

## Promotion and tenure: Clinical faculty at schools of pharmacy in Canada

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### Abstract

As a result of an evolution in roles and responsibilities of pharmacists, pharmacy education in North America has become more clinical in nature. In order to meet teaching and research requirements, Canadian pharmacy schools are hiring non-traditional faculty members who possess advanced clinical degrees and training rather than traditional academic qualifications. Policies with respect to tenure and promotion have not kept pace with these changes in hiring practices. Research was undertaken to examine the application of tenure and promotion policies and guidelines to clinical pharmacy faculty members across Canada. Document review was complemented by key informant interviews. A series of themes emerged indicating areas of concern regarding application of traditional “arts and science” tenuring/promotion policies for clinical pharmacy faculty members. Based on these themes, a model for development of guidelines to acknowledge the value and importance of creative scholarly activity within pharmacy (“the 5 C’s”) is proposed and discussed.

**Keywords:** *Pharmacy education, clinical pharmacy, clinical faculty, tenure and promotion*

### Background

Schools of pharmacy in Canada are uniquely diverse environments, encompassing a broad range of activities relevant to the mission of pharmacy education and research. As a clinical profession situated within a variety of scientific disciplines, pharmacy education and research is of necessity broad, embracing fields such as behavioural sciences, medicinal chemistry, physiology, and jurisprudence. This breadth provides a uniquely enriching academic experience for both undergraduate and postgraduate students, who take courses in subjects ranging from physical chemistry to psychology. It also provides an environment in which interdisciplinarity may flourish amongst researchers and scholars.

As a clinical profession, pharmacy education has evolved considerably over the past decade, in response to expanding roles for pharmacists in the health care system, and on-going evolution in scopes of practice (Popovich & Abel, 2002). Pharmacists practicing in hospital and community settings participate in a

variety of interprofessional health care teams, and are more directly involved in patient care and clinical decision making than in the past. In order to prepare future practitioners for this clinical, patient-centred role, educational standards and expectations have evolved. Across North America, there is now a greater emphasis on clinical teaching, experiential learning, and involvement of practitioner–educators at both the undergraduate and postgraduate levels (Barnett & Matthews, 1998).

As a result, faculty members with non-traditional academic qualifications and backgrounds are required in order to meet teaching requirements of these evolving curricula. While, in the past, the majority of faculty members recruited and hired in schools of pharmacy across Canada were PhD graduates with post-doctoral fellowships, many schools of pharmacy today must recruit practitioners with advanced clinical degrees (Pharm D) with clinical residencies or fellowships (Holstad, Burke, Prosser, Dobesh, & Lakamp, 2000). Similar to schools of medicine, the role of clinician–educator–scholars is increasing as

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Table I. Tenure and promotion guidelines accessed.

<p>Memorial University:  <a href="http://www.mun.ca/munfa/art11.htm">http://www.mun.ca/munfa/art11.htm</a>.          Accessed February 23 2005 11:16 am.</p> <p>Dalhousie University:  <a href="http://as01.ucis/dal.ca/wag/template/uploads/fos/Tenure_Guidelines_and_Criteria_2004.pdf">http://as01.ucis/dal.ca/wag/template/uploads/fos/Tenure_Guidelines_and_Criteria_2004.pdf</a>. Accessed February 23 2005 12:19 pm.</p> <p>Universite de Laval:  <a href="http://new-www.pha.ulaval.ca/pharmacie/pages/viefacultaire.html">http://new-www.pha.ulaval.ca/pharmacie/pages/viefacultaire.html</a>.          Accessed February 23 2005 2:45 pm.</p> <p>Universite de Montreal:  <a href="http://ww.drh.umontreal.ca/conv/SGPUM.pdf">http://ww.drh.umontreal.ca/conv/SGPUM.pdf</a>.          Accessed March 29 2005 3:47 pm.</p> <p>University of Toronto:  <a href="http://www.provost.utoronto.ca/userfiles/page_attachements/Library/6/sec_4_tenure_review_04_05_2242539.doc">http://www.provost.utoronto.ca/userfiles/page_attachements/Library/6/sec_4_tenure_review_04_05_2242539.doc</a>.          Accessed March 09 2005 1:03 pm.</p> <p>University of Manitoba:  <a href="http://www.umfa.mb.ca/contract/19.html">http://www.umfa.mb.ca/contract/19.html</a>.          Accessed March 09 2005 9:45 am.</p> <p>University of Saskatchewan:  <a href="http://www.usask.ca/vpacademic/collegial/university_StandardsFeb122002.shtml">http://www.usask.ca/vpacademic/collegial/university_StandardsFeb122002.shtml</a>. Accessed February 23 2005 1:39 pm.</p> <p>University of Alberta Guidelines:  <a href="http://www.uofaweb.ualberta.ca/science/pdf/Criteria.pdf">http://www.uofaweb.ualberta.ca/science/pdf/Criteria.pdf</a>.          Accessed March 09 2005 4:42 pm.</p> <p>University of British Columbia Guidelines:  <a href="http://www.facultyrelations.ubc.ca/faculty/faculty.htm">http://www.facultyrelations.ubc.ca/faculty/faculty.htm</a>          (4. Accessed February 23 2005 12:45 pm.</p>
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the amount of clinical education in the curriculum increases.

Over the past decade, the clinical component of a typical undergraduate pharmacy program has increased significantly, now accounting for approximately 30–35% of coursework in programs reviewed by the Canadian Council for Accreditation of Pharmacy Programs. At the graduate level, increasing numbers of students are now studying in the areas of pharmacy education, pharmacy practice, social/administrative pharmacy, and clinical sciences.

As university-based institutions, schools of pharmacy operate within relatively traditional paradigms of teaching, research, service, and scholarly activity. Tenure and promotion guidelines established in this “Arts-and-Science” paradigm may not be entirely applicable to clinical faculty involved in pharmacy education and research, due to the nature of their academic appointments, the type of scholarly activity in which they are engaged, and the output of their work (Bajcar, Endreyne, Paton, Pugsley, Stieb, Uetrecht, & Winslade, 1994; Ritchie, Burke, Dahdal, Holstad, & Maddux, 1999). As a result, these individuals may not be adequately recognized for their contributions to the profession and to the university. Importantly, the definitions of “excellence” that underlie tenure and promotion guidelines and that were established within the traditional PhD followed by post-doctoral fellowship paradigm may not be broad enough to encompass the vital role

played by individuals with a Pharm D followed by a residency/clinical fellowship (Holstad et al., 2000).

As the focus of pharmacy education and research continues to evolve towards patient-focused practice, there will be an increasing number of faculty members who will be hired without the traditional PhD + post-doctoral fellowship qualification. Issues of recruitment, retention, and acknowledgement will need to be addressed in order to ensure the teaching and research agenda of pharmacy programs across the country can continue to thrive (Wolfgang, Gupchup, & Plake, 1995). In order to address these important questions, it is necessary to first understand how tenure and promotion policies and procedures are currently applied to clinical faculty with non-traditional academic qualifications at schools of pharmacy across Canada.

### Objective

The objective of this research was to describe how schools of pharmacy across Canada apply existing guidelines, criteria, policies, and procedures related to tenure and promotion decisions in the context of clinical faculty members. For the purpose of this research, clinical faculty members were defined as those individuals whose primary teaching and scholarly activity is situated with the domain of pharmacy practice at an accredited school of pharmacy, and who have full-time appointments at a university-based school of pharmacy in Canada.

### Method

Four major sources of information were identified as relevant for this research:

- (a) Publicly available, web-based documents outlining criteria for tenure and promotion at the university level, (frequently contained within memoranda of understanding between a university and a faculty association or union);
- (b) Internal guidelines, policies, procedures and practices that are documented at the school or faculty of pharmacy, and while publicly accessible may not be readily retrievable;
- (c) Key informant interviews with academic administrators involved in tenure and promotion decisions; and
- (d) Key informant interviews with clinical faculty members (tenured, tenure-track, and non-tenure-track)

Each school of pharmacy was contacted and asked to provide copies of any faculty-specific documentation. In addition, key informants (both administrators and clinical faculty) were interviewed to provide context for interpretation of written documents, and to provide perspective on the way in which

these procedures and policies are applied in the case of clinical faculty members. In particular, key informants were asked to provide case examples of recent tenure and promotion decisions for clinical faculty members, and to reflect upon the process (Since, in general, tenure and promotion committee deliberations are *in camera*, no documentation was available).

Analysis of written documents (at the university- and faculty-level) was guided by key informant interviews, and key informants were asked to provide their interpretation of ambiguous documents or interview transcripts. All documents and interview transcripts were reviewed and analyzed by two investigators, to enhance consistency of interpretation. From this review and analysis, a series of common themes emerged related to the way promotion and tenure decisions are currently made at schools of pharmacy across Canada in the context of clinical and non-clinical tenure-track faculty.

## Results

There are a total of nine pharmacy schools in Canada, all of which are associated with major medical-doctoral universities across the country. All universities have established tenure and promotion guidelines, which are freely available on the internet (Table I).

Key informants (particularly academic administrators) indicated that some schools of pharmacy in Canada have developed alternative criteria, or faculty-specific policies and procedures regarding tenure and promotion decisions to account for the differing scholarship of clinical faculty members.

### *Tenure and promotion are awarded, not given*

Tenure is not a right, nor is it given simply on the basis of attendance or longevity. In all cases, tenure is seen as an award based on the judgment of peers. As such, tenure is neither automatic, nor certain. In all cases, structured criteria exist to evaluate a candidate's suitability for this award. Similarly, promotion in all cases is based upon demonstrated attainment of specific goals, and is not a function of seniority alone.

### *Tenure and promotion are based on "excellence" and individual accomplishment*

All published documents reviewed used similar language to describe the basis of tenure and promotion awards. Simple engagement in research, teaching, service or scholarly work confers neither tenure nor promotion. A qualitative, comparative assessment of output is required in all cases, one that establishes the individual's work as meaningful, unique, and important within the context of that individual's discipline. Awards are not made simply on the basis of quantity of work (be it number of grants

received, dollar amounts of grants, number of papers published, or other objective measurements of output). Rather, decisions are made on the basis of a specific contribution to the field, and the judgment by others that this contribution has real meaning.

### *Determination of "excellence" is made by one's peers in the field*

The notion of excellence is at the heart of both tenure and promotion decisions in all schools of pharmacy in Canada. The determination of excellence involves a subjective component. Published guidelines are generally silent on this issue; thus excellence is neither strictly qualitative nor quantitative in nature. In most cases, there is an acknowledgement that those who are intimately involved in the field, not those who are simply familiar with it, ought to make the determination of quality, impact, and excellence.

Interviews with key informants (particularly those involved in tenure and promotion decisions) indicate that the diverse interests and experiences of faculty members in schools of pharmacy may, on occasion make it difficult to define excellence. For example, in some fields (such as medicinal chemistry), dissemination of scholarship through peer reviewed journals is a well-accepted measure of productivity, and in these cases, "excellence" has been quantified in a way that includes number of papers published, page-counts, and impact-factors calculated based on journals. However, such quantitative techniques are increasingly questioned in many fields (especially clinical areas), particularly the use of impact factors which (in an environment of freely-available information through the internet, and the widespread use of web-based journals) are becoming increasingly difficult to defend.

Defining one's peers becomes a critical activity in determining the excellence of one's work, particularly in clinical sciences, and in areas where interdisciplinarity or interprofessionalism is becoming more common place. Tenure and promotion guidelines generally do not address these issues explicitly and do not necessarily provide a framework for including non-tenured or clinical individuals in the final determination of excellence, although in all cases non-tenured or clinical colleagues may be encouraged to provide supportive letters or documentation on behalf of the candidate.

### *Tenure and promotion decisions should not affect academic freedom*

In all universities in Canada, all faculty members (regardless of their formal status within the institution) are free to pursue inquiry pursuant to general institutional guidelines. All universities with schools of pharmacy have explicit statements encouraging

faculty members to be innovative and expansive in their scholarship, teaching, and research. However, key informant interviews suggest that most individuals without tenure feel much more constrained in their ability to pursue research that is not deemed “safe” or “productive”. Consequently, non-tenured individuals may be more likely than tenured individuals to compromise personal research interests in order to demonstrate productivity and contribution, although this was not quantified during any interviews.

*Tenure does not mean a “job for life”*

Tenure neither permanently guarantees nor secures an individual’s position. Tenured faculty at all schools must still demonstrate productivity and contribution in a meaningful manner over the course of their career. However, tenure does free an individual from the burden of regular performance reviews by those unfamiliar with their field, and does provide a measure of security especially during times of significant financial uncertainty or instability for an institution.

*Tenure and promotion are an important and valued acknowledgement of accomplishment*

Ultimately, as described by key informants, the value of both tenure and promotion within a school of pharmacy is the public acknowledgement of the quality of one’s work within the institution and the broader professional community. Tenure and promotion confer prestige and honour, and provides a level of respectability and acceptance within the academic community.

Importantly, there are several schools of pharmacy that (consistent with their university policies) offer separate “streams” for clinical and teaching faculty. For example, the University of Toronto has developed a lecturer stream, the Université de Montreal has developed a “clinical professor” stream, while at the University of British Columbia, there exists an “instructor stream”. In these cases, an individual may be “promoted”, for example, from lecturer/instructor to senior lecturer/instructor, and there is language in these documents that describe this process as comparable to tenure. In other institutions (such as Memorial University, or the University of Manitoba), such separate and distinct streams are generally not utilized for full-time academic appointments.

Key informants, particularly clinical faculty members in such streams, point to the potential issue with such institutional policies. As one informant noted, “As the sad history of the world shows us, separate but equal seldom really is . . . (we) are second class citizens within the (faculty), despite what the policies say.” The existence of two separate streams for clinical and non-clinical faculty was identified by many key informants as problematic and potentially divisive.

*Tenure enables stability and longevity within the faculty*

As with many health care professions, there currently exists a strong demand for pharmacists in community, hospital, and industrial settings. Individuals who are eligible for clinical faculty positions are frequently highly trained and accomplished, and would therefore be considered prime recruits for non-academic settings (Orlando, Gunning, Shane-McWhorter, Oderda, Rusho, Rollins 2000). Amongst health care professions in Canada, pharmacy may be viewed as somewhat unique insofar as the majority of pharmacists work in the private, not public, sector where salaries and benefits are highly responsive to market forces. Key informant academic administrators noted that many capable clinical faculty members may enjoy greater financial opportunities outside academia, and have identified tenure in particular as an attractive non-financial incentive to encourage long-term commitment to the university. From this perspective, tenure of clinical faculty is an important component of academic human resources planning, and confers important advantages for the institution despite the significant long-term costs in salary and benefits.

Most clinical faculty members select academic careers due to the opportunity to teach, and engage in scholarly activity and community service, and recognize that in making this decision, there may be some personal financial disadvantage. The need for tenure recognition amongst clinical faculty key informants was not universal, with some expressing the opinion that tenure is not relevant, so long as the opportunity to freely engage in activities of interest continue to exist. For others, tenure provides a measure of certainty and stability that is highly desired. Importantly, the North American market for academic pharmacists is expanding quickly; ten new schools of pharmacy have opened in the United States in the last decade alone. In many cases, these schools are not located in publicly funded universities; in many cases, they may provide both first-rate academic work environments as well as attractive benefits, including salary, and clear and equal tenure/promotion guidelines for clinical faculty. Anecdotally, key informants report the unfortunate loss of potentially gifted academic pharmacists to these American schools.

*Frequently, tenure decisions are made at the university level, based upon recommendations made at the faculty level*

In general, tenure is awarded by the university, upon receiving a positive recommendation from the Faculty. As such, ultimate decisions regarding clinical faculty members may be made by individuals who are not necessarily aware of the role of clinical faculty within pharmacy education, research, and scholarship. While there were no specific examples of university



administration over-riding a faculty's tenure recommendation, key informants did cite circumstances under which university administrators unfamiliar with the unique nature of clinical faculty appointments have questioned promotion decisions. Academic administrator key informants indicated the importance of establishing clear lines of communication with university administration to ensure clarity and consistency in interpretation and application of rules governing both tenure and promotion, and for advocating on behalf of clinical faculty members.

## Discussion

Clinical faculty members in schools of pharmacy are involved in a variety of scholarly activities, including curriculum development, program planning and evaluation, pharmaco-economic evaluation, practice research, and establishing policies and regulations related to licensure and professional practice. These activities have fundamentally shaped the profession of pharmacy at the local, national, and international levels, and have helped direct the evolution of pharmacy towards a more patient-centred practice. They also contribute significantly to delivery of curriculum using novel educational methods such as simulated patient interactions, case-study seminars, and problem-based learning tutorials. As pharmacy schools increase recruitment of full-time clinical faculty members with non-traditional qualifications, tenure and promotion guidelines for more traditional research-intensive faculty may not be applicable (Anderson, D'Souza, Grapes, Kavula, & Miller, 1998). As such tenure and promotion may appear difficult and decisions may appear arbitrary and capricious, thereby compromising clinical faculty recruitment particularly given attractive opportunities in practice or in the private sector.

In balancing the need for rigorous, fair, and consistent guidelines for tenure that reward excellence, with the need to acknowledge differences in scholarship, many key informants echoed a common theme related to "separate but equal" tracks for clinical and non-clinical tenure. In general, most believed that the system currently utilized in many universities of distinguishing between "clinical" professors and other professors was pejorative and unfortunately set-up a two-tier system within the academy. While this system may have initially been crafted as a compromise, and does afford many important rights, responsibilities and protections to those in the clinical stream, the aspirations of many clinical faculty members to be fully acknowledged and recognized within the university governance structure appears to be stifled.

Increasingly, schools of pharmacy are interested in acknowledging creative scholarly activity, both in traditional bench-based research and in clinical

sciences and practice. While most schools have formal or informal practices to define such activities, the determination of excellence in creative scholarly activity may often appear arbitrary. In particular, since this determination is generally made by tenured faculty members who received tenure through traditional criteria, there may be difficulties in truly recognizing the contribution and importance of certain kinds of scholarly work.

We propose a model for determination of excellence related to promotion and tenure decisions based on the "5 Cs" (see Appendix). While none of these criteria in and of themselves is unique or contentious, framing them within the context of promotion and tenure decisions for all faculty members (not just clinical faculty) provides an opportunity to address currently expressed concerns regarding the two-tier nature of academic pharmacy in Canada.

While the principles articulated in the Appendix may be broadly acceptable within academic pharmacy, it is important to recognize that significant structural impediments currently exist to fully accepting creative scholarly activity within the tenuring and promotion processes for clinical and non-clinical faculty alike:

*Frequently, tenure decisions are made at the university level, based upon recommendation made at the faculty level*

University-level administrators unfamiliar with the unique nature of academic pharmacy and the need for additional guidelines for creative scholarly activity may question faculty-based tenure and promotion recommendations. Senior academic officers within the Faculty need to communicate clearly and consistently, and emphasize the following points:

- Faculties of pharmacy across North America continue to take the leadership role in advancing pharmacy towards patient-centred practice. In large part, this is due to the contribution of clinical faculty members at teaching sites who demonstrate innovative patient care through implementation of new programs and interprofessional, multi-disciplinary collaboration.
- The evolving nature of patient care practice (particularly in primary care) requires significant scholarship in articulation of practice models, standards of practice, educational and health-related outcomes that may not necessarily follow traditional research paradigms such as randomized, double-blinded, placebo controlled trials. This scholarship must be multidisciplinary, including (for example), critical sociological theories and perspectives.
- Development of new practices and evolution in the profession will require "best practice exemplars", role models, and pharmacy practice research that

may utilize “n = 1” or case-study methodologies involving mixed quantitative and qualitative research methods.

- Traditional methods for evaluating excellence may unfairly disadvantage certain individuals, insofar as most tenure and promotion committees are composed of individuals who themselves have achieved tenure through traditional means. While, in most cases, the structure of tenure review and promotion committees is negotiated by memorandum of understanding with Faculty Associations (and therefore not under the control of either the faculty or the university directly), these committees may give latitude to the candidate by, for example, soliciting letters from non-tenured, high-ranking individuals in government, regulatory bodies, and professional associations at the national/international level.
- Careful constitution of the review committee is necessary to ensure each member is objective and open to evaluation of excellence within the context of creative scholarly activity.
- Education of external members of the committee (who may not be pharmacists or affiliated with a school of pharmacy) is necessary. These individuals may not necessarily appreciate the importance of the individual’s work within the context of pharmacy practice and education.
- Development of a “critical mass” of tenured individuals who have succeeded through creative scholarly activity is essential so that, in the future, it will be truly possible to have peer-based evaluation.
- While “independence” is an important virtue in any candidate for tenure, so too is the demonstrated ability to collaborate within a multidisciplinary context.

#### *Faculty development to support candidates for tenure/promotion*

Deans and associate deans must ensure that each faculty member is provided with the tools necessary to be successful for tenure and promotion (Ritchie et al., 1999). Currently, there appears to be wide variability across Canada in terms of central administrative support for candidates. For example, in some universities, generous “start-up” financial packages may be awarded, while in others, senior mentors are appointed. No school of pharmacy has currently developed a “model portfolio” for candidates to utilize in developing their own case for tenure and promotion.

#### *Development of an international network to support tenure/promotion through creative scholarly activity*

The issues faced by Canadian pharmacy faculty members are not unique; indeed clinical faculty throughout the world face similar issues. Consequently,

and in keeping with the need to ensure international recognition of innovation and contribution, international collaborations should be developed to assist candidates in developing portfolios, and to assist universities in identifying appropriate individuals who may be able to provide informed expert review letters to tenure/promotion committees. Additionally, there is a need to advocate at the national and international level with other organizations (such as the Society for Teaching and Learning in Higher Education), to connect candidates to others outside pharmacy who may provide collegial support, or letters of reference to tenure and promotion committees.

### **Conclusions**

The importance of clinical faculty (including educational and practice researchers, practitioners, and other non-traditional academics) within schools of pharmacy in Canada is clear: these individuals have helped push pharmacy practice in new directions that have had broad influence on practice and health policy and outcomes (Harm, 1983). Formal recognition of the significance of this work, through the awarding of tenure, is highly desired to ensure stability within the faculty, and to encourage creativity, contribution and collaboration. Formal acknowledgement of such contributions through promotion is essential to ensure on-going commitment to the institution and the profession (Orlando et al., 2000).

We have described a model (the 5 Cs) to assist schools of pharmacy and universities in interpreting the work of non-traditional scholars (whether they are clinical faculty or not), in the context of promotion and tenure decisions. Such decisions are amongst the most important made within an academic setting; the “arts and science” model, while effective for some, may not be applicable to all pharmacy academics. This model is in no way presented as “the final word”; rather it is presented in the hopes that interest in acknowledging the contribution of clinical faculty in schools of pharmacy will increase, and commensurate institutional changes will occur to support fuller inclusion of all faculty within the academic pharmacy community. As such, this paper is a springboard for broader discussion and debate.

As the role of the pharmacist in health care continues to evolve and expand, Canadians will become more reliant upon their contribution to optimizing utilization of scarce resources, as well as positive health outcomes. Education for pharmacy students has evolved considerably over the past decade, as has the need for innovation in scholarship to support practice advancement. In recognizing the past, present and future contributions of clinical faculty, schools of pharmacy in Canada can distinguish themselves internationally, and continue to provide leadership in

the areas of pharmacy education, practice, research, and scholarship.

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## Appendix

The 5 Cs: Proposed criteria for tenure and promotion within Schools of Pharmacy in Canada

### General principles

- (1) Guidelines should be applied and available to all faculty members, not simply clinical faculty members.
- (2) The notion of “separate but equal” tracks for faculty members should be challenged.
- (3) Three major categories of creative scholarly activities may be identified, in descending order of importance and weighting:
  - (a) Innovations brought to the field of study or practice
  - (b) Contributions to the development of the field of study or practice
  - (c) Exemplary work within the field of study or practice

### Application of general principles

- (1) Innovative classroom teaching, while important, requires evidence of its impact in other educational settings beyond the individual's own institution.
- (2) Administrative activity (including university or community responsibilities), while important, requires evidence of its impact on the profession or society, beyond the individual's own institution
- (3) Evidence for creative scholarly activity must be solicited from a wide variety of credible sources, and should not be limited to, for example, number and dollar amount of grants received, number of papers published in peer reviewed journals, or “impact factor” of journals publishing the candidate's work. While these may be included and offered as evidence, other credible sources of evidence must be accepted.

### Criteria for evaluating excellence in creative scholarly activity

- (1) *Creativity*: Originality of thought is valued more highly than originality of application or implementation. Development of a conceptual innovation is more important than successfully introducing another person's innovation.
- (2) *Continuity*: Long-term potential contribution of the candidate and his/her work, and the ability of the candidate to demonstrate productive innovation over the course of a career must be considered. The longevity of the innovation itself, while important, is less important than the anticipated further contributions of the individual.
- (3) *Contribution*: Evaluation of impact of creative scholarly activity must be undertaken by those who are familiar with the work and its affects within the appropriate settings. As a result, basic scientists should not judge clinical faculty members' work or vice-versa, unless there is a contextually specific reason for doing so. Traditional evaluative tools such as journal impact ratings must be contextualized, particularly in the clinical sciences where most journals are freely available on the internet and therefore calculations of “impact” may be problematic.
- (4) *Collaboration*: Creative scholarly activity should not occur in isolation; rather, an integral feature of such activity is the extent to which it involves others in a collaborative (frequently multi-disciplinary or interprofessional) manner. Evidence of collaboration and collegiality broadens the impact of the activity, and provides an opportunity for further development and refinement of ideas and innovations. Importantly,

collaborative (particularly interprofessional) work may involve significant contributions from many individuals, not all of whom may be recognized as principal investigators. Traditional evaluation of grants in terms of principal investigator status need to be reconsidered, with a specific view to the nature of the collaboration and the real value of the candidate's contribution to the overall success of the initiative.

(5) *Commitment:* Emphasis on scholarly activity should in no way dilute or diminish the notion of excellence. Commitment to the field of study or practice may be demonstrated through active engagement within that community of scholars, and the broader community. Evidence for commitment to advancement, excellence, and innovation may be solicited from non-traditional sources familiar with the importance of the candidate's work.