

# How to Promote the Academic Success of Junior Faculty Physicians in Gastroenterology

Nicholas J. Shaheen and Robert S. Sandler

*University of North Carolina at Chapel Hill, Division of Gastroenterology and Hepatology, Department of Medicine, Chapel Hill, North Carolina*

**B**ecause landing a GI fellowship is so competitive, trainees in gastroenterology are among the most talented young physicians in medicine. Having navigated a gauntlet of challenges, and sporting exceptional board scores and clinical evaluations, they are

superbly prepared to face the challenges of our profession. Many of these physicians express interest in an academic career during their training. However, relatively few achieve academic excellence as junior faculty. What happens to winnow the numbers? What is the system doing wrong? How can institutions increase the chances of academic success in junior faculty?

Herein, we review obstacles to academic success among junior physician faculty and suggest some strategies to address them. These strategies may be helpful both to leaders of academic divisions, as well as physician trainees who are evaluating positions for their potential to launch a successful academic career.

What is academic success? For the purposes of this discussion, we define academic success broadly to include not only academically productive basic, translational, and clinical researchers, producing manuscripts and successful grant applications, but also individuals who excel as educators and experts in quality improvement and efficiency. Such a broad definition also implies that the standards for success cannot be one size fits all. Although the yardsticks defining success vary somewhat by discipline, they generally include the creation of scholarly products, culminating in professional recognition for this effort.

## Powerful Forces Oppose the Academic Development of Junior Faculty in Gastroenterology

Although it may seem that the development of an academic career is primarily an exercise of will, intellect,

and perseverance, multiple forces oppose the development of academic excellence in junior faculty. First and foremost, the demand for clinical productivity competes directly with academic pursuits.<sup>1</sup> The old joke that junior faculty get protected time between midnight and 8 AM is true in many academic institutions. Given that endoscopy provides much-needed clinical revenue, many departments of medicine rely on gastroenterology and other procedure-oriented divisions to subsidize parts of their mission that chronically run at a loss. Academically inclined junior faculty physicians recognize pressure for clinical productivity as a major impediment to achieving success and a source for job dissatisfaction.<sup>2</sup>

Other obstacles are common (Table 1). Funding for research is increasingly competitive, especially for the larger awards that protect substantial amounts of research time and fund sizeable investigations.<sup>3</sup> There may also be insufficient funds for study personnel, equipment, and supplies. The availability of high-quality mentors is spotty, and junior investigators may need to venture outside their divisions to find mentors with relevant methodologic expertise. As GI divisions have developed satellite clinics to increase revenues and provide better customer service, junior faculty may spend substantial portions of their time at outlying clinics or endoscopy suites, away from the academic resources of the main campus. Personal commitments, such as starting families or caring for aging parents, compete for the faculty member's time and attention. Financial demands have also escalated—the average debt among graduating medical students taking loans increased from \$32,000 in 1986 to \$190,000 in 2016, an increase of \$120,000 after accounting for inflation.<sup>4</sup> Because many compensation plans decide compensation largely based on the accrued work relative value units generated by the faculty member, faculty are compelled to “chase relative value units” to meet their financial obligations, at the expense of their academic pursuits.

Despite these challenges, some institutions enjoy substantial success in fostering academic excellence in junior faculty. These institutions are over-represented when professional society junior faculty development awards and

**Table 1.** Challenges to Academic Productivity in Junior Faculty

Challenge	Potential Solutions
Appropriate mentoring not available	Cultivate extramural mentors through societal mentoring programs or via connections with faculty at your institution Access institutional mentors outside division through Clinical and Translational Science Award or vice dean of research
Lack of funding for study personnel, equipment and supplies	Engage medical students, residents, and fellows interested in academic careers to perform study tasks Assess availability of intramural pilot grant programs Consider application to societal pilot grant programs
Significant portion of time spent in satellite offices	Negotiate for schedule that is most conducive to academic progress
Inadequate protected time for research	Insist that divisions honor the protected time mandated by federal or society awards
Financial demands and debt	Assess eligibility for National Institutes of Health loan repayment and other programs for medical debt relief

National Institutes of Health K awards are distributed.<sup>5</sup> Because these institutions are not uniformly those with the highest endowments or the best payer mixes, other factors must be at play to make some divisions more academically successful and better at fostering academic junior faculty.

As present and past division chiefs, we have observed what motivates junior faculty, and what resources are especially important in their development. We believe that several factors are instrumental in developing academic success in junior faculty. Taken together, these factors might best be described as creating a “culture of scholarship.” Recognizing that much about culture is intangible, we attempt to describe some of the factors necessary for promotion of academic excellence in junior faculty.

## Creating a Culture of Scholarship

### *Select the Right Faculty*

It may seem self-evident, but to build a successful academic division requires picking winners. Picking winners is not easy, but it is important because it costs a lot to bring on a junior faculty member, and the institution and donors are not likely to continue to support recurring failure.

The startup costs for a junior faculty are considerable. Faculty development awards cover only a small proportion of the salary and benefits necessary to protect the 50%–80% time necessary to satisfy funding agencies, meaning that the institution must subsidize the remainder of the cost of salary, benefits, divisional overhead, and other expenses. At our institution, we estimate that a young faculty member on a K or similar award with 75% protected time costs the division >\$150,000 annually. However, startup costs go beyond dollars. New faculty require space, administrative support, and the costs inherent in mentoring them. Given these direct and indirect costs, it is imperative that we select the most promising investigators—those likely to make the biggest impact on our field, and those most likely to ultimately develop self-sufficient research programs.

Unfortunately, and not surprisingly, there is no equation to predict academic success. Commonly used metrics—membership in AOA, board scores, completion of a chief

residency—poorly predict success. Because publication quality and quantity is a criterion for academic promotion, publications during fellowship may be a useful metric to select promising faculty. However, it is sometimes difficult to separate the effect of the environment from the effort of the applicant. Some divisions write lots of papers, and trainees in such places are more likely to be authors, if for no other reason than proximity and access to prolific researchers. Paradoxically, trainees who publish papers while training at sites not known for academic productivity may actually be those applicants who are most motivated, because the amount of effort to produce a scholarly product in such a setting is likely greater than that necessary at highly productive institutions.

Trainees who have made an additional substantial time commitment to scholarly pursuits in their training are more likely to succeed in academics. Examples of such commitments include extra research or teaching time in fellowship, advanced degrees or special training, and the writing of grant applications.

### *Provide Protected Time for Junior Faculty to Develop Expertise in Methodology and in Subject Matter*

Protected time is essential to develop academically impactful products, whether they be research studies, manuscripts, curricular elements, or quality improvement initiatives. The division chief and the junior faculty member must have a frank discussion about both the expected products and the time necessary to develop them. Giving a junior faculty member 9 half-days of clinical assignments and a mandate to write a successful faculty development award is a recipe for failure. Indeed, burnout seems to be one of the primary factors causing tenure-track junior faculty to leave research.<sup>6</sup> Divisions must factor in the costs of unfunded protected time and be as liberal as circumstances will allow in awarding such time early in the career of faculty. It has been our experience that junior faculty understand well the relationship between starting salary and protected time, and, with the correct counseling, are willing to forego higher starting salaries for more protected

time. It is up to the divisional leadership to avoid tempting research- or teaching-oriented faculty with additional clinical workload for augmented compensation. Although such trades may initially seem attractive to junior faculty who may be purchasing homes, starting families, and pursuing other costly early career endeavors, they curtail academic productivity.

### *Incentivize Behaviors That Lead to Academic Development*

It is hypocritical for leaders of divisions to simultaneously bemoan the poor academic productivity of their junior faculty and to reward only clinical productivity. The clearest statement of an organization's values is how it rewards effort, and compensation schemes based largely or totally on work relative value units send a message to junior faculty that it is clinical work that matters.

Figure 1 demonstrates the form used by the authors for over a decade to calculate year-end discretionary bonuses at our institution (a similar, but more complicated, departmental evaluation, is currently in use). Note that clinical performance is 1 of 6 realms evaluated, the others being research, academic productivity, "citizenship," teaching and mentoring, and administrative functions. Given the broad interests and job functions of our faculty, the division chief and the faculty member decide jointly on the applicable categories for evaluation—for instance, a PhD benchtop researcher would not be evaluated for clinical performance, and a new faculty member with no administrative role would not be evaluated for administrative contributions. All faculty received scores for citizenship and teaching/mentoring. A simple ratio of points achieved to points available decided what discretionary funds went to each faculty member. The most important purpose of the review, however, is that it gives the division chief the opportunity to share with the faculty member what behaviors are valued. The message is clear—we value all the missions of our enterprise, and our faculty should as well.

### *Formalize Mentorship and Sponsorship*

High-quality mentoring is essential to the development of junior faculty and is consistently recognized by faculty as key to a successful academic career.<sup>7-9</sup> Evidence also suggests that, among researchers, structured mentoring increases the chance of a successful federal grant application.<sup>10</sup> The best mentoring is organic, growing out of shared interests and a mutually beneficial working relationship. However, it takes time and effort to develop these relationships, and leaving it to chance risks the possibility that successful working pairs never form. Therefore, we engage in "academic matchmaking" on hiring research fellows and junior faculty. By assigning them a senior faculty mentor, we provide these individuals with both a conduit for advice and guidance, as well as a well-resourced, successful academician who knows our system and can help the new faculty navigate it. Although we consider academic interests when making this assignment, it is common that this initial

assignment is not the most important or durable mentor-mentee relationship for that junior faculty member. However, it does ensure that initial conversations occur about structuring work, access to resources, and short to midterm goals.

Sponsorship is different from mentorship.<sup>11,12</sup> A sponsor is a person in power who advocates for the advancement and promotion of a junior colleague. Sponsors can nominate junior faculty for positions on committees of national organizations or locally. They can help faculty network to create research or professional opportunities. Having division members strategically placed in national organizations is helpful but not necessary. What is necessary is that senior faculty find or create opportunities and steer junior faculty toward them. Energetic sponsorship can jumpstart the careers of junior faculty.

### *Create Infrastructure to Enable Academic Success*

Institutions vary widely with respect to infrastructure for academic work. Some GI divisions have extensive research and education resources, whereas others have practically none. However, even in situations where the division is almost entirely dedicated to clinical service, resources supporting the research or academic development of educators can be found at the level of the department or the school of medicine. Identifying these resources, and enabling access for junior faculty, is a primary responsibility of the division's leadership. The 60 or so institutions who have been awarded National Institutes of Health Clinical and Translational Science Awards have, as part of their mandate, the development of infrastructure to aid campus investigators. For those institutions not lucky enough to have Clinical and Translational Science Awards, the vice dean for research or similar campus official will be able to identify appropriate resources for junior faculty. Many schools of medicine now have Academies of Educators with resources and programs for aspiring clinician educators. Additionally, the American Gastroenterological Association sponsors an active Academy of Educators that provides enrichment for educators, small grants for educational research efforts, and a community for faculty with interest in education. It is the job of the leadership of the division to help the junior faculty to identify which resources are appropriate to the goals and needs of the faculty member.

### *Recognize and Celebrate Academic Successes*

Finally, frequent recognition and celebration of academic successes should be a staple of divisional interaction. We end our monthly faculty meeting with a "good news" section, featuring all of the academic milestones of the previous month. We report who was promoted, who was asked to serve on study sections or in leadership positions in national organizations, and who received major grants or awards. We present a list of all of the peer-reviewed publications written by divisional authors in the previous month and ask the authors to briefly summarize the major

**Division of Gastroenterology and Hepatology  
Faculty Evaluation**

Date: \_\_\_\_\_

Faculty Member's Name \_\_\_\_\_

Signature \_\_\_\_\_

**Research Evaluation (if applicable):** grants, clinical trials, contracts / subcontracts

0	1	2	N/A
None or limited intramural funding	Key personnel one or more extramural funding sources	PI of one or more federal or other major projects	

**Academic Evaluation:** publications, presentations, service on boards, panels, study sections

0	1	2	N/A
None or two or fewer publications	Multiple (3 or more) publications	Multiple publications including high impact	
Local presentations	Regional presentations	National presentations	
Local organizations	Regional organizations	National or international organizations	

**Clinical Evaluation (if applicable):** participation in clinical activities including clinic, attending, call service

0	1	2	N/A
Participates in minimal clinical activities	Goes beyond minimal clinical activities	Extensive clinical effort and/or achieves external recognition for clinical activities	

**Citizenship Evaluation:** conference participation: journal club, grand rounds, divisional research conferences; charge and medical documentation completion; Directorships; Professionalism, volunteer for open clinic slots, complete TimeTrex and other administrative reports

0	1	2	N/A
Average participation	Grand Rounds Attendance 25-50%	Grand Round Attendance > 50%	
Delayed or missing documentation, coding, reports		No missing Timetrex reports; no delayed or missing notes	
Support of divisional efforts	Strong supporter	Remarkable supporter	

**Teaching and Mentoring Evaluation:** Includes formal coursework, local seminars, CME, teaching awards, mentoring

0	1	2	N/A
Meets expectations	Does extra	Major commitment	
Average evaluations	Above average evaluations	Remarkable evaluations or teaching / mentorship awards / recognition	

**Administrative Contributions Evaluation:** Completes staff evaluations in a timely manner; engages employees and HR in coaching and counseling activities; monitoring attendance and using TIM appropriately; works with administration on recruitment, retention, layoff issues in accordance with University policy

0	1	2	N/A
Meets expectations	Does extra	Major commitment	

**TOTAL POINTS** \_\_\_\_\_

**COMMENTS:**

**Figure 1.** Sample annual evaluation form for faculty at academic institutions.

findings of the work and why it is important. Because our faculty meetings usually deal with clinical workload (always too much) and money (never enough), this section has the effect of lightening the mood and reminding people why they work in an academic institution. It also allows them to hear about the progress of their colleagues, and spurs

ideas for new collaborations or application of techniques to new areas.

Each year, we also electronically publish a booklet of all DDW oral and poster presentations from our group. Faculty use this resource to attend the presentations of colleagues. We also send the booklet to alumni, friends, and benefactors

of the division, in case they will be in attendance, and for public relations. These activities serve to recognize the accomplishments of junior faculty, who are often the first authors and presenters, and to publicize their work to others.

## Developing and Retaining the Best

Academic divisions often fill junior faculty slots with graduates from their own fellowship. Although fellowships provide an opportunity to spot and nurture talent, there are potential downsides for both the program and the graduating fellows when programs hire their own graduating fellows. Programs risk becoming too “in-bred,” losing the opportunity to introduce new solutions to problems, as well as clinical and research skills, to their institutions. Additionally, although a hire from one’s own fellowship might be viewed as “safe,” external candidates may actually be best suited to fill the goals of the position. Trainees, too, may fare less well if they accept employment terms below their market value or garner fewer resources than would be available had they gone elsewhere.

To make the best decision for both the program and the applicant, it is important that all applicants for any position be treated identically. This includes formal interviews, identical application requirements, “job talks” (if that is a feature of the position), and contracting. An applicant’s market value is the same whether they trained at the institution or elsewhere, and offering the internal candidate a package of compensation and support inferior to what would be offered to an external applicant is unfair. Such approaches result in salary inequity, which will create later problems in the division.

It is essential to make sure that, once new faculty are hired, they are productive and satisfied. Frequent monitoring of their progress toward academic goals is important, and should occur informally via the faculty member’s mentor, and formally with the divisional leadership. Junior faculty with an interest in research and education willingly work in academic positions to explore their interests, despite lower levels of compensation when compared with clinical practice. Retention of such faculty does not depend on making these jobs more like private practice, so they can support higher salaries, but making them less like private practice, such that the faculty who wish such positions will enjoy the diversity of their work. By exploiting the inherent differences between academic positions and full-time clinical positions, divisions are most likely to retain and develop them as academically productive faculty members.

## Is the Academic Gastroenterologist a Vanishing Species?

Academic success does not happen by accident. It requires the innate talents, creativity, and hard work of junior faculty. That is not enough. Junior faculty need to

work in an environment where their contributions are appreciated, where their time is protected, where they receive outstanding mentoring, and where their accomplishments are recognized and rewarded. They are also more likely to succeed in an environment where there is a critical mass of scholars who can serve as role models, sponsors, coaches, and cheerleaders. With contracting research dollars and expanding clinical responsibilities, the future will depend on having academic GI divisions who understand and embrace all aspects of the academic mission, and willingly invest in it.

## References

1. West CP, Dyrbye LN, Shanafelt TD. Physician burnout: contributors, consequences and solutions. *J Intern Med* 2018;283:516–529.
2. Raptis DA, Schlegel A, Tschuor C, et al. Job satisfaction among young board-certified surgeons at academic centers in Europe and North America. *Ann Surg* 2012; 256:796–803; discussion: 803–805.
3. Lauer M. How many researchers, revisited: a look at cumulative investigator funding rates. Washington, DC: US Department of Health and Human Services, 2018.
4. Grischkan J, George BP, Chaiyachati K, et al. Distribution of medical education debt by specialty, 2010–2016. *JAMA Intern Med* 2017;177:1532–1535.
5. Crockett SD, Dellon ES, Bright SD, et al. A 25-year analysis of the American College of Gastroenterology research grant program: factors associated with publication and advancement in academics. *Am J Gastroenterol* 2009;104:1097–1105.
6. Stoykov ME, Skarupski KA, Foucher K, et al. Junior investigators thinking about quitting research: a survey. *Am J Occup Ther* 2017;71. 7102280010p1-7102280010p7.
7. Riley M, Skye E, Reed BD. Mentorship in an academic department of family medicine. *Fam Med* 2014; 46:792–796.
8. Martina CA, Mutrie A, Ward D, et al. A sustainable course in research mentoring. *Clin Transl Sci* 2014;7:413–419.
9. DeCastro R, Griffith KA, Ubel PA, et al. Mentoring and the career satisfaction of male and female academic medical faculty. *Acad Med* 2014;89:301–311.
10. Freel SA, Smith PC, Burns EN, et al. Multidisciplinary mentoring programs to enhance junior faculty research grant success. *Acad Med* 2017;92:1410–1415.
11. Travis EL, Doty L, Helitzer DL. Sponsorship: a path to the academic medicine C-suite for women faculty? *Acad Med* 2013;88:1414–1417.
12. Hilsabeck RC. Comparing mentorship and sponsorship in clinical neuropsychology. *Clin Neuropsychol* 2018; 32:284–299.

### Reprint requests

Address requests for reprints to: Nicholas J. Shaheen, MD, MPH, Professor of Medicine, University of North Carolina School of Medicine, CB#7080, Chapel Hill, NC 27599-7080. e-mail: [nicholas\\_shaheen@med.unc.edu](mailto:nicholas_shaheen@med.unc.edu); fax: (919) 843-2508.