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**ATOMIC ENERGY
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**L'ÉNERGIE ATOMIQUE
DU CANADA LIMITÉE**

**RADIATION EFFECTS ON LIVING SYSTEMS: A
BIBLIOGRAPHY OF AECL PUBLICATIONS**

**EFFETS DES RAYONNEMENTS SUR LES ORGANISMES VIVANTS:
UNE BIBLIOGRAPHIE DES PUBLICATIONS DE L'EAEL**

Norma J. Hawley

**Whiteshell Nuclear Research
Establishment**

**Etablissement de Recherches
Nucléaires de Whiteshell**

Pinawa, Manitoba R0E 1L0

October 1980 octobre

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RESUME

Cette bibliographie comprend des communications et des comptes-rendus rédigés par des savants de l'Energie Atomique du Canada, Limitée en ce qui a trait aux effets qu'exercent les rayonnements sur les organismes vivants. Elle se divise en trois parties: la Radiobiologie, la Radiobiochimie et la Radiochimie. Il est prévu que cette bibliographie sera mise à jour sur une base annuelle.

Etablissement de Recherches Nucléaires de Whiteshell
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ABSTRACT

This bibliography includes papers and reports by Atomic Energy of Canada Limited scientists concerning radiation effects on living systems. It is divided into three sections: Radiobiology, Radiation Biochemistry and Radiation Chemistry. It is intended that the bibliography will be brought up to date on a yearly basis.

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1. INTRODUCTION

Research within Atomic Energy of Canada Limited in the Radiobiological field involves fundamental studies of the effects of nuclear radiation on living matter. Over three hundred papers and reports have been published in the open literature in the past thirty years embodying these studies. A strong need for a listing of these publications has developed, and this bibliography has therefore been compiled.

A companion report, Atomic Energy of Canada Limited Report, AECL-6319 (1978), "Bibliography of Environmental Research", covers the effects of radiation on the environment including plants, animals and insects in the air, water and on land.

This bibliography has been divided into sections

1. Radiobiology
2. Radiation Biochemistry
3. Radiation Chemistry

The citations are arranged chronologically by AECL report or reprint number within each section or sub-section. An author index is included at the end of the bibliography.

2. RADIOBIOLOGY

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- A.M. Marko GENERAL INTRODUCTION (1-2)
H.C. Birnboim INTRODUCTION TO CELL BIOLOGY AND DNA STRUCTURE (2-8)
R.E.J. Mitchel FREE RADICALS AND RADIATION DAMAGE IN CELL MEMBRANES (8-10)
J.D. Childs THE EFFECTS OF MUTATIONS IN DNA AS ILLUSTRATED WITH A BACTERIAL VIRUS (10-15)
N.E. Gentner DNA REPAIR SYSTEMS IN A RADIORESISTANT BACTERIUM (16-26)
P. Unrau RECOMBINATIONAL REPAIR OF DNA IN NUCLEATED CELLS (26-29)
M.C. Paterson REPAIR OF DNA IN HUMAN CELLS (30-34)
D.K. Myers INFLUENCE OF DNA REPAIR ON ASSESSMENT OF RADIATION HAZARDS (34-42)

12. A.M. Marko, D.K. Myers, I.L. Ophel, G. Cowper and H.B. Newcombe, RESEARCH IN RADIATION BIOLOGY, IN THE ENVIRONMENT AND IN RADIATION PROTECTION AT CRNL. Atomic Energy of Canada Limited Report, AECL-5911 (1978).

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