

**Labor Health and Human Services, Education, and Related Agencies
Witness Disclosure Form**

Clause 2(g) of rule XI of the Rules of the House of Representatives requires non-governmental witnesses to disclose to the Committee the following information. A non-governmental witness is any witness appearing on behalf of himself/herself or on behalf of an organization other than a federal agency, or a state, local or tribal government.

Your Name, Business Address, and Telephone Number:

Lee Goldman, 

1. Are you appearing on behalf of yourself or a non-governmental organization? Please list organization(s) you are representing.

Columbia University Medical Center

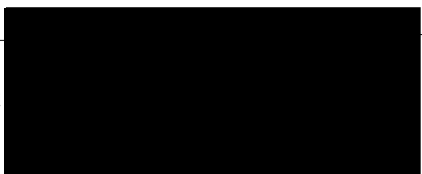
2. Have you or any organization you are representing received any Federal grants or contracts (including any subgrants or subcontracts) since October 1, 2008?

Yes No

3. If your response to question #2 is "Yes", please list the amount and source (by agency and program) of each grant or contract, and indicate whether the recipient of such grant or contract was you or the organization(s) you are representing.

In FY 11 Columbia University Medical Center (also referred to as Columbia University Health Sciences) received separate grants and contracts from the National Institutes of Health totaling \$312,275,684. Itemized list attached.

All Grants are made to the institution, not to me personally, nor am I the Principle Investigator on a grant. I am however devoting a portion of my time to one grant – line 205 on the attached spread sheet. For this work I am compensated \$4,000 per year.

Signature: 

Date: 3/26/12

Testimony of Dr. Lee Goldman
Executive Vice President for Health and Biomedical Sciences
And Dean of the Faculties of Medicine and Health Sciences
Columbia University
Subcommittee on Labor, Health and Human Services, Education, and Related
Agencies
March 29th, 2012

Chairman Rehberg, Congresswoman DeLauro – Good morning, thank you for giving me the opportunity to speak with you today. I am Dr. Lee Goldman, Executive Vice President of Columbia University and Dean at Columbia University Medical Center (CUMC). Before I start, I would be remiss if I did not take notice and say a special hello to my dear friend and exceptional public servant, Congresswoman Nita Lowey. As always, it is a pleasure to see you.

Located in the Washington Heights area of New York City, CUMC is the health and biomedical sciences campus of Columbia University. It comprises the College of Physicians & Surgeons, the Mailman School of Public Health, the College of Dental Medicine, and the School of Nursing. We have three basic missions: to conduct groundbreaking biomedical research, to provide the highest quality patient care, and to educate the next generation of doctors, scientists, dentists, nurses, and public health professionals.

While my testimony will focus on the first of these missions, research, it is critical to understand that all three are inexorably linked. Translating scientific advances into everyday medical practice requires the combination of research, patient care, and education; and failure to nurture and promote any one of these will inevitably lead to a decline in the other two.

My request to you this morning is simple. Please increase funding for the National Institutes of Health (NIH) by \$1.3 billion, to at least \$32 billion. This roughly 4.3% increase will allow the NIH to keep up with inflation and even regain just a little of the spending power it has lost since 2003. More important, it will allow NIH to remain the world leader in biomedical science and to fund more significant and exciting research. This is the kind of research that will, as the NIH's mission statement says, "Seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce the burdens of illness and disability."

This request is supported by researchers and patients from across our great nation. Last week, more than 200 leading patient advocacy groups, scientific societies, and academic institutions representing millions of Americans from every state signed a letter supporting such a funding level for the NIH. More than 150 Members of Congress, from both parties, are supporting this request, and an additional ten Republicans have gone on record in support of the NIH, although without mentioning a specific funding request. I want to thank all of the Members who signed these letters and note that the New York delegation was very well represented by both Republicans and Democrats. I ask that these letters be included in the record along with my testimony.

Increasing the NIH budget has an impact well beyond simply funding more science. Research, and especially biomedical science, is an investment in American infrastructure. You may not be able to ride on it like a highway, but the return on our investment is just as real. Increasing the NIH budget not only can advance our scientific understanding, it will also improve health and stimulate the economy.

I know that in many ways I am preaching to the choir, as members of this subcommittee, from both sides of the aisle, have long been strong advocates for the NIH. I want to thank you for your leadership which has been, and continues to be, extremely important.

In addition to being a Dean, I am a practicing cardiologist and have done extensive research on health outcomes. I am also the current Editor of the Cecil Textbook of Medicine, the oldest continuously published textbook of medicine. It is almost forty years since I graduated from medical school, and the advances we have made are unbelievable.

During my career as a physician, the age-adjusted death rate from heart disease has declined by more than 50%, and it has gone down by about 75% for stroke. These unprecedented improvements have been driven by better prevention and care, all of which have been based on discoveries made by researchers who have been funded by the NIH.

But let me put this in somewhat more personal terms, both as a cardiologist and as Dean of a medical school. When I welcome our new students each year, I let them know that we are going to teach them a lot about science and about the profession of medicine, but I also emphasize that we are going to teach them how to learn continuously over their professional lifetimes. Why? As I tell them, only partly jokingly, I am now old enough that about half of what I learned in medical school I have now

forgotten, and about half of what I learned in medical school was wrong anyway. Every day I just hope it was the same half!

More seriously, I can honestly tell you that essentially everything I learned when I was training to be a cardiologist about how to take care of people with heart attacks, heart failure, or abnormal heart rhythms is now no longer valid. Since that time, we have developed clot-busting drugs, angioplasty to open up your coronary arteries and stents to keep them open, implantable defibrillators that can treat life-threatening arrhythmias better than any medication, implantable devices to help your heart pump better, and as former Vice President Cheney can now attest, heart transplants. When I was in medical school, the first heart transplant was a new development; today, there are over 2,000 each year in the United States. Each of these technologies benefitted substantially from NIH support.

But how about the rest of us who may never have had such a life-threatening event? We too have benefitted enormously from NIH research that elucidated the causes of heart disease, ranging from high blood pressure to high cholesterol to diabetes to cigarette smoking. After the Framingham Heart Study, funded by the NIH, first identified these causes and which were validated by other NIH studies, laboratory scientists went to work, again funded by the NIH. They determined many of the causes of high blood pressure, as well as the medications to bring it down to normal. They discovered what causes our cholesterol levels to be high, and medications that can bring them down to normal. They discovered a number of new treatments for diabetes, as well as interventions to help people stop smoking.

There is a lot more work to be done. As I have shown in my own research, Americans eat about 30% more salt than we need; we are becoming increasingly overweight, especially our children; and obesity has caused rates of diabetes to skyrocket. The substantial reductions in heart disease mortality could quickly be reversed if we do not find ways to reverse the epidemics of obesity and diabetes, or to help reduce salt in our diet. So we cannot rest on our laurels! Medical progress is a constant battle as past improvements beget new challenges.

I could talk in similar ways about the extraordinary progress made by NIH researchers in reducing deaths from infectious diseases, including HIV and AIDS, in reducing deaths from cancer, especially breast cancer and prostate cancer, and a number of other disease specific areas.

I am proud to say that some of the most exciting and promising NIH-funded research is ongoing today at CUMC. Dr. Karen Duff recently led a study that provides new insight into how Alzheimer's disease spreads throughout the brain. The findings open up new opportunities for gaining a greater understanding of this and other

neurological diseases and for developing treatments that could halt their progression. Drs. Megan Sykes and Michael Friedlander have developed a way to recreate an individual's immune system in a mouse. The personalized immune mouse offers researchers an unprecedented tool for individualized analysis of abnormalities that contribute to type 1 diabetes and other autoimmune diseases, starting at the onset of disease.

I could go on. One need only go to our website, or to the websites of other medical schools, to find hundreds of other exciting discoveries and major advances that our faculty members and scientists across the country have made. While they vary widely in focus, there is one common element in just about everything you will see. Most, if not all, of these studies were funded at least in part by the NIH.

Funding research, especially biomedical research, is good for the economy, and not just here in the DC area. More than 80% of the NIH budget goes for extramural research, which means it is spent at research institutions throughout the fifty states. As Chairman Rehberg knows, NIH has a large presence in Montana. NIH funding supports half a million jobs nationwide and generates \$68 billion in economic activity. I would note that these tend to be good jobs, with better-than-average wages and good benefits – health, retirement, and even education in some instances – the types of jobs that build strong communities and allow families to support and advance themselves economically.

As excited as I am about the work that NIH has done and continues to do, I am concerned about the future. In recent years, the NIH budget has been flat or risen by only small amounts. In one year, it even fell slightly. This unpredictability is not good for the agency and not good for science. I recognize that the federal government faces a very large budget deficit that this Congress, and especially members of this committee, must find a way to deal with, but the fact is that the agency budget is not keeping up with inflation.

If you look at the NIH budget since 2003, the year the doubling was completed, spending has actually gone down 20% in real terms (see attached chart). Yes, there was a one-time major infusion of funding as a result of the American Recovery and Reinvestment Act. Don't get me wrong, it was definitely a much needed investment, but if you really want to keep science moving forward, if you really want America to maintain its leadership position in research, then what we need is a predictable, steady increase in funding. The \$1.3 billion increase for which I am advocating will at least allow NIH to keep up with inflation and make some progress toward recovering the ground that we have lost.

I am also concerned about the next generation of scientists. If we want our brightest young women and men to go into research, they need to believe that they can earn a living as researchers. These are the people most impacted by the NIH budget situation. The average success rate for NIH grant applicants is below 17%, down from 30% at the end of the doubling. This means that scientists seeking NIH support for their research have a lower success rate than an average major league baseball hitter. In practical terms, this means fewer people pursue careers in science, and those who do often struggle. A generation ago, a promising scientist might expect their first successful NIH grant application during their 30s. Now the age at which investigators get their first award is well into their 40s. This trend is unacceptable and must be reversed. Attracting people into scientific careers will be even more challenging if it remains this difficult to get funding.

I have gone on at length, hopefully not too much, extolling the wonders of the NIH, but I want to address three specific issues that are causing concern throughout the research community.

First is the Peer Review Process. The Peer Review process is what makes the NIH so great. It is why the American people, and you as Legislators, can be assured that the taxpayer dollars that you allocate for this important agency are being put to the absolute best use. NIH grants are made on the basis of merit, as determined by a thorough review by experts in the field. It is a very rigorous process and that is only the first step. Those applications that receive high scores must then be judged by the scientists and other experts at the NIH. Only then is an award made. It is an arduous process, but it is supposed to be, because it ensures that only the best science gets funded. In recent years, there have been a few efforts, fortunately none very successful, to meddle in the peer review process. These have come from the Executive branch, from Congress, from outside advocacy groups, and even on occasion from the scientific and patient communities. Please resist any effort to micromanage the NIH grant-making process. Congress should set overall policy and budget levels, but when it comes to deciding which projects get funded and for how much, please resist any effort to insert this body or any entity into the decision making process. Let the NIH do its job.

Second are my concerns about the rules regarding indirect cost recovery. On February 28th, the Office of Management and Budget (OMB) issued an Advanced Notice of Proposed Guidance (APRN), which looked at several options for “reforming the way the federal government allows grant recipients to allocate and receive reimbursement for indirect costs.” Several of the suggestions put forth in the APRN would be very troubling for academic research institutions such as Columbia. We believe, in fact, that they are inconsistent with the federal policy goals set out in OMB Circular A- 21, which says that, “The principles are designed to provide that the Federal

Government bear its fair share of total costs, determined in accordance with generally accepted accounting principles, except where restricted or prohibited by law.” I will not go into details, but I oppose OMB’s proposal to impose a flat and discounted facilities and administrative cost rate. The APRN also does nothing to make reforms in the time and effort requirements which are a tremendous burden to scientists and research institutions. I urge this subcommittee to pay close attention to the APRN and work with the Administration and the research community to ensure that Indirect Cost Recovery rules are equitable and not overly burdensome.

Third is the Salary Cap. The FY 12 appropriations bill lowered the maximum amount that any individual could be paid on a grant from Executive Level I, \$199,000, to Executive Level II, \$179,000. I urge that it be restored to Level I. Lowering the cap by 10% will make it much more difficult to manage and support a large research enterprise. These lost funds have to be made up by the institution out of discretionary, uncommitted funds, which, as in government, are often in short supply. I calculate that at Columbia we may have to repurpose up to \$2.6 million to make up for the funds that individual investigators have lost from their salaries. In the longer term, the cap will make it more difficult to recruit new faculty, especially in high cost areas like New York. I think the effect will be greatest with physician scientists, those who spend part of their time seeing patients and part of their time doing research and pursuing new discoveries. Clinical medicine has always paid better than research. The last thing we should do is lower research salaries and provide these leaders with an incentive to spend less time in the lab. Please raise the Salary Cap back to Executive Level I.

As I have discussed, we are at an incredible time in the history of biomedical research. As wonderful as the NIH is, there is so much more we can and should be doing to capitalize on the opportunities we have. So let’s get creative. By far, the largest health-care expenditure the federal government makes is for Medicare -- \$480 billion in FY 11. I propose that we take a small portion of that budget, perhaps 0.5%, and allocate it towards clinical trials for new procedures, drugs, and devices that could help Medicare recipients become healthier and save costs. No need to reinvent the wheel. The Centers for Medicare and Medicaid Services (CMS) could work with the NIH to implement this. Imagine the advances in health and well-being we could make and the cost savings we could achieve, if CMS were at the research table.

I hope I have been able to lay out a convincing case of why support for the NIH is so valuable and why it is so important that funding be increased to at least \$32 billion. While I spoke a lot about what it would mean for science, for research institutions such as Columbia, and even for the economy, let me close by saying a few words about what this is really about. Tonight, when you go home, I want you to take a look in your medicine cabinet. Is there a medicine that you routinely take to maintain your health? Chances are that medicine can trace its roots back to NIH funding. Now take a moment

to think about a friend or relative who has survived cancer or a heart attack, maybe someone who now has a cardiac stent and is living a normal active life. Know that if it were not for biomedical research funded by the NIH, there is a good chance that person would no longer be with us. Finally, think about a constituent who has Alzheimer's disease, or ALS, or perhaps an incurable form of cancer. What are our best chances for developing treatments and cures for those diseases, so patients and families will no longer have to suffer? I am not sure what the exact answer is, but there is a pretty good chance it involves the NIH. That is what this is all about. Investing in the NIH, the research it supports, and the new knowledge it creates, will save and improve lives, the lives of people we all care about and the lives of the people you represent.

Thank you for the opportunity to testify this morning. I look forward to answering any questions you may have.



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LEE GOLDMAN, MD

Lee Goldman, MD, MPH, is the Harold and Margaret Hatch Professor and Executive Vice President for Health and Biomedical Sciences at Columbia University, where he also serves as Dean of the Faculties of Health Sciences and Medicine at Columbia University Medical Center. Dr. Goldman received his undergraduate and medical degrees from Yale University, where he also earned a Masters degree in Public Health. He did his clinical training in medicine at UCSF and Massachusetts General Hospital, and in cardiology at Yale New Haven Hospital. Before joining Columbia he was the Julius R. Krevans Distinguished Professor and Chair of the Department of Medicine and Associate Dean for Clinical Affairs of the School of Medicine at the University of California, San Francisco. Prior to moving to San Francisco, he served as Professor of Medicine at Harvard Medical School, Professor of Epidemiology at Harvard School of Public Health, and Vice Chair of the Department of Medicine and later Chief Medical Officer at Brigham and Women's Hospital.

Dr. Goldman's research has focused on the costs and effectiveness of diagnostic and therapeutic strategies. Dr. Goldman is best known for his pioneering work in applying the latest methods of multivariate analysis, cost-effectiveness, quality-of-life, and computer-simulation models to key topics in clinical medicine. This work at the interface between "public health school methods" and clinical medicine is exemplified by his work predicting the cardiac risk of non-cardiac surgery (the "Goldman Index"), determining which patients with chest pain require hospital admission ("the Goldman Criteria"), establishing priorities for the prevention and treatment of coronary disease (the Coronary Heart Disease Policy Model), and changing the way medical care is delivered (the scientific basis for the now ubiquitous chest-pain evaluation units and the creation of the first academic hospitalist program). His more than 450 publications include more than 20 first- or senior-authored articles in the *New England Journal of Medicine*, the premier journal for patient-oriented research. The more than 45 trainees who have first-authored peer-reviewed publications under his mentorship include many who are now leaders in cardiology, general internal medicine, and public health nationally and internationally. As a creator of the Harvard Program in Clinical Effectiveness (*Nature* 1994;371:100), he has contributed to the training of hundreds of physician investigators.

Dr. Goldman is a member of the American Society for Clinical Investigation; past President of the Association of American Physicians, the Society of General Internal Medicine, and the Association of Professors of Medicine; a Fellow of the American Association for the Advancement of Science; a past director of the American Board of Internal Medicine; and a member of the Institute of Medicine of the National Academy of Sciences. He is the recipient of the Society of General Internal Medicine's highest honor (the Glaser Award), and received the Blake Award from the Association of American Physicians and the John Phillips Award from the American College of Physicians. Dr. Goldman is a past editor of *The American Journal of Medicine*, and he currently serves as the lead editor of the renowned *Cecil Textbook of Medicine* and as co-editor of *Hospital Medicine* and of *Primary Cardiology*.