

production of penicillin and research in the field of antibiotics. Additional facilities are provided near Toronto at the Dufferin Division and include a 145-acre farm property with modern laboratory buildings and quarters for animals.

Through the organization of the Western Division in the University of British Columbia, the Connaught Medical Research Laboratories have shared in the development of an important program of research in preventive medicine on the Pacific Coast.

Thus for over forty years the Connaught Medical Research Laboratories, with the co-operation of the medical profession and the official public health authorities, have contributed in steadily increasing measure to the advancement of research and public health in Canada.

The Banting Research Foundation.—The Banting Research Foundation supports the work of the Banting and Best Chair of Medical Research in the University of Toronto and aids medical research throughout Canada by making grants-in-aid to those who submit problems of sufficient medical interest to the Board of Trustees. The Board meets and makes grants usually three times a year, around June 1, Oct. 1 and Feb. 1. Five members of the Board of Trustees are appointed by the Board of Governors of the University of Toronto and the Alumni Association of the University of Toronto, and these five members appoint two other Trustees, then the seven members appoint an eighth Trustee.

Subsection 4.—University Research

Canadian universities and colleges subscribe to three basically essential aims, though with varying degrees of emphasis: (a) the diffusion of knowledge through sound teaching, extension and evening classes and written reports, (b) the conservation of knowledge and its reorganization and (c) the extension of the boundaries of knowledge through research. Most undergraduate courses attempt to provide a basic understanding in a number of subject fields with more extensive knowledge in one or more of these. The graduate courses provide a wider and deeper appreciation and understanding in a limited field through advanced courses, seminars and individual research. Practice in the research methods of the disciplines, using experiment, questionnaire, logic of the subject, or statistics is intended to prepare students capable of adding to present knowledge.

Research in the universities was first undertaken to obtain knowledge for its own sake, or pure research. It was soon recognized that this provided basic information on which applied science rests and it was followed through. More recently the universities, because of their unique position in having trained specialists and equipment, have undertaken emergency and other contractual research. The trend to pursue all three has been expanding rapidly, creating new problems but also providing greater opportunities for undertaking sizable tasks that could not have been considered otherwise. Broadening of the field of research has indirectly been responsible for increasing the capacity of the universities to educate advanced students and has occasionally improved the quality of their education through providing large-scale equipment otherwise beyond the ability of the institution.

Research presently undertaken in the universities falls into three broad categories: projects undertaken by the student under the guidance of a professor or committee to meet requirements for an advanced degree; that undertaken by the professor, which may be of a more or less continuous nature; and larger research projects undertaken co-operatively on a faculty or interfaculty basis in the university laboratories or in such specialized institutions connected with the university as medical research laboratories, institutes of microbiology and hygiene, science service laboratories and faculties of agriculture.

Some idea of the increase in research undertaken by Canadian universities is obtained from a comparison of the situation in 1919 (when two universities—Toronto and McGill—offered graduate courses beyond the master's degree and graduated 11 students) with the situation in 1957. In the latter year Ontario had four, Quebec three and six other provinces