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Research

EVALUATION OF RESEARCH SUPPORT

Recent governmental policy has strongly supported so-called "targeted" research. An example of the background for such policy is a recent Department of Defense report (Project Hindsight), which concluded that "the contributions of university research were minimal. Scientists contributed most effectively when their effort was mission-oriented." The authors question whether "objective, scientific techniques . . . can be used to design and justify a national biomedical research policy." Because they had expertise in the area of cardiovascular and pulmonary disease, and because these diseases are responsible for more than 50 per cent of annual deaths in the United States, they selected this field for detailed examination. Forty physicians were asked to suggest advances made since the 1940's which they considered to be most important for their patients. The authors then identified essential basic knowledge that had to be attained before such clinical advances could

be accomplished. The literature was reviewed extensively in order to determine whether significant research was basic or not. More than 4,000 scientific articles were screened, 2,500 selected for further evaluation, and 529 finally judged essential. Of the latter articles, 62 per cent described basic research, while 41 per cent were "not clinically oriented." An example of such investigation (prior to the 1940's) is the fact that Roentgen was studying "a basic problem in the physics of rays emitted from a Crookes' tube" when he discovered x-irradiation. It is concluded that a scientific rather than anecdotal approach indicates "basic research . . . pays off in terms of key discoveries almost twice as handsomely as other types of research and development combined." It is therefore necessary that generous support be granted for basic research done for the sake of knowledge rather than for any obvious immediate goals. (Comroe III, Dripps RD: *Scientific basis for the support of biomedical science. Science* 192: 105-111, 1976.)