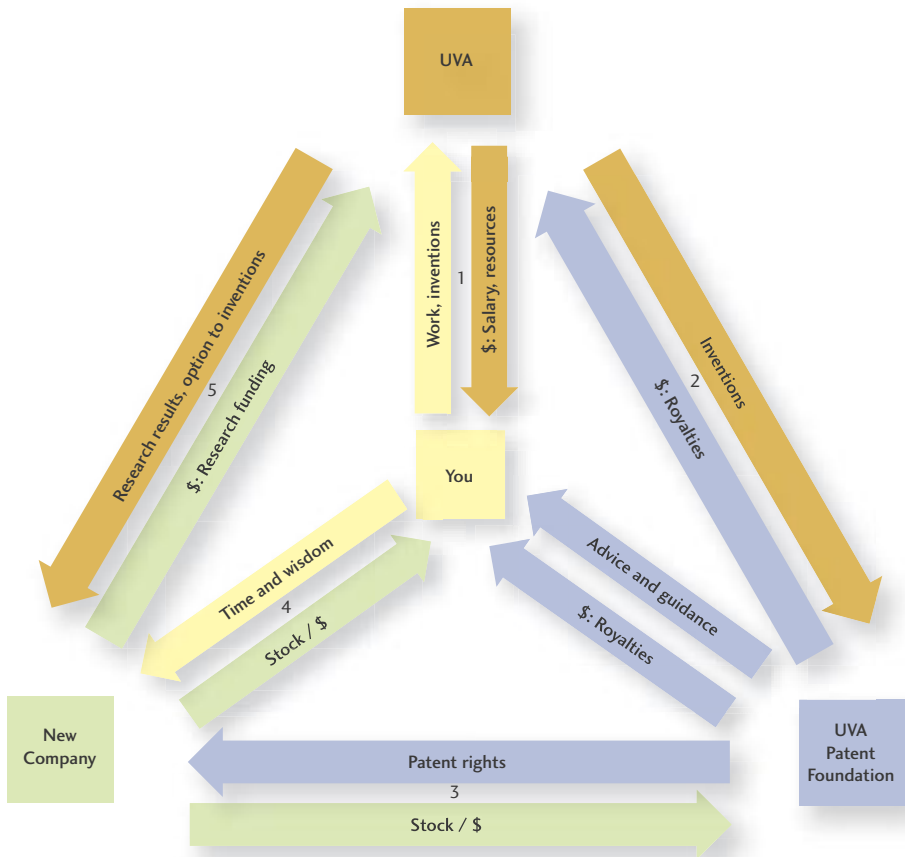




The UVA Faculty Entrepreneur's Guidebook



Each set of arrows represents a different relationship between the parties.

- 1 employment contract
- 2 relationship between UVA and UVAPF
- 3 license agreement
- 4 consulting/founders agreement
- 5 sponsored research agreement

The UVA Faculty Entrepreneur's Guidebook

- 2 Faculty Entrepreneurs
- 3 Limiting and Managing Conflicts
- 5 Compensation
- 7 Inventorship and Ownership
- 8 Licensing UVA Inventions
- 9 Use of University Resources
- 10 Non-endorsement and Non-use of the University's Name
- 12 An Exciting Future



All of the policies mentioned in this guidebook are available on the website of the Office of the Vice President for Research and Graduate Studies (VPRGS), <http://www.virginia.edu/vprgs>; paper copies can be obtained by contacting the office of the VPRGS at 434-924-3606.

Faculty Entrepreneurs

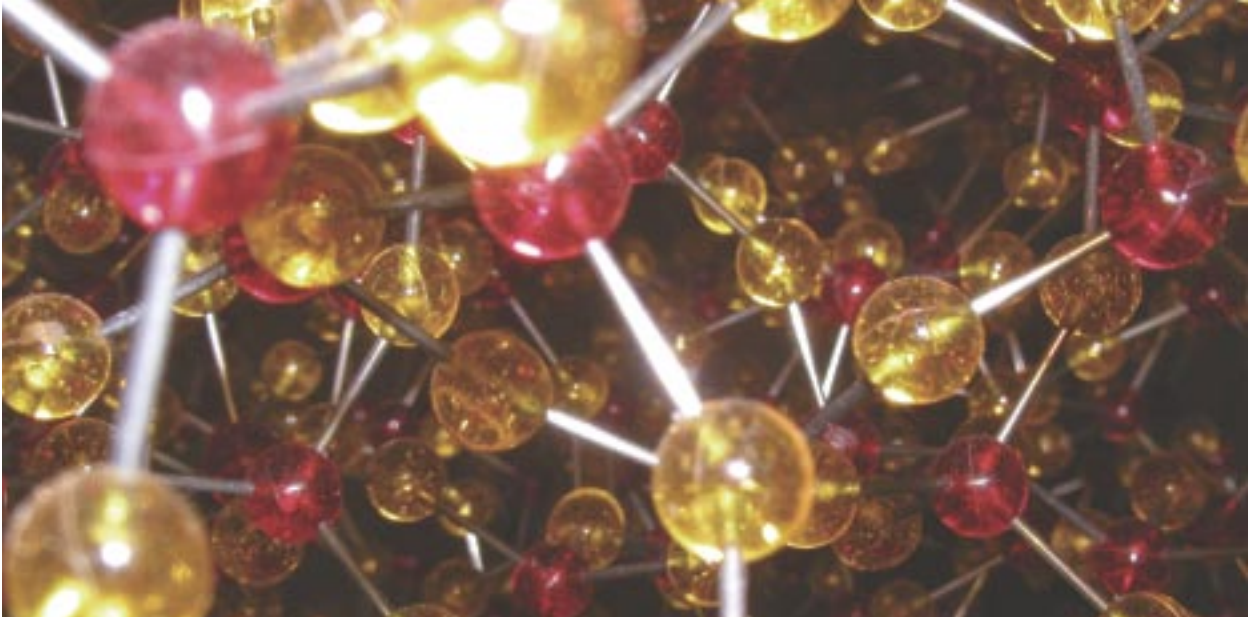
The interface between industry and academia has evolved considerably since the mid-twentieth century as increasing numbers of faculty seek to bring the fruits of their academic research to the commercial marketplace for public benefit. To facilitate movement of inventions from universities to the marketplace, the federal government passed the Bayh-Dole Act in 1980. The Act, which allows universities to own patents on inventions made using federal research funds, has led to the development of technology transfer programs at virtually all American research universities. These programs, by preserving the market exclusivity that patents can provide, offer incentives for industry to develop new technologies into commercial products and services.

Not all patentable technologies are eagerly received by industry. Many university inventions are early stage, require extensive product development, challenge conventional wisdom, or require new production facilities to be built before they can be commercialized. Established companies sometimes prefer to commercialize inventions that represent incremental advances with smaller risks.

Over the past decade, pioneering faculty members have begun taking on the enormous challenge of starting their own companies in order to see their inventions reach the public. Although faculty entrepreneurship was initially considered a fad, today many observers agree that it has become an enduring national movement.

The University of Virginia enthusiastically supports this movement as an integral part of its research enterprise. To sustain technology commercialization at UVA, Virginia Gateway provides contacts and resources for inventors who may have a product or an invention that they wish to take to market, and the UVA Patent Foundation protects and licenses inventions made at the University. We believe that faculty-launched companies bring new ideas and excitement to academic research programs at UVA. The fruits of research are multiplied when we can realize the practical value of scientific discoveries in addition to the intellectual and basic scientific advances they represent. Health care is improved when we bring new technologies to the patient. The public, whose taxes fund much University research, are rewarded for their support when they have access to the latest technologies through the goods and services that they buy. Collaborations with young technology companies can expand research in new directions and provide new sources of research funding. Our community is enhanced when we create jobs for talented scientists and other local citizens.

Faculty entrepreneurship is a new frontier with unique challenges. Faculty entrepreneurs often learn about building a business in real-time. Other challenges may appear when faculty entrepreneurs must “wear two hats,” simultaneously serving both as professor and company leader, which may lead to concerns about potential conflicts of interest and conflicts of commitment. Despite the challenges, we believe that entrepreneurship and faculty life can productively co-exist.



The purpose of this guidebook is to explain how long-standing UVA policies and procedures are being applied in the area of faculty entrepreneurship with the twin goals of facilitating the development of new technology companies while preserving the unique nature of the UVA academic research enterprise. We hope that as you review this guidebook, you will come to recognize that UVA enthusiastically supports the faculty entrepreneurship movement and the dedication of our faculty entrepreneurs.

Limiting and Managing Conflicts

When faculty members start a new company, they may face possible conflicts of interest and commitment. A conflict can occur when there is a divergence between the private interests of entrepreneurs and their professional obligations to UVA. Starting a company is one example of a private interest. Fortunately, most conflicts can be managed with minor accommodations that allow both interests to be well served.

Conflicts of interest

The inevitable consequence of complex activities and relationships, conflicts of interest are common to almost everything we do. For example, if you ask scientists if their research programs are affected by their desire for future funding from granting agencies, they will almost certainly say “yes.” There is a conflict of interest between “pure” scientific motivation and financial practicality. Such conflicts are not inherently bad, provided that faculty members’ financial interests do not compromise their scientific interests.

Conflicts involving personal financial interests are less common, but require greater caution. In addition to the legal issues concerning financial conflicts, public perception may put at risk the valuable reputation of the investigator, the research itself, and/or the institution. Financial conflicts can occur if a UVA researcher has

an ownership interest in a company that wishes to enter into a contract with the University. This often happens when a faculty start-up company wants to sponsor research at the University. Under Virginia law, if a researcher's financial interests equal or exceed \$10,000 in annual income, or 3% equity in a company, UVA can accept such funding or other contracts with that company only after disclosing, reviewing, approving, and when necessary, managing the conflict.

Federal law requires the University to assure that federally funded research will not be biased by any conflicting financial interests of its researchers. UVA's *Objectivity in Research Policy* describes how the University manages conflicts that might arise when faculty have federal grants, if the results of that research might appear to impact their financial interests.

Whether funded by federal agencies or not, in rare cases the potential risks from a conflict might be so compelling that certain activities will not be permitted. For example, the UVA External Commitments and Interests Committee (ECIC) may prohibit the involvement of researchers with clinical trials involving human subjects if the personal financial interests of the researchers might be affected by the results of those trials. In such circumstances, the ECIC evaluates the conflict, determines if the researcher can continue the trial, and if so, develops a plan to manage the conflict.

Because situations created by conflicts require careful monitoring, faculty members are required to disclose any significant financial interests that might conflict with their University roles and responsibilities. If in doubt, faculty members should disclose the issue to the ECIC so that it is reviewed and addressed. The ECIC, *not* the faculty member, will determine whether a conflict exists, and if it does, how to manage it. For details of the disclosure and management process, please refer to the *UVA Conflict of Interest and Commitment Policy*.

Conflicts of commitment and consulting

Even if there is no financial conflict of interest, a conflict of commitment can exist. This occurs when faculty entrepreneurs commit time and effort to their company at the expense of their responsibilities to UVA. Faculty members face a number of pressures including teaching, research, patient care, publishing, advising, and other professional or personal commitments that demand their time and dedication. UVA faculty members owe their primary professional allegiance to the University, meaning that their primary commitments of time and intellectual energies should be focused on the University's educational, research, and patient care programs.

However, UVA *does* permit faculty to engage in some outside consulting activities. The University's policy is substantially more permissive than policies one might find in a non-academic setting. For example, an industry employee is unlikely to be permitted to engage in any outside consulting, but this is an accepted and even important component of academic life. It is important for faculty members to consider their relationship to the University, to avoid activities and arrangements that might appear to conflict with their UVA commitments, and to recognize that

University resources cannot be used for consulting activities. When an individual's outside professional activities, including time spent with start-up companies, exceed permitted limits (as specified in individual schools' consulting policies), or when a faculty member's primary professional loyalty is to another entity and not to UVA, a conflict of commitment exists.

The University has a long-standing consulting policy that limits outside consulting by faculty members to one eight-hour day per week, and the work is to be done on their own time. Some schools, centers or departments may have their own policies, so faculty members should be sure to check with their department chair. If they wish to commit an amount of time that their chair feels will encroach on their abilities to discharge their obligations to the University, the faculty member may need to request a partial or full leave of absence. There also may be a leave period beyond which the chair is not willing to keep a faculty line unfilled, and the faculty member eventually may need to choose between staying with the company or returning to their faculty position.

Compensation

Successful faculty entrepreneurs will likely receive personal income and other compensation from three places: from the University, from the new company, and from the UVA Patent Foundation, the organization that promotes the entry of UVA technologies into the commercial marketplace. As before they started their companies, faculty entrepreneurs will receive a salary and benefits in exchange for continuing to satisfy their ongoing UVA duties. They will probably receive stock and may also receive consulting fees from the new company, in exchange for their contributions of time and effort on its behalf. In addition, they will receive a portion of the inventors' share of license royalties paid by the company to the Patent Foundation, in accordance with the *UVA Patent Policy*. Each of these separate sources of income provides compensation for separate and distinct contributions the faculty entrepreneurs have made or will make.

Faculty salaries

In most cases, faculty entrepreneurs can continue to receive their full salary and benefits from UVA, provided they continue to satisfy their full-time obligations as faculty members under the applicable consulting policy for their school. The University will consider their efforts on behalf of the start-up company to be consulting activity. As explained in the previous section on conflicts, if faculty members feel the need to commit more time to their companies than their school's consulting policy generally permits, they will need to work with their department chairs to request a reduction in the time required by their UVA appointment, or a leave of absence, either of which would affect their University salary.

Compensation from the company

Faculty entrepreneurs are entirely responsible for negotiating their own company compensation. Company founders working on its behalf at its very

outset will probably receive “founder equity.” Bear in mind that founder equity is compensation for work in founding the company and for work to be performed for the company in the future. Entrepreneurs should not ask for or receive such equity in consideration for any efforts made while they are engaged in University research, nor for any value the company receives in a license for the patent rights to inventions they made at UVA. In addition to founder equity, faculty entrepreneurs may also receive consulting fees, bonuses or other cash compensation, as they may negotiate with the company from time to time.

Entrepreneurs who are inexperienced with such matters may be well-advised to seek legal counsel. For example, in arranging company compensation, founders may take founder equity without establishing any mechanism for the company to compensate them for their ongoing contributions to the company. As new investors come on board, the faculty entrepreneur’s share of the company could decrease and may in fact become negligible.

UVA’s Office of the Vice President for Research and Graduate Studies does not generally place any limits or impose any structure on company compensation, so long as it is clearly for efforts faculty entrepreneurs personally make on behalf of the company. Some schools, centers or departments may have limits, so again, faculty members should be sure to check with their department chair.

Royalty income

At UVA, the participation of faculty members in their companies does not preclude them from receiving royalty income under the *UVA Patent Policy*. Under this policy, the inventors’ share of revenue rewards faculty members for the contributions they made as inventors at UVA.



Inventorship and Ownership

Faculty entrepreneurs sometimes make inventions both as part of their University employment and in their role as researchers for their start-up company. Because of this, *inventorship* as well as *ownership* must be determined in order to respect the interests of both the University and the start-up company.

Inventorship

Determining inventorship is not as easy as it may seem. Inventorship is a legal determination which cannot be distorted by friendship, collegiality or academic traditions. The question of inventorship ultimately needs to be determined by the patent attorney who files the patent application on the invention.

An inventor must contribute to the conception of at least one aspect of the invention described in the patent application. A patent attorney often considers *negative* tests of inventorship the most useful. For example, someone who serves only as a “pair of hands” is generally not an inventor. In the university setting, it can sometimes be unsettling to decide that a graduate student, postdoctoral fellow or colleague is really a “pair of hands” and not an inventor because, although their contribution may be valued and their investment of time and effort may be substantial, they carried out experiments under instruction and did not contribute creatively to the invention.

Ownership

Under the *UVA Patent Policy*, the University owns any inventions that are developed by faculty within the scope of their employment and/or using significant University resources. When faculty members have a start-up company and are working for both the University and their company, ownership of their inventions may need to be determined. If the invention is made within the scope of their research or other efforts on behalf of the University, it would be a University-owned invention. If the invention was made as a result of work performed at the laboratories of the start-up company and not within the scope of the faculty member’s UVA employment, then the company would own the invention. Inventors who are in doubt should submit a disclosure of the invention to the UVA Patent Foundation, which will seek a final ownership determination from the Vice President for Research and Graduate Studies, the final authority under the *UVA Patent Policy*. It is in the company’s best interest to have ownership determined early in the process so that the company can clarify its rights to use the invention, either through ownership or licensing. If the invention is determined to be owned by the University, the Patent Foundation will generally be willing to license the rights to the company, so the ownership issue would usually not affect the company’s ability to use the technology.

Protecting inventions

Once ownership of an invention is determined, it is in everyone’s best interest to protect it. A *patent* is a government grant of an exclusive right to prohibit others from using an invention for the length of the patent’s term, typically 20 years. A

copyright protects original works of authorship that are fixed in any tangible medium. Works of authorship include literary works, musical works, and pictorial works. It is important to note that copyright protection does not extend to an idea, procedure, process or principle embodied in the work. Computer software may be patentable as an invention, for example, if the software implements a unique algorithm; the code itself is always protected by copyright. The UVA Patent Foundation can help faculty inventors determine the most effective way to protect their intellectual property.

Licensing UVA Inventions

Because the University does not directly engage in the commercialization of technology, inventions are generally licensed to industry. A license is best compared to a lease: a lease allows you to use property without owning it, in exchange for paying rent. A license allows a company to use an invention without owning it, in exchange for payments that are shared with the inventors and their laboratories.

Faculty option agreement

The Patent Foundation generally begins to work with faculty start-ups by offering the faculty founder a 90-day option to acquire a license to the invention for the newly-formed company. During the 90-day option period, the Patent Foundation will not offer the invention to any other companies. In exchange for this option, the faculty member promises to generate a three-page business proposal, file articles of incorporation for the new venture, identify candidates for board of directors positions, and complete the Patent Foundation's conflict of interest documents. If the faculty member then decides to proceed with launching a company, negotiations begin by the end of the option period; if not, when the option period expires, the Patent Foundation begins its standard process for marketing the invention to other companies.

Negotiating with the Patent Foundation

The Patent Foundation is willing to negotiate the terms of a license agreement with a faculty entrepreneur's attorney, business partner or other representative. Although it is preferable to negotiate with such a representative, the UVA Patent Foundation realizes that faculty entrepreneurs may have little choice but to come to it personally to negotiate license agreements. Without a license in hand, it may be difficult to attract other founders or find money to pay legal fees. The UVA Patent Foundation's growing experience with such relationships has revealed that some faculty members may feel very uncomfortable in this situation because they realize that the UVA Patent Foundation has far more experience and expertise in license negotiations than they do. To that end, the Patent Foundation staff is willing to spend as much time as necessary to help inventors learn the intricacies of licensing.

It is important to bear in mind that the Patent Foundation serves the interests of UVA and its faculty, and also its own interest in funding its ongoing operations. When faculty entrepreneurs negotiate with the Patent Foundation, both parties will seek to reach a fair deal. The Patent Foundation, however, will *not* be advocating

the company's interests, and as a result may not appear to be serving the personal interests of the faculty entrepreneur. This is because the faculty member will probably have moved to the company side of the negotiating table. The easiest way to recognize this is to note that most faculty *inventors* prefer that the Patent Foundation collect *high* royalties on behalf of the University, but faculty *entrepreneurs* often argue that the royalties should be *low* so that the company retains more of its earnings. This shift in roles is most apparent when faculty members negotiate for their companies. The Patent Foundation's *Conflicts of Interest Policy and Statement* provides guidelines for understanding this change in roles.

Licensing terms

The Patent Foundation is sensitive to the special demands placed upon young companies, and will work with faculty entrepreneurs to provide licensing terms that meet the special needs of a start-up while reflecting the fair value of the technology being licensed. For example, start-ups are often short on cash; all available cash must be invested in research and development. In lieu of the traditional cash licensing fee, the Patent Foundation is willing to accept a modest amount of equity in the new venture. Such equity is held by the Patent Foundation until a liquidity event. At that time equity is distributed among the inventors and the UVA Patent Foundation, according to the *UVA Patent Policy*.

For more information

Visit the Patent Foundation's web site, www.uvaf.org, or contact the Patent Foundation's Executive Director at 434-924-2175.

Use of University Resources

In the early days of a faculty start-up, the interests of the company and the University typically align. Basic research conducted in a UVA laboratory may inform the company's development plans, or the company may sponsor research at the University. It is critical to remember, however, that the company and UVA are distinct entities. Some means of keeping University and company interests separate are obvious and easy to do. For example, the company needs its own phones, computers, web site, etc. Furthermore, company business should not be conducted out of UVA faculty offices. Likewise, the company must conduct its research in company laboratory space with company equipment, not in UVA lab space or on UVA equipment — unless, of course, the work is being done under a research contract between the University and the company.

Other ways to keep UVA and company interests separate are a bit less concrete but still crucial. Faculty entrepreneurs should avoid having corporate perspectives and goals unduly influence their academic research, teaching, and publications. Departmental chairs and colleagues can serve as informal advisors to guard against this. Likewise, entrepreneurs should consider the needs of others in their laboratory when assigning research projects that could be related to technology licensed by the company. For example, graduate students need to publish in order to graduate, and postdoctoral fellows need a project they can develop as their own

once they leave UVA. Thus, it may be better in some cases for them to work on non-company-related projects.

Hiring UVA employees to work for the company

Some of the people most qualified to work for the company may be those who currently work at UVA. The University does not prohibit start-up ventures from hiring UVA employees; in fact, the University supports these companies because they provide a local source of employment for UVA graduates and spouses of UVA employees. However, companies, employees, and the University must take care when an employee works part-time for the company and part-time for the University. As a rule of thumb, employees who are working on a company project and being paid by the company should be working in company, not UVA, space. This issue often comes up in the context of Small Business Innovation Research (SBIR) subcontracts to the University. To receive an SBIR grant, the company must employ a company principal investigator (PI) for at least 51% of the PI's time. Faculty members often hire postdoctoral fellows to work 51% or more of the time for the company, and 49% or less of the time for the University. UVA recognizes that it may be difficult to determine whether an invention made by such an employee is a company invention or a UVA invention; thus all SBIR subcontracts provide that inventions made by part-time UVA employees belong to the University and may be licensed to the company. In addition, faculty members should always keep in mind the special relationship that develops between a faculty mentor and graduate students or postdoctoral fellows. It may be difficult to be both an academic mentor and a company employer, but faculty should recognize that their primary responsibility is to their academic duties. Finally, faculty entrepreneurs should be sure to check any prohibitions on outside employment in federal training grants before offering part-time company work to their trainees.

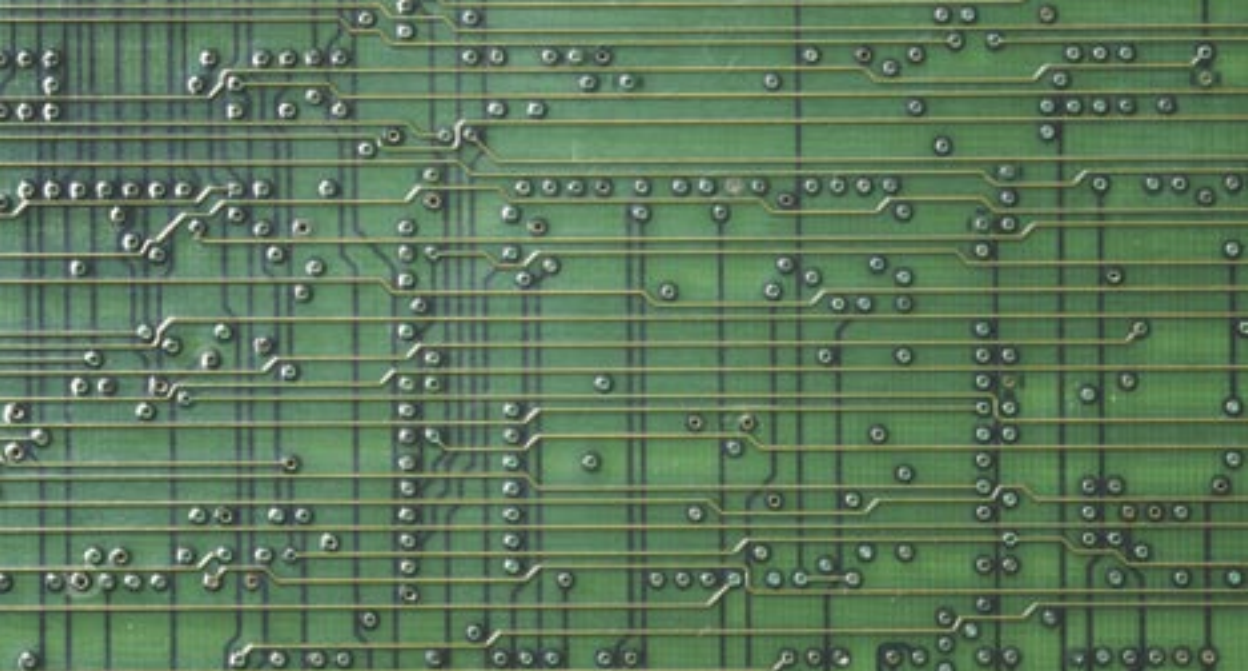
Using UVA equipment for the company

The University may have resources such as specialized, expensive equipment that a start-up company cannot afford, but that could contribute to its technology development. By sponsoring research at the University, the company can gain access to such equipment and the UVA expertise that goes along with it. In special circumstances, the University may agree to lease time on the equipment to the company, but such arrangements must be made through a formal contract that assures UVA employees primary access to the equipment and that outlines how ownership will be determined on any inventions that arise from the use of that equipment.

For related information, refer to this guidebook's sections on *Limiting and Managing Conflicts* and *Non-Endorsement and Non-Use of the University's Name*.

Non-endorsement and Non-use of the University's Name

Faculty members frequently turn to private industry as a source of funding for their research and educational programs. While responsive to these requests, industry is also interested in exploiting such support for marketing purposes. This creates



the potential for conflicts of interest, because academic institutions must at all times remain objective and assure both the fact and the appearance of neutrality if they are to fulfill their mission of revealing and teaching truth in the scientific and educational arenas.

Sponsored research agreements

Faculty members at UVA are encouraged to solicit financial support for their University research from industry. Such support must be administered through the Office of Sponsored Programs, which has specific policies related to endorsement. Gifts to the University from a company must comply with the regulations associated with University gift policies (located in *Financial and Administrative Policies and Procedures*) and should be handled through the University Development Office. When the University accepts a gift, the faculty members who will benefit from the donation must signify that no endorsement of a specific product is either stated or implied and that endorsement will not be part of their professional activities.

Private endorsement of products

While the University recognizes that individuals and industry may have relationships outside of UVA, the University requires that any product endorsement remain free of even the appearance of a University conflict of interest. An individual's endorsement of a commercial product cannot imply any University endorsement—by use of a faculty member's title, the UVA logo or letterhead, or any other reference to the University—unless the appropriate dean has given prior written approval.

Company vs. University research

Statements about research conducted by faculty entrepreneurs should be accurate so as not to mislead company investors into thinking that research is being done by a faculty member's company when it actually is being carried out at the University.

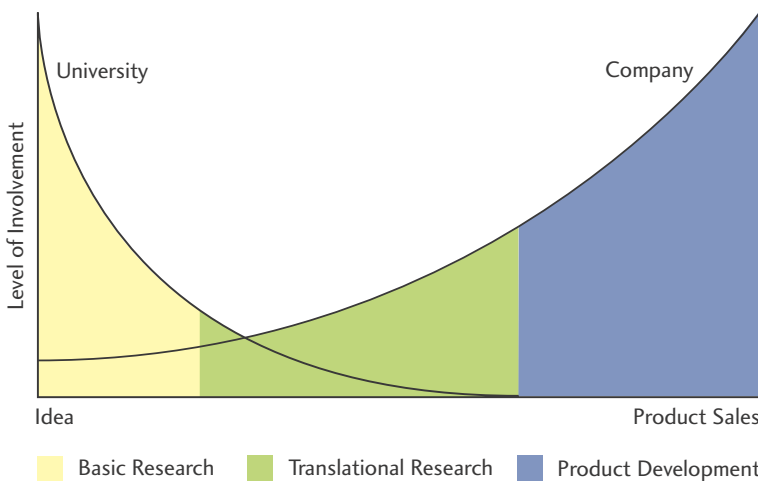
An Exciting Future

The University of Virginia supports faculty entrepreneurial activity as a natural part of its mission. Faculty start-up companies generate significant benefits for the University, the surrounding communities, and the public at large.

We realize that applying long-standing University policies can be confusing in this new arena. We also realize that this guidebook may not answer all questions and that we may not have foreseen all of the issues that could arise. We hope that faculty members will turn to the Office of the Vice President for Research and Graduate Studies and the UVA Patent Foundation for help as they seek to become faculty entrepreneurs.

Please be aware that the policies mentioned in this guidebook are unique to the University of Virginia. Different universities have different policies regarding faculty entrepreneurship. Moving to another institution should not affect any license agreement in place between the UVA Patent Foundation and a company, and faculty entrepreneurs are entitled to continue receiving any personal share of royalty income as described in the *UVA Patent Policy*. However, moving intellectual or material property to another institution presents unique issues. Faculty should seek advice from UVA and their new institutions.

Do not hesitate to contact us with any remaining questions, or if we can help in any other way. We wish our faculty entrepreneurs great success as they expand their academic career in new and exciting directions, and we look forward to helping them to realize the full potential of their UVA research activities.



From scientific discovery to consumer product

The faculty entrepreneurship movement has connected university basic research and corporate product development. Faculty now find themselves involved in research along the entire continuum, sometimes in their University research labs and sometimes working with scientists in corporate labs.



Directory

Vice President for Research and Graduate Studies (VPRGS)

www.virginia.edu/vprgs

P.O. Box 400301

Charlottesville, VA 22904

T. 434/924-3606

F. 434/924-3667

You may obtain copies of the following through the VPRGS:

Objectivity in Research Policy

Conflict of Interest Policy

Consulting Policy

Patent Policy

Gift Policy

UVA Patent Foundation

www.uvapf.org

250 W. Main St., Suite 300

PO Box 800755

Charlottesville, VA 22902

P. 434/924.2175

F. 434/982.1583

You may obtain copies of the following through the UVA Patent Foundation:

Conflicts of Interest Policy and Statement

Virginia Gateway

www.virginia.edu/vprgs/industry

PO Box 400301

Charlottesville, VA 22904-4301

P. 434/924-7566

F. 434/924-3966