

The Council meets at least four times a year in Ottawa, and in order to economize its time, has appointed from its membership a number of standing and special committees to deal with particular problems; further, in order to have expert advice along technical lines, it has appointed twelve associate and advising committees of Canadian scientists, technologists and business men, whose advice on their specialties is available without remuneration as required. Nor do the members of the Research Council receive for their services any other remuneration than their expenses.

Research is impossible without trained "researchers." Consequently, to increase the number of scientific investigators in Canadian industries, the Council has established Fellowships, Studentships and Bursaries, having an annual value of \$2,200, \$1,000 and \$750 respectively, which may be awarded to graduates of universities and technical colleges who have given evidence of the possession of the special knowledge and capacity required to conduct independent research in some department of science bearing on industrial processes. During the fiscal year 1921-22, seven Fellowships, fourteen Studentships and thirty-five Bursaries were awarded.

During the year 1921-22 many applications for financial assistance in aid of special researches were received, which were carefully examined and a number approved and the assistance granted. Among these may be mentioned a grant to Professor Wilfred Sadler to complete an investigation for determining the character of the bacteria and other germs found in cream, milk and butter. The studies made reveal much on the bacterial flora of graded butter, suggest the importance of water supply as a possible agency of contamination, emphasize the possibility of bacterial recontamination subsequent to pasteurization, indicate the necessity for bacterial control in the management of cream and the manufacture of butter, and define cases where specific deterioration of grade has been eliminated or rendered less acute by putting into practice the advice tendered as a result of the laboratory findings.

To ascertain the possibility of cultivating economically in British Columbia several essential oil and drug-yielding plants, a grant was made to Professors R. H. Clark and J. Davidson of the University of British Columbia. The investigations made indicate that the results of storing the bark of *Cascara Sagrada* for three years previous to use can be produced quickly by chemical means, and tests made at the Vancouver General Hospital with bark so treated have been satisfactory. The *Cascara Sagrada* wood was next examined to see if it contained enough active constituent to pay for extraction. Preliminary results in this connection indicate that the wood is practically as active as the bark. This result, if fully confirmed, will mean the conservation of the fast disappearing *cascara* tree.

A grant was made to Professor J. C. McLennan, Director of the Physics Laboratory of the University of Toronto, to continue his investigations regarding the relations of the infra red rays to the structure of atoms. A special study has been made of the ionization