methacin is a valuable agent in the treatment of acute gouty attacks of arthritis, as it is in patients with osteoarthritis of the hip.

Senator NELSON. Thank you, Doctor. I think the testimony does not differ from what the FDA witnesses said yesterday about the use of indomethacin, except that you went into considerably more detail.

You suggested that the committee evaluate these tests. The committee does not feel competent to evaluate these tests. That is why we call in experts like you and who may well differ with each other. We feel that is the best way to find out what the truth is.

Dr. CALABRO. I hope I have made it apparent that most rheumatologists are unhappy about the methods we have for evaluating antirheumatic agents. As a matter of fact, Dr. Carl Pearson, professor of medicine at UCLA, as well as myself and three other investigators have just received an enormous grant aimed at the pharmacology and testing of drugs in arthritis. I am afraid to even mention the amount.

Senator NELSON. From where?

Dr. CALABRO. From the NIH, for $3.5 million for 5 years. This grant was awarded Dr. Pearson to study the pharmacology of drugs—but more important, to ascertain newer techniques and tools by which we might better objectively evaluate current drugs, or newer drugs, used in the various rheumatic disorders. I hope that this represents at least the beginning of the type of support that many investigators will obviously need in order to evaluate the long term efficacy of antirheumatic drugs.

Clearly, we need a drug like indomethacin, and I hope to test indomethacin with our newer methods of objective evaluation as these become available.

Senator NELSON. Thank you very much, Doctor. We appreciate your coming to testify today.

(The letter and supplemental information submitted by Dr. Calabro follow:)

APRIL 23, 1968.

Hon. GAYLORD NELSON,
Chairman, Subcommittee on Monopoly, Senate Committee on Small Business, U.S. Senate, Washington, D.C.

DEAR SENATOR NELSON: In anticipation of my participation in the congressional hearing of your committee on May 3, 1968, the following summarizes my experience with the drug indomethacin and the role it has in the management of patients with rheumatic diseases.

Recent reports of double-blind studies of indomethacin in rheumatoid arthritis (RA) have caused considerable controversy concerning the efficacy of this drug as an antirheumatic agent. It is my opinion that while double-blind studies are obviously useful in evaluating new agents, they are also extremely difficult, particularly in such a capricious disease at RA. To this point, I might add that there are few (if any) double-blind trials with other antirheumatic agents that are entirely satisfactory.

Even more appalling are the apparent expectations of many investigators conducting short-term studies in RA that indomethacin would provide objective functional improvement. This is a clinical misconception since all antireheumatic agents are at best palliative. By providing effective relief of joint pain and inflamation, rugs allow patients to undertake therapeutic exercise and other supportive measures. These provide objective improvement. Yet, such measures receive scant mention and do not appear to be an integral part of the reported double-blind studies of indomethacin in RA.

In spite of these controlled trials, many physicians have the impression that indomethacin benefits certain patients with RA. As Healey has recently pointed out in the Bulletin of the Rheumatic Diseases (*18*, 483, 1967), there may be a sub-group of patients with RA that are controlled by indomethacin, a finding that