# breakthrough

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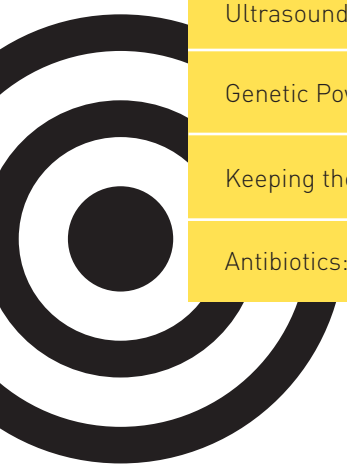

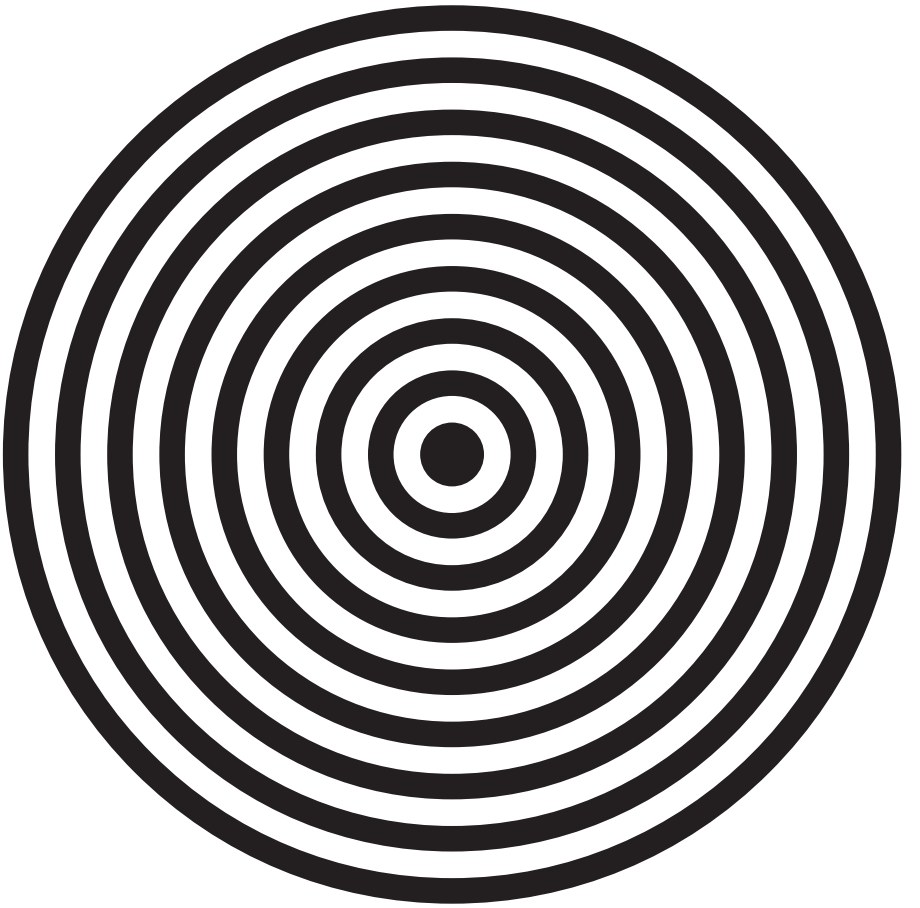

Medicine is a public trust

THE JOHNS HOPKINS CENTER FOR INNOVATIVE MEDICINE

breakthrough

In this issue

David B. Hellmann, MD., M.A.C.P.
*Aliki Perroti Professor of Medicine; Vice Dean, Johns Hopkins Bayview Medical Center; Chairman, Department of Medicine*

**WHY WE ARE HERE**

At the Center for Innovative Medicine, we feel like the luckiest doctors and scientists in the world. We have been granted an exciting, unprecedented opportunity to help patients by changing how we work together, and it's because of you. The Center for Innovative Medicine exists because a few caring, thoughtful people wanted to help us make a difference.

The first of these is Mrs. Aliki Perroti, whose generosity is described in more detail on Page 3, and on the back page of this publication. Another remarkable figure in our story is Mrs. Anne Miller. I have the privilege of being her doctor now, but my predecessor in caring for her was a tough act to follow – Phil Tumulty, one of the greatest physicians and teachers ever, a legend at Hopkins and worldwide, for whom the practice of medicine was as much an art as a science. Mrs. Miller asked me a very simple question: "Why aren't there more Dr. Tumultys? Why are they so rare?" The Miller family gave us the money to start a lecture series to celebrate Phil Tumulty and the qualities that make an excellent physician.

But this was only the beginning. Mrs. Miller's question lit the match, in effect, to a bonfire that had been building up around here for quite some time. It seemed to us very clear that some academic medical centers have lost their footing. Instead of putting the patients first, the patients came in somewhere after grants, national rankings, prestigious discoveries, and other measures of success. But Tumulty taught that the ultimate measure of success is the patient's well-being. Our only real goal should be improving the lives of our patients, and teaching doctors and scientists to do the same.

The history of Johns Hopkins, from its very beginning, is a story of fortunate convergences – the right people coming together at the right time – and this is exactly what happened next. Richard Paisner and I went to see Bill Brody, the President of The Johns Hopkins University, to talk about funding several projects designed to help our patients get better care. Instead, he told us, "Go and create a center. Think about what an academic medical center can and should do. Focus on the ways in which academic medicine needs to be restructured." For the last two years, this is exactly what we have been doing.

This is our first issue of *Breakthrough*, and the name of this publication is important. It's not just scientific breakthroughs, although there are plenty of exciting ones happening here every day – too many to fit in these pages. It's a breakthrough in thinking and in focus. We see our mission as one of stewardship, as guardians of the public trust that is academic medicine. The opportunity itself is an honor, and we owe it to you, who have done so much to make it possible, to see it through wisely.

David B. Hellmann, M.D.

**WE BELIEVE**

Medicine belongs to the public. Our mission is to create a different kind of academic medicine, to tear down ivory towers, share knowledge and dedicate ourselves toward one goal – making life better for patients.



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## on the web

If you'd like to learn more about the Johns Hopkins Center for Innovative Medicine, please visit our website: www.hopkins-medicine.org/innovative/index.html

# The Aliki Initiative:
## Putting the "Care" Back in Health Care

What's wrong with health care in this country? That's a huge question. Let's make it smaller: How is your health care? Think about your last trip to the doctor, or the last time you visited someone in the hospital. How did it go? Did the doctor spend time with you, listen to you, answer your questions – or seem not to give a hoot? Did you feel cared about? Were you helped?

It is a great irony that the United States, which has the best medical care in the world, also faces severe health care problems. One, of course, is the price. Unless you're lucky enough not to have to worry about how much it costs, medical treatment is often prohibitively expensive. Even if you have insurance, it doesn't cover everything. Also, the quality of medical care is inconsistent; it truly is "operator-dependent." A good doctor or nurse can make a world of difference; so can one who's brusque, indifferent, or just plain bad.


"We believe medical care should be a lot better for everyone, and now we have a remarkable, very exciting opportunity to make a change," says David B. Hellmann, M.D., M.A.C.P., Aliki Perroti Professor of Medicine, Vice Dean of Johns Hopkins Bayview, and Chairman of the Department of Medicine. "At the Center for Innovative Medicine, our goal is encouraging our researchers, clinicians, and nurses to work together on common problems, so they can concentrate their energies on the needs of patients, regardless of someone's ability to pay. Now, as part of that effort, thanks to the generosity of Mrs. Aliki Perroti, we are launching the Aliki Initiative – the nation's first effort to change medical education by focusing on personal care."

**Thanks to the generosity of Mrs. Aliki Perroti, these doctors will learn how to listen better, be more observant, and even follow up with home visits.**

What does this mean? "Unfortunately, as skilled as many doctors and nurse are – even at a world-class medical center such as Bayview – they are overworked and, as far as dealing with patients as individuals, undereducated," Hellmann explains. "National statistics estimate that about 60 percent of all patients feel their doctors do not know them as individuals. Worse, only 40 percent of patients nationally receive care that is considered to be appropriate based on scientific evidence. We have designed the Aliki Initiative to change this."

**Briefly, here are the key features of the Aliki Initiative:**

**Fewer patients for each doctor, so the doctor can spend more time with each one.** There are four teams of doctors, nurses and medical students that staff the Hospital at Johns Hopkins Bayview. One of these teams will see half as many patients. "We believe a key to providing personal care is having the time to provide it," says Hellmann.

**Doctor-patient relationships that don't end when the patient is wheeled out of the hospital.** "We will offer intensive instruction on providing personal care, with an emphasis on psychosocial learning," notes Hellmann. (Bayview is already doing this in other programs; see story on Page 14.) All members of the care team will learn how to listen better, to be more observant, and to build relationships with their patients; they will also check how the patients are doing when they leave the Hospital, with follow-up phone calls and even home visits.

**Evidence-based medicine.** "Some things work, and others don't," explains Hellmann. "We know this because controlled trials tell us so. Yet all too often, doctors don't give drugs that work, and don't *stop* giving drugs or recommending treatments that don't work." For example, clinical trials showed that inhaled steroids could be of great help in controlling asthma, but it took years before prescribing them became standard practice. Similarly, studies showed that taking aspirin could help prevent heart attacks – but it took many years before doctors and hospitals began incorporating this evidence, as well. "We will provide rigorous instruction on evidence-based medicine, so that medical tests and treatments are appropriate, and based on published scientific studies."

**Wise use of technology.** "We need technology to help us manage the massive amounts of information that we must deal with," notes Hellmann. "There is just so much information, no one can keep it all memorized – but we also need to have fast access to it." Technology is also essential in helping to manage complicated medical records. "The goal is to allow caregivers to provide the most personalized care, and technology can help us do that."

**Patients get to report how well their doctors did.** Patients will be asked whether their doctors knew them as individuals; the results will be compared with those of the three other teams. "We will attempt to measure whether more time with caregivers translates into patients having a greater understanding of their treatment plan," adds Hellmann. "Finally, we will see whether this approach reduces costs and improves outcomes. If, as we suspect, enabling doctors to spend more – and better – time with their patients produces lower costs through greater compliance and better outcomes, the impact on the nation's health care system will be profound. We are all very grateful to Mrs. Perroti for her generosity in allowing us to do this."

## MILLER SCHOLAR'S LECTURE

William R. Brody, M.D., Ph.D., the President of The Johns Hopkins University, delivered the fourth annual Miller Scholar's Lecture in May. "It is fitting that Dr. Brody gave this lecture, because we often refer to him as the "father" of the Center for Innovative Medicine," says David B. Hellmann, M.D., Aliki Perroti Professor of Medicine, and Vice Dean of Johns Hopkins Bayview. (For more on how the Center started, see story on page 1). The Miller Lectureship is provided by the Miller family – Thomas and Anne Miller and their daughters and sons-in-law, Sarah Miller Coulson and Frank L. Coulson, Leslie Anne Miller and Richard Brown Worley.

rethinking the black bag

# Move Over, Stethoscope:
# Handheld ultrasound brings technology to the bedside

Consider the doctor's black bag. It's a familiar icon. Doc Adams on "Gunsmoke" never ventured far without his; neither did Marcus Welby. Nor did the distinguished physicians who made up the first medical faculty at Johns Hopkins in 1889. The basic doctor's medical kit consists of a handful of tools which, together, make for a pretty good physical exam: A stethoscope; a percussion hammer; an ophthalmoscope, for looking into the eyes; and an otoscope, for checking the ears. That's about it. This is how the doctor's bag has been for as long as anybody can remember.

And yet: Medicine today is vastly different from what it was a century ago. A revolution in bedside diagnostic equipment is long overdue, says David Hellmann, M.D., M.A.C.P., Aliki Perroti Professor of Medicine. And the catalyst is a small device, about the size of a laptop computer. It's a handheld ultrasound machine. With it, instead of just listening to the heart, a doctor can actually

watch it contract. At the patient's bedside, a doctor can measure someone's blood flow, check the heart's valves, look for narrowing or aneurysms in critical arteries, such as those in the neck and abdomen, and even spot gallstones. Instead of wheeling a patient to a radiology department and waiting for a few hours – or worse, making the patient sweat out several days' wait for an appointment at an imaging facility – a doctor can tell right there in the office if someone's at risk for stroke.

Several years ago, working with a company called SonoSite, Hellmann helped get a portable ultrasound machine into the hands of residents, and then, with colleagues, led several studies to see how well they could use it at the bedside. One of these, published in the September 2005 *American Journal of Medicine*, found that residents could indeed learn the basics of bedside ultrasound. Studies are now underway to see if this translates to better clinical care. Although they're still too expensive (currently, between $20,000 and $50,000) to be part of every physician's black bag, Hellmann would like to see

**"Medical care needs to be human, compassionate and heartfelt – but also based on exquisite precision."**

one or two handheld ultrasound units in every hospital. He also believes the devices could be less fancy and still do the job. "It's a case of, do we need to be building Cadillacs, when Chevys are perfectly fine."

Hellmann compares the technology now to where calculators and computers were twenty years ago. "Look at the defibrillator," he continues. "A few years ago, they were big and expensive, and not in the hands of average people." Now they're part of the emergency equipment at airports."

**It's not just the tool bag that needs a makeover; it's also the way doctors treat their patients. Most people – nearly 60 percent, according to one study – feel that their doctor doesn't know them as a person. Is this important? Does it really matter if your doctor doesn't know you from Adam, as long as what's ailing you gets fixed?**

**Well, yes, it does. David Hellmann and others believe medicine needs to become more personalized – because, just as every fingerprint is different, so is every person. The medicine that works for your dad may make you sick. The treatment that helps you may act as the proverbial drop in the bucket on your neighbor's symptoms – which, on the surface, are identical to yours. Race matters; so does gender. We're all different, and we need custom-tailored medical care.**

**"This needs to happen at every level," says Hellmann, "both at the level of care and on a scientific basis." One day, he predicts, "we are going to understand people's unique DNA and proteins, so we will be able to give the right person the right treatment, at the right dose for the right period of time. Medical care needs to be human, compassionate and heartfelt – but also based on exquisite precision. The Holy Grail for us now is to try to pull these threads together in how we practice and teach medicine."**

# Genetic Powerhouse:
## It All Started With a Dream

In 2004, Bayview immunogeneticist Kathleen Barnes was given a remarkable gift. Barnes was debating taking a job away from Bayview; she had received a tempting offer from another university. Then suddenly, everything changed: A few of her colleagues, including David Hellmann, M.D., Antony Rosen, M.D., and Bruce Bochner, M.D., came to Barnes and asked what it was that appealed to her about the other offer. Barnes told them that it was the chance to build a genetics and genomics program from scratch.

"They said to me, 'How about if we provide the infrastructure for you to do that here? This is your opportunity to dream. Write down what you want to do, and come up with a business plan."

Barnes, who had limited lab space, not much equipment, and a small-scale research program, allowed herself the novel luxury of thinking big.

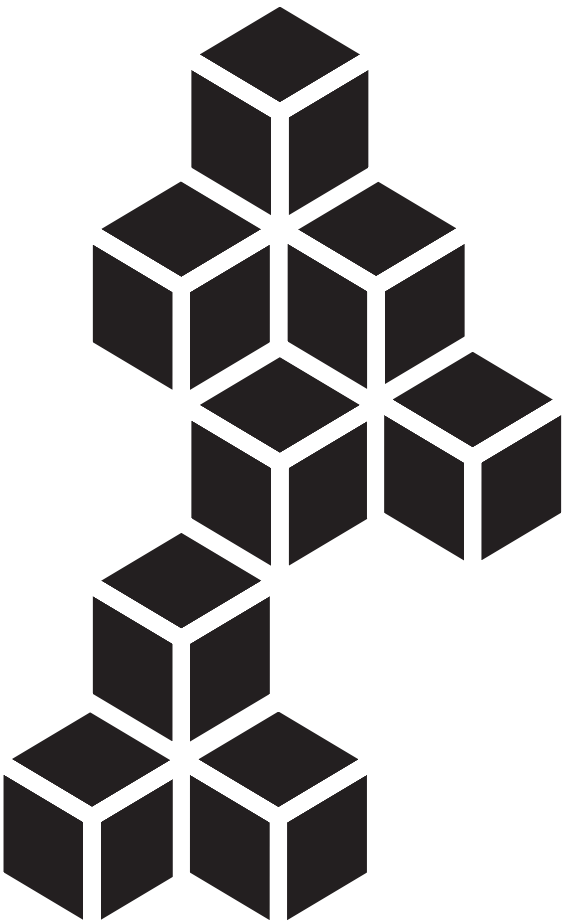
**It seemed as if she'd suddenly been swept into an academic scientist's version of the Cinderella story – especially when she acquired a fairy godmother.**

It seemed as if she'd suddenly been swept into an academic scientist's version of the Cinderella story – especially when she acquired a fairy godmother. One of Hellmann's longtime patients, Mary Beryl Patch Turnbull, had recently died, and her daughter, Joan Carl, wanted to honor her mother's memory by supporting research in her name. Hellmann told Mrs. Carl about Barnes.

"I received a lovely letter from the family to establish this fund, to support in part my efforts to build a Bayview Genomics Core, and to expand my genetics lab," says Barnes. During this time, the Center for Innovative Medicine was just beginning, as well, and Barnes' Genomics Core became an integral part of the new Center. Building on that early support, Barnes has turned the Core into a genetic research powerhouse that has gained nearly $25 million in outside funding.

The Genomics Core, says Hellmann, is "one of the great areas that has brought people together at the Center for Innovative Medicine, facilitating the work of many departments, divisions, and disciplines."

Barnes' research focuses largely on the genetics of asthma; she has been looking for variants in genes that could make someone more susceptible to developing asthma – but which also may be involved other lung problems, including injury and chronic obstructive pulmonary disease. Scientists at the Genomics Core have been able to help colleagues in other fields look for genetic components to many forms of illness – including how the body ages, and why some people tend to become frail and others don't. "We've been able to provide genomics work for a variety of groups," she adds, "and this is definitely a direct outcome of the Turnbull Scholarship."



**It's just as well that Kathleen Barnes dreams big, because the scope of her job is huge – or immensely tiny, depending on how you look at it. The genome is the entire genetic blueprint; it's the chemical recipe book with which each of our cells makes specific building blocks – which actually are strings of chemicals, identified with letters. The string of letters is so daunting, and so impenetrable, that the study of it – the science of genomics – would be impossible without computers. Fortunately, there are landmarks; one of these is a variation called a "SNP," (pronounced "snip"). Looking for these fluctuations is like looking for a misspelled name in the phone book. Fortunately, many of these "snips" are known, and scientific companies have prepared representative batches of them to help narrow down the search – to identify particular neighborhoods, in effect, out of a street map of as many as a million houses.**

**Recently, in work funded by the National Institutes of Health, Barnes has completed the first genome-wide study looking for clues to heart-lung diseases in people of African-American and African-Caribbean descent. The study was massive, involving 2,000 volunteers and 650,000 SNPs. Now Barnes faces the task of trying to make sense out of 1.3 billion pieces of data that are being generated from this study.**

**"Being competitive for that grant was a direct result of this scholarship that I received," she says. "I am incredibly grateful to the Turnbull family for supporting me."**

# Keeping the E.R. Moving
## Innovations Speed Up the Flow

Nobody likes waiting in the emergency room. Doctors hate it, too – so much that for the last several years, Bayview physicians have been looking for innovative ways to streamline the flow of patients from the Emergency Department to the hospital. Thanks to their collaborative efforts, the average wait is a lot shorter – by nearly two hours – than it used to be.

"We started working on this seven years ago," says hospitalist Eric Howell, M.D., Director of the Zieve Medical Services. More than half of the people who come into the Emergency Department are admitted to the general medicine service. Howell, working with Edward S. Bessman, M.D., Director of Emergency Medicine, and Roy Ziegelstein, M.D., Executive Vice-Chairman of the Department of Medicine, developed a new system to get these patients to the appropriate hospital wards using telephone triage. "We essentially bypassed having to evaluate these patients in the Emergency Department." Doctors in the Emergency Department – instead of waiting for Department of Medicine physicians to come to the emergency room, assess the patients, and decide whether to admit them – took responsibility for having the patients admitted,"with the Department of Medicine trusting the emergency doctor's assessment. That was very novel at the time."

But there was still room for improvement. Over the last couple of years, the triage program, which still relies heavily on telephone discussion, has been expanded from the general medicine service to include subspecialties such as pulmonary medicine and cardiology. Howell has also added four more doctors to the team of about 15 hospitalists to manage triage. "In the past, residents used to do this," says Howell. However, "they are doctors in training, there are about 50 of them, they are learning, and they did a variable job in terms of triage. They didn't have ownership in the process, because that wasn't their thing. What we did was take a small number of people, made them responsible for a large process, held them accountable, and gave them feedback." The hospitalists have reduced the average patient's stay in the Emergency Department by an impressive 25 percent. "Because they took pride in a very visible job, they wanted to improve, and they ran with that."

Has the speeded-up time affected the quality of care? "We are studying that now," says Howell. So far, it appears that the shorter wait has not affected patients adversely.

**"What we did was take a small number of people, made them responsible for a large process, held them accountable, and gave them feedback."**

# For a Rare,Difficult Disease, a One-of-a-Kind Clinic

Myositis is a complicated disease that causes the body's immune system to attack the muscles. Because it is also rare, it often defies immediate diagnosis; treating it requires expertise, patience, vigilance – and doctors well versed in the art as well as the science of medicine. It is fitting, then, that such a highly specialized, complex disease has met its match with a one-of-a-kind, multispecialty clinic at Bayview.

The Myositis Center is co-directed by a rheumatologist, Lisa Christopher-Stine, M.D., M.P.H., and a neurologist, Andrew Mammen, M.D., Ph.D. Because the disease affects the body in many ways, the Center also includes specialists in pulmonary medicine, radiology, and physical therapy. "This Center serves all three of our missions – teaching, patient care, and research," says Antony Rosen, M.D., director of the Division of Rheumatology, who helped design the center. Patients can participate in several clinical trials of drugs aimed at fighting cancer, blocking inflammation, or suppressing the immune system. In another study, Bayview scientists are looking to see whether there is a connection between myositis and drugs called statins, which are used to lower cholesterol.

Is myositis as rare as we think it is? Maybe not, says Rosen. "It's sometimes quite a difficult diagnosis to make; a lot of things mimic it." Although it's detected in only one out of 100,000 people every year, there may be hundreds more who suffer in misdiagnosed silence.

**Myositis and Cancer: Can we Learn to Harness the Immune System?**

**The confounding thing about the immune system is that most of the time, it does a fine job of identifying enemies, custom-designing specific weapons such as antibodies to fight them, and generally protects the body from harm. The immune system can even fight off cancer, in myriad tiny battles that we never even know about – because the cancer is gone before it ever gets a chance to start.**

**But sometimes, the immune system goes haywire. Suddenly forgetful, it doesn't recognize its friends anymore; it becomes paranoid – seeing enemies everywhere, even in normal healthy tissue. And it attacks. In myositis, this can mean inflammation, muscle swelling, weakness, lung problems, and even skin irritation.**

**People with myositis tend to develop cancer, as well. But they also tend to fare better than others who develop cancer. "That's true of most diseases where autoimmunity and cancer are associated at the same time," notes Antony Rosen. In fact, one back-handed gift of myositis is that it may mean someone's cancer is found and treated sooner.**

**Is is possible to take the good aspects of an overzealous immune system and somehow tame them, to teach the body to leave muscle cells alone – particularly when they're injured and trying to repair themselves, using antigens that incite the wrath of the immune system, because they're similar to those expressed in some cancers? It's a sophisticated lesson for any body to learn. But if it could be taught, the result might be a cancer-fighting weapon more powerful and precisely targeted than anything we've developed so far.**

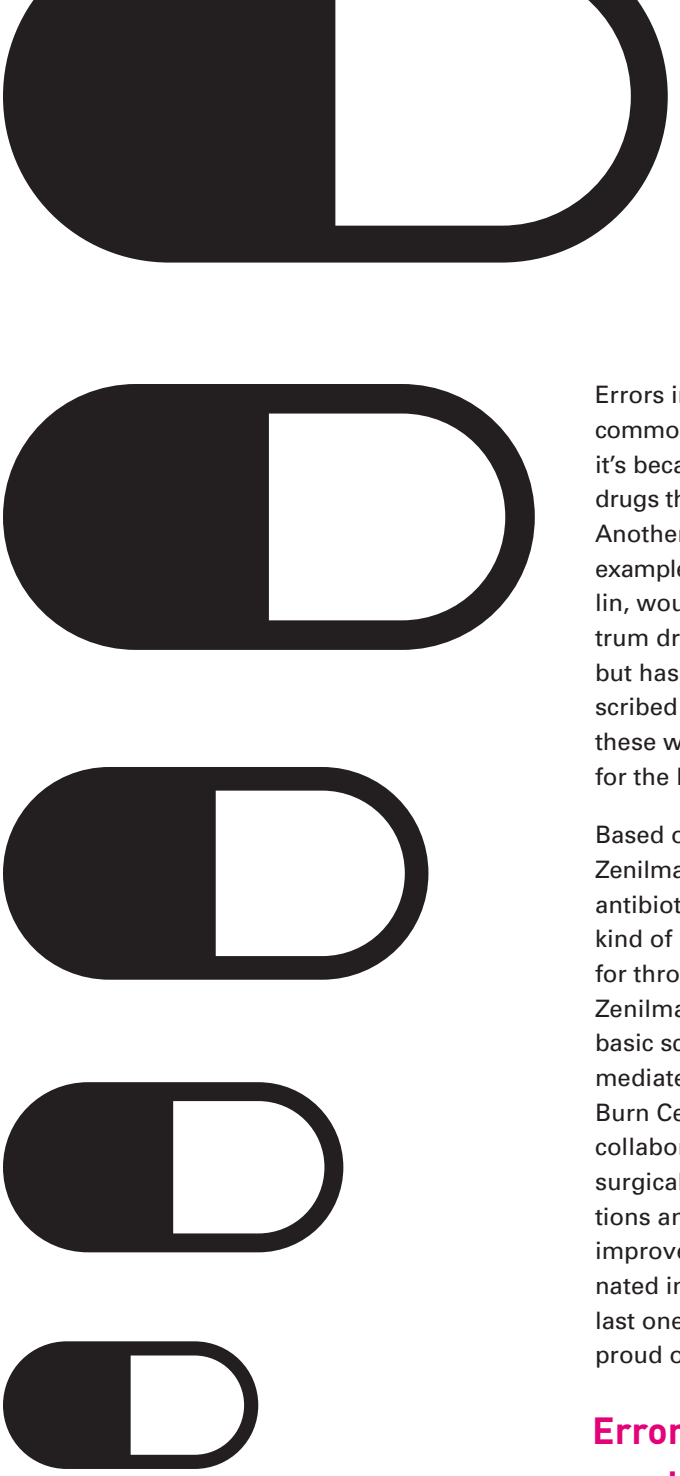
# Antibiotics:
# Less is More, Smarter is Better

Antibiotics are miracle workers, but there's a dark side. They are also, in varying degrees, abused, misused, and poorly understood – to the cost of millions of dollars a year in unnecessary bills, and often to the detriment of the patient. The world of life-saving antibiotics is increasingly complicated; choices abound. Some antibiotics are broad-spectrum; like a shotgun, they blast everything in their path, many different forms of bacteria. Others, like a rifle, have a more focused target.

At Bayview, a pilot study has reduced the number of inappropriate antibiotics given to patients on the hospitalist service, and cut the average daily cost from $26 per person to $17. This recent project – part of a comprehensive program that includes a newly developed pharmacy-infectious diseases antimicrobial management team, close monitoring of prescribing by Hospital physicians, and the use of cheaper, generic antibiotics whenever possible – was led by Flora Kissule, M.D., Ph.D., who brings public health expertise and perspective to her work as a hospitalist.

"What she did was really innovative," says Jonathan Zenilman, M.D., chief of Infectious Diseases, who also has been working to improve the use of antibiotics in the hospital, and whose department funded the study. In a labor-intensive effort, Kisuule audited antibiotic prescriptions of the 17-member hospitalist service, matched them to patients' diagnoses, and determined whether the prescriptions were appropriate. Then she took her results to the hospitalists – and, when needed, told them what they should do differently next time.

"This work is a beautiful example of how collaboration creates new disciplines that benefit patients," says David B. Hellmann, M.D., Aliki Perroti Professor of Medicine. "Hospitalists are traditionally people who focus on getting patients treated and sending them home. "Dr. Kisuule asked the very unusual question, 'How can hospitalists, who usually focus on one person, contribute to public health?' This may well be the first public health project done by hospitalists, and this collaboration with Dr. Zenilman has led to the creation of an entirely new field – hospitalists as public health officials – that should have great dividends for patients everywhere."



Kisuule's colleague-to-colleague approach, offering advice in a friendly but informative way, produced impressive results – greatly reducing antimicrobial prescribing errors. "It's one thing to go to a group and say, 'This is what you should do,'" Kisuule says. "But putting the hospitalists face-to-face with their practice – that's probably what made a big impact."

Errors in prescribing antibiotics are disturbingly common in every hospital. Why is this? Sometimes it's because doctors give ineffective antibiotics – drugs that just won't help the particular problem. Another problem is antibiotic overkill – when, for example, a more limited antibiotic, such as penicillin, would work, but a high-powered, broad-spectrum drug like Zosyn (which not only costs more, but has a greater potential for side effects) is prescribed instead. "There is some perception that these would be stronger, even though they're not for the bug you're trying to kill," says Zenilman.

Based on the project's success, Kisuule and Zenilman hope to continue the work of improving antibiotic management on a larger scale. "This kind of project is very difficult to get funding for through traditional research mechanisms," Zenilman notes. "It is very translational; it's not basic science at all." And yet, the results are immediately helpful to patients and doctors. In the Burn Center, aggressive antibiotic control and a collaborative team approach with the Center's surgical staff has reduced infectious complications and, with improved surgical techniques, improved the survival rate. "We have also eliminated invasive, systemic fungal infection. The last one we had was in July 2005. We're pretty proud of that."

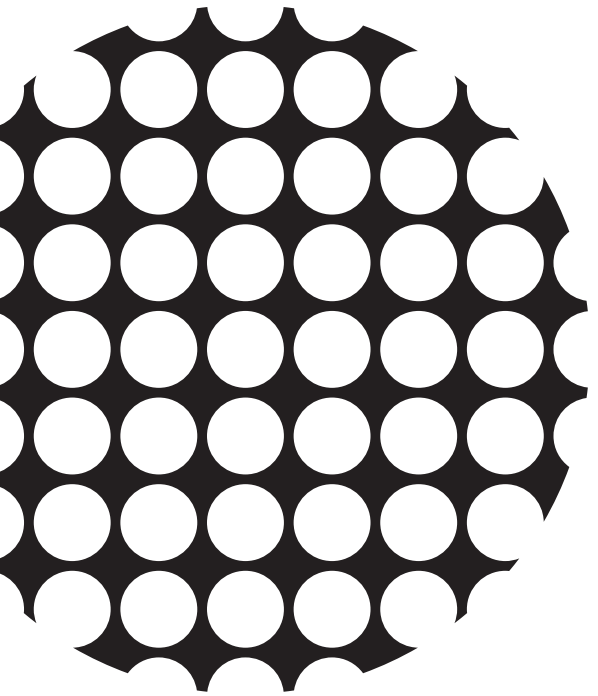
**Errors in prescribing antibiotics are disturbingly common in every hospital. Why is this?**

# Divisions Work Together, Get Powerful New Microscope, Everybody's Happy

Think of it as the CT scan of a cell. Just as a CT scanner takes pictures in sections, then puts them together to make a three-dimensional image, the confocal microscope does the same thing – except on a really small scale.

How small? Cells are so tiny that they're measured in microns – millionths of a meter. Most microscopes magnify by 400 times, and some cells still aren't easy to discern on a slide. But the confocal microscope allows scientists, in effect, to enter the world of a cell, and examine the structures inside it.

For brief perspective, let's go back – way back – to medieval times, when philosophers tackled such metaphysical issues as, "How many angels can dance on the tip of a very fine needle, without jostling one another?" An esoteric debate – because nobody could imagine anything so minuscule. The idea that items much smaller than the head of a pin could not only be seen but sliced through (vertically or horizontally), recreated three-dimensionally, downloaded on a CD, replayed on a laptop computer and studied for the secrets to diseases would have blown those ancient scholars away.



**Tiny bits of cells can be sliced through, recreated in 3-D, downloaded on a CD, and studied for the secrets to diseases.**

Bayview is getting a new one – at a price tag of nearly half a million dollars – as a result of a remarkable bit of cooperation. Landon S. King, M.D., director of the Division of Pulmonary and Critical Care Medicine, wanted the confocal microscope and put together a proposal to request funding from the National Institutes of Health. Gary Briefel, M.D., director of the Division of Nephrology, contributed some of his division's money to help. In return, King shared some of the Pulmonary Division's research space with a researcher in Nephrology. The NIH was impressed with this interdepartmental collaboration, funded the microscope, and soon at least 20 scientists at Bayview will be using it to answer a host of questions about the most basic aspects of disease – how cells handle proteins, for example, or what happens within cells that affects the body's response to allergy or inflammation. "It's an incredibly powerful tool," says King, "and it will greatly facilitate the work of investigators on this campus."

"This is yet another success story of what happens when different disciplines work together," says David B. Hellmann, M.D., Aliki Perroti Professor of Medicine, "and the atmosphere is one of cooperation rather than competition." King agrees. "Bayview is a great community. The spirit of collaboration here is particularly strong."

# GOOD BAD JUST FINE GREAT NO OPINION **HOW'D WE DO?**

## Patients help doctors learn how to listen

**Teaching medical students and residents how to diagnose a problem in the heart is fairly straightforward: It's all about listening. Teaching young doctors to *have* a heart, however, to care about their patients, to listen to what they say – not with a stethoscope, but with a sensitive and compassionate ear – is an entirely different matter, subtle and complicated. Here is the crossroads between the art and science of medicine, between good doctors and great doctors. Here, for patients, is where the rubber meets the road.**

**"We've always paid attention to it," says Roy C. Ziegelstein, M.D., executive vice-chairman in the Department of Medicine and associate program director of the residency program in internal medicine. But with funding from the Miller family (for more on this family, see story on Page 1), Ziegelstein has been working on new ways to teach young doctors compassion for their patients – in a nutshell, to teach them to be more like legendary Hopkins clinician Phil Tumulty, "the quintessential caring physician."**

**Bayview already is known for its commitment to teaching young physicians how to talk and listen to patients, Ziegelstein notes. "There are phenomenal role models here, of caring, sensitive physicians – Randy Barker, Colleen Christmas, and John Burton come to mind immediately – who are great teachers of these skills." Already, interns spend a whole month working on listening to and communicating with patients; throughout their residency, their interactions with patients are observed by faculty members, critiqued by specially trained patients, and even videotaped for analysis.**

**"But the one thing we have not done," says Ziegelstein, "is ask the patient, 'How are our doctors doing in communicating with you? Are they explaining things in language you understand? Are they asking questions about other aspects of your life that are important to understanding you as a human being?'" In hopes of getting more immediate feedback, Ziegelstein and colleagues have designed and implemented a kiosk with a touch screen – an on-the-spot opportunity, available in Spanish as well as English, for patients to evaluate the encounter they just had with residents, "and specifically, to address the adequacy, sensitivity, and compassion of their communication skills."**

**Along with all of this, Ziegelstein has been designing a course to help prepare fourth-year Hopkins medical students for internship. Communication skills play an important role here, too. One remarkable part of this program is an experience called "Adopt a Patient." The medical students spend an evening in a patient's room, "not as a doctor, but as a fly on the wall, to find out what it's like to be a patient. How often do medical and nursing staff come into the room and not introduce themselves? How often does the patient push the call bell and not get a response? Then they go back the next morning, and see what happens when the team comes in and rounds."**

**Afterward, one student recounted waiting with a patient and hearing the determined sound of "high-heeled shoes at a fast staccato pace," coming toward the room, says Ziegelstein. "The patient said, 'I hope she's not coming to give me bad news.' " In that moment, "the student was able to crawl inside the patient's mind and feel her anxiety about her health situation." And this student, he believes, will be a more caring physician as a result.**

### FRIENDS

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# Generosity in action

Ask David Hellmann to name the best part of his job, and he'll tell you right away – it's the great luxury of taking care of people with complicated medical problems, regardless of their ability to pay. "I get to do this because I am the Aliki Perroti Professor of Medicine," he says. "I am allowed to do it, literally, in her name."

Providing help to those who otherwise wouldn't receive it has been one of Mrs. Perroti's missions for years. In her beloved Greece, she endowed an entire hospital to serve the poor. She also established an agricultural college to help expand the opportunities for young people in Greece and the Balkan countries. "The hospital is named after her parents, and the agricultural college after her late husband," explains Hellmann. "Her chair is the first thing she has allowed to be named after herself."

At Bayview, Perroti's generosity has helped some very sick people. One of them (whose name has been changed to protect her privacy) is Anna, who has a rare form of vasculitis. When she got to Hellmann's office, he suspected immediately that she was bleeding internally, and that she needed critical care right away.

Aliki Perroti

Although the hospital was full, the nurses found a bed for Anna right away. Soon, her room was packed with doctors, blood transfusions were started, "and she began to look a little better." Hellmann went home, but woke up in the middle of the night, worried that Anna was not doing well. He called the hospital, and "sure enough, she was starting to bleed again. We got her transferred to the Intensive Care Unit, got her stabilized, and got her through this crisis."

"At the Center for Innovative Medicine, we spend a lot of time thinking about big ways to make medicine better," comments Hellmann. "In this case, Mrs. Perroti's generosity made a huge difference in the life of one patient and her family, and in the end, that's what it's all about – making a difference, one patient at a time."

Medicine is a public trust


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