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Sen. Barry Goldwater
363 Russell Senate Office Bldg.
Washington, D.C. 20510

Dear Sen. Goldwater:

I am a National Research Council Fellow currently attached to the Naval Medical Research Institute (NMRI) in Bethesda. I have been engaged in post-doctoral research for this institute for the last 22 months. In that time I have come to conclude that the Navy's in-house research efforts are seriously misdirected, and that the funds consumed in these efforts could be better utilized in other places. I decided, therefore, to write to you about my observations and conclusions.

The Naval Medical Research Institute is engaged in a variety of research programs. These include everything from "biotechnology" and schistosomiasis to diarrheal disease, malaria, and hyperbaric physiology. Much of this work is basic science. This type of research is essentially identical to that being done in any number of universities, federal civilian institutes, and biotech companies. So, in the face of the Gramm-Rudman-Hollings deficit-cutting program, one has to ask why it is that the Navy is engaged in attempting to duplicate the research efforts of the private and federal civilian sectors?

Nothing that is now being done at NMRI is not being done somewhere else. For example, less than 5 miles from here is the sprawling Walter Reed Army Medical Center. They are engaged in essentially the same vaccine development, and malaria and diarrhea studies that we are working on. (Interestingly, the Army is funding most of the research that we are doing). Across the

1. Last July the natural gas supply that is fed into the infectious disease labs of NMRI was suddenly cut off. We were not forewarned, and to date, it has not been restored. I do not know if it ever will be. The gas is used to sterilize glass, and metal probes that routinely come in contact with infectious materials. After trying to make due with a 19th century alcohol lamp, I finally went to a local hardware store and bought a propane torch cylinder. It is not an ideal solution but it does make my work a little easier and a little safer.
2. The autoclaves (pressurized steam vessels for sterilization) in the infectious disease section of NMRI are either continuously broken or highly suspect. I am certain that on a number of occasions I have inadvertently discarded infectious materials that I thought had been adequately sterilized. Only after the fact did I discover that the autoclaves were not properly pressurizing.
3. About the same time that the gas mysteriously disappeared, my office telephone went dead. Despite repeated assurances that the problem was being corrected the phone has remained dead.
4. In 1983 a chemical/biological containment hood was ordered for my lab. It has been sitting in the hallway ever since. Every 6 months or so someone comes by to tell me that it's going to be installed shortly.
5. NMRI is trying to become a high-tech institute. On my floor alone we have at least 2 dozen computers or terminals. All of the major computer manufacturers are represented; IBM, Apple, Xerox, Digital, and Wang. Not surprisingly, few of these machines and their related software are compatible. A researcher writing a paper on his or her PC cannot give the disk to a secretary to have it edited on the office word processor. Statistics done on one computer are nonsense on another. We have computer games (very popular), spreadsheets (rarely used), and DNA sequencing programs (never used). We have a \$55,000 fermenter that has been successfully used 4 times in the last 2 years. It can seldom be sterilized with our 40 year old steam system, and it is too big to fit into our suspect autoclaves. Next to the fermenter is an \$10,000 nucleic acid analyzer that has never been used, and which now serves as a desk top for various pieces of junk.
6. In October I tried to order some computer disks from the stock room here on the base (you can see the building from my lab window). Despite a re-order in January they have not arrived. I suspect that I will never get them. Fortunately, Crown Books carries computer disks.
7. The Navy supplies hospital corpsmen as laboratory technical assistants. Unfortunately, they are not trained to do research and consequently require a good deal of training by the individual researchers. In addition, the corpsmen also have to serve as janitors, stockboys, night watchmen, and all-purpose handymen. This does not make for quality technical help, and is unfair to the corpsmen.
8. Publications are the products of a research institute. Yet NMRI seems to go out of its way to delay and discourage publication. The last time I submitted a paper for internal approval it took 32 days for 5 people to sign off on it. Fortunately, I had the good sense to give them one copy to play with while I mailed a second copy to the journal.

The above items may seem trivial and anecdotal, yet they represent real frustrations and real impediments to quality research. Recently, a civilian researcher complained of not being able to get her radioisotopes for an experiment because the Radiation Safety Office was not able to process the paper work during the course of an 8 hour day. The Navy commander that she complained to quipped; "Well, that's why we're a third-rate research institute." No business, no university, could possibly be managed as badly as NMRI and hope to compete and flourish in the biomedical community. This is one of the two reasons why, despite a Navy commendation and an offer of permanent employment in the casualty care branch of NMRI, I am leaving in September.

My other reason for turning down the job offer was that I am philosophically opposed to the idea of the military doing the kind of research that universities and civilian agencies have traditionally done; and done well. It seems terribly unfair that in an era of contracting budgets the military is getting the guns and the butter. If the DoD budget has to be cut in order to comply with Gramm-Rudman-Hollings it would seem logical to cut out that portion which does not directly jeopardize the national security, and which is wastefully duplicating the efforts of other federal agencies, businesses, and universities. Let me give you some examples from NMRI again.

As previously mentioned, NMRI is doing the same research as Walter Reed and NIH. NMRI is also working on malaria vaccines for military personnel. Yet, some of the most promising work in this field is being done at Rockefeller University in New York. NMRI is also interested in shistosomiasis (snail fever). So is Wayne State University and Harvard Medical School. NMRI is interested in diarrhea vaccines. There are at least 50 universities investigating some aspect of diarrheal prophylaxis and gastrointestinal infection. Hyperbarics is of great interest to the Navy's divers and submariners, and NMRI has an extensive hyperbarics physiology program. Yet, some of the best research in this field is being done at Duke University. Finally, NMRI has also started a "biotechnology" branch. Yet, there are now hundreds of biotech companies and academic programs in the U.S.; many of them desperately looking for some contract work to help keep them afloat.

What I am trying to point out is that if NMRI were to disappear tomorrow no one would notice, and no one would care. There would be no loss to science, public health, or defense preparedness. This is true of all of the DoD's biomedical research efforts. Their work would not be missed. It would easily be compensated for by the efforts already underway in our universities and biomedical businesses. I think that the sensible thing to do is to eliminate the DoD's in-house biomedical research efforts. The time and money spent by the DoD in trying to create first class research institutes has been for nothing. The effort has failed, and it is time to correct the problem.

The money that is now going toward the maintenance of military

Commercialize the vaccine work

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bioomedical research programs should be eliminated from the defense department budget. Ideally, this money should go to the Universities Research Initiative, to the support of university graduate programs and equipment purchases, and to biotech companies able to do contract work for the DoD. Whether the deficit would make this possible at this time is unclear.

I'm certain that the DoD would attempt to make a case for its continued in-house research programs. Yet, the defense department does not feel the need to make its own fighter planes, or Christmas fruitcakes, or nerve gas, or acetylcholinesterase. Why then do they feel that they need to have their own programs to study the mechanisms of campylobacter diarrhea, or lectin-ligand interactions, or the cloning of rickettsial surface protein genes? These are projects for university graduate students, not Navy and Army lieutenants. If the DoD thinks that these are topics of military importance they should be willing to fund the research in the form of grants to universities, and contracts to businesses. The end result would be a leaner, cheaper defense department and stronger universities and biotechnical businesses. Everyone would benefit.

Recently, the director of one of the other research institutes here in Bethesda was showing me some budget-cutting plans that he had drawn up for his superiors. His major point was that while a proposed 25% budget cut would not damage existing contract programs too greatly, a 25% cut would totally disrupt his in-house research programs. His conclusion was that no in-house cuts should be made. I pointed out that if the in-house programs were completely eliminated he would still have a flourishing external contracting program bringing in valuable research. His response was to put his finger to his lips and say, "Ssssshhhh."

I hope this letter will spark some interest and some debate on the Hill. I do not expect that my letter will prompt an overnight reform of the DoD, but I would like to think that you will find some thoughtful suggestions here for dealing with the budget crisis and the need to support universities and the growing biotech industry. Thank you.

Sincerely,

Edward McSweeney

Dr. Edward McSweeney

P.S. Copies of this letter have been sent to 20 other senators and representatives. A list of recipients is available upon request.

I apologize for the quality of the printer and the paper, but it was all that I had available.

If wonder how big was Mc Sweeney's investment in SmithKline?