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## Research Interests

Professor Hoskin's research interests include the anti-cancer and anti-inflammatory potential of iron chelating agents, antimicrobial peptides, and phytochemicals found in common spices, fruits, and vegetables; and the manipulation of T cell signal transduction using natural source compounds and other novel agents for cancer control. His work is geared towards developing new treatments for breast cancer and other common cancers.

## Qualifications

Bachelor of Science, McGill University  
Doctor of Science, McGill University

## Research outputs

Malone A, Clark RF, Hoskin DW, Power Coombs MR. **Regulation of macrophage-associated inflammatory responses by species-specific lactoferricin peptides.** *Frontiers in Bioscience - Landmark*. 2022 feb.;27(2):043. doi: 10.31083/j.fbl2702043

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Rad JG, Hoskin DW. **Delivery of apoptosis-inducing piperine to triple-negative breast cancer cells via co-polymeric nanoparticles**. *Anticancer Research*. 2020;40(2):689-694. doi: 10.21873/anticancer.13998

Greenshields AL, Power Coombs MR, Fernando W, Holbein BE, Hoskin DW. **DIBI, a novel 3-hydroxypyridin-4-one chelator iron-binding polymer, inhibits breast cancer cell growth and functions as a chemosensitizer by promoting S-phase DNA damage**. *BioMetals*. 2019 dic. 1;32(6):909-921. doi: 10.1007/s10534-019-00222-3

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## Projects

### **Automatic CO2 incubator with IR sensor**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/05 → ...

### **Benchtop refrigerated centrifuge with rotor**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/04 → ...

### **Benchtop ultracentrifuge for molecular cell biology**

Duncan, R. (PI), McMaster, C. C. (CoPI), Rohde, J. R. (CoPI), Karten, B. (CoPI) & Hoskin, D. W. (CoPI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/11 → ...

### **Funding for the purchase of a gamma irradiator for studies related to cancer, immunology, and neurobiology research**

Lee, P. W. K. (PI), Duncan, R. (CoPI), Hoskin, D. W. (CoPI), Johnston, B. B. (CoPI), Lee, T. D. G. (CoPI), Marignani, P. A. (CoPI), Marshall, J. S. (CoPI), Robertson, G. S. (CoPI), Robertson, H. A. (CoPI) & Sinal, C. J. (CoPI)  
Institute of Cancer Research  
4/1/06 → 3/31/07

### **Impact of TRPV6 ligation on colonic epithelial cell-dendritic cell crosstalk during induction of an innate immune response**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/15 → ...

### **Mechanism of positive and negative regulatory signaling by CD2 during mouse T lymphocyte activation**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/04 → ...

### **Microplate reader, software, and printer**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/09 → ...

### **Modulation of regulatory T- cell function by histamine and IL-6**

Hoskin, D. W. (PI)

Natural Sciences and Engineering Research Council of Canada  
1/1/12 → ...

**Modulation of regulatory T- cell function by histamine and IL-6**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/13 → ...

**Modulation of regulatory T- cell function by histamine and IL-6**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/14 → ...

**Modulation of regulatory T- cell function by histamine and IL-6**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/15 → ...

**Modulation of regulatory T- cell function by histamine and IL-6**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/11 → ...

**Multi-user fluorescence microscope for live cell imaging**

Duncan, R. (PI), Garduño, R. A. (CoPI), Rohde, J. R. (CoPI), Stadnyk, A. W. (CoPI), McMaster, C. C. (CoPI), Karten, B. (CoPI), McCormick, C. (CoPI), Hoskin, D. W. (CoPI) & Krueger, S. R. (CoPI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/12 → ...

**Shared equipment for counting and sizing of cell populations**

Anini, Y. Y. (CoPI), Cowley, E. A. (CoPI), Hoskin, D. W. (CoPI) & Blay, J. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/08 → ...

**Studies of cellular immunity in the antiphospholipid syndrome**

Hanly, J. G. J. (PI) & Hoskin, D. W. (CoPI)  
Institute of Musculoskeletal Health and Arthritis  
4/1/98 → 9/30/01

**Studies of iron uptake and regulation in animal cells and effects of novel iron chelators**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/12 → ...

**The effect of novel iron chelators on iron-related Wnt signaling in animal cells**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/13 → ...

**Thy-1: a T cell molecule with novel T cell receptor-like and costimulatory signaling properties**

Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/09 → ...

**Thy-1: a T cell molecule with novel T cell receptor-like and costimulatory signaling properties**

Hoskin, D. W. (PI)

Natural Sciences and Engineering Research Council of Canada  
1/1/05 → ...

**Thy-1: a T cell molecule with novel T cell receptor-like and costimulatory signaling properties**  
Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/06 → ...

**Thy-1: a T cell molecule with novel T cell receptor-like and costimulatory signaling properties**  
Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/07 → ...

**Thy-1: a T cell molecule with novel T cell receptor-like and costimulatory signaling properties**  
Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/08 → ...

**Thy-1 signaling in Th2, Th17, and T regulatory cell induction**  
Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/10 → ...

**Treatment of intestinal inflammation with piperine, a dietary phytochemical with immune-modulating activity**  
Hoskin, D. W. (PI) & Liwski, R. S. (CoPI)  
Institute of Nutrition, Metabolism and Diabetes  
10/1/08 → 9/30/11

**Zeiss inverted microscope**  
Hoskin, D. W. (PI)  
Natural Sciences and Engineering Research Council of Canada  
1/1/06 → ...