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William Osler Professor of Medicine  
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Paul B. Rothman, M.D.  
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Dean of the Medical Faculty,  
Johns Hopkins University School of Medicine  
Administration, Suite 100

RE: Promotion of Dr. Daniel Brotman to Professor of Medicine

Dear Dr. Rothman:

It is my pleasure to recommend that Dr. Daniel Brotman be promoted to Professor of Medicine (full-time) in the Division of General Internal Medicine. This letter is prompted by his outstanding program building in his role as Director of the Hospitalist Program at Johns Hopkins Hospital, his body of scholarly achievements, and his national recognition and leadership in the field of Hospital Medicine.

#### Career History

Dr. Brotman earned his undergraduate degree from Harvard University and his M.D. from the University of Virginia, where he was inducted into *Alpha Omega Alpha* and co-authored his first full-length research article, "Suppression of melatonin secretion in some blind patients by exposure to bright light" which appeared in the *New England Journal of Medicine*. In 1997, he came to Hopkins as a resident on the Osler Service, where he began an extramurally funded project investigating blood tests for the diagnosis of venous thromboembolism in inpatients. In 2000, he was recruited to the faculty of the Cleveland Clinic where he was promoted twice in 5 years: first to Associate Staff and then to full Staff (the highest rank offered). We recruited him back to Hopkins in June of 2005 to direct the Hospitalist Program as an Assistant Professor. Based on his academic work and his program building activities, he was promoted to Associate Professor in 2007.

#### Program Building – The Hospitalist Program at Johns Hopkins Hospital

Over the past 7 years, Dr. Brotman has transformed the Hospitalist Program from a small unit with low morale, marginal productivity, and no national profile into a program that is respected locally and nationally by academicians, clinicians, and administrators. Under his leadership, the Program (1) grew 3-fold, from 6 to 17 full-time faculty, plus additional part-time faculty; (2) successfully implemented a 24-7 coverage system; (3) deployed a direct admission program for patients who can safely bypass the Emergency Department to be admitted by a Hospitalist; (4) took control of the General Internal Medicine consult service and spun off a nationally prominent internet-based teaching program in consultative medicine; (5) established two co-management services dedicated to the care of Gastroenterology patients and Hematology (sickle cell) patients; (6) deployed a bedside procedure service, serving the entire hospital (paracenteses, thoracenteses, lumbar punctures, arterial access, and ultrasound-guided central venous access for dialysis and pheresis catheters) which won incremental funding from the hospital in 2012 to expand its scale and scope; and (7) partnered with a national payer (Amerigroup) to create a novel

program (Concierge Hospitalist Access for Multi-morbid Patients

or 'CHAMP') which employs hospitalists in the day-to-day management of complex, high-cost Medicaid patients following hospital discharge to reduce readmission risk.

Academically, the Johns Hopkins Hospitalist Program has also excelled under Dr. Brotman's leadership. In 2012, it was recognized as one of the top academic hospitalist programs in the country by a joint panel of the Society of Hospital Medicine and the Society of General Internal Medicine. The Johns Hopkins Hospitalist Program teaching portfolio now includes: (1) Attending on the Osler Firms; (2) Attending on the Mary Elizabeth Garrett Service with Osler housestaff; (3) Attending on the inpatient consult service with Osler interns and General Internal Medicine post-doctoral fellows; (4) hosting sub-interns from Hopkins and from across the nation and around the world for electives at Hopkins (One of the 2011-12 Assistant Chiefs of Service got her first exposure to Hopkins as a visiting sub-intern on the Hospitalist Unit), and (5) running a Hospitalist Elective rotation for medicine residents from community programs in the Baltimore area and around the region who are considering careers in Hospital Medicine. These teaching initiatives have transformed a service that was 100% 'uncovered' (i.e. staffed solely by faculty physicians without residents or students) into a fertile teaching program.

Dr. Brotman has greatly enhanced the academic profile of his Program nationally. In 2011 and again in 2012, his faculty won the 'top research abstract' award at the Society of Hospital Medicine national meetings and presented at plenary sessions with thousands of physicians in attendance. At these national meetings, 10% of all accepted research abstracts were first-authored by his faculty—an astounding figure, since the Society has 10,000 members representing over 500 distinct programs in US and abroad. Two of his faculty members hold NIH K awards and 5 others have won external salary support for academic pursuits. Dr. Lenny Feldman is Principal Investigator on federal grants worth over \$7M to develop urban health training programs at Hopkins—programs which have already won national attention. A recent survey of academic hospital medicine programs sponsored by the Society of Hospital Medicine indicates that the Johns Hopkins Hospitalist Program has more external funding per faculty member than all but one other program in the nation. (Before Dr. Brotman arrived, the Hospitalist Program had zero external funding.)

As Hospitalist Program Director, Dr. Brotman also plays leadership roles in several institutional initiatives related to quality and safety, serving as (1) a Comprehensive Unit-Based Safety (CUSP) physician leader; (2) a leader for the Hospitalist Clinical Community sponsored by the Armstrong Institute; (3) a Co-chair of the Sunrise Provider Committee, responsible for facilitating the development and approval of all provider documents deployed within the Sunrise documentation system and vetting other IT interventions prior to deployment; and (4) a physician champion for the JHHS-wide Readmissions Initiative. He has also served on institutional and departmental committees, including: (1) the Department of Medicine Safety Committee; (2) the Department of Medicine Clinical Operations Committee; (3) the Clinical Systems Advisory Committee; (4) the Committee on the Promotion of Academic Clinicians; (5) the Department of Medicine Credentialing Committee; (6) the Readmissions Task Force; (7) the Geriatric Medicine Advisory Board; (8) the Department of Medicine Care Management Subcommittee; (9) the JHH Department of Medicine Clinical Care Transformation Workgroup; and (10) the JHH Patient Centered Care Redesign Committee.

### Scholarship Related to Patient Care and Quality Improvement

He was corresponding author on a multi-center study examining perioperative warfarin management (*American Journal of Medicine*, 2010) and senior author on a study examining the impact of antibiotic stewardship protocols on the timing of antimicrobial administration (*Journal of Hospital Medicine*, 2009). He has received foundation funding for work related to IT-enhanced patient education and continues to do work related to IT-based quality improvement and care coordination. His recent work related to creating individualized and interactive online dashboards to recognize patient safety practices of individual faculty members has impressed the hospitalist community and garnered him recent invitations to present his work as a visiting professor at Albert Einstein/Montefiore (NY) and at the Cleveland Clinic. He has also recently published on the impact of real-time display of diagnostic costs of radiology tests on provider ordering behavior (*Journal of the American College of Radiology*, 2012), on the impact of insurance status and race on cardiovascular outcomes for hospitalized patients (*Journal of General Internal Medicine*, 2012), and the impact of attending provider workload on patient safety (*Archives of Internal Medicine*, in press).

Dr. Brotman's work on quality and safety earned him a position on a National Expert Panel for the National Committee on Quality Assurance (NCQA) to provide input on a new 'readmission measure' to be included in the Healthcare Effectiveness Data and Information Set (HEDIS). This measure was presented to and endorsed by the National Quality Forum (NQF) as a benchmark indicator for health plans and hospitals throughout the nation with regard to readmission rates. Dr. Brotman has also represented Johns Hopkins Hospital to the Maryland Health Services Cost Review Commission (HSCRC) regarding bundled compensation for hospital readmissions and was invited to serve on a National Review Panel at the Center for Medicare & Medicaid Innovation (CMMI) Center to evaluate proposals that sought funding through CMMI's bundled payment initiative.

His work with the Johns Hopkins Health System Readmission Task Force led to his drafting a proposal as Principal Investigator for CMMI funding to expand and disseminate the care coordination bundle that proved successful on the Hospitalist Unit in generating an 18% year-over-year reduction in readmission rates. He was then asked by a special Dean's CMMI Committee to roll his ideas into a larger and more comprehensive care coordination proposal, the Johns Hopkins Community Health Partnership (dubbed "J-CHiP") which was awarded \$19.9M by CMS. Launched in 2012, this high-profile program has the ambitious goal of spear-heading healthcare reform for inpatients and outpatients at Johns Hopkins and its surrounding community by implementing strategies that reduce utilization and costs by improving care and coordination. Dr. Brotman serves as the J-CHiP physician leader at the Johns Hopkins Hospital and is a member of the J-CHiP Executive Board.

### National Leadership and Recognition

Dr. Brotman is a leader within the Society of Hospital Medicine (SHM) which boasts a membership of over 10,000 and is growing faster than any other specialty organization in the history of American medicine. In 2006, he directed a pre-course at the organization's annual meeting. Since 2005, he has served as a national research abstract judge and since 2008 as national meeting faculty. Dr. Brotman was one of the inaugural Fellows inducted into the Society of Hospital Medicine in 2009. He currently chairs the Education Committee and is interim chair of the Annual Meeting Committee. He serves on 3 more national committees: the Academic Practice Taskforce, the Research Committee, and the Annual Meeting Taskforce. In 2013 he will be the Co-Director for SHM's National Meeting in Washington, DC, and, in 2014, he will serve as the Director for SHM's National Meeting in Las Vegas, NV.

In 2005, he was selected to be an Assistant Editor for SHM's flagship scientific journal, the *Journal of Hospital Medicine*. In the succeeding 7 years, he rose to Associate Editor, Deputy Editor, and now Senior Deputy Editor. He continues to serve as Associate Editor for the *Cleveland Clinic Journal of Medicine* and as an Editorial Consultant for *The Lancet*.

Dr. Brotman has also been active in the American College of Physicians-American Society of Internal Medicine (ACP-ASIM): in 2004, he was elected to Fellowship in the College and in 2012 he was named "Outstanding Hospitalist" by the Maryland ACP Chapter. In 2011, he was listed among *Baltimore Magazine's* "Top Docs," reflecting his sterling reputation as a clinician among his peers in the community.

#### Other Academic Accomplishments:

Despite heavy commitments to clinical practice, administration, quality improvement, and teaching, Dr. Brotman has maintained a productive program in clinical research focusing on clinical and physiologic aspects of vascular complications in hospitalized patients. Specific topics have included inpatient and peri-operative management of thrombosis, the vascular and clinical consequences of the neuroendocrine stress response, and cardiovascular factors leading to rehospitalization. He has published 18 peer-reviewed papers since 2007—most of these in the first-author or senior author role. His h-index is 21, impressive for a physician who devotes over 70% effort to clinical care and administration.

In 2003, he demonstrated that hemostatic activation and inflammation increase with duration of hospitalization. Hospitalization therefore reduces the utility of hemostatic markers for diagnosis of clinical thrombosis (*American Journal of Medicine*, 2003). His further research in surgical patients demonstrated that chronic pro-thrombotic factors such as hormone replacement therapy do not play a dominant role in precipitating thrombotic events (*Thrombosis and Haemostasis*, 2004, CV #9). Instead, it is surgery-related factors such as duration of anesthesia and antithrombotic prophylactic regimen that determine the risk of thrombosis (*Mayo Clinic Proceedings*, 2005 and *Thrombosis and Haemostasis*, 2004, CV #10).

Turning to the role that the endogenous stress response plays in determining vascular risk, Dr. Brotman conducted a controlled trial of the vascular, autonomic, and endocrine effects of stress-dose glucocorticoids in healthy volunteers. This study demonstrated for the first time that glucocorticoids may acutely increase certain thrombotic factors (*Thrombosis Research*, 2006). However, contrary to conventional wisdom, stress-dose glucocorticoids actually improve other vascular risk factors, such as high-density-lipoprotein cholesterol and heart rate, (*Journal of Clinical Endocrinology and Metabolism*, 2005). This research also clarified the role of autonomic balance in modulating vascular smooth muscle responsiveness to nitrates (*American Journal of Cardiology*, 2005 CV#16).

His work on diurnal blood pressure variation (another correlate of chronic stress system activation) demonstrated that impaired diurnal blood pressure regulation is associated with dyslipidemia (*American Journal of Cardiology*, 2005 #13) and predicts the development of nephropathy (*Archives of Internal Medicine*, 2006), and all-cause mortality (*American Journal of Hypertension*, 2008). Noting that impaired diurnal blood pressure variation was also associated with fluctuations in serum creatinine (independent of the overall trajectory of renal function), Dr. Brotman hypothesized that fluctuations in renal function may be an important vascular risk factor and that biomarkers other than creatinine may be better able to characterize the associated cardiovascular risk.

To test this hypothesis, he secured an investigator-initiated grant to determine the prognostic value of cystatin C concentrations and inpatient fluctuations in N-terminal-B-type natriuretic peptide in predicting death and readmissions in patients admitted to the hospital with congestive heart failure, independent of creatinine. This work resulted in two senior-author publications (*American Journal of Cardiology*, 2009, and *American Journal of Cardiology*, 2011). Additionally, he has examined the prognostic impact of heart rate variability in predicting end-stage renal failure and hospitalizations associated with renal disease (*Journal of the American Society of Nephrology*, 2010). Based on his work related to cardiovascular biomarkers and the physiological stress response, he was asked by the editors of the *Lancet* to write a review article (which was accepted after full peer review) on the cardiovascular impacts of the physiologic stress response (*Lancet*, 2007).

Dr. Brotman has also published over a dozen review articles and clinical observations (most as first or senior author) in top journals, including *The Lancet* and the *New England Journal of Medicine*. He recently co-edited a textbook on hospital medicine with other leaders in the field, *Principles and Practice of Hospital Medicine* (2012). His academic reputation has led to multiple invitations to write editorials: since 2005, he has written 5 editorials, three for the *Archives of Internal Medicine*.

#### Education and Mentorship

At the Cleveland Clinic, interns twice named Dr. Brotman as “Best Morning Report Attending Staff Member” --an honor never before bestowed on a Hospitalist. At Hopkins, his high-quality housestaff teaching was recognized with a Firm Faculty appointment and he has continued to earn outstanding reviews from housestaff and medical students. In 2012, an Osler resident wrote:

“Dr. Brotman is an exemplary physician. Physicians either are stellar in their clinical judgment/knowledge base or in their bed-side manner/delivery of care to patients; Dr. Brotman is exemplary at both while extremely knowledgeable about the systems aspect level of care needed at the hospitalist level. If I, or a family member, were ever to get sick, I would want Dr. Brotman to take care of me/them (this is the highest compliment I can pay a fellow colleague).”

Dr. Brotman has involved trainees in his academic pursuits, mentoring over a dozen trainees to first-authored peer reviewed publications. One of his mentees, Dr. Michael Davidson, won the Cleveland Clinic Resident Research Award two years in a row. Based on Dr. Brotman’s reputation for mentoring, he was selected to direct the Hospital Medicine Fellowship Program at the Cleveland Clinic, a post he held until his departure in 2005. At Hopkins, he has continued to involve housestaff, fellows, and junior faculty in his work. One of his mentees, Dr. Henry Michtalik, won the Best Oral Research Presentation Award at the national Society of Hospital Medicine Academic Summit in 2010--an award never before won by a post-doctoral fellow. Under Dr. Brotman’s continued mentorship, Dr. Michtalik won a highly competitive KL2 award that helped fund his transition to Hopkins faculty. Dr. Brotman also mentors Dr. Zishan Siddiqui who recently won an internal grant from the Osler Center to study patient satisfaction. And he has mentored Dr. Lenny Feldman on a controlled trial to determine the influence of cost information at the point of computerized order entry on diagnostic test ordering, which produced the top-rated research abstract at the Society of Hospital Medicine Annual Meeting in Texas in 2011.

Summary

Since assuming leadership of the Hospitalist Program in June of 2005, Dr. Brotman's performance as an academic leader and programmatic pioneer has been phenomenal. Every indicator of program performance—clinical, organizational, educational, and scholarly—has surged. He has transformed the Johns Hopkins Hospitalist Program from a low-profile group of transient clinicians laboring in solitude into a nationally recognized powerhouse with a huge role in training the housestaff, post-doctoral fellows, and medical students. And, despite substantial clinical and administrative responsibilities, Dr. Brotman has excelled in research and research mentorship and has earned a national reputation as a scholar of Hospital Medicine. I therefore recommend Dr. Brotman's promotion to Professor with great pride and utmost enthusiasm.

Sincerely,

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Enclosures