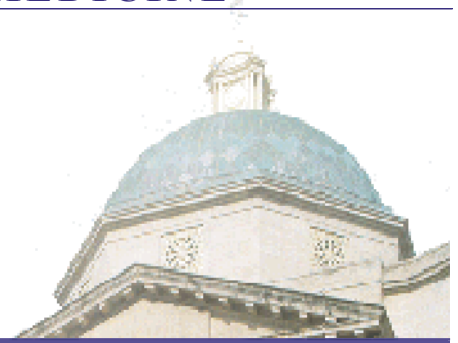


THE DEPARTMENT OF
**INTERNAL
MEDICINE**



Newsletter of the Department of Internal Medicine

Volume 1 • Number 8

Investigative Medicine Program

The Investigative Medicine Program, inaugurated in May, 1999, was created at Yale University School of Medicine to provide a bold new way to train physician-scientists. The program was designed to address the mandate from National Institutes of Health (NIH) and Congress to rectify the declining number of physician-investigators seeking independent research funding. The overall goal of the program, which leads to a Ph.D. degree, is to create a cadre of talented physician-scientists who will be uniquely prepared to meet the challenges of academic careers in biomedical research, and who will advance the frontiers of medical practice. The first trainees enrolled in the program on July 1, 2000, and currently there are 14 trainees enrolled in the program. Details about the organization of the program including the courses offered are available at <http://info.med.yale.edu/invmed/>. Each trainee completes a didactic curriculum of required and elective courses, comprehensive examination, and a research project resulting in a dissertation—under the guidance of a Qualifying and Thesis Committee; the usual duration in the program is 3-5 years.

We provide below a brief overview of the administrative structure of the program, a description of the relationship between the program and the Department of Medicine, and an overview of the candidates enrolled in the program to date. The remainder of the article provides answers to the most commonly asked questions from potential trainees, residents and fellows interested in auditing courses, training program directors and other faculty.

Administrative Structure of the Program

Program Director:

Keith Joiner, M.D., M.P.H., Professor of Medicine Cell Biology and Epidemiology
Chief, Section of Infectious Disease

Deputy Director, Head of Patient Oriented Research:

Sharon Inouye, M.D., M.P.H., Professor of Medicine and Investigative Medicine

Associate Director, Stanislav Kasl, Ph.D.
Professor of Epidemiology and Public Health,
Head, Division of Chronic Disease Epidemiology

Doctoral Committee:

Kim Bottomly, Ph.D.
Professor of Immunology and Molecular, Cellular & Developmental Biology

Margaret Hostetter, M.D.
Professor and Chairman, Department of Pediatrics

Sharon K. Inouye, M.D., M.P.H.
Professor of Medicine and Investigative Medicine
Deputy Director, Investigative Medicine

Keith Joiner, M.D., M.P.H.
Professor of Medicine Cell Biology and Epidemiology
Chief, Section of Infectious Disease
Director, Investigative Medicine

Harvey Risch, M.D., Ph.D.
Professor, Division of Chronic Disease Epidemiology

Eugene Shapiro, M.D.
Professor of Pediatrics, Epidemiology and Public Health

Gerald Shulman, M.D., Ph.D.
Professor of Medicine, Cellular and Molecular Physiology

The doctoral committee is the major decision making body for the program. The doctoral committee

- 1.) Reviews applications, interviews applicants, and makes decisions regarding acceptance into the program.
- 2.) Oversees the coursework in the program
- 3.) Approves and monitors the composition and function of qualifying and thesis committees
- 4.) Sets the criteria for the qualifying examination, and the acceptance criteria for the doctoral thesis
- 5.) Serves as the promotion and tenure committee, by reviewing faculty applications for appointment to the graduate school in Investigative Medicine.

Qualifying/Thesis Committees:

Each trainee must have a qualifying committee. The trainee selects the members of the committee, with input from their thesis advisor and from the Investigative Medicine Program (IMP) leadership. The qualifying committee must have at least three members, although committees with four or five faculty are optimal. Committees are required to have at least two faculty members with graduate school appointments, and at least one faculty member with a primary appointment in a basic science department or EPH.

Relationship of the Investigative Medicine Program to the Department of Internal Medicine:

While the Investigative Medicine Program is a school-wide initiative, it has a close connection with the Department of Medicine:

- 1.) The initial impetus for the program was a review of fellowship training within the Department of Medicine, in 1996. One of the suggestions from that review was that a special program be developed for individuals desiring a more intensive research training experience during subspecialty fellowships.
- 2.) The Director and the Deputy Director are members of the Department.
- 3.) The courses developed for the program are directed by faculty within the Department (Keith Joiner, Sharon Inouye, Elisabetta Ullu, Henry Binder, Gary Cline, David Fiellin, and Steven Wormsley)
- 4.) The majority of trainees are from this department.
- 5.) The largest percentage of auditors for the coursework are from the Department of Internal Medicine.
- 6.) The largest number of participating faculty are from the Department

Commonly asked questions regarding the Investigative Medicine Program**Unique features of the program:**

Why enroll in the Investigative Medicine Program?

The primary reason to enroll in the IMP is to guarantee a structured and complete training experience, and to have protected time devoted to research. Most physicians conducting research as part of their specialty training have neither had extensive prior research experience, nor taken graduate level coursework focused on basic biomedical investigation. It is commonplace for subspecialty fellows beginning a research project during their fellowship to be thrust immediately into the project. While they may become highly accomplished in their focused area of research, they do not typically receive the broader training and perspective typical of a Ph.D. training program.

The coursework, qualifying examination, and the thesis required of all trainees provide just such a broad perspective, and also provide a critical level of quality control.

Even more importantly, the qualifying and thesis committees insure that trainees stay focused on a productive research path. This structure facilitates timely completion of projects, and minimizes the likelihood that trainees will spend their time in an unproductive fashion.

Thesis committees provide a nearly unique structure within the university, in that both the committee members and the research mentor are focused primarily on the success of the trainee. Our experience to date is that changes in research direction have been well accepted by the research mentor and trainee if strongly recommended by the thesis committee.

How is the Investigative Medicine Program different from the Robert Wood Johnson Clinical Scholars Program for individuals interested in patient-oriented research?

The main difference is that the Investigative Medicine Program is a Ph.D.-degree granting program, in contrast to the Clinical Scholars Program which is not a degree program. As a consequence, the IMP program duration is 3-5 years, in contrast to 2 years currently in the Clinical Scholars Program. The two programs are closely inter-related, with many close ties between the two programs: many faculty teach in both programs, fellows enrolled in each program attend coursework in the other, and some Clinical Scholars have pursued additional training through enrollment in the IMP.

How is the Investigative Medicine Program different from an M.P.H. for individuals interested in public health-related topics?

Trainees in the IMP are focused on the interface between rigorous scientific investigation and individual human disease. In contrast, the M.P.H. degree requires substantial coursework in disciplines tangential to individual human disease, such as environmental health. Moreover, MPH programs do not focus primarily on preparing trainees to become independent investigators in academic medical departments.

Program eligibility and the application process:

Who is eligible to enroll in the Investigative Medicine Program?

Individuals who have an M.D. degree and have completed two years of residency are eligible for the program. Trainees are typically enrolled in a residency or fellowship program at YSM. Application to the IMP may be made concurrently with the fellowship application (see below).

When should individuals apply for enrollment in the program?

The policy of the IMP program has been that trainees can apply up to two years before they will officially enroll. Because this requires a deferred acceptance by the graduate school, this sequence is not preferred. However, in those cases in which potential enrollees predicate their

decision about selecting YSM for fellowship or residency, special arrangements will be made.

When should trainees enroll in the Investigative Medicine Program?

Trainees should enroll in the IMP when they have completed the bulk of the clinical requirements for their subspecialty, or have a block of 3-4 years which can be dedicated to research. Trainees cannot spend more than 10% time outside of their full time graduate studies. This 10% time is often devoted to a half day per week of longitudinal clinic. Once trainees have been enrolled for 12 months, they are eligible to take a leave of absence from the program. This may be necessary if they are required to complete additional clinical training for their subspecialty.

Do trainees have to be US citizens or permanent residents?

Most trainees in the program are US citizens or permanent residents. This permits them to be supported by T32 training grants, and to apply for NIH K awards. However, being a US citizen or permanent resident is not a prerequisite to be accepted. Individuals who can identify funding to cover their stipend and associated expenses, for a period of 4 years, are eligible to enroll in the program. Two of our current trainees meet these criteria.

How does one apply for the Investigative Medicine Program?

The application IMP is available online at <http://info.med.yale.edu/invmed/>. Applicants are encouraged to submit a preliminary application, which will be reviewed by the Director and Deputy Director. If the applicant is considered competitive, they will be notified and requested to submit a complete application. The deadline for the complete application for the upcoming 2004-2005 academic year is January 5, 2004.

What are the most important criteria for acceptance into the program?

Admission to the program is based on a number of factors. These include prior academic record, test scores, letters of recommendation, past research experience, and publication record. Essential to admission to the program is a firm commitment to complete the research project and doctoral training.

How many are accepted into the program each year?

There is not a prespecified limit to the number of trainees accepted each year. We anticipate that we will have 4-6 trainees per year matriculated in the program.

Duration of program:

How long will it take to complete the coursework?

The coursework required to be eligible for the qualifying examination can be completed in 1-2 years. Trainees are encouraged to take additional graduate level coursework

during the duration of their thesis project.

How long will it take to finish the thesis work?

The organization of the program makes it feasible to complete the thesis work in 3-4 years. This time is concurrent with specialty training, and is similar to the total amount of time generally necessary to become an independent investigator.

The first trainee to graduate from the program (Charlotte Ariyan, enrolled 2000) graduated in May 03 in 3 years. Two of the other trainees in the entering class of 2000 are expected to graduate May 04, after 4 years in the program.

What are the requirements to complete the program?

Trainees must complete the required coursework and pass the qualifying exam in order to be eligible to continue pursuit of the doctoral degree. The trainees must meet with their qualifying committee on three occasions in the first year, and on two occasions per year in the subsequent periods. They must write and defend their thesis work.

The dissertation project:

What are the potential areas for thesis research?

Trainees can conduct thesis research on any topic which has direct relevance to human disease. They may conduct patient oriented research, laboratory-based/translational research, or work in the context of a clinical research center.

Does previous research count towards the Ph.D./thesis project?

Previous research can not be credited directly towards the Ph.D. However, many of the trainees have entered the program while already conducting research in the general area of their thesis topic. While they must define a new hypothesis and research direction for the doctoral work, their previous research experience facilitates rapid progress.

Does the research mentor have to hold a graduate school appointment?

This is ideal. Graduate school appointments can be conferred either as a consequence of a joint appointment in a basic science department, or by credentialing of the mentor through the Investigative Medicine Program. Currently, only mentors conducting patient-oriented research are eligible for graduate school appointments in IMP.

Who takes and teaches the coursework?

Who takes courses in the Investigative Medicine Program?

Graduate students enrolled in the program are the only individuals who are eligible for graduate school credit. Many fellows, residents, faculty and other individuals have attended the IMP courses as auditors. Information for the courses and applications are available on the IMP website or from the IMP office. For most courses, enrollment is limited, and early registration is required. Each course has a tuition fee.

Who teaches in the Investigative Medicine Program?

Faculty for the Investigative Medicine Program come from various departments in the Medical School, as well as from outside organizations and institutions.

Financial and administrative considerations:*How are trainee stipends covered for the Investigative Medicine Program?*

The majority of trainee stipends during the first two years in the program are covered by T32 training grants to the subspecialty section/department. In other cases, stipends are provided by the department, or as part of the residency training program. In some cases, trainees have obtained individual fellowship support. The recent acquisition of an NIH K12 award provides a more flexible mechanism for trainee support in patient-oriented research.

Are IMP trainees eligible for the NIH loan repayment program?

Yes, several candidates have qualified for the loan repayment program.

How are the administrative costs for the program covered?

The IMP is supported by an NIH K30 award (Institutional Clinical Curriculum Training Award). Additional support is provided by the office of the Dean, YSM.

How are tuition costs covered?

Currently, tuition costs for some of the trainees are covered by NIH T32 training grants, and the recently acquired NIH K12 award. For other individuals, tuition has been covered by departmental funds or by tuition waivers granted by YSM.

What title do trainees in the program hold?

Most trainees in the IMP are fellows or residents. Full time graduate students cannot hold a faculty appointment, so IMP trainees cannot be appointed as Instructors, Associate Research Scientists, or Assistant Professors. However, IMP has a special waiver from YSM, allowing trainees to hold K awards.

Is the IMP part of the combined biological and biomedical sciences (BBS) graduate program?

IMP is separate from BBS. This decision was dictated by the special requirements for admission to IMP. Trainees in IMP must hold an M.D. degree and have completed two years of residency. Therefore, other graduate students in BBS would not be eligible to enroll in IMP.

What is new this year:*What changes are anticipated for the Investigative Medicine Program?*

A new full semester course on Methods in Human Investigation are planned for the spring of 2004. A short version of this course was offered in the spring of 2003. This course focuses on methods which are commonly used for investigation in a clinical research center setting. Topics include the use of tracers in clinical research, newer imaging techniques including PET, SPECT, and fMRI, glucose and lipid kinetics, fluid and electrolyte dynamics.

What is the role of the new K12 Mentored Clinical Research Scholars Program?

This new program at Yale is intended to provide salary and research support for fellows enrolled in the patient-oriented research arm of the Investigative Medicine Program. The level of support is quite generous, providing salary (up to \$75,000 per year for fellows and up to \$90,000 per year for junior faculty) and research/tuition stipend support (up to \$30,000 per year) for up to 3 candidates per year in patient-oriented research enrolled in the Investigative Medicine Program. In addition, junior faculty members are also eligible to apply for the program, without the requirement of matriculating in the Ph.D. component of the Investigative Medicine Program. While the K12 program is closely integrated with the Investigative Medicine Program, a more detailed application is required. Applications follow the same review process and deadlines as the Investigative Medicine Program. Details about the application process can be obtained from the Program Coordinator, Lupi Robinson at 688-1173 or lupi.robinson@yale.edu.

Current Investigative Medicine Trainees

Varman Samuel, M.D.

Dr. Samuel is a fourth year trainee. Dr. Samuel received his B.S. from Cornell University and his M.D. from New York University. He completed his residency at the University of Chicago and is currently a Postdoctoral Associate in the section of Endocrinology working with Dr. Gerald Shulman. His thesis project is The Impact of Fat on Liver Glucose Metabolism: Defining the link between non-alcoholic fatty liver and hepatic insulin resistance. Non-alcoholic fatty liver disease is increasingly being recognized as a common medical condition. Dr. Samuel's research focuses on understanding how the accumulation of fat within the

liver results in hepatic insulin resistance. In addition to using rodent models to understand the cellular and molecular mechanisms of fat induced hepatic insulin resistance, Dr. Samuel also has several human studies to demonstrate that hepatic fat accumulation per se is directly linked to hepatic insulin resistance.

Samuel Lee, M.D.

Samuel Lee is a fourth year trainee. He received his B.A. and M.D. from the Boston University Seven-Year Combined Liberal Arts and Medical Education Program in 1993. He completed his internship and residency in internal medicine at the Hospital of the

University of Pennsylvania in 1996. After teaching in a residency program in 1996-7 (Asst. Director of Medical Education, Frankford Hospital, Philadelphia), he trained in infectious diseases at Yale from 1997-2000. He has continued at Yale in the Investigative Medicine Program since 2000. He is studying the trafficking and secretory pathways of virulence-associated proteins in *Candida albicans* with Brian Wong and Keith Joiner.

Erica Herzog, M.D.

Dr. Herzog is a third year trainee. She is a postdoctoral fellow in the Pulmonary and Critical Care section. She received her undergraduate and medical degree from the University of North Carolina at Chapel Hill, where she was elected to Phi Beta Kappa. She completed her residency training at Mount Sinai Medical Center, where she received the Ira M. Goldstein award for resident teaching. Dr. Herzog's thesis project is: Bone Marrow Derived Stems Cells as Progenitors of Alveolar Epithelium. Working on a collaboration between doctors Diane Krause and Jack Elias, Dr. Herzog uses molecular, in situ, and histochemical techniques to ascertain the contribution of bone marrow progenitor cells to alveolar turnover in the murine lung. Using a variety of transgenic and knockout mouse models, Dr. Herzog is working to identify the mechanisms by which this change in phenotype occurs, with the hope of developing a translational project to apply these novel results to the treatment of human respiratory disease.

Warren Lee, M.D.

Dr. Lee is a third year trainee. He received his M.D. from Yale University and his B.S. from Northwestern University. Currently he is in the residency program of the Department of Psychiatry, and also works closely with faculty in the Department of Neurosurgery. Dr. Lee is interested in studying gene expression profiles of human brain tissue using DNA microarrays and related technologies. His thesis project is: Characterization of Candidate Susceptibility Genes in Human Temporal Lobe Epilepsy with Mesial Temporal Sclerosis.

Susan Hardy, M.D.

Dr. Hardy is a second year trainee. Currently she is a postdoctoral fellow in the Geriatrics section of Internal Medicine. She earned her medical degree from the University of Pittsburgh and her B.A. from Princeton University. She completed the Internal Medicine Residency Program at Duke University Medical Center. Dr. Hardy is also a graduate of the Robert Wood Johnson Clinical Scholars Program at Yale University. Her thesis project is: Recovery from disability among community-dwelling older persons. She has demonstrated that most older persons with new ADL disability subsequently recover independent func-

tion. However, she has also demonstrated high rates of recurrent disability. Together these findings indicate that disability in older persons often has a dynamic course with multiple, likely interrelated episodes of disability. She is currently developing a multi-state model of disability and recovery to determine the probability and predictors of transitions between disability and independence among community-dwelling older persons. An improved understanding of disability will provide valuable prognostic information and will facilitate the development of targeted interventions to restore and maintain independent function among disabled older persons.

Ram Weiss, M.D.

Dr. Weiss is a second year trainee. He earned his M.D. from the Hebrew University of Jerusalem Medical School and his B.S. from the Hebrew University of Jerusalem in Israel. He completed his internship and residency in Pediatrics at the Rambam Medical Center in Haifa, Israel. Dr. Weiss is currently a postdoctoral fellow in the Endocrinology section of the Department of Pediatrics. His thesis project is: Metabolic characteristics of obese children with normal glucose tolerance vs. impaired glucose tolerance. Ram focuses his research on characterization the metabolic phenotype of obese children and adolescents with special emphasis on glucose and lipid metabolism, lipid partitioning in peripheral tissues and adipocytokine profile. Ram utilizes insulin clamp procedures and non-invasive methods for assessment of lipid distribution.

Hatim Hassan, M.D.

Dr. Hassan is a second year trainee. He earned his medical degree from the University of Khartoum Medical School in Khartoum, Sudan. He completed his residency training in Internal Medicine at Cairo University Hospital in Cairo, Egypt. He also completed two elective clerkships in the Renal Section in the Department of Medicine at both the Methodist Hospital, Baylor College of Medicine in Houston, Texas and at Brigham and Women's Hospital, Harvard Medical School in Boston, Massachusetts. He is currently completing his fellowship in the Section of Nephrology, Internal Medicine Department. Dr. Hassan's thesis project is: Mechanisms of Regulation of Anion Exchanger of SLC26A6.

Scott Lichtenberger, M.D.

Dr. Lichtenberger is a second year trainee and is a postdoctoral fellow in the Section of Digestive Diseases, Department of Internal Medicine. He earned his B.A. from Northwestern University in Economics and his medical degree from the Indiana University School of Medicine. Scott completed his residency training at the University of Colorado prior to coming to Yale. He is

investigating to role of the inducible costimulator (Icos) to form regulatory T cells in the prevention of inflammatory bowel disease.

Scott Skibo, M.D.

Dr. Skibo is a second year trainee. He received his B.S. and his M.D. from the University of Wisconsin. He completed his internal medicine residency at the University of Rochester. He is currently a postdoctoral fellow in the Pulmonary and Critical section of Internal Medicine. Dr. Skibo is exploring that extra-cellular matrix, when in its low-molecular weight form, is capable of initiating an innate inflammatory response in the murine model. An accumulation of low molecular weight hyaluronan fragments have been shown to accumulate in asthma, IPF, and ARDS. The hypothesis is that altered-self, and not just non-self or missing-self, is able to initiate an inflammatory response. Initial work in the lab indicates that this occurs in a Toll-like receptor dependent mechanism. Hyaluronic acid, in its low molecular weight form may mimic the natural ligands for TLR4 and TLR2, which are LPS and peptidoglycan, respectively. His aim is to further characterize the mechanism required to initiate this inflammatory response using TLR2, TLR4, and TLR2/4 deficient mice.

Karen Dorsey, M.D.

Dr. Dorsey is a first year trainee. She earned her B.A. from the University of Virginia and her M.D. from Washington University School of Medicine. She completed her internship and residency in pediatrics at The Children's Hospital of New York, New York Presbyterian after which she completed a two year fellowship program at Yale University in the Robert Wood Johnson Clinical Scholars Program. Dr. Dorsey's research interest is in developing methods to assess and reduce obesity-related health risk for children in primary care settings. Specifically she is developing methods using direct monitoring of motion to describe the health risk associated with inactivity among overweight children in general pediatric populations with high prevalence of obesity. Dr. Dorsey has recently been awarded a grant from the Yale School of Nursing to conduct pilot studies among Latino and African-American children enrolled in a local New Haven community health center.

Karin Provost, D.O.

Dr. Provost is a first year trainee. She is currently a postdoctoral fellow in the section of Pulmonary and Critical Care Medicine. She received her B.S. from the University of Arizona and her D.O. from Midwestern University, Chicago College of Osteopathic Medicine.

She completed her Internal Medicine Residency at George Washington University Hospital. Karin's research is directed at understanding the mechanisms that regulate persistence of inflammation and the lack of immune tolerance seen in the asthmatic airway. The aims of her research focus on understanding the mechanisms regarding the development of tolerance in airways, and the dysregulation that develops in patients with asthma.

Justin Paglino, M.D.

Dr. Paglino is a first year trainee. He received his B.A. in Psychology from Brown University and his M.D. from Brown University School of Medicine. Dr. Paglino recently completed two years of residency in the Department of Laboratory Medicine, and plans to complete a fellowship in medical microbiology after earning his Ph.D. He is currently working in the laboratory of Dr. Peter Tattersall in Laboratory Medicine, studying Minute Virus of Mice, a parvovirus. In particular, he is exploring ways of enhancing the natural oncotropism of the virus in hopes that it might be exploited as a cancer therapeutic.

Edward J. Miller, M.D.

Dr. Miller is a first year trainee. He received his B.S. from the University of Notre Dame and his M.D. from Loyola Stritch School of Medicine. Dr. Miller is currently a fellow in the section of Cardiovascular Medicine. His research, under the direction of Dr. Lawrence Young, MD, focuses on the role and regulation of glucose metabolism during coronary ischemia.

Anita Huttner, M.D.

Dr. Huttner is a first year trainee. She received her M.D. from the University of Erlangen in Germany, which was followed by a period of three years at the National Institutes of Health (NINDS). Here she focused primarily on the isolation, characterization and transplantation of neural stem cells. She established an in-utero transplantation model and combined it with single cell patch clamping, which allowed the controlled observation of neuronal maturation and synapse formation on a single cell level during development. This microsurgical grafting paradigm also offers the possibility to precisely analyze stem cell of the normal and diseased human brain and determine the conditions for their functional integration. The post-traumatic reconstruction of circuits and the development of cell replacement therapies in neurodegenerative disease are potential targets. Currently Dr. Huttner is a resident in the Department of Pathology and will continue to work with Dr. Pietro De Camilli.

Attending Notification on Medical Service

The Department is seeking to improve attending notification and housestaff supervision on the Medical Service at Yale-New Haven Hospital. At the present time, community physicians are generally contacted by Emergency Department (ED) Attending staff regarding admission of their patients to the Medical Service. The full-time faculty attendings are usually notified by the housestaff on the morning following admission, and only rarely on the day of admission.

While the present system increases housestaff autonomy, we have become increasingly concerned about two different “standards of care” for patients admitted to the Medical Service. Moreover, the inpatient attendings assume legal and ethical responsibility for the patients at the time of admission. We also have had difficulty in correctly identifying the attending for purposes of admission. These problems have resulted in occasional substantial delays in attendings assuming care of individual patients. Therefore, we would like to modify the protocol to insure that full-time faculty are notified directly by ED attending staff when a patient is admitted to their service. Thus, the General Medicine Ward Attending will be notified by the ED Attending staff when a patient is admitted under their name. In so doing, we will have one “standard of care” for patients admitted to the Medical Service and hopefully improve our performance in correctly identifying the attending for the patients. We also suggest that the housestaff and attendings discuss the case on the day of admission.

The ED attendings have admitting authority and the aforementioned change in procedure is not intended to subvert this responsibility. The change in attending notification will result in additional calls from the ED to Medicine Attendings. Because of the number and time cap for the housestaff, it is anticipated that very few of these calls will be made late at night. I am hopeful that this change will increase supervision of patient care, improve the accuracy of assigning attendings to patients, insure more timely assessment of patients by attendings, and possibly shorten length of stay on the Medical Service.

We will implement this change on December 1, 2003. Comments from the faculty and trainees on the effectiveness of the change in attending notification are welcome!

David Coleman, M.D.
Chair, Department of Medicine

Primary Care Residency Program Restructuring

The Department’s recommendations for restructuring the Primary Care Residency Program have progressed substantially and the basic outline of the Program is completed. The process involved a Committee appointed by Dr. Coleman and chaired by Dr. Patrick O’Connor. The committee met every other week from June through September. Subcommittees were developed and they met weekly. Subcommittees included: Mission and Goals, Inpatient Medicine, Ambulatory Medicine, Faculty Composition, Administration and Finance. Residents and faculty have been engaged broadly in ongoing discussion. Interim reports have been presented to David Coleman, to the Chief of Staff, to the GME Committee and to the core faculty and residents. We are excited to be recruiting into a strengthened Program this upcoming recruitment season. A summary of the restructured residency program is provided in this article. Feedback about the program is welcome.

There were three main objectives in restructuring the residency program as listed here:

- To “right size” the Yale Primary Care Internal Medicine Residency Program in light of Departmental goals, resources, community and institutions needs, and the medical student applicant pool.
- To use the restructuring as an opportunity to assess and strengthen all rotations, training sites, and the overall Program curriculum.
- To develop a generalist model of training that can serve as a model nationally.

Inpatient training will occur at Yale-New Haven Hospital and at Waterbury Hospital. The resident continuity practice will be at the Chase Outpatient Center at Waterbury Hospital and the ambulatory block rotations will continue to utilize general medicine and subspecialty practices in the community. Additional changes include the following:

- The resident compliment will decrease by approximately 30%. We will recruit fourteen interns into the categorical program (current compliment is twenty) and six residents into the preliminary program (current compliment is eight).
- There will be an increase in the proportion of time residents spend at Yale-New Haven Hospital and a shift on the inpatient services at Yale-New Haven Hospital to incorporate general medicine firms as well as the subspecialty services.
- The ward services at Waterbury Hospital will be geographically localized and the information systems are being significantly upgraded. This will include substantial improvements to the clinical workstations as well as the education informatics systems.
- The resident continuity clinic is moving into new and expanded space in January 2004 that will accommodate consolidation of the continuity site for all residents from the two facilities we currently utilize into one common site.

Curricular developments include rotations and experiences that will emphasize standard-setting and teaching opportunities for senior residents, and a curriculum in leadership and scholarship. This latter curriculum will have didactic and experiential components and will have defined outcomes expectations. The core content of the didactic pieces will be incorporated into the noon lecture series, grand rounds, and the ambulatory seminar series. This will include topics that are distinct from the clinical content areas of internal medicine, but that are important broadly for all physicians. Examples include issues of advocacy, healthcare finance, public health and health policy, community medicine, patient safety, quality of care, ethics, professionalism, research methodology and design, evidence-based medicine, etc.

The experiential component will be an opportunity for each resident to explore in some depth an area of focused interest according to the following format:

- In the PGY 1 year residents will participate in a series of discussions to identify their area of interest.
- In the PGY 2 year residents will have a month-long rotation working directly with a faculty mentor and they will also have one half-day per week during their 12-week ambulatory block rotation to continue working on their project. At the end of the PGY 2 year all residents will make a presentation to their peers and the core faculty about the current status of their project.
- In the PGY 3 year residents will have one half-day per week during their 12-week ambulatory block rotation to continue work on the project and residents who are pursuing hypothesis driven research will be able to elect up to two additional months of dedicated research time. All senior residents will be expected to present their work at the Program's annual spring "Research Day" and residents will be encouraged to submit their work for presentation at regional and national ACP, SGIM, or subspecialty society meetings.

Areas of focus for this curriculum for many residents will be topics that the Program and core faculty have significant expertise and interest in such as quality of care, medical education, and community medicine. It is anticipated that others will pursue hypothesis driven research with faculty throughout the Department.

The overall goal of the Program is to train houseofficers to obtain the knowledge, skills and attitudes to become excellent Internists who are committed to upholding the highest ethical and professional standards of medicine. The restructuring of the Program has provided the Department an opportunity to strengthen the residency in order to help our trainees achieve these goals. We look forward to sharing further developments about the restructured program as they evolve and we look forward to further feedback from the faculty and residents.

Stephen Huot, M.D., Ph.D.
Program Director, Primary Care Residenc

New Faculty

Kalpana Gupta, joins the Section of Infectious Diseases as an Assistant Professor of Medicine



Dr. Gupta's research focuses on the prevention and pathophysiology of genitourinary infections in women and is funded by a K23 award from the NIH. She received her clinical training in Infectious Diseases at the Beth Israel Deaconess Hospital in Boston, MA and then completed her fellowship in 1998 at the University of Washington in Seattle, WA. As a

junior faculty member at the University of Washington, Dr. Gupta has completed a Masters Degree in Public Health and Epidemiology, served as an Associate in Clinical Research at the Fred Hutchinson Cancer Research Center, and been the recipient of a Hartford Foundation grant to study the epidemiology of UTI in postmenopausal women.

Bridget Martell joins the Section of General Medicine as an Associate Research Scientist



After graduating from Chicago Medical School, Dr. Martell joined the housestaff at Yale-New Haven Hospital. Following residency and chief residency she was recruited to the South Bronx and Albert Einstein College of Medicine (AECOM) to serve as medical director of the 500 patient admission clinic that is part of the nine-clinic system of AECOM Division of Substance Abuse. There,

under the mentorship of Drs. Marc Gourevitch and Julia Arnsten, she pursued the question of methadone's impact on the cardiac conduction in opiate users being induced and stabilized on methadone. She returned to the Yale campus this July to continue her research pursuits. Awarded a VA Cooperative Studies Career Development Award and under the guidance of Drs. Thomas Kosten, Patrick O'Connor, and David Fiellin she will be looking at a cocaine vaccine, currently in Phase II development, for the treatment of cocaine addiction.

William Rifkin joins the Department as Associate Director of the Yale Primary Care Residency Program



After graduating from Stony Brook School of Medicine (SUNY), Dr. Rifkin completed his Internal Medicine residency at Lenox Hill Hospital in Manhattan. Since then he has served as an Academic Hospitalist and as Associate Residency Program Director at Nassau University Medical Center and then at Maimonides Medical

Center. Dr. Rifkin has been recruited to serve as the Associate Director of the Yale Primary Care Residency Program, and will be clinically based at the Waterbury Hospital campus. In this capacity, he will help supervise the day-to-day operation of the residency program. Dr. Rifkin's primary research interests include the description and evaluation of hospitalist models of inpatient care, specifically in the realms of length of stay, processes of care and resource utilization. Educationally, Dr. Rifkin hopes to share his enthusiasm for the psychosocial aspects of patient care and physician connectedness to their patients, as described in his essays on the reflective practice of medicine.

Gary Vanasse recently joined the Section of Hematology as an Assistant Professor



Dr. Vanasse obtained his medical degree from Georgetown University and completed his residency in Internal Medicine at Beth Israel Deaconess Medical Center in Boston. He then completed fellowship training in Hematology at the University of Washington/Fred Hutchinson Cancer Research Center in Seattle. As a junior faculty member at the University

of Washington, Dr. Vanasse's clinical and research activities focused on the study of hematologic malignancies with a special emphasis on non-Hodgkin's lymphoma. Dr. Vanasse's laboratory focuses on genetic pathways responsible for generating chromosome translocations and gene expression and cellular signaling pathways underlying non-Hodgkin's lymphoma. His work is supported by an NIH K08 award and a recently completed American Society of Hematology Fellow Scholar Award.

LIBRARY NOTES:

SFX Will Make Your Life Better

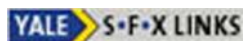
Over the past five years, the Medical Library's collection of electronic journals has grown from 500 titles to well over 3,000 biomedical titles today. One of the challenges we now face is to easily and quickly connect researchers and clinicians with the article they need from a database or citing source. That is where SFX comes in.

SFX is an advanced management tool that permits context-sensitive linking between diverse web-based resources based on Yale's subscriptions, using a detailed database of our electronic journal holdings and the SFX software. No more "dead" links when the user clicks on a link to navigate to a new information space only to find that they do not have rights of access to the resource and are therefore blocked from access.

Many faculty are accustomed to seeing the "Ovid Full Text" link on citations in Ovid MEDLINE. Please be aware that this link is only for those journal subscriptions we purchase directly through Ovid. While Ovid was a major source of our e-journals at one time, Ovid-supplied journals currently represent less than 10% of our full-text offerings. Selecting the SFX link from Ovid searches will greatly expand your retrieval of full-text articles.

While it does not solve all of our problems, SFX helps tremendously with the complex task of linking to full-text materials from research tools including PubMed, Ovid MEDLINE, Web of Science and EbscoHost databases. And while our linking is currently limited to journals, SFX is capable of linking to all types of web-based resources. The Medical Library is dedicated to making SFX and other state-of-the-art tools for managing electronic resources work even better.

When you see an icon like the one below, click on it and follow the link to Yale's electronic subscription where one exists. In cases where no e-subscription exists or where SFX cannot make a direct link to the article, SFX can automatically search other finding tools including our web-based E-journals list or the Library's Orbis catalog.



For more information on using SFX or any other library-related matter, contact the Department of Internal Medicine's Library Liaison, Mark Gentry. Email: mark.gentry@yale.edu, Telephone: 785-2163, Office: Cushing/Whitney Medical Library, Room 113B (in the Morse Periodical Room)

Geriatrics Announcement:

The Section of Geriatrics offers a two-year training program in Geriatric Clinical Epidemiology and Aging-Related Research, sponsored by the National Institute on Aging. One goal of the program is to provide highly qualified subspecialty fellows with research skills in geriatric clinical epidemiology and an intensive research experience under the mentorship of experienced investigators in geriatric medicine and gerontology. Subspecialty fellows will have access to resources and expertise through the Geriatric Medicine Program, the Program on Aging/Claude D. Pepper Older Americans Independence Center, the Program in Clinical Epidemiology/Robert Wood Johnson Clinical Scholars Program, and the Investigative Medicine Program. **The deadline for applications for the 2004 academic year is January 30, 2004.** Candidates should be committed to an academic career in aging-related research and must have completed clinical training in their subspecialty field by June 30, 2004. Application materials can be obtained from Ms. Karissa Stolzman at 688-3344. Information about the Geriatrics Section and Research Programs in Aging may be found on our website at: <http://info.med.yale.edu/intmed/geriatrics/index.html>.

Kudos

SAMUEL D. KUSHLAN, M.D., Clinical Professor of Medicine, received the Lifetime Achievement Award given by the Connecticut Chapter of the American College of Physicians on October 31, 2003. This Award was given in celebration of Dr. Kushlan's accomplishments and recognizes his many years of commitment to Medicine, his compassion, wisdom and unfailing dedication which serve as an inspiration to his students and fellow healthcare professionals.

STEPHEN E. MALAWISTA, M.D., Professor of Medicine, Section of Rheumatology, received the Presidential Gold Medal Award from the American College of Rheumatology during the ACR Annual Scientific Meeting in October. This award is given to an active, emeritus or international member in recognition of major contributions to the field of rheumatology and is the highest award bestowed by the ACR. During 21 years as Chief of Rheumatology, he built what began as a one-man operation into a major unit. In research, he is especially well known for work on motile and killing functions of white blood cells in the context of the inflammatory response; the mechanism of action of colchicine; the pathogenesis of gout; and of course the discovery and elucidation of Lyme disease. He is a former President of the ACR, and a Guggenheim Fellow.

ASGHAR RASTEGAR, M.D., Professor of Medicine and Associate Chair of Academic Affairs, received the George F. Thornton Award given by the Connecticut Chapter of the American College of Physicians on October 31, 2003. This Award is given in honor of his outstanding contributions to medical education and an enthusiastic sharing of knowledge which has been an inspiration to generations of students, residents and attendings.

Medical Grand Rounds

- November 20, 2003 *"Sex, Drugs and HIV Drug Resistance"* Michael J.Kozal, M.D., Assistant Professor of Medicine, AIDS Program
- November 27, 2003 HAPPY THANKSGIVING!!
- December 4, 2003 *"Delirium in Older Patients: An Investigative Journey"*. Sharon Inouye, M.D., Professor of Medicine, Section of General Medicine (Geriatrics)
- December 11, 2003 *"Art and the Art of Medicine"*. Irwin Braverman, M.D., Professor Of Dermatology.
- December 18, 2003 (TBA) Samuel Thier Lecture given by Harvey Fineberg, M.D. President, Institute of Medicine, Washington, D.C.
- December 25, 2003 HAPPY HOLIDAYS!!

MEDICAL GRAND ROUNDS WILL RESUME ON THURSDAY, JANUARY 8, 2004.

Grand Rounds begins at 8:30 a.m. in the Fitkin Amphitheatre.

Special Lectures

November 20, 2003

Program for Humanities in Medicine. Alan J. Plattus, PhD, Professor of Architecture at Yale University School of Architecture will present a lecture entitled: **HOW CITIES REMEMBER; THE ROLE OF MONUMENTS IN CIVIC IDENTITY**. Along with their obvious residential and economic functions, one of the principal roles that cities play is as a living repository of community memory. Since classical antiquity, orators have practiced the technique of enhancing memory by associating thoughts with actual places. In daily life, personal and collective memory adheres to the surfaces and spaces of buildings, monuments and public places, whether or not they are consciously designed to support that function. Using images of buildings and cities throughout history and the world, Professor Plattus will explore the efforts of communities and architects to shape actively the complex process of collective memory.

December 4, 2003

Gretchen Berland, MD, Assistant Professor of Medicine at Yale University School of Medicine will present a lecture entitled: **PERSPECTIVES FROM A WHEELCHAIR: INDEPENDENCE WITH DIGNITY**. Using video cameras, three people spent 18 months documenting their lives; all from wheelchairs. Stranded on a sidewalk in her stalled wheelchair, Vicki films as darkness descends. In his bathroom, Ernie confronts his illness, wrestling with the difficult decisions he faces. "Rolling" depicts the struggle to maintain independence with dignity; from the perspective of three feet off the ground.

December 18, 2003

Vivian Shipley, PhD, Professor of English, Editor of Connecticut Review, at Southern CT State University will present a lecture entitled: **THE MUSES; HEALTH AND ILLNESS**. In the speaker's opinion art unites the heart and mind by transforming the personal into the universal. Ms Shipley's poems are individual offerings of suffering, of joy, to help others celebrate, to heal. Only when a poem is liberated from the ego by imagination can it become a gift. To bring words outside her own experience, she structures them into a shape. Without architecture, words do not become a poem, but with form they can contain and control experience, help us accommodate what we must accept in order to live.

LECTURES ARE HELD IN THE BEAUMONT ROOM OF THE STERLING HALL OF MEDICINE AT 333 CEDAR STREET AT 5:00 PM.

THE DEPARTMENT OF INTERNAL MEDICINE

Yale University School of Medicine

<http://info.med.yale.edu/intmed/newsletter/>

Editor: Lynn Gambardella
Assistant Editor: Steven Wormsley, Ph.D.
Designed by: Sarah Walls

For questions, comments, and submissions,
Please contact:

Lynn Gambardella
Chairman's Office
LMP-1072

(203) 737-4249 Tel. (203) 785-6954 Fax