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objectives of the Kettering Laboratory are set forth in a manner that is suitable for general information.

A second memorandum is for your information as to certain types (by no means all) of work that are now under way.

If there is any specific part or parts of the content of either of these that you wish to inquire into further, let me know.

Which are Being Prosecuted in The Kettering Laboratory
at this Time.

1. The Kettering Laboratory is best known both within the United States and abroad, so far as its experimental work is concerned, for its contributions to the understanding of metallic poisoning, with specific, but by no means exclusive, reference to lead . In one way or another the Laboratory has been involved in investigationsof various aspects of the actual or potential hazards or the overt effects of human exposure to arsenic, mercury, salenium, aluminum, manganese and beryllium. The work on lead has been more extensive and has been continued longer than that on any other metal, and on the whole it may be said (although if it were to be said it should be said modestly, rather than boastingly) that more has been done in the last 30 years in the Kettering Laboratory to clarify the physiology and toxicology of lead compounds, and to provide satisfactory criteria for industrial hygiene in the lead trades, than had been accomplished elsewhere previously. A small monograph, based on a series of Lectures in London (The Harben Lectures for 1960) will soon be available, in which some of the more important contributions are presented briefly.

2. The Laboratory is also well known for its work on certain organic compounds of fluoine - the refrigerants Freon 12 and Freon 21 - but is better known, perhaps, for its investigations of the behavior of inorganic fluoride. Numerous articles on various aspects of this matter have been published, and a series of reports is now being prepared for issuance (nearly completed), following the completion of a program of investigation financed by a series of industries in which large quantities of inorganic fluoride are handled. This problem, as that concerned with lead, has involved extensive sampling and analysis of naturally occurring materials (vegetation and animal products used as food, the tissues and the excreta of animals and man) and the artificial contamination of these materials with fluoride, chiefly as the result of the industrial or technological developments of our time.

3. A very extensive bibliography and review of the literature concerned with inorganic fluoride has been assembled in two volumes by the staff of this division of the Laboratory (a less comprehensive companion volume on the organic compounds of fluorine is near completion). This has been a monumental task carried out by Assistant Professor Campbell (Mrs. Irene) and her associates of this division.

public) hazards. Moreover, since some chemicals possess carcinogenic properties, certain materials (petroleum products, coal tar and derived products, certain amines and certain minerals) have been investigated by methods which are an offshoot of industrial toxicology. (In some instances these investigations of the laboratory have been coördinated with epidemiologic surveys in industry.) Two such major investigations have been carried out, one under the financial sponsorship of the American Petroleum Institute, and the other supported by a number of industries engaged in one or another aspect of the production or use of coal tar which grouped themselves informally for this purpose. These investigations extended over some years (one of them 11 years) and were productive of much new information.

5. Work on some of the mechanisms of carcinogenesis, as the outgrowth of the investigations referred to above, continues to follow certain seemingly significant clues.

6. The Clinical Division of the Laboratory, sometimes alone, and more often in collaboration with the Division of Industrial Hygiene Technology, and occasionally with the assistance of epidemiologists in the Division of Preventive Medicine, investigates cases or groups of cases of industrial injury or disease (especially of chemical origin), and undertakes to appraise the conditions in industry and to make recommendations that will bring these conditions under satisfactory control. Sometimes the investigative aspects of such work are of predominant importance, sometimes the clinical characteristics of occupational disease are the main issue, and sometimes epidemiological interpretations are of primary significance. A considerable number and variety of industries have been "patients" of the Laboratory in this manner, with results which have ranged from almost wholly unproductive efforts to the highly satisfactory solution of a problem.

7. Other activities have been carried out from time to time, and some not mentioned here are in progress now. It would be difficult, as well as undesirable, to attempt to cover these, in any complete sense, just as it would be difficult and undesirable for a physician to describe his practice. The Laboratory undertakes to advise and assist industry in meeting hygienic problems of any type. It also aids local and other governmental agencies in these matters as it can and as opportunity affords. Increasingly it extends its work beyond industry into community health and environmental hygiene.

Its product (insofar as research rather than professional training is involved) is represented by its reports to industry or governmental agencies, and by its publications. In view of the professional relationships within which it works, these are the only products which it can show to the public.

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