

- 4 A Canadian second helping**
IRAP — stimulating R & D in the food industry.
L'industrie alimentaire canadienne 5
PARI stimule la recherche et le développement.
-
- 8 Oracle for origins**
Peering around the "next corner" in cosmic ray research.
Les rayons cosmiques 9
Coup d'oeil prospectif sur la recherche.
-
- 14 David Suzuki**
A "chromosome mechanic" at work.
David Suzuki 15
Un "mécanicien de chromosomes" au travail.
-
- 20 New tools — new skills**
The Manufacturing Technology Center — service to Canadian industry.
Nouveaux équipements, nouvelles compétences 21
Le Centre de fabrication technique au service de l'industrie canadienne.
-
- 24 Unravelling the motions of matter**
Novel technique for looking at chemical constituents of the cell.
Lumière sur le mouvement de la matière 25
Technique nouvelle pour voir les constituants chimiques de la cellule.
-
- 28 Mapping the contours of life**
Protein folding — one of the most challenging areas of modern biology.
Processus biologique fondamental 29
Le repliement protéique est l'un des domaines les plus complexes de la biologie moderne.

Science Dimension is published six times a year by the Public Information Branch of the National Research Council of Canada. Material herein is the property of the copyright holders. Where this is the National Research Council of Canada, permission is hereby given to reproduce such material providing an NRC credit is indicated. Where another copyright holder is shown, permission for reproduction should be obtained directly from that source. Enquiries should be addressed to: The Editor, Science Dimension, NRC, Ottawa, Ontario, K1A 0R6, Canada. Tel. (613) 993-3041.

La revue Science Dimension est publiée six fois l'an par la Direction de l'information publique du Conseil national de recherches du Canada. Les textes et les illustrations sont sujets aux droits d'auteur. La reproduction des textes, ainsi que des illustrations qui sont la propriété du Conseil, est permise aussi longtemps que mention est faite de leur origine. Lorsqu'un autre détenteur des droits d'auteur est en cause la permission de reproduire les illustrations doit être obtenue des organismes ou personnes concernés. Pour tous renseignements, s'adresser à la rédactrice en chef, Science Dimension, CNRC, Ottawa, Ontario, K1A 0R6, Canada. Téléphone: (613) 993-3041.

Managing Editor Loris Racine **Directeur**
Editor Joan Powers Rickerd **Rédactrice en chef**
Wayne Campbell
Associate Editors Dr. Wally Cherwinski **Rédacteurs en chef adjoints**
Designer and Robert Rickerd **Maquettiste et**
Print Supervisor **contrôleur de l'impression**
Photography Bruce Kane **Photographie**
Printer Dollco **Imprimeur**
31059-5-0782

In early December 1916, 11 men representing the scientific and technical and industrial interests of Canada met in Ottawa for the first time. On June 6 of that year, a Sub-Committee of the Privy Council had formed the Honorary Committee for Scientific and Industrial Research, the earliest ancestor in the genealogy of the National Research Council of Canada.

Today, 60 years later, NRC continues to play a major role in Canada's scientific development. The modern-day Council functions as a national science laboratory, a patron of Canadian scientific research and a vital link between the scientific interests of government, industry and universities in Canada.

Laboratory activities are now concentrated into ten major research divisions spanning various aspects of the life sciences, physical sciences and engineering. The newest of these, the Herzberg Institute of Astrophysics, has been named in honor of Dr. Gerhard Herzberg, distinguished NRC scientist and Canada's first Nobel Prize winner in the natural sciences. Other scientific and technical facilities, which are unique or too specialized for individual Canadian industries or scientific organizations to support on their own, are maintained all across Canada.

In its research programs, NRC acts in response to Canada's changing needs and scientific priorities. Current applied research is focussed on selected areas related to long-term problems of national concern — energy, food, building and construction, and transportation. The Council also provides research support towards social objectives — public safety and security, protection of property, health and environmental quality. A significant part of present-day laboratory work centers on basic or exploratory research aimed at the creation and application of new knowledge. The results of such fundamental studies ultimately fulfill some practical need in society.

NRC's extensive research facilities complement its role as custodian of Canada's primary physical standards which include measurements of such quantities as length, mass, heat, electricity and time. Because of this involvement, the Council acts for Canada in international agreements concerning weights and measures.

In addition to its "in-house" research activity, the Council is closely allied with Canadian industry through cooperative programs of research and development and through programs of direct financial assistance. Similarly, an extensive program of grants and scholarships is the main source of direct aid to scientific research in the universities.

While maintaining this direct interface with Canada's scientific community, NRC is also the focus of a nationwide distribution network for scientific and technical information.

Dr. W.G. Schneider, President of NRC, emphasizes the importance of science to Canada's future and foresees a consolidation of NRC's pivotal research role in the years ahead. "In the future," he states "NRC activities will be centered largely around its laboratory programs, with more emphasis on effective ways of using the demonstrated capacity of the Council for our national development. NRC's role must remain clearly defined within the overall Canadian and international scientific effort." □