally total less than three percent of research dollars spent by that university and a far lesser percent of total university revenues.

**Myth: University inventors are receiving substantial personal financial benefit from university licensing.**

**Reality:** No more than one-third of all university patent applications and patents are licensed and producing revenues at any given time. Because the majority of university inventions are very early stage, a large number go unlicensed and produce no revenues. Among those that are successfully licensed, there is wide disparity as to the amount of licensing revenue generated. Relatively few are large earners. While university revenue-sharing policies vary, the most commonly reported percentage of royalties paid to university inventors is a total of 30 percent of revenues earned, after deducting patent and marketing expenses. This percentage is shared among all inventors named on the licensed patent.

**Myth: Universities overinflate the value of their inventions, setting rates too high.**

**Reality:** Royalty rates are dependent upon market factors and determined through negotiation. While defining an "average" royalty rate will not reflect the true value of an invention, one study[vi] cites an average royalty at approximately 2 percent of the revenues generated by a licensee-company from its sales of products or services under the license. A small study conducted by the Association of University Technology Managers finds the rate at 2.3 percent.

**Myth: Universities are more likely to license big companies because they can afford to pay more. Small companies cannot afford to license university inventions.**

**Reality:** Data for FY '98 reported by 179 U.S. and Canadian institutions show that 63 percent of the licenses granted were to small businesses (those with fewer than 500 employees). This figure is consistent with activity reported by the universities from prior years.[vii]

**Myth: University technology transfer offices are prospering through charging high royalties.**

**Reality:** The vast majority of university-licensed inventions result from research funded by the federal government. Under Bayh-Dole (35 USC 202 et seq.), universities have an obligation to commercialize these inventions and distribute a portion of licensing revenues to inventors. This obligation is carried out by the technology transfer office, usually an administrative unit within each university. Universities are permitted to recoup only those expenses incurred in the patenting and licensing process. Any excess revenues must be used by the institution for purposes of education and research and may not be accumulated for the benefit of the technology transfer office.

**Myth: Universities are more interested in patenting inventions than publishing research findings for the public to use.**

**Reality:** All universities must adhere to the academic tradition of publication. Publication remains a primary factor in tenure decisions. Publication is also the main vehicle for academic professional recognition and is important to establish credibility in grant applications. Most importantly, publication in peer-reviewed journals is validation of the findings of the academic scientist. Patenting does not mean there is no publication. All university research findings are available for publication whether or not patenting occurs. Publication, on the other hand, does not necessarily result in public use. Most often, new products would not be developed without the exclusivity afforded by patent protection. Further evidence of the preference for publishing over patenting is provided by figures cited in an NSF study[viii], showing that ~73% of patent applications citing publications as published disclosures of the art which the new patent application has advanced and seeks to protect-cited academic, government, or non-profit publications.

**Myth: Universities are doing too much patenting. It would be better for economic growth and U.S. competitiveness to put more inventions into the public domain.**

**Reality:** As the United States enters a period where articles attributing economic growth to a pro-patenting environment are commonplace, it is difficult to quantify how much patenting is "too" much. Universities are filing at an annual rate of less than one new U.S. application for every three inventions disclosed to the technology transfer office.[ix] The real measure of useful patenting for universities is whether patenting encourages commercial licensing. FY '98 data show that the universities issued 3,668 licenses/options during the same year in which they were filing 4,808 new patent applications.[x] Whether companies would have picked up the 3,668 new university technologies to commercialize from the public domain is highly questionable. A further reality is that patenting is expensive. Since no university has the resources for indiscriminate patent filing, we know that budgetary limitations, alone, require technology transfer professionals to carefully select for filing only those inventions most likely to be licensable.

**Myth: University patenting of biological materials and research tools is harmful to the advancement of science and is hampering the efforts of researchers.**

**Reality:** The patenting of research tools is currently a high-profile debate among universities, industry, and the government. To aid universities, NIH has recently issued principles and guidelines to underscore the importance of striking a balance between preserving access for research use and the broader public interest in acquiring the intellectual property protection required for commercialization. The university community, itself a community of academic researchers, has always been acutely aware of the importance of preserving rights to use patents for research purposes.

**Myth: The recent focus on industrial relationships and entrepreneurial activities in U.S. universities is detrimental to the university's fundamental mission of educating students.**

**Reality:** In fulfilling their educational mission in today's changing world, universities must seek to provide students with experience that is more closely aligned with contemporary industry. Enabling students to participate in industry research gives students a window to the industrial world and provides them with the opportunity to assist in solving real-world prob-

lems. It also provides them with experience in teaming with industrial scientists as well as giving them an opportunity to become comfortable with the industrial workplace environment. Often companies are funding university research in anticipation of finding future talented future employees. As universities involve students in relationships with industry or provide them with opportunities to start new companies, universities recognize an obligation to do so in a manner that preserves the students' sense of balance and perspective as to the long-term value of the university experience.

**Myth: Partnering with industry will skew the academic research agenda from basic to applied research.**

**Reality:** The research agenda at many of the major U.S. universities is not exclusively restricted to basic research. There is general agreement in many universities that both faculty members and students find benefit from participating in more applied research funded by industry. Industry-funded programs permit faculty to keep abreast of the current trends and practices important to American industry and give students an opportunity to learn the teaming and other knowledge skills that will be important to their success as they join the workforce. The growing number of research programs jointly supported by industry and government agencies clearly shows a convergence of interest in supporting both basic and more applied research. Carefully managed, university-industrial partnerships provide universities with new educational opportunities, expand infrastructure, provide alternative sources of research revenue, and contribute new and useful science to the commercial marketplace.

**Myth: By taking industry sponsorship, universities are inviting industry to determine the direction of university research.**

**Reality:** Industrial-funded research programs are collaborative from inception. They match the commercially-oriented objectives of companies with the scientific interest of the university principal investigator and students. If there is not commonality of interest in the science to be pursued, there is no prospect for success. Universities insist on directing the conduct of the research program; require the research to be supervised by the university investigator; and require final control of research work product and publication.

**Myth: Collaboration with industry invariably creates financial conflicts of interest for academics.**

**Reality:** University faculty members interact with industry as educators, principal investigators under research programs, consultants, creators of intellectual property used by industry, and as entrepreneurs. It is the responsibility of universities to continually explore the implications of these relationships and to establish effective policies to manage them. Accordingly, universities' conflict of interest policies seek to ensure that the personal financial interests of faculty members do not improperly affect the content, quality, or timely release of research. These conflict-of-interest policies have become fairly uniform among universities since they must meet standards that have been established by the federal granting agencies.

[i] AUTM Licensing Survey: FY1998. The Association of University Technology Managers, Survey Summary, page 2

[ii] Ibid. Survey Table S-12

[iii] Stevens, Ashley: "Measuring Economic Impact" and Pressman, Lori, et.al.: "Pre-Production Investment and Jobs Induced by MIT Exclusive Patent Licenses"

[iv] Campbell, Kenneth D.: "R&D yields public rewards," Mass High Tech, May 11-17, 1998.

[v] Op. cit., AUTM Licensing Survey: FY1998, page 14, Adjusted gross licensing income of \$725M compares with \$24.4B in total university FY98 sponsored research expenditures

[vi] AUTM Economic Impact Survey, October 24, 1966

[vii] Ibid, page 6

[viii] Narin, Francis; Hamilton, Kimberly and Olivastro, Dominic: "The Increasing Linkage between U.S. Technology and Public Science" Research Policy: 26, No.3, 1997

[ix] Op. cit, AUTM Licensing Survey, Survey Tables, S-6 and S-8

[x] Ibid, S-12 and S-8

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