

Dr. MACARTHUR. We had to adjust as we went along and we do think it has worked very well. I think there are many things that have come out of discretionary funds. Many examples which because the laboratory director had funds that he could use right on the spot when the individual had an idea rather than going through the complicated, tortuous budget process. When a scientist or engineer had an idea that was good and the director funded it, gave him the resources, then we have many examples of things that have come out of the program.

Mr. DADDARIO. Could you provide examples of some of those programs?

Dr. MACARTHUR. I would be glad to.

Mr. DADDARIO. Why don't you give us one that you think would be an outstanding one for the record?

Dr. MACARTHUR. An outstanding one has been mentioned before. That was the Sidewinder missile at NOTS. That is an outstanding example of an individual where if he had followed the rules, I doubt if we would have arrived where we are now, but he was able to somehow get some money and put it in to demonstrate the basic idea which he thought would be very successful, and it was.

Another example was the early work on the Walleye which has seen some real success in Southeast Asia.

These are two examples. I would be glad to furnish you others for the record. We evaluate all these projects at the end of the year.

(The information requested is as follows:)

IN-HOUSE INDEPENDENT RESEARCH FUNDS (IHIR)

The IHIR funds were established as line items in the FY 62 DoD budget as a result of a Secretary of Defense decision on October 14, 1961, as follows:

"Depending upon the mission and nature of the work of the particular laboratory, a fraction of the annual laboratory budget shall be set aside for work judged by the laboratory director to be of promise or importance without need of prior approval or review at higher levels. The results of this work shall be reviewed by the Assistant Secretaries for Research and Development of the Military Departments."

While this concept was new for the Army and Air Force, it had been in effect within the Navy for over a decade prior to this time.

Listed below are a number of examples of IHIR efforts which have resulted in useful products or applications. In addition, we have included a comprehensive list of completed IHIR efforts to provide the Subcommittee a better insight into the scope and flavor of this program.

ARMY EXAMPLES

Severe shock

The Walter Reed Army Institute for Research conducted basic studies to find improved methods of treatment of patients in severe refractory shock. It was found that enormous amounts of fluids could be given to patients, when the exact amount is known; and that vasodilators given after adequacy volume addition are not only safe but dramatically effective. At Walter Reed General Hospital during a specified period, the mortality of shock cases with usual treatment was about 700. The mortality, during the same period, with treatment derived from this study, was 120.

Laser transmitter

The U.S. Army Electrical Components Laboratory designed and constructed a laser transmitter, consisting of an array of seven injection laser diodes, with a peak power output of 150 watts. The transmitter, when combined with an eight-inch telescope and photomultiplier tube, was tested as a range finder and exhibited a useful range of 500 meters.