NIH GUIDE for GRANTS and CONTRACTS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

No. 15, January 7, 1972

SOURCES SOUGHT FOR EVALUATION OF MECHANISMS APPLICABLE TO DETOXIFICATION OF BACTERIAL TOXINS AND ALLERGENIC EXTRACTS BY FORMALDEHYDE

ANNOUNCEMENT

The Division of Biologics Standards of the National Institutes of Health is interested in identifying potential contractors having interest in and capability for a study to evaluate the mechanisms applicable to detoxification of bacterial toxins and allergenic extracts by formaldehyde. Appropriate preparations which could be obtained in "purified" state should be examined in order to see if the mechanisms of detoxification are common to multiple substances. The conditions necessary for the preparation of stable toxoids should be examined. In addition, an evaluation should be made of how toxoiding affects antigenicity of resulting products.

Interested organizations may submit resumés of experience and capabilities which should include the professional qualifications of scientists having significant involvement in the proposed study, a description of general and special facilities, an indication of previous experience in the proposed research area, a listing of consultants needed and/or a description of any collaborative effort planned, and a brief outline of the proposed experimental design.

This synopsis is not a request for proposal and responses shall not state proposed pricing. Only those sources deemed fully qualified will be invited to submit proposals when requests for proposals are issued. Ten copies of the resumé of experience and capabilities should be submitted to Mr. Damian Crane, Division of Biologics Standards, NIH, Bethesda, Maryland 20014, within ten days of date of publication.

The GUIDE is published at irregular intervals to provide policy, program, and administrative information to individuals and organizations who need to be kept informed of requirements and changes in grants and contracts programs administered by the National Institutes of Health.

Sources Sought for Improvements in Artificial Kidneys and Treatment of Patients with Chronic Kidney Failure

ANNOUNCEMENT

The National Institute of Arthritis and Metabolic Diseases (NIAMD), National Institutes of Health, is seeking organizations having an interest and capability for conducting research in certain specific problem areas concerned with artificial kidneys and their use:

1. Clinical Dialysis

   a) Development of novel objective measures of adequacy of dialysis.

   b) Selection and demonstration of a group of "marker molecules" in the "middle molecule" range. (MW = 300-4000)

   c) Evaluation of dialyzers by study of more porous membranes, higher surface areas or altered flow regimes.

   d) Comparative evaluation of hemo and peritoneal dialysis.

   e) Sterilization and reuse procedures.

2. Membrane and Material Evaluation

   a) Measurement of in vitro membrane permeabilities, physical and mechanical properties.

   b) Blood compatibility testing.

   c) Development of improved blood campatibility tests.

3. Complications of Dialysis

   a) Evaluation of effectiveness of Vitamin D metabolites or analogs in prevention or therapy of uremic bone disease.

   b) Development of improved nervous system function tests (to serve as criterion for uremic nerve damage).

4. Blood Access

   a) New concepts in blood access with lower risk of clotting and other complications.

   b) Improved needle designs for arterio-venous fistula access.

Resumés are invited from organizations having capabilities for one or more of the specific studies listed. Resumés should contain: 1) information which will clearly establish the organizations' qualifications, experience, and achievement in a specific area; 2) information concerning personnel available for the project; 3) a brief statement of probable approach, awareness of problems, and factors involved in the selected problems; and 4) a description of equipment and facilities available for research.

It is emphasized that expression of interest must relate to the research approach which falls within the scope of the area outlined above and include a rationale that can be scientifically evaluated. Item three (3) above should not exceed three (3) pages and the entire resumé ten (10).

This announcement is not a request for proposals. Respondents will not be notified of the results of the evaluation by the National Institute of Arthritis and Metabolic Diseases of the source data received. Only sources deemed fully qualified will be considered when requests for proposals are solicited.

Ten copies of the resumé of experience and capabilities should be submitted before close of business no later than ten (10) days from the appearance of this announcement, to:

Program Contract Officer
National Institute of Arthritis and Metabolic Diseases
Building 31, Room 10-A-52
National Institutes of Health
Bethesda, Md. 20014

Telephone calls will not be honored and all inquiries must be in writing and addressed to the office listed above.

COLLABORATIVE (CONTRACT) MEDICAL DEVICES APPLICATIONS PROGRAM, NATIONAL HEART AND LUNG INSTITUTE

The National Heart and Lung Institute's Medical Devices Applications Program has as its goal the reduction of deaths and disability from circulatory and respiratory diseases through the development of materials, instruments, and devices for the diagnosis, monitoring, and treatment of such diseases.

Requirements for materials of interest include compatibility with the various tissues involved, durability, strength, and suitability for a wide range of specific implantation needs. Instruments sought are those that will aid in the diagnosis and treatment of circulatory and respiratory diseases, with emphasis on instruments that offer non-invasive techniques for early diagnosis and monitoring of these diseases. Devices to be developed include a variety of therapeutically effective, safe, and reliable circulatory and pulmonary assist and replacement devices. The biological and physical problems involved are being identified and attacked at both the basic and applied levels by research and development groups in academic and industrial settings working under contract to the Medical Devices Applications Program. The primary monitoring of the scientific and technical aspects of these contracts is at a scientist-to-scientist level with close contact between the Program Office scientific staff and the principal investigators of the various research groups.

The Medical Devices Applications Program (1) outlines an over-all plan based on the establishment of long-range and intermediate goals; (2) identifies problems related to the achievement of those goals; and (3) supports work designed to solve those problems in a timely, effective manner. In accordance with the program plan, which is subject to constant updating, the Program Office issues Requests for Proposals (RFPs)directed at the solution of specific problems related to the achievement of the program goals. Responses to such RFPs in the form of research and development proposals are selected for award of contracts on the basis of their likelihood of contributing to the solution of the identified problems, all factors considered.

Collaborative (Contract) Lipid Metabolism Program, National Heart and Lung Institute

In December 1970 the Lipid Metabolism Branch was created in the National Heart and Lung Institute's Collaborative Research and Development Program. Its aim is to help implement a primary goal of the National Heart and Lung Institute--the prevention of premature atherosclerosis through the diagnosis and treatment of hyperlipidemia.

The Lipid Metabolism Branch is responsible for the planning, developing, and directing of a collaborative program of research into the structure, metabolism, and functions of lipids and lipoproteins as they relate to atherosclerosis, and coordinating a national research program designed to increase knowledge related to the diagnosis and management of lipid disorders, especially those associated with premature vascular disease.

The Lipid Metabolism Branch began to implement its program project goals by the establishment of (1) a network of six Lipid Research Clinics and (2) a Patient Registry and Coordinating Center. It is planned to double the number of these clinics in FY 1972. The Lipid Research Clinics will serve to improve the diagnosis and management of hyperlipoproteinemia and establish opportunities for further research, including determination of prevalence of abnormalities, their causes and treatment, and the effect of this treatment on premature atherosclerosis. The coordinated ventures of the Clinics will require common study protocols, comparable patients, random assignment, double blind evaluation, placebo control, long-term observation and central collection, editing and monitoring of data.

The objectives of the Lipid Research Clinic's Program include:

1. Evaluation of current techniques for the diagnosis of hyperlipoproteinemia and the development of better ones.

2. Improvement of detection, diagnosis, and medical care for hyperlipidemic patients by providing guidance and assistance to physicians on the management of these patients.

3. Testing and development of improved therapy (both dietary and drug) for specific disorders.

4. Design and implementation of an intervention study to test the lipid hypothesis in high-risk patients: i.e., will lowering blood lipids reduce cardiovascular mortality and morbidity in patients with specific types of hyperlipoproteinemia. Will it delay the development and/or progression of cardiovascular disease.

5. The standardization of methodology, techniques, and definitions dealing with hyperlipoproteinemia and its diagnosis.

The first task of the Lipid Research Clinics will be to set up and standardize basic techniques for the evaluation of hyperlipidemia. It is essential to validate the basic lipid techniques needed to define hyperlipoproteinemia. There is a clear need for collective standardization of techniques and terminology. New and simpler techniques must be evaluated collectively. Education both within and outside the lipid field, prevalence studies and intervention must await this standardization. After methodology is established the clinics will seek to determine the prevalence of hyperlipoproteinemia in the United States.

Ultimately the high risk subjects defined and registered by the Lipid Research Clinics will provide the ideal populations to gain the answer to the fundamental question as to whether the lowering of lipids will reduce the development and/or progression of coronary vessel disease. Familial Types II and III are, for example, clearly associated with a high rate of new coronary events between ages 30 and 50. With our present armamentarium 30-60% reductions of plasma lipid levels can be achieved with drug and diet.

COLLABORATIVE (CONTRACT) RESPIRATORY DISEASES PROGRAM, NATIONAL HEART AND LUNG INSTITUTE

The Respiratory Diseases Branch, established in January 1971, fosters collaborative research and development programs that are timely and that hold promise of leading to results of immediate and practical significance in the prevention of chronic respiratory disease. Studies may be either fundamental or clinical, but they must be directed to such practical problems as developing methods for detecting symptoms prior to the occurrence of irreversible disease, improving treatment of respiratory failure, or improving the care and rehabilitation of patients with advanced chronic respiratory disease.

Research now being supported for work on O_2 toxicity vs. O_2 therapy has the following features: Some activity focuses on cellular constituents and biochemical pathways affected by high O_2 exposure. Other work concentrates on the mechanism of O_2 toxicity and will include correlation of biochemical and pathological observations. As lipid metabolic pathways and surfactant synthesis are of the utmost importance in problems related to O_2 toxicity, a set of studies is exclusively concerned with the subject. Another study evaluates the possibility of synergetic effect of respiratory infection and O_2 exposure in causing toxic response. One study seeks to determine maximum time limits of exposure for specific oxygen pressure and safe level of exposure. Finally, one program is concerned with direct observation of the O_2 exposure on the mucociliary function and will also study the mode of O_2 administration.

Research studies on $alpha_1$ antitrypsin deficiency and respiratory disease constitute a program with the following features: Two reference laboratories are being developed with capabilities for producing a large number of analyses and for research on new techniques and on identification of new phenotypes. These laboratories may be looked at as a national resource. Studies of population groups include an in-depth study of general groups for respiratory disease at an early stage and for phenotype identification; a population made up of patients with chronic respiratory disease will be studied from the genetic point of view; a population in the childhood and young adult age group, and the prevalence of COPD and genetic variant in a Negro population.

Additional requests for proposals will supplement this program.

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Bethesda, Maryland 20014

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