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Standards of Excellence in Research for Promotion and Tenure

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# Scope

For IU School of Medicine faculty and administrators to use in preparing for promotion and tenure.

# Overview

Research is fundamental to the mission of IUSM and is expected of faculty on the tenure and scientist track. While some clinical track faculty may also conduct research, it is not a specific area reviewed for promotion. Research efforts include activities in basic science, health services, social science, educational, translational research, and clinical trials. This document defines the standards for excellent or satisfactory contributions in research for promotion and/or tenure.

# Guidelines

## Criteria for Satisfactory Contributions in Research

For faculty on the tenure track advancing on excellence in service or teaching, satisfactory research is expected through publications or other scholarship. Involvement in grants is also highly valued. Criteria for evaluating the research mission as satisfactory are similar in principle to those described below for judging excellence but with less rigorous standards regarding independence, recognition and productivity. However, the key principle is that scholarship is expected. Intellectual input into research can be made by providing essential expertise or by contributing to the design of the project as a member of a research team. For individuals advancing based on service or teaching as an area of excellence, research activity that relates to the area of excellence helps form a focused portfolio.

## Overview of Criteria for Excellence in Research

When research is the area of excellence for tenure and/or promotion to associate professor, candidates will generally be expected to have an independent and focused research program supported by external research funding and significant publications or other scholarly output.

IUSM also supports collaborative research and recognizes that biomedical science increasingly requires integrated team-based projects. Thus, an individual may also achieve excellence in research through contributions that have shaped collaborative projects, provided the candidate can show evidence of an emerging national reputation for excellence based on their unique intellectual contribution to those projects and the scholarship they generate.

The candidate will have played a critical role(s) as a member of the collaborative, externally funded research team(s). In both cases, the candidate would be expected to have produced or significantly contributed to publications (or other scholarly output) and demonstrated emerging excellence regionally and nationally. For promotion to professor, maturation of a research program and/or playing a more significant leadership role on a research team(s) with a continued record of research excellence is required. The candidate's accomplishments and contribution to the field in rank, individually or in the context of a collaborative research team, would be recognized nationally and/or internationally.

Excellence in research is typically achieved by a focused research program where successive achievements build upon each other to enrich the overall theme. A collection of unrelated projects, publications, or other forms of scholarly output does not substitute for an overall research theme. The emergence of a theme is essential in judging younger faculty who may not have an extensive research portfolio when they present for promotion to associate professor or for tenure. A focused body of achievement is expected for faculty seeking promotion to professor. However, it is acknowledged that the interests and composition of the research team(s) may change over time.

For faculty members of collaborative research teams, due credit will be given for such creative activity where significant intellectual input is documented. An essential factor will be demonstrating that the scholarly activity reaches a level comparable to that described above for faculty directing an independent research program. An individual can achieve excellence in research as an essential contributor to successful collaborative projects but must meet the requirement of having a focus, noted above, as well as the criteria discussed in Sections 2, 3, and 4.

Independence means that a faculty member is the primary decision maker for a research program or, in the case of collaborative work, their portion of the program. Typical indicators of independence include:

* being principal investigator on grants,
* being senior and/or corresponding author on papers,
* receiving individual recognition for their work (Section 4).

In cases where the candidate’s primary role has been as an essential member of a collaborative research team, the individual is expected to explain and document the importance of their intellectual contributions to the program. Senior research team members should provide supporting letters of reference to explain further and document the importance of the candidate’s unique intellectual contributions to the program.

### Non-tenure Research Scientist Track Faculty

Faculty on this track advance in rank based on excellence in research. Achievement of excellence is, in spirit, based on criteria similar to those applied to tenure-track faculty. However, many faculty members on this track are associated with other tenure track faculty members who fund part or all of the salary and provide research space. Thus, in assessing independence in the context of research scientist faculty:

* + - the degree to which a faculty member independently directs the research and its processes should be assessed (e.g., design/methodology, data collection, data analyses, writing and dissemination).
    - Although this can take the form of serving as a principal or co-principal investigator or project director on funded research projects, independence and research autonomy may also be demonstrated for specific components of the research project or process without an official leadership designation.
    - This does not preclude collaborations and/or consultations with colleagues and peers but does entail the research scientist having the authority to make critical decisions about the research design and implementation.
    - At its highest levels, independence may include providing intellectual leadership of a core, center, or unit.

## Detailed Criteria for Promotion and Tenure Evaluations of Teaching

### Publication Record

A critical element in establishing excellence in research is a record of disseminated, retrievable, peer-reviewed scholarship accomplishment. This is most often in the form of journal articles that utilize peer review. In evaluating a publication record, several factors will be considered:

* + - Volume of publications. This is one, but not the only, index of excellence and contribution to the disciplines. The stature and impact of the journal or dissemination outlet are also important.
    - The stature and impact of the journals or dissemination outlets in which a candidate publishes.
  + Publication in premier peer-reviewed, high-impact general science or medical journals (for example, *Science, Nature, Cell, New England Journal of Medicine, Lancet*) clearly demonstrates peer appreciation of the published work.
  + Publication in the “top tier” journals of a candidate’s discipline, such as major society journals, is a significant indicator of the quality of a candidate’s work and an expectation of the IUSM.
  + Valid and significant publications will appear in what are generally viewed as less important journals, and credit will be accorded; however, publications in lesser journals will count less in evaluating the candidate’s publication record.
  + For some departments and disciplines, there may be several top-tier journals, and it is important to appreciate that any given journal's reputation and importance may change with time.
  + The primary committee or department chair is expected to assess the stature of journals or dissemination outlets. Considerable weight will also be given to the opinion of external letter writers, who should be asked to judge the prestige of the journals in which the candidate’s papers are published.
* Order of authorship. Being a senior or lead author is important. It is essential for establishing excellence in research to be the senior or lead author of a number of publications. Yet it is understood that the relative importance of the position in the list of authors in multi-author papers may depend on the discipline. For example:
  + - * in many clinical investigations, being the first author is most important, although sometimes being the last author also has significance.
      * In the basic sciences, a senior researcher will often place students or post-doctoral fellows as first authors, placing their name last.
      * The value of middle authorship is often hard to evaluate. A key principle is that the candidate should document their role in their publications. This is particularly important in team science; candidates are advised to describe their role in collaborative projects in the dossier by:
        + annotating their publications and grants or projects on their CV
        + descriptions in the personal statement
        + including reference letters from collaborators, co-authors, or senior research team members.

Non-peer-reviewed publications are judged on a case-by-case basis. For example, the proceedings of a meeting, while not without merit, would normally be considered less important than an invited review in a prestigious journal, a chapter in a major textbook or an important editorial. Some such publications may contribute to establishing one’s reputation.

Faculty members are increasingly disseminating their work in non-traditional outlets. Credit will be given to such creative activity using the same criteria as discussed above for conventional publications; that is:

* it is essential that the activity is disseminated, retrievable, and peer-reviewed.
* Non-peer-reviewed materials are weighed less than items that undergo peer review.
* The role of the candidate must be documented.
* Since the usual standards (e.g., journal stature) may not be apparent, the candidate must provide documentation.

Published abstracts are not generally accorded the weight of peer-reviewed papers. Nonetheless, certain large meetings accept abstracts through a competitive peer review process. The candidate should document whether any abstracts listed fall into this category and should also highlight abstracts on their CV selected for oral or poster presentations at national or international meetings, as these are generally considered more prestigious.

### Funding

External funding is expected. A significant percent effort on funding from competitive peer-reviewed sources indicates objective recognition of a faculty member's research program. A faculty member seeking tenure and/or promotion to associate professor based on excellence in research is expected to have had success in securing external funding as PI or Co-PI or in unusual circumstances with significant external funding as Co-I, along with the high likelihood of sustaining future funding as an individual or essential member of a research team. Promotion to professor requires a sustained record of external research funding. In evaluating a funding record, several factors will be considered:

* + - Peer-reviewed grants from national agencies have the greatest prestige (e.g., National Institutes of Health, National Science Foundation, Centers for Disease Control and Prevention, U.S. Department of Veterans Affairs, U.S. Department of Defense).
    - Individual projects that are components of large center or program project grants to these agencies are considered equivalent to investigator-initiated grants, provided the individual project has been funded.
    - Grant support from national societies offering a competitive grant program is viewed positively (e.g., the American Diabetes Association, Juvenile Diabetes Research Foundation, American Heart Association, American Cancer Society, Leukemia and Lymphoma Society, Multiple Sclerosis Society).
    - Similarly, securing competitive grants from major foundations is also noteworthy (e.g., the Hartford Foundation, The MacArthur Foundation, Bill and Melinda Gates Foundation, Susan B. Komen Breast Cancer Foundation, March of Dimes Birth Defects Foundation).
    - For young investigators, career development awards represent a significant achievement.
    - Investigator-initiated awards from pharmaceutical companies are significant, although they do not rise to the level of prestige of peer-reviewed grants. Playing a leading role as a coordinator of a multi-center pharmaceutical trial is also viewed very positively.
    - A faculty member achieving excellence in research has historically been Principal Investigator (PI) on a substantial part of the candidate's funding. As noted in the preceding paragraph, a possible exception is the case of center or program project grants. Being a Co-PI in an NIH, multiple PD/PI model grant would be considered equivalent.
    - Credit will also be accorded for a role as co-investigator. If funding from grants on which the candidate is not PI is to be considered in making a case for excellence in research (for example, if the candidate is an essential member of a collaborative research team), the nature and significance of the candidate's contribution must be carefully documented by the candidate, collaborators and other evaluators.
    - As a principle, the school does not evaluate success in attracting external funding strictly in terms of monetary value. It is also recognized that different research types demand different funding levels. Nonetheless, it is appreciated that small grants do not weigh as much as, for example, an NIH R01 grant. For advancement to professor, the level of scholarship will have necessitated significant and sustained external funding.
    - Candidates are invited to submit NIH Summary Statements or the equivalent from other agencies as impartial evaluations of their work.

### Intellectual Property

* + - Patents. A patent award is recognized as evidence of creative activity and the development of new knowledge. A patent has undergone stringent external review by the US Patent Office and is a form of retrievable output that requires a substantial investment of intellectual effort. A patent is, therefore, a potential indicator of a successful research program, though it is recognized that, like publications, not all patents have equal weight. Some are never licensed and effectively used, whereas others may generate revenue for the university, school, and department. Also, as with traditional publications, an individual’s role in a patent application is important, and the onus is placed on the applicant to document, if necessary, their contribution through letters from co-inventors. Minimally, the candidate must be listed as a co-inventor.
    - Licensing/Royalties. Licensing products or awarding royalties does not have the weight of peer-reviewed appreciation of a research program but does indicate recognition and value. However, with publications and external funding, licensing and royalties can support the cohesiveness of a research program.

### Recognition

In addition to publications and grant funding, several other indicators provide evidence of an individual's reputation and stature in the field. Examples are given below, but a candidate is not expected to have accumulated all.

#### Promotion to Associate Professor and/or Granting of Tenure

Indicators of recognition are similar to those listed for advancement to professor. The candidate should build a reputation and have emerging recognition at the national level. Reviewing papers and grants, nationally or locally, are positive indicators. Invitations to present seminars or to speak at congresses and meetings, locally or nationally, are likewise important gauges of visibility. Invited reviews and participation in study sections or grant review boards are strong recognition indexes but may not always be achieved at this stage.

#### Promotion to Professor

* + - * Editorial boards and manuscript review. A faculty member with a mature and successful research program would likely be asked to review many manuscripts for journals. Being or having been a member of an editorial board(s) is considered very positively, with the more important the journal(s), the better. In some instances, documentation of meritorious editorial service in the form of a certificate, published list of the number of papers reviewed, or letter from senior editors can be used for documentation.
      * Study sections and grant review. Similar to requests for manuscript review, solicitations to review grant applications are viewed positively. Such activity can range from requests to review individual grants through acting as an ad hoc reviewer on a study section or review panel to full membership or chairing such review groups. Full membership of the National Institutes of Health study sections is deemed especially meritorious. Participation in national society or association review boards (e.g., American Heart Association, American Cancer Society, or American Diabetes Association) is highly valued.
      * Invited authorships. Invitations to contribute reviews, editorials, commentaries, or perspectives in significant journals or chapters in important books or textbooks are recognition of an individual's stature and visibility in the field.
      * Invited speaking engagements. Invitations to speak at symposia, congresses or scientific meetings are additional measures of the success of a research program. More prominent lectures at meetings carry more weight. For example, a plenary lecture at a major society meeting is more significant than having an abstract selected for a 15-minute oral presentation, but both have value. Presentation at a large national meeting has more weight than speaking at a small specialist meeting, though both are important. Chairing a session, organizing a session or organizing a meeting are further indicators of recognition. Invitations to present seminars or grand rounds at other major research institutions or universities are another index of scientific reputation.
      * Participation in professional society affairs. Appointments to office and committees in national professional societies, particularly if by election, are viewed positively. In some cases, election to membership of elite societies itself carries prestige (e.g., American Society of Clinical Investigation).
      * Honors and awards. Accolades for research achievement may also be in the form of honors, awards or prizes. These vary in prestige, depending on the scope, local versus national, and the stature of the awarding body. Included would be MERIT awards from the National Institutes of Health, which represent high-level peer recognition of an individual's research program.
      * Consultancies. In some research areas, consultancies for companies or other organizations may represent a positive judgment of an individual’s reputation.

# Related Information

[Rubric for Evaluating Research Performance](#_Rubric_For_Evaluating)

[IUSM Promotion and Tenure website](https://medicine.iu.edu/faculty/career-planning/promotion-and-tenure)

[Standards of Excellence in Service for Promotion and Tenure](https://medicine.iu.edu/faculty/career-planning/promotion-and-tenure/areas-of-excellence)

[Standards of Excellence in Teaching for Promotion and Tenure](https://medicine.iu.edu/faculty/career-planning/promotion-and-tenure/areas-of-excellence)

[IUI Promotion and Tenure Guidelines](https://medicine.iu.edu/faculty/career-planning/promotion-and-tenure/documents)

# History

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| **Reviewed** | **Approved** |
| 5/2006 | 5/10/2007 FSC; 5/21/2007 SEC; 5/2007 IUPUI Executive Vice Chancellor and Dean of the Faculties |
| 9/2012 | 2/20/2014 FSC; 4/7/2014 SEC |
| 6/2024 | Minor updates, approval not needed. |

# Rubric For Evaluating Research Performance

*Please note that one does NOT need to engage in all the listed contributions or have all the evidence listed within each category.*

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| **Type** | **Examples of Evidence** | **Unsatisfactory** | **Satisfactory** | **Excellent** |
| **Disciplinary or Professional**  **Research** | * List of peer-reviewed publications with evidence of impact (e.g., journal impact factor and/or citations) * Presentations * Invited lectureships * Personal statement has clear articulation of the research program * Documentation of contributions to team science * External letters * US Patent, copyright, or other intellectual property * List of grants submitted and/or funded * List of other sources of support for research (e.g., industry, foundation) | * Research has not been regularly conducted or there is no evidence of dissemination * Evidence comes only from colleagues, collaborators, or ex-learners * Individual roles and level of collaborative work are unspecified * Research is of poor quality * No research program has been presented * No evidence of attempts to seek grant funding/ support | * Candidate has performed research that is appropriate to the discipline/profession and reflects standards of good practice * Candidate has disseminated the results of research in scholarly journals and other appropriate venues * The research program is clearly articulated * Candidate has articulated the role they have played in collaborative work * Evidence of attempts to obtain grant funding, which shows promise | * Significant contributions to the knowledge in the field that demonstrate attributes of scholarly work associated with research, including peer-refereed presentations and publications and recognition of the quality of research * Candidate’s work has attracted favorable peer review and peer commentary notes promise * Sustained contributions * Successful grant and external support has been obtained and continuing efforts and promise are documented |
| **Peer review** | * External letters * Study section member * Scientific review committee * Journal editor * Journal reviewer * Abstract reviewer | * Local and external peer reviews have evaluated the work as unsatisfactory. | * Departments provide clear information about the stature of journals and the significance of the research publications * Departments affirm the candidates’ plans for continued research | * Expert external peer review demonstrates the attributes of scholarly work associated with research, including peer-refereed presentations and publications |
| **Scholarly activities, including awards** | * Awards and other recognition * Internal and external letters * Unsolicited letters from mentees * Elected member of professional/disciplinary organization | * None are documented | * Dissemination and recognition has occurred | * Evidence of a program of scholarly work that has contributed to the knowledge base and improved the work of others * Departmental evaluations document the stature of the work * Regular and significant dissemination of good practice and recognition has occurred |