PubMed Central Canada & Faculty Perspectives: Open Access to Health Research at York University

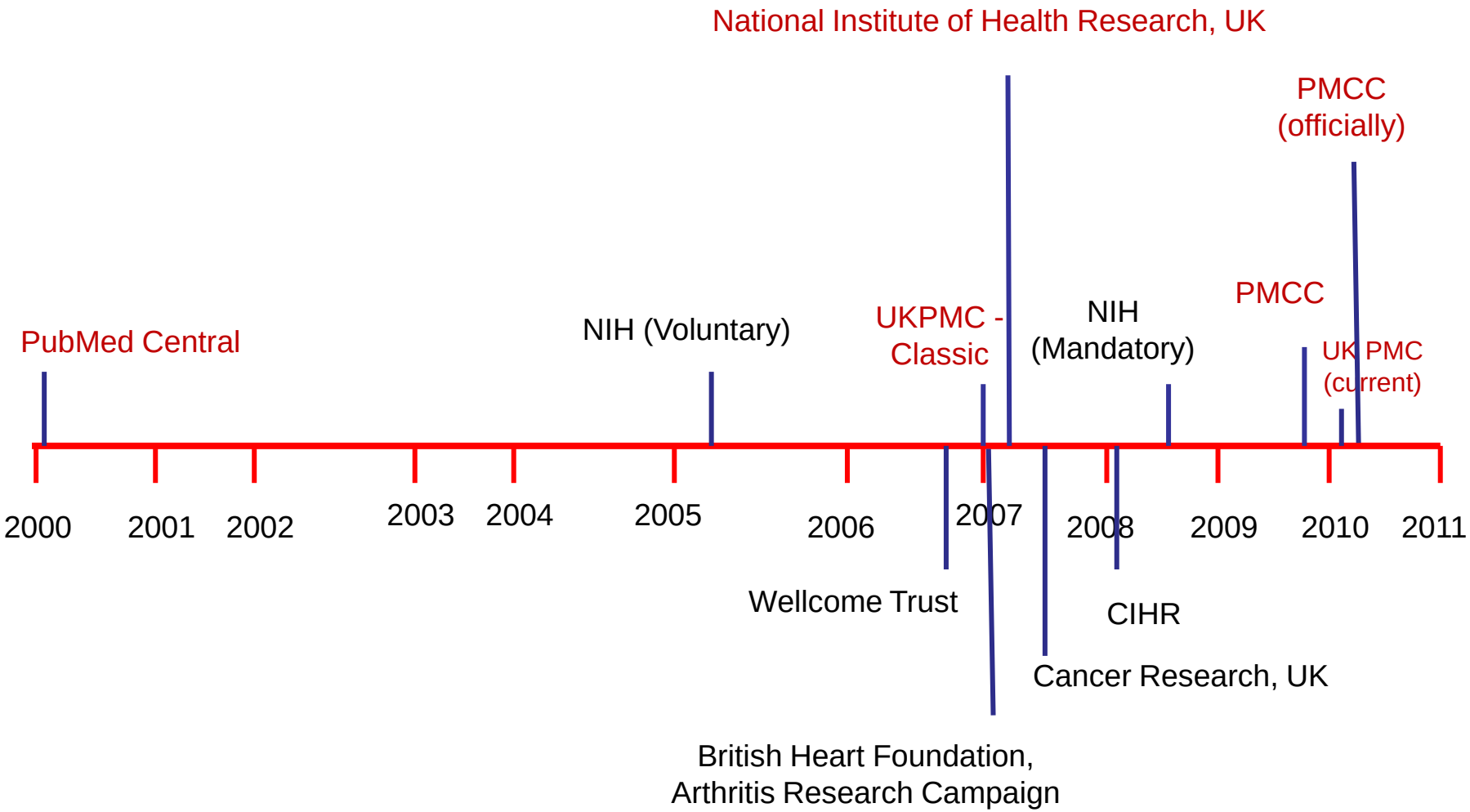
Rajiv Nariani
Science Librarian, York University Libraries
CLA 2012 National Conference
1st June 2012
rajivn@yorku.ca

PMC Canada, UK PMC & PubMed Central

Why PubMed Central Canada?

- Question: How do we strengthen PMC Canada?
  - How can it be unique?
  - Users perspectives about this online archival repository of published, peer-reviewed health and life sciences research publications
- UK PMC & PubMed Central: Guides

Timelines: PMC, UK PMC, PMCC



PubMed Central CANADA

Protocol for an economic evaluation alongside the University

Journal titles
Articles

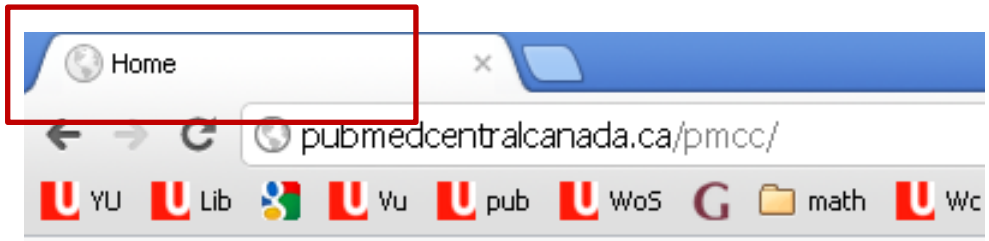
Search

PUBMED CENTRAL CANADA

PubMed Central Canada (PMC Canada) provides **free access** to a stable and permanent online digital archive of full-text, peer-reviewed health and life sciences research publications. It builds on PubMed Central (PMC), the archive developed by the U.S. National Library of Medicine (NLM), which is part of the U.S. National Institutes of Health (NIH). The search interface allows anyone to browse, search and download articles.

PMC Canada is a partnership between the National Research Council's Canada Institute for Scientific and Technical Information (NRC-CISTI), the Canadian Institutes of Health Research (CIHR), and the U.S. National Library of Medicine.

Launched 28th April 2010



PubMed Central CANADA

Home | Overview | Journals | Submit Manuscript | Contact Us | Français

PUBMED CENTRAL

PMC CANADA WEBINAR

You can now view the PMC Canada recorded Webinar which was offered in October and November 2010. Questions and answers that followed the Webinars are also posted for your benefit.

View the PMC Canada Webinar *[Corrections]*
Read the Webinar questions and answers.

SUBMISSIONS?

PMC Canada supports CIHR's Policy on Access to Research Outputs, which requires grant recipients to ensure that their peer-reviewed publications are freely accessible online within six months of publication.

Submissions

CIHR Policy on Open Access to Research

For Researchers
- Funding Overview
- Find Funding
- Apply for Funding
- Understand Peer Review
- View Decisions

For the Public
- Research Highlights
- Get Involved

The Agency
- About us
- Institutes
- Initiatives
- Media Room
- Careers

CIHR Policy on Access to Research Outputs

Policy Summary

Beginning January 1, 2008, researchers awarded new or renewed funding from CIHR are reminded to adhere with the following new responsibilities:

- ensure that all research papers generated from CIHR funded projects are freely accessible through the Publisher's website or an online repository within six months of publication;
- deposit bioinformatics, atomic, and molecular coordinate data into the appropriate public database (e.g. gene sequences deposited in GenBank) immediately upon publication of research results;
- retain original data sets for a minimum of five years (or longer if other policies apply);
- and acknowledge CIHR support by quoting the funding reference number in journal publications.

Over twenty research funding agencies worldwide, including the U.K. Medical Research Council and Wellcome Trust, have implemented policies that call for funded researchers to provide free online access to supported research publications. Most recently, the U.S. National Institutes of Health mandated open online access to its funded research through the National Library of Medicine's online archive, PubMed Central.

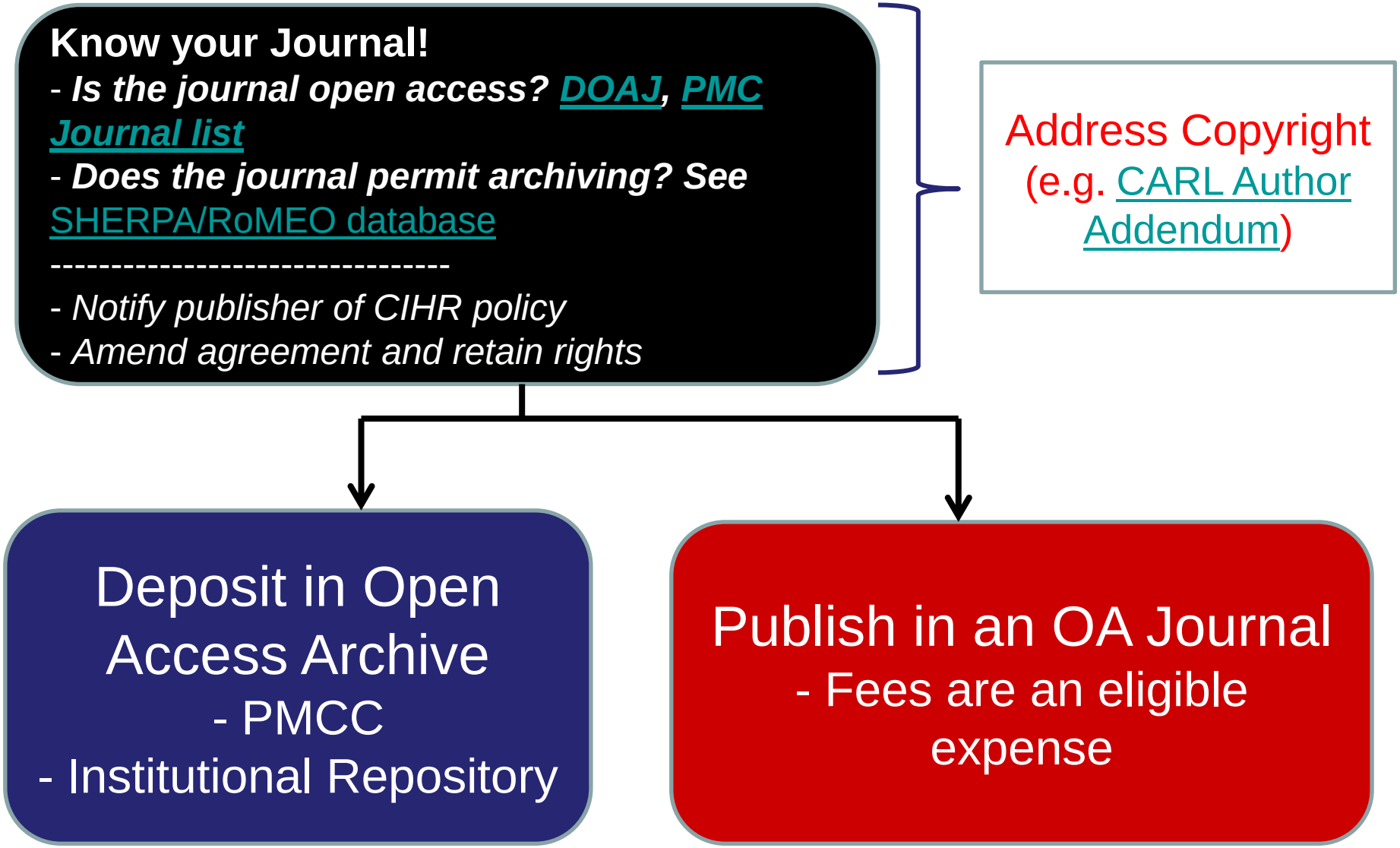
Adhering with the new policy – Open access publications

For journal publications, there are two ways to adhere with the policy:

- Submit your manuscript to a journal that offers immediate open access (e.g. BioMed Central, PLoS) or offers open access to the paper on its website within six months (e.g. NEJM).
- Submit your manuscript to a journal that does not offer open access, but will permit you to archive the peer-reviewed manuscript in a central or institutional repository within 6 months of publication.

The SHERPA/RoMEO database contains a searchable listing of journal publisher's copyright and self-archiving policies which will help researchers to determine journal's that adhere with CIHR policy.

Compliance to CIHR Policy on OA

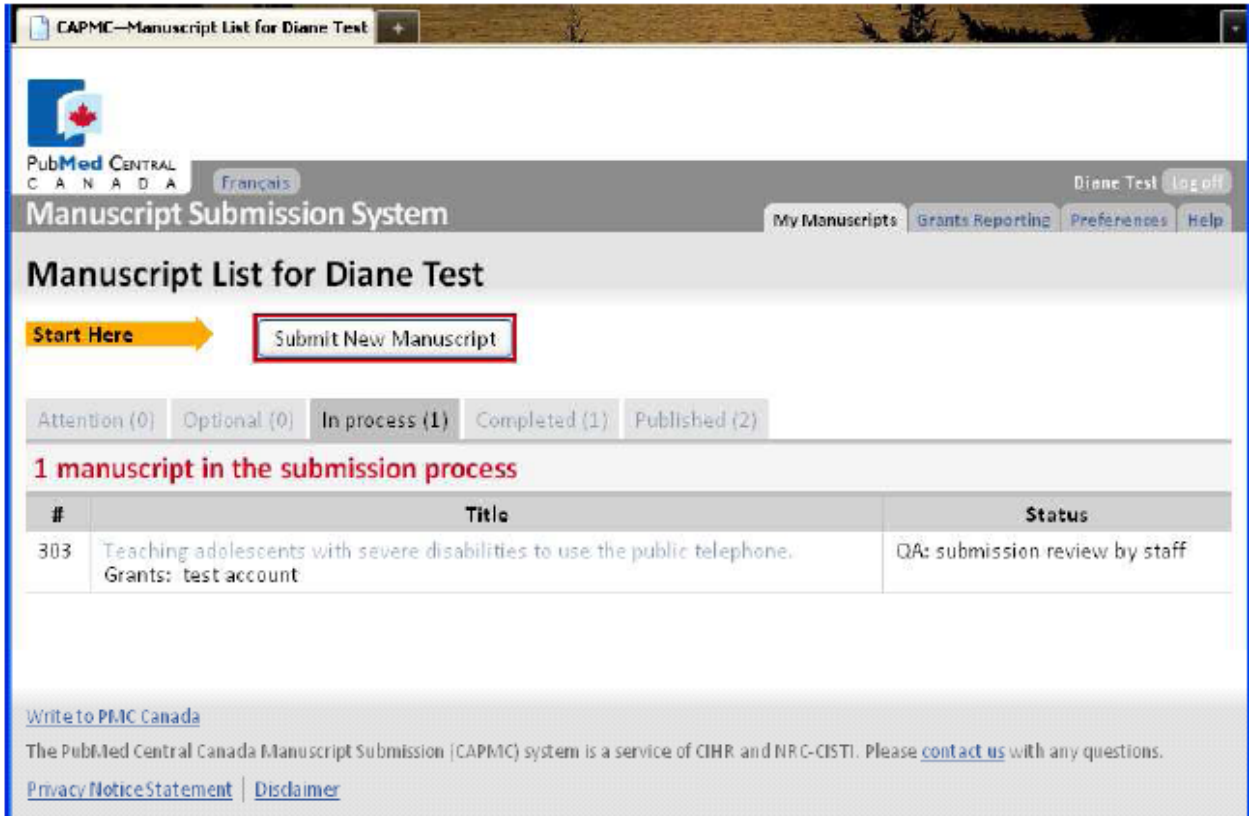


http://pubmedcentralcanada.ca/docs/PMCC_tutorial_ppt.pdf

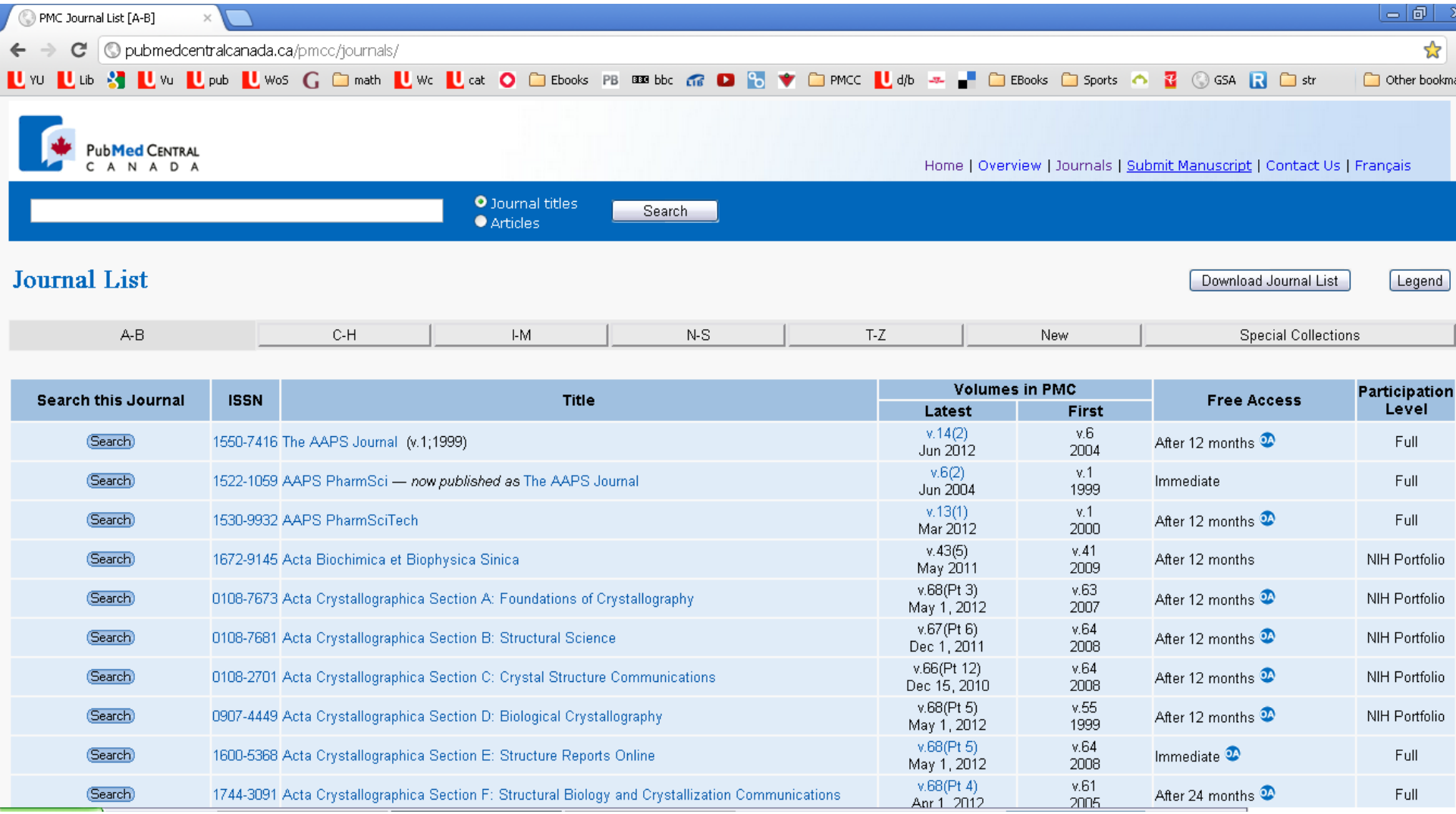
PMC Canada Manuscript Submission System (MSS)

MSS

- Grants awarded as of Jan 1/08
- Only CIHR funded researchers may submit
- Peer-reviewed final Manuscripts



Journal List: CIHR Policy Compliance



Search this Journal	ISSN	Title	Volumes in PMC		Free Access	Participation Level
			Latest	First		
Search	1550-7416	The AAPS Journal (v.1;1999)	v.14(2) Jun 2012	v.6 2004	After 12 months OA	Full
Search	1522-1059	AAPS PharmSci — *now published as* The AAPS Journal	v.6(2) Jun 2004	v.1 1999	Immediate	Full
Search	1530-9932	AAPS PharmSciTech	v.13(1) Mar 2012	v.1 2000	After 12 months OA	Full
Search	1672-9145	Acta Biochimica et Biophysica Sinica	v.43(5) May 2011	v.41 2009	After 12 months	NIH Portfolio
Search	0108-7673	Acta Crystallographica Section A: Foundations of Crystallography	v.68(Pt 3) May 1, 2012	v.63 2007	After 12 months OA	NIH Portfolio
Search	0108-7681	Acta Crystallographica Section B: Structural Science	v.67(Pt 6) Dec 1, 2011	v.64 2008	After 12 months OA	NIH Portfolio
Search	0108-2701	Acta Crystallographica Section C: Crystal Structure Communications	v.66(Pt 12) Dec 15, 2010	v.64 2008	After 12 months OA	NIH Portfolio
Search	0907-4449	Acta Crystallographica Section D: Biological Crystallography	v.68(Pt 5) May 1, 2012	v.55 1999	After 12 months OA	NIH Portfolio
Search	1600-5368	Acta Crystallographica Section E: Structure Reports Online	v.68(Pt 5) May 1, 2012	v.64 2008	Immediate OA	Full
Search	1744-3091	Acta Crystallographica Section F: Structural Biology and Crystallization Communications	v.68(Pt 4) Apr 1, 2012	v.61 2005	After 24 months OA	Full

http://pubmedcentralcanada.ca/pmcc/journals/

Promoting PMC Canada launch at YUL

YORK UNIVERSITÉ UNIVERSITY
redefine THE POSSIBLE.

yFile
YORK UNIVERSITY'S NEWS SOURCE

HOME | TOP STORIES | CURRENT NEWS | CAMPUS NOTES | YORK IN THE MEDIA | RESEARCH | CONTACT

5/5/2010 | in headline news | SHARE

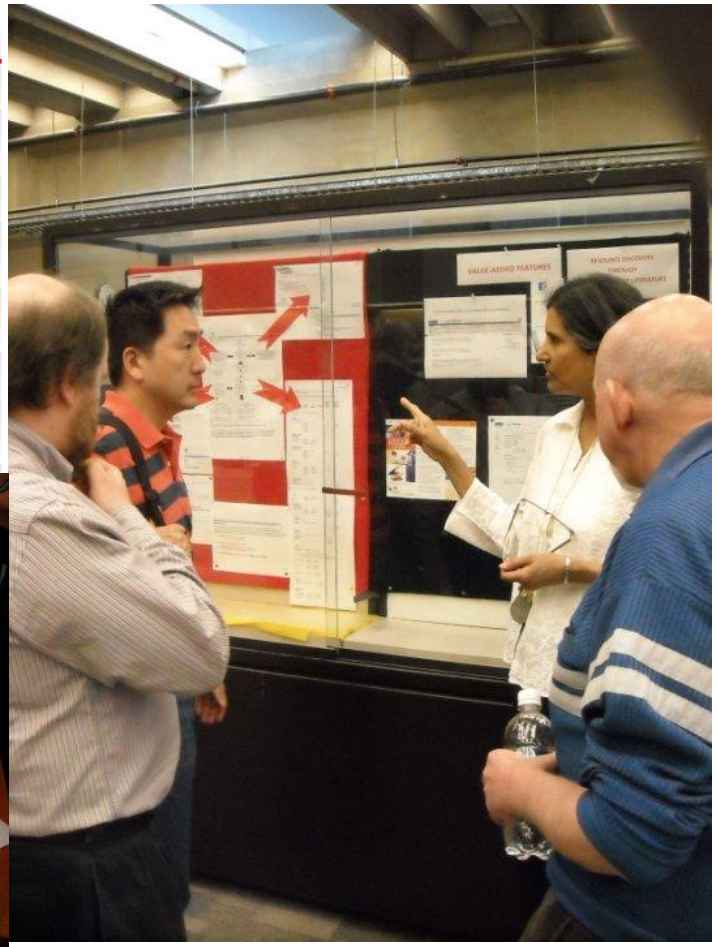
Steacie celebrates new open-access network on health research

York's Steacie Science & Engineering Library will today celebrate the launch of PubMed Central (PMC) Canada, a new Canadian partner in an international network providing free or open access to health research.

Faculty and graduate students are invited to find out how York University Libraries can help make their research available to the world through PMC Canada. Join the science librarians at Steacie Science & Engineering Library at 4:30pm and listen to guest speakers, including Lesley Beagrie, associate dean of professional & international programs in the Faculty of Health; Gordon Flett, associate dean of research & graduate education in the Faculty of Health; and biology University Professor Ron Pearlman of the Faculty of Science & Engineering. Pearlman has worked extensively with the Canadian Institutes of Health Research (CIHR) in encouraging faculty to support open access (OA) publishing.

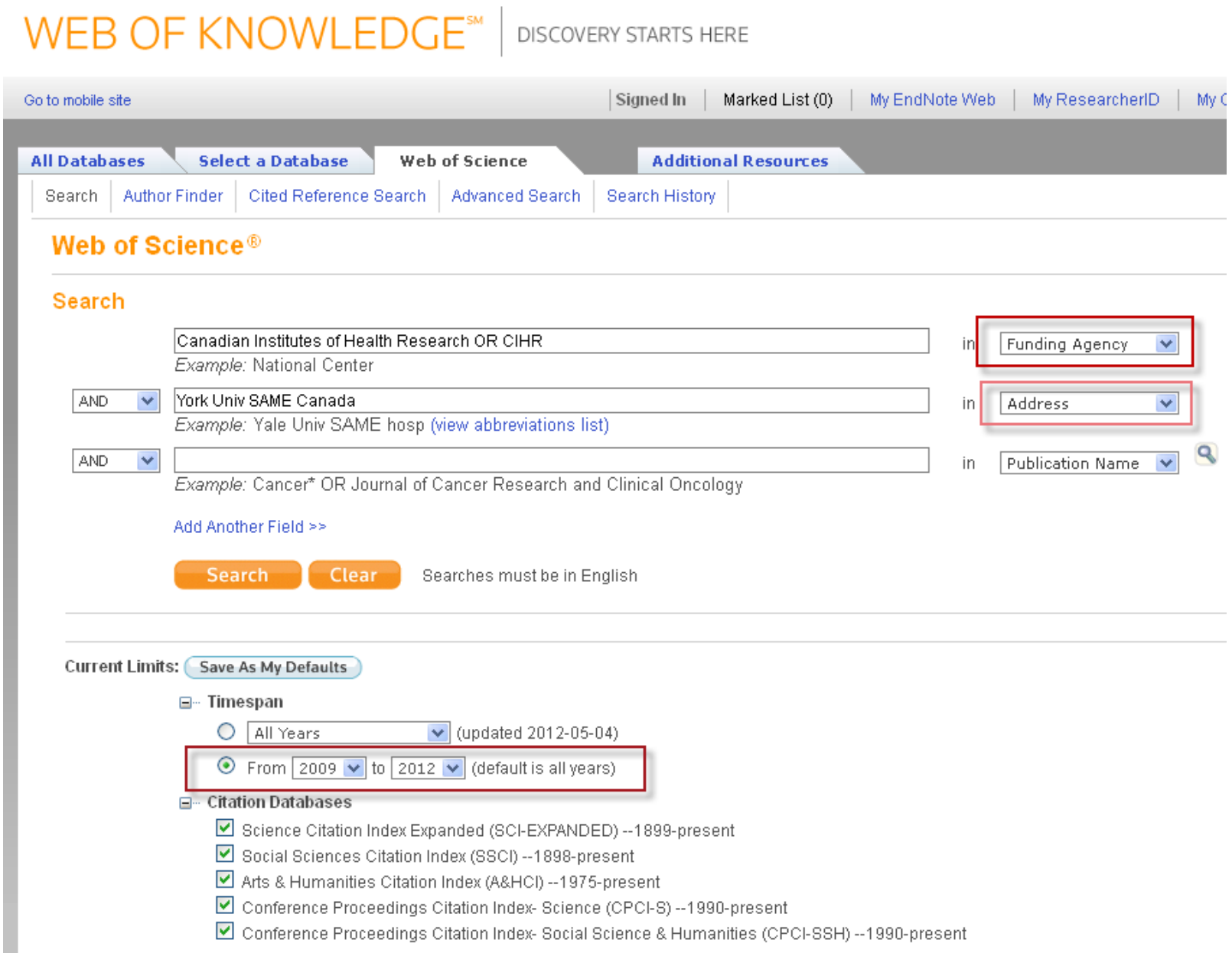
LATEST STORIES

- SSHRC awards over $3 million to York-led projects
- Schulich launches new Master of Science in Business Analytics program
- Finance 'rock star' entertains with new book
- Music prof composes a hymn for YWCA Elm Centre launch
- Book untangles Canada's response to early Jewish immigrants
- Morris Katz Lecture: Abrupt changes in the Arctic
- York Senate approves new Lassonde School of Engineering



CIHR funding & York University

CIHR publications: York University



Web of Science®

Results Funding Agency=(Canadian Institutes of Health Research OR CIHR) AND Address=(York Univ SAME Canada)
Timespan=2009-2012. Databases=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH.
Lemmatization=On

Scientific WebPlus BETA View Web Results >>

Results: **270** Page 1 of 27 Go Sort by: Publication Date -- newest to oldest

Hide Refine

Refine Results

Search within results for
Search

Web of Science Categories Refine
- NEUROSCIENCES (57)
- CLINICAL NEUROLOGY (28)
- PHYSIOLOGY (25)
- CELL BIOLOGY (24)
- ENDOCRINOLOGY METABOLISM (20)

more options / values...

Document Types Refine
- ARTICLE (248)
- REVIEW (22)

more options / values...

- Subject Areas
- Authors
- Group Authors
- Editors
- Source Titles
- Book Series Titles
- Conference Titles
- Publication Years
- Institutions

(0) | Save to: ENDNOTE WEB | ENDNOTE | RefWorks | ResearcherID more options

Analyze Results
Create Citation Report

1. Title: **Effects of moderate electrical stimulation on reactive species production by primary rat skeletal muscle cells: Cross talk between superoxide and nitric oxide production**
Author(s): Lambertucci Rafael Herling; Silveira Leonardo Dos Reis; Hirabara Sandro Massao; et al.
Source: JOURNAL OF CELLULAR PHYSIOLOGY Volume: **227** Issue: **6** Pages: **2511-2518** DOI: 10.1002/jcp.22989 Published: **JUN 2012**
Times Cited: **0** (from Web of Science)

Find it York [View abstract]

2. Title: **Models for Humanitarian Health Care Ethics**
Author(s): Schwartz Lisa; Hunt Matthew; Sinding Chris; et al.
Source: PUBLIC HEALTH ETHICS Volume: **5** Issue: **1** Pages: **81-90** DOI: 10.1093/phe/phs005 Published: **APR 2012**
Times Cited: **0** (from Web of Science)

Find it York [View abstract]

3. Title: **From "Sex Toy" to Intrusive Imposition: A Qualitative Examination of Women's Experiences with Vaginal Dilator Use Following Treatment for Gynecological Cancer**
Author(s): Cullen Kimberley; Fergus Karen; DasGupta Tracey; et al.
Source: JOURNAL OF SEXUAL MEDICINE Volume: **9** Issue: **4** Pages: **1162-1173** DOI: 10.1111/j.1743-6109.2011.02639.x Published: **APR 2012**
Times Cited: **0** (from Web of Science)

Find it York [View abstract]

4. EN Web Title: **Posttraumatic growth in coronary artery disease outpatients: Relationship to degree of trauma and health service use**
Author(s): Leung Yvonne W.; Alter David A.; Prior Peter L.; et al.
Source: JOURNAL OF PSYCHOSOMATIC RESEARCH Volume: **72** Issue: **4** Pages: **293-299** DOI: 10.1016/j.jpsychores.2011.12.011 Published: **APR 2012**
Times Cited: **0** (from Web of Science)

Suppression of a MEF2-KLF6 Survival Pathway by PKA Signaling Promotes Apoptosis in Embryonic Hippocampal Neurons

Author(s): Salma, J (Salma, Jahan)[1,2,4]; McDermott, JC (McDermott, John C.)[1,2,3,4]

Source: JOURNAL OF NEUROSCIENCE **Volume:** 32 **Issue:** 8 **Pages:** 2790-2803 **DOI:** 10.1523/JNEUROSCI.3609-11.2012 **Published:** FEB 22 2012

Abstract: In the mammalian nervous system, regulation of transcription factor activity is a crucial determinant of neuronal cell survival, differentiation, and death. The myocyte enhancer factor 2 (MEF2) transcription factors have been implicated in cellular processes underlying neuronal survival and differentiation. A core component of the MEF2 complex is the MEF2D subunit. Recently, we reported that cAMP-dependent protein kinase (cAMP/PKA) signaling negatively regulates MEF2D function in myogenic cells. Here, we assessed whether cAMP signaling converges on the prosurvival role of MEF2D in Sprague Dawley rat embryonic (E18) hippocampal neurons. Initially, we observed that experimental induction of cAMP/PKA signaling promotes apoptosis in primary hippocampal neurons as indicated by TUNEL and FACS analysis. Luciferase reporter gene assays revealed that PKA potently represses MEF2D trans-activation properties in neurons. This effect was largely reversed by engineered neutralizing mutations of PKA phospho-acceptor sites on MEF2D (S121/190A). Kruppel-like factor 6 (KLF6) was identified as a key transcriptional target of MEF2 in hippocampal neurons, and siRNA-mediated knockdown of KLF6 expression promotes neuronal cell death and also antagonizes the prosurvival role of MEF2D. These observations have important implications for understanding the pathways controlling cell survival and death in the mammalian nervous system.

Accession Number: WOS:000300716600022

Document Type: Article

Language: English

KeyWords Plus: MYOCYTE-ENHANCER FACTOR-2; CENTRAL-NERVOUS-SYSTEM; FACTOR 2D MEF2D; TRANSCRIPTION FACTOR; PROTEIN-KINASE; ALZHEIMERS-DISEASE; GENE-EXPRESSION; FACTOR 2A; DIFFERENTIATION; MUSCLE

Reprint Address: McDermott, JC (reprint author), York Univ, Dept Biol, 327 Farquharson,4700 Keele St, Toronto, ON M3J 1P3, Canada

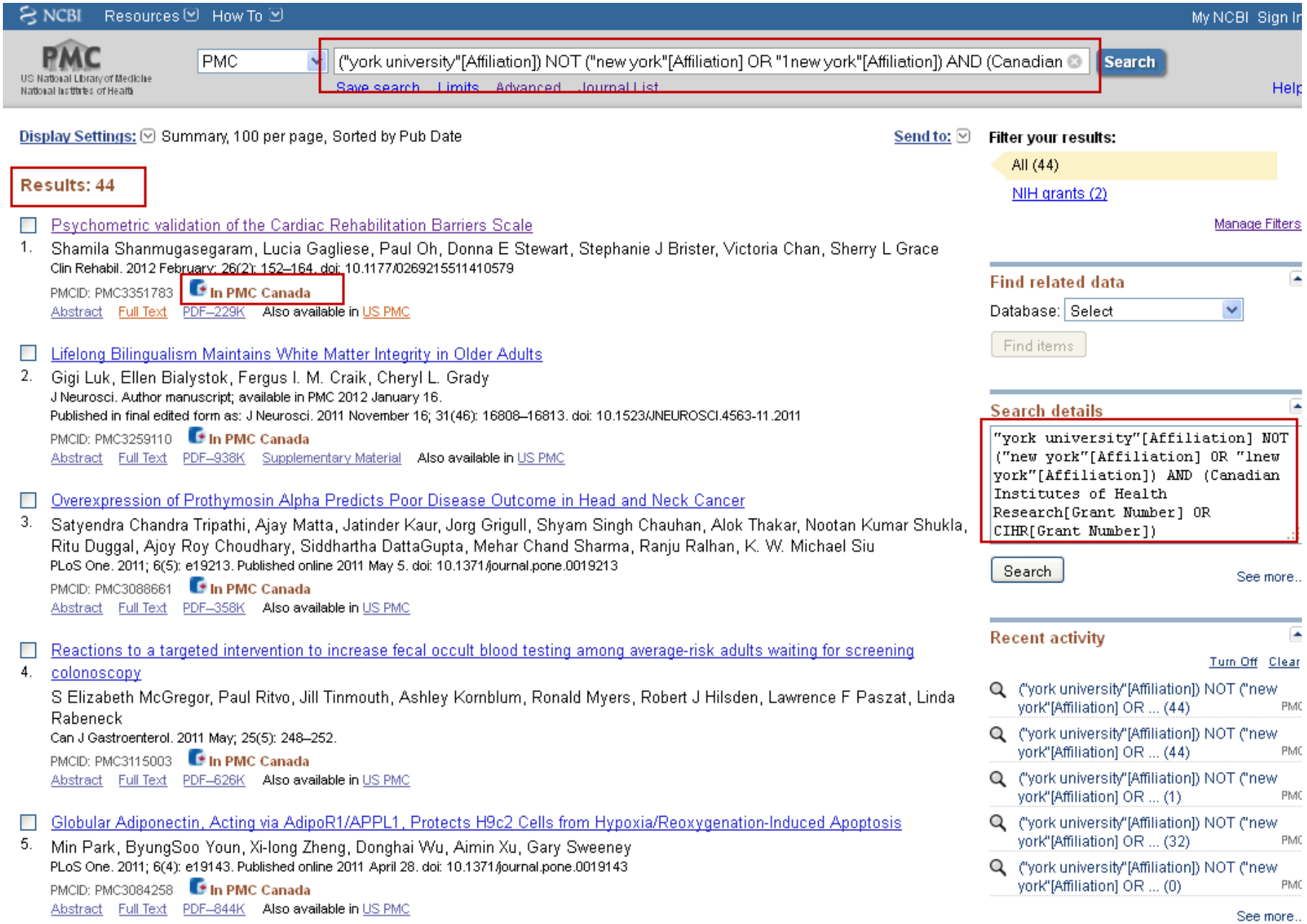
Addresses:
1. York Univ, Dept Biol, Toronto, ON M3J 1P3, Canada
2. York Univ, Ctr Res Mass Spectrometry, Toronto, ON M3J 1P3, Canada
3. York Univ, Muscle Hlth Res Ctr, Toronto, ON M3J 1P3, Canada
4. York Univ, Ctr Res Biomol Interact, Toronto, ON M3J 1P3, Canada

E-mail Address: jmcderm@yorku.ca

Funding:

Funding Agency	Grant Number
Canadian Institutes of Health Research (CIHR)	

YU Papers in PubMed Central (2008-2012): CIHR funding



YU Papers in PubMed Central (2008-2012): CIHR funding

☐ An APPL1-AMPK signaling axis mediates beneficial metabolic effects of adiponectin in the heart

13. Xiangping Fang, Rengasamy Palanivel, Justin Cresser, Kristin Schram, Riya Ganguly, Farah S. L. Thong, Joseph Tuinei, Aimin Xu, E. Dale Abel, Gary Sweeney
Am J Physiol Endocrinol Metab. 2010 November; 299(5): E721–E729. Published online 2010 August 24. doi: 10.1152/ajpendo.00086.2010
PMCID: PMC2980363 **Only in US PMC**
Abstract Full Text

☐ Nuclear S100A7 Is Associated with Poor Prognosis in Head and Neck Cancer

14. Satyendra Chandra Tripathi, Ajay Matta, Jatinder Kaur, Jorg Grigull, Shyam Singh Chauhan, Alok Thakar, Nootan Kumar Shukla, Ritu Duggal, Siddhartha DattaGupta, Ranju Ralhan, K. W. Michael Siu
PLoS One. 2010; 5(8): e11939. Published online 2010 August 3. doi: 10.1371/journal.pone.0011939
PMCID: PMC2914786 **In PMC Canada**
Abstract Full Text PDF–511K Also available in US PMC

☐ Somatic symptom overlap in Beck Depression Inventory–II scores following myocardial infarction

15. Brett D. Thombs, Roy C. Ziegelstein, Louise Pilote, David J. A. Dozois, Aaron T. Beck, Keith S. Dobson, Samantha Fuss, Peter de Jonge, Sherry L. Grace, Donne E. Stewart, Johan Ormel, Susan E. Abbey
Br J Psychiatry. 2010 July; 197(1): 61–66. doi: 10.1192/bjp.bp.109.076596
PMCID: PMC2894982 **In PMC Canada**
Abstract Full Text Also available in US PMC

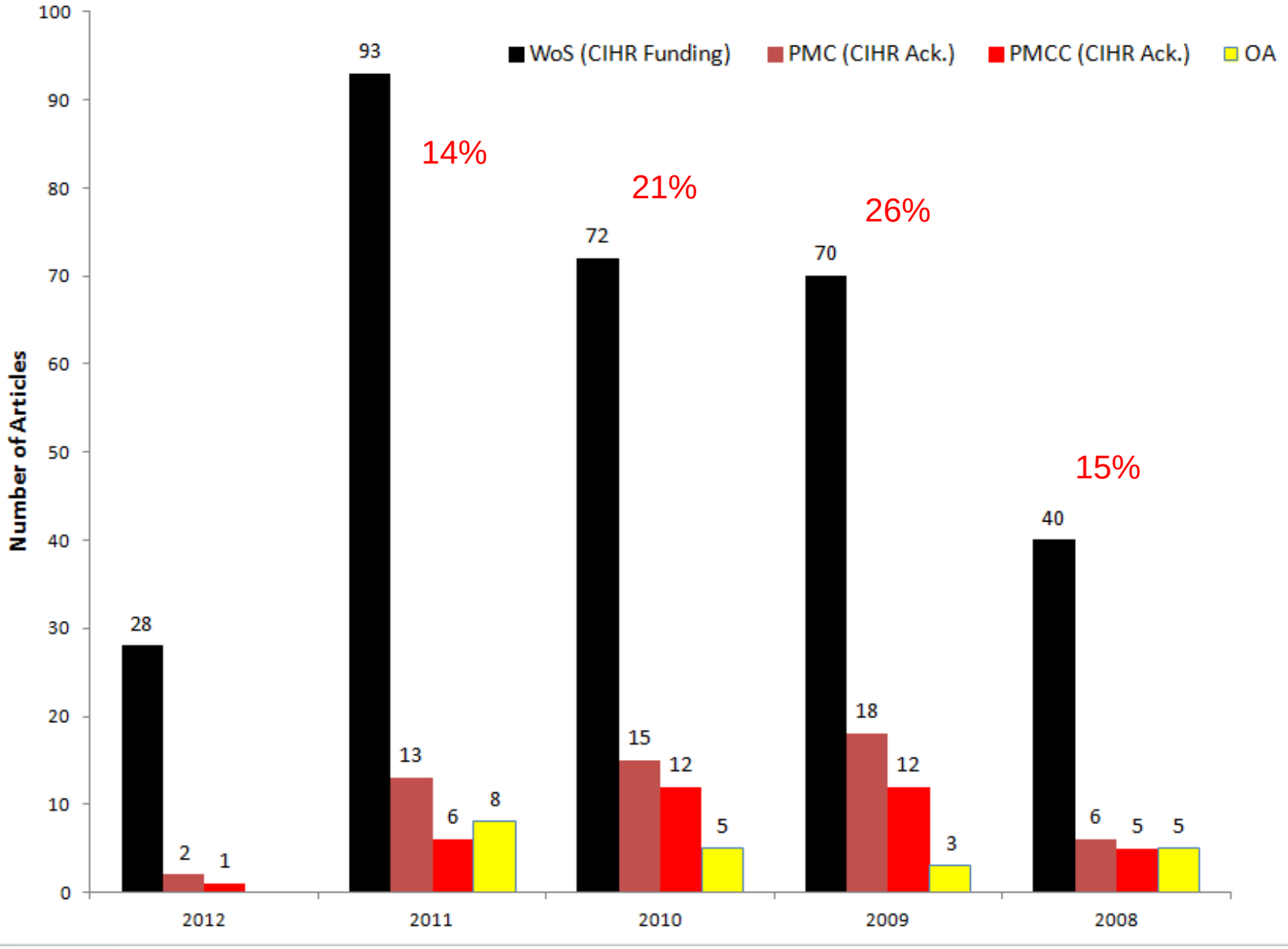
☐ Drive time to cardiac rehabilitation: at what point does it affect utilization?

16. Janette Brual, Shannon Gravely-Witte, Neville Suskin, Donna E Stewart, Alison Macpherson, Sherry L Grace
Int J Health Geogr. 2010; 9: 27. Published online 2010 June 4. doi: 10.1186/1476-072X-9-27
PMCID: PMC2900239 **In PMC Canada**
Abstract Full Text PDF–1.4M Also available in US PMC

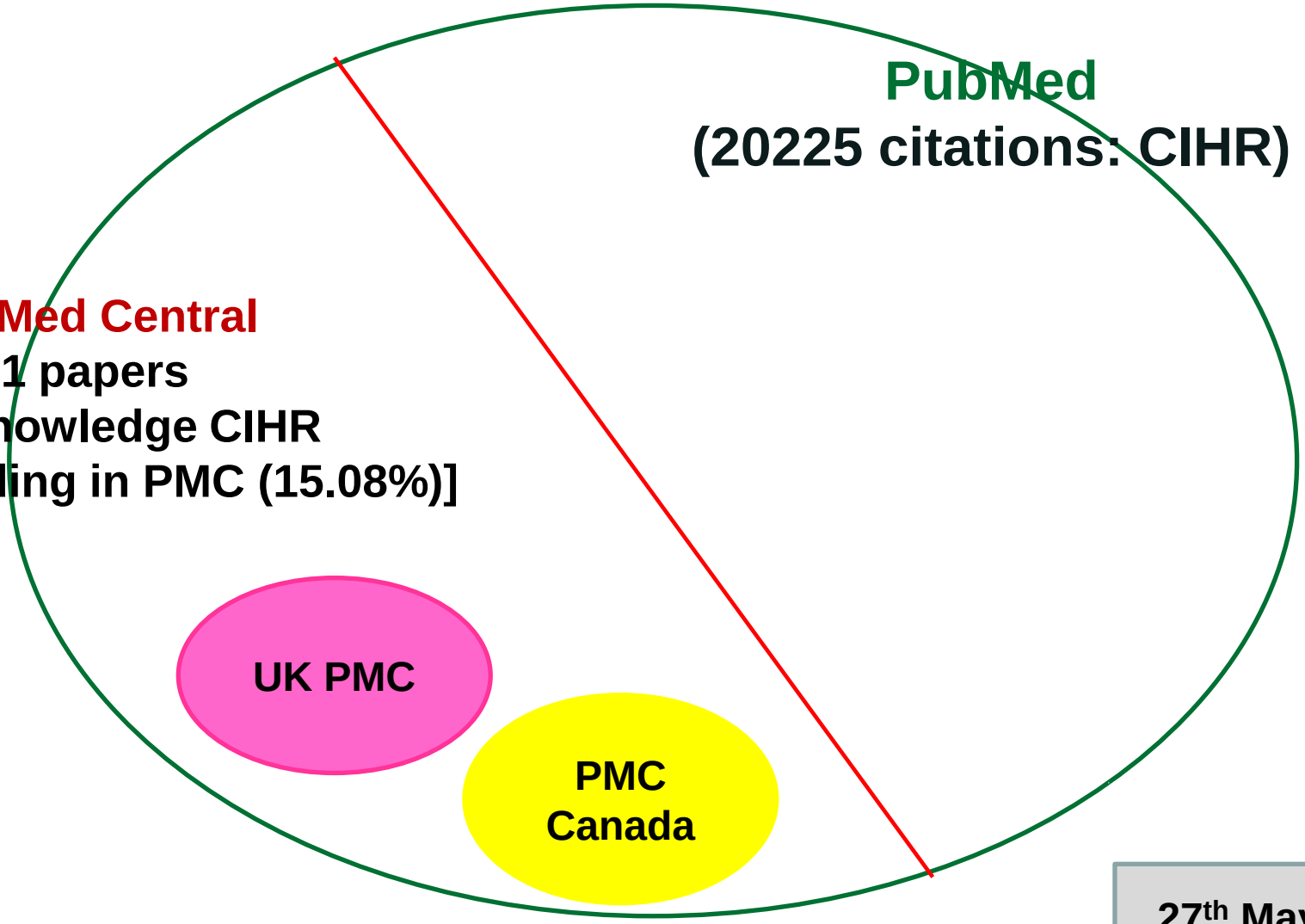
☐ Essential Loci in Centromeric Heterochromatin of *Drosophila melanogaster*. I: The Right Arm of Chromosome 2

17. Alistair B. Coulthard, Christina Alm, Iulia Cealiac, Don A. Sinclair, Barry M. Honda, Fabrizio Rossi, Patrizio Dimitri, Arthur J. Hilliker
Genetics. 2010 June; 185(2): 479–495. doi: 10.1534/genetics.110.117259
PMCID: PMC2881131 **Only in US PMC**
Abstract Full Text PDF–998K

York University Chart: CIHR

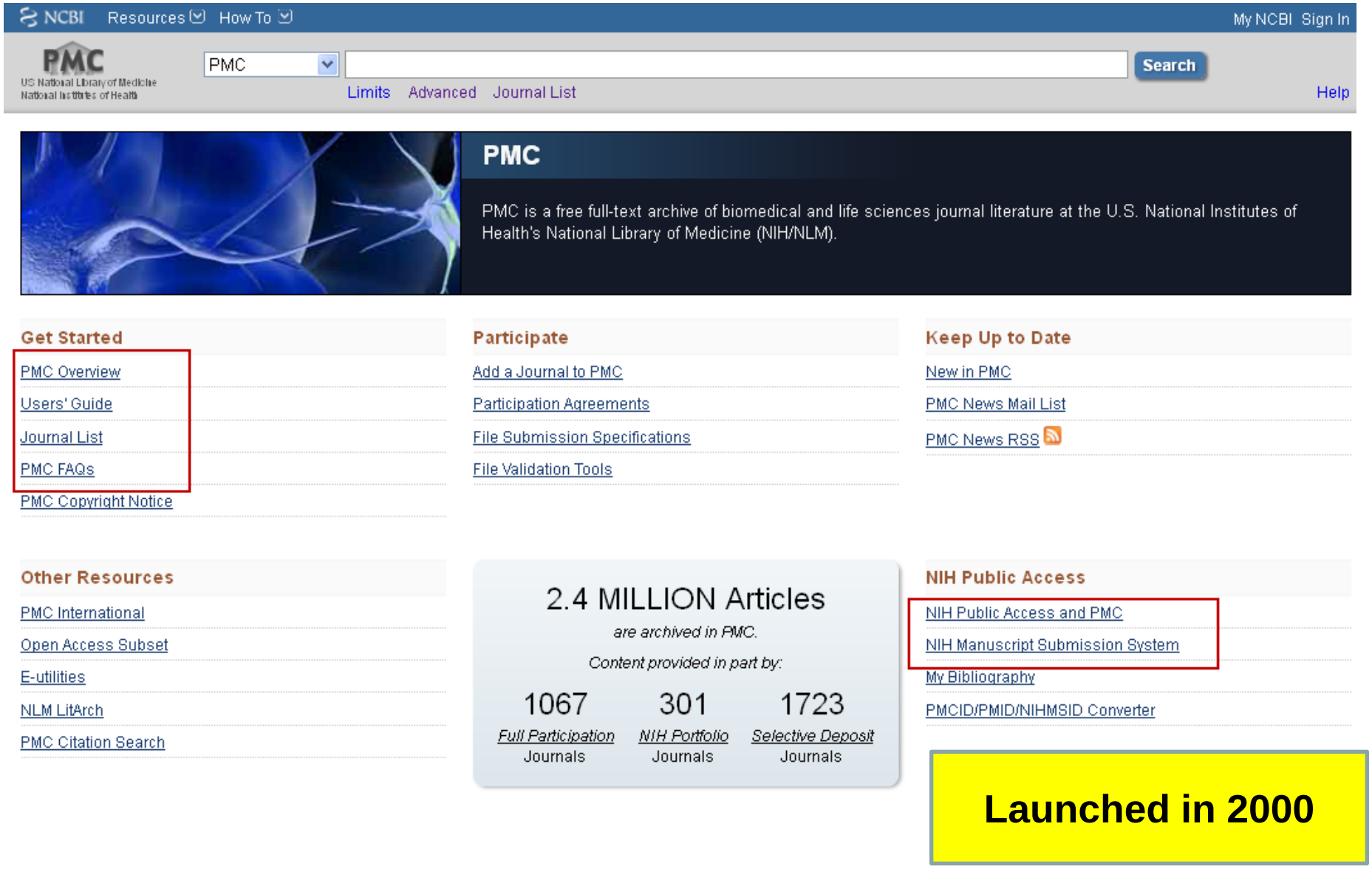


CIHR publications: PubMed, PMC



27th May 2012

US PMC



Launched in 2000

NIH Public Access Policy: 75%

Overview

The NIH Public Access Policy ensures that the public has access to the published results of NIH funded research. It requires scientists to submit final peer-reviewed journal manuscripts that arise from NIH funds to the digital archive PubMed Central *upon acceptance for publication*. To help advance science and improve human health, the Policy requires that these papers are accessible to the public on PubMed Central no later than 12 months after publication.

NIH Public Access Policy Details

The NIH Public Access Policy implements Division G, Title II, Section 218 of PL 110-161 (Consolidated Appropriations Act, 2008). The law states:

The Director of the National Institutes of Health shall require that all investigators funded by the NIH submit or have submitted for them to the National Library of Medicine's PubMed Central an electronic version of their final, peer-reviewed manuscripts upon acceptance for publication, to be made publicly available no later than 12 months after the official date of publication: Provided, *That the NIH shall implement the public access policy in a manner consistent with copyright law.*

Compliance rates NIH: PMC

INTERAGENCY PUBLIC ACCESS COORDINATION

A REPORT TO CONGRESS ON THE COORDINATION OF POLICIES RELATED TO THE DISSEMINATION AND LONG-TERM STEWARDSHIP OF THE RESULTS OF FEDERALLY FUNDED SCIENTIFIC RESEARCH

This policy, and its subsequent fine tuning, has led to a dramatic increase in the number of NIH papers posted to PMC. Since 2008, NIH has been able to collect over 260,000 papers under the Policy. Overall, the compliance rate stands at 75 percent and continues to edge upward. This success is due to the combined efforts of NIH, its investigators and the voluntary support of publishers. Thousands of journals voluntarily submit peer-reviewed author manuscripts to PMC to assist authors in complying with the Public Access process. Several hundred journal publishers voluntarily deposit final published versions of articles in PMC automatically on behalf of their authors. Publishers representing about 1000 journals voluntarily submit the full content of their journals to PMC, regardless of whether the issue contains an article subject to the NIH Public Access Policy.

MARCH 2012

UK PubMed Central

UK PUBMED CENTRAL

Feedback

UKPMC Labs >>

Home | About | RSS Feeds | Journal List | Grant Lookup | FAQ and Guides | UKPMC+

Search

Clear Search
Advanced Search

A unique, free, information resource for biomedical and health researchers

Search 25 million+ abstracts and 2 million+ full text research articles from PubMed and PubMed Central
Discover who is citing who, find related data resources and browse summaries of key terms
Access additional content including biological patents, clinical guidelines, PhD theses and research reports

News from the UKPMC Blog

April deluge (01 May 2012)
Citation Sort Order and Navigation (13 Mar 2012)
Introducing UKPMC Labs (02 Feb 2012)

Recent articles | Popular articles

Calpain 3 is important for muscle regeneration: Evidence from patients with limb girdle muscular dystrophies

Aspirin has little additional anti-platelet effect in healthy volunteers receiving prasugrel

Common variants in 22 loci are associated with QRS duration and cardiac ventricular conduction

Stereocilin-deficient mice reveal the origin of cochlear waveform distortions

Novel Bluetongue Virus Serotype from Kuwait

View all

Try these searches

Drosophila microbiota (Full Text Articles)

Small cell lung cancer

Common cold virus (Theses)

Launched in 2007

UKPMC + User Guide

Help for Grant Owners/Principal Investigators

How do I submit a manuscript to UKPMC?	HTML Version | PDF Version | Flash Version
How do I approve the initial PDF Receipt?	HTML Version | PDF Version
How do I approve the final web version of my manuscript?	HTML Version | PDF Version

Help for Submitters

How do I create a new UKPMC+ account?	HTML Version | PDF Version | Flash Version
How do I submit a manuscript on behalf of someone else?	HTML Version | PDF Version |

Grant linking

How do I attach a grant to my papers?	HTML Version | PDF Version
Grant and research impact reporting using 'My UKPMC'	HTML Version | PDF Version

Publisher Submissions

How does a publisher submit on behalf of authors?	HTML Version

Miscellaneous

Acceptable file formats	HTML Version | PDF Version
Grant prefixes explained	HTML Version | PDF Version
How do I find my username?	HTML Version | PDF Version
How to reset a forgotten password	HTML Version | PDF Version

Frequently Asked Questions

FAQ	HTML Version | PDF Version
Wellcome Trust FAQs	Authors FAQ | Publishers FAQ

Open Access Policies

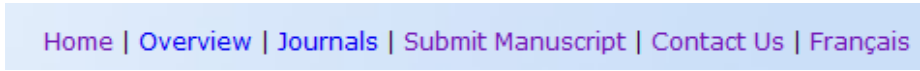
Publisher policies	Sherpa/Romeo
Wellcome Trust-funded OA Policies	Summary of policies

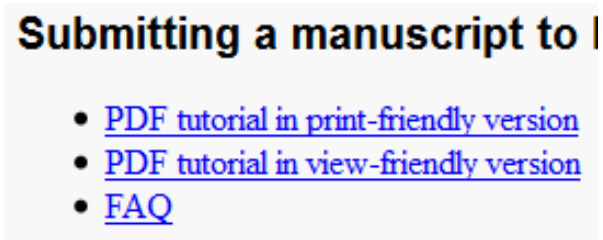
Publicity Material

UKPMC Publicity Brochure	PDF Version

Back to UKPMC+

PMC Canada User Guide





Limiting to articles generated from grant-funding bodies: UK PubMed Central

Grant Lookup Tool

Search All

PI Name Initials Surname

Project Title

Keyword

Institution

Grant ID

Funder(s)

- [x] Action on Hearing Loss
- [x] Arthritis Research UK
- [x] Austrian Science Fund FWF
- [x] Biotechnology and Biological Sciences Research Council
- [x] Breakthrough Breast Cancer
- [x] British Heart Foundation
- [x] Cancer Research UK
- [x] Chief Scientist Office
- [x] The Dunhill Medical Trust
- [x] Marie Curie Cancer Care
- [x] Medical Research Council
- [x] Motor Neurone Disease Association
- [x] Multiple Sclerosis Society
- [x] Myrovlytis Trust
- [x] National Institute for Health Research (Department of Health)
- [x] Parkinson's UK
- [x] Telethon Italy
- [x] Wellcome Trust

Select All | Select None

Submit Query

Clear Query

Notes

Click on the titles below to show/hide the notes.

About Grant Lookup
General
Search All
PI Name - Initials
PI Name - Surname
Project Title
Keyword
Institution
Grant ID
Funder(s)

Grant Lookup Tool - Search Results : Summary

View summary: Grant numbers 1 - 10 : Search - All : "obesity" : Funders - Wellcome Trust

Back to Search

New Search

Output: All

Format: CSV

Export to file UKPMC+_Grants.csv

Email to

Output

Show 10 grants per page (max. 100)

Showing grants 1 to 10 of 50

Page 1 of 5

Next >>

#	Funder	Grant ID	PI Name	Project Title
1	Wellcome Trust	072217	Dr R Andrew	5 alpha- reduced glucocoticoids: novel agonists of the hepatic glucocorticoid receptor in obesity.
2	Wellcome Trust	072598	Ms S Badger	A genetic diagnosis for obesity: Society and moral experiences of the body and responsiblility in childhood.
3	Wellcome Trust	068692	Professor M Ashford	Adipose hormone signalling in hypothalamic neurones and the regulation of obesity.
4	Wellcome Trust	073153	Dr DTT Huynh	Assessment of risk factors for early onset obesity in pre-school children in Ho Chi Minh City, Vietnam
5	Wellcome Trust	073152	Dr Y Cheng	Changing dietary patterns and obesity in school aged children in Xi'an city, Shaanxi province, China
6	Wellcome Trust	081713	Dr L Heisler	Delineation of discrete brain circuitry regulating obesity and type 2 diabetes in mice.
7	Wellcome Trust	065287	Prof D Withers	Determination of the role of insulin receptor substrate proteins in leptin and insulin-sensitive hypothalamic neurones and their relation to feeding and obesity.
8	Wellcome Trust	065287	Professor M Ashford	Determination of the role of insulin receptor substrate proteins in leptin andinsulin-sensitive hypothalmic neurones and their relation to feeding and obesity,
9	Wellcome Trust	081627	Prof SR Bloom	Development of novel analogues of the satiety hormone pancreatic polypeptide (Y4 receptor agonist) as an anti obesity agent.
10	Wellcome Trust	071397	Dr NM Morton	Dietary (lipid) regulation of the gluchcorticoid metabolising enzyme 11beta-hydroxysteroid dehydrogeanse type 1 and its implications for obesity and metabolic disease.

Differences at Article Level: PMC Canada (PMCC), PMC & UK PMC

Reprod Biol Endocrinol. 2009; 7: 146.
Published online 2009 December 9. doi: 10.1186/1477-7827-7-146

PMCID: PMC2797513

Transforming growth factor-beta inhibits aromatase gene transcription in human trophoblast cells via the Smad2 signaling pathway

Hong Zhou,[1,2] Guodong Fu,[1] Hui Yu,[1] and Chun Peng[✉1]

[1]Department of Biology, York University, Toronto, Ontario, M3J 1P3, Canada
[2]School of Life Science and Technology, University of Electronic Science and Technology of China, Chengdu, PR China
✉Corresponding author.
Hong Zhou: zhouhongzh@uestc.edu.cn; Guodong Fu: guodong@yorku.ca; Hui Yu: lifengyuhui@hotmail.com; Chun Peng: cpeng@yorku.ca

Received October 26, 2009; Accepted December 9, 2009.

Abstract

Background

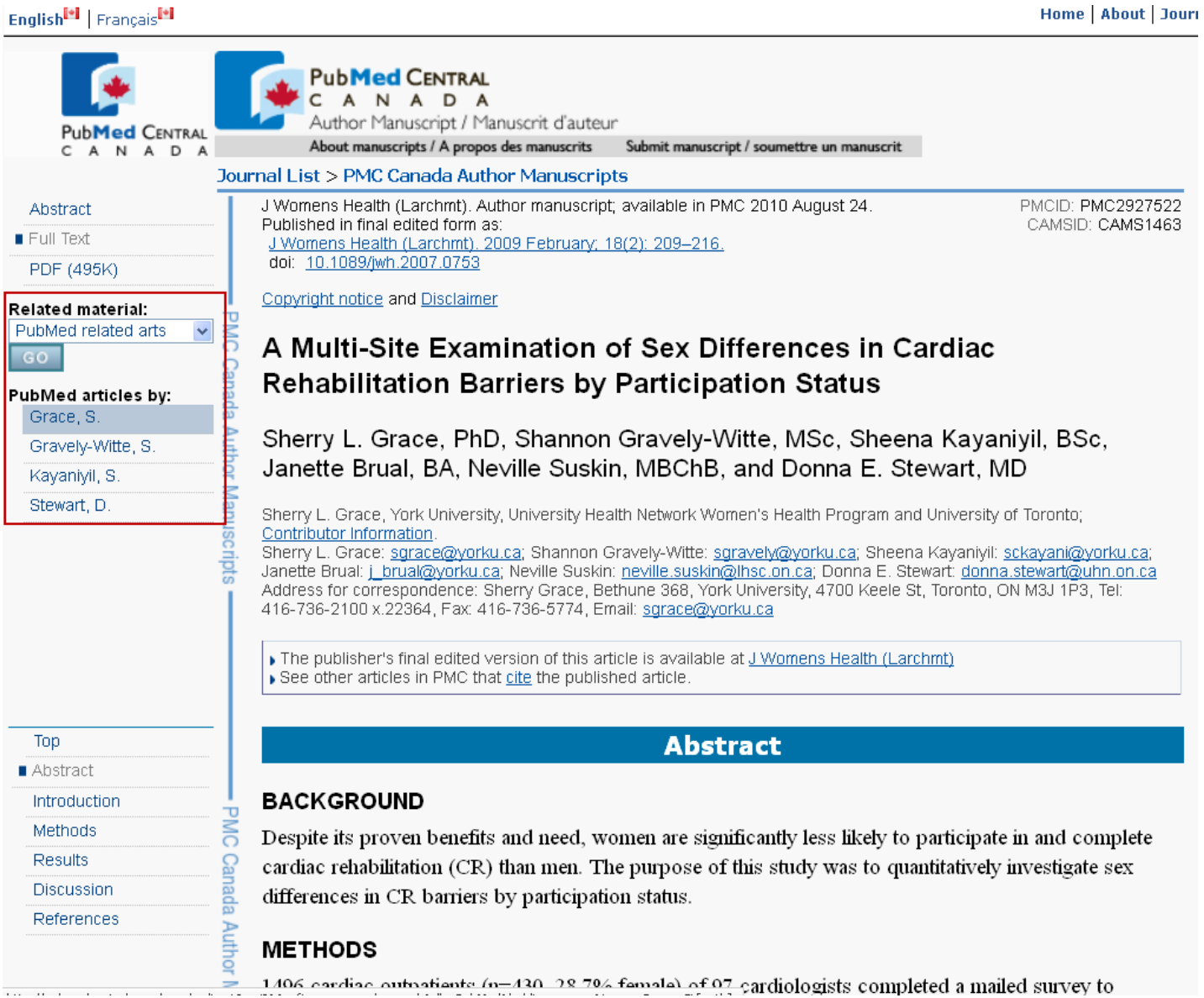
Transforming growth factor-beta (TGF-beta) is known to exert multiple regulatory functions in the human placenta, including inhibition of estrodial production. We have previously reported that TGF-beta1 decreased aromatase mRNA levels in human trophoblast cells. The objective of this study was to investigate the molecular mechanisms underlying the regulatory effect of TGF-beta1 on aromatase expression.

Methods

To determine if TGF-beta regulates aromatase gene transcription, several reporter constructs containing different lengths of the placental specific promoter of the human aromatase gene were generated. JEG-3 cells were transiently transfected with a promoter construct and treated with or without TGF-beta1. The promoter activity was measured by luciferase assays. To examine the downstream signaling molecule

Some concerns with PMC Canada

P
M
C
C



English | Français

Home | About | Jour

PubMed Central CANADA

PubMed Central CANADA
Author Manuscript / Manuscrit d'auteur

About manuscripts / A propos des manuscrits Submit manuscript / soumettre un manuscrit

Journal List > PMC Canada Author Manuscripts

Abstract
Full Text
PDF (495K)

Related material:
PubMed related arts
GO

PubMed articles by:
Grace, S.
Gravely-Witte, S.
Kayaniyil, S.
Stewart, D.

PMC Canada Author Manuscripts

J Womens Health (Larchmt). Author manuscript; available in PMC 2010 August 24.
Published in final edited form as:
J Womens Health (Larchmt). 2009 February; 18(2): 209–216.
doi: 10.1089/jwh.2007.0753

PMCID: PMC2927522
CAMSID: CAMS1463

Copyright notice and Disclaimer

A Multi-Site Examination of Sex Differences in Cardiac Rehabilitation Barriers by Participation Status

Sherry L. Grace, PhD, Shannon Gravely-Witte, MSc, Sheena Kayaniyil, BSc, Janette Brual, BA, Neville Suskin, MBChB, and Donna E. Stewart, MD

Sherry L. Grace, York University, University Health Network Women's Health Program and University of Toronto; Contributor Information.
Sherry L. Grace: sgrace@yorku.ca; Shannon Gravely-Witte: sgravely@yorku.ca; Sheena Kayaniyil: sckayani@yorku.ca; Janette Brual: j_brual@yorku.ca; Neville Suskin: neville.suskin@lhsc.on.ca; Donna E. Stewart: donna.stewart@uhn.on.ca
Address for correspondence: Sherry Grace, Bethune 368, York University, 4700 Keele St, Toronto, ON M3J 1P3, Tel: 416-736-2100 x.22364, Fax: 416-736-5774, Email: sgrace@yorku.ca

The publisher's final edited version of this article is available at J Womens Health (Larchmt)
See other articles in PMC that cite the published article.

Top
Abstract
Introduction
Methods
Results
Discussion
References

Abstract

BACKGROUND

Despite its proven benefits and need, women are significantly less likely to participate in and complete cardiac rehabilitation (CR) than men. The purpose of this study was to quantitatively investigate sex differences in CR barriers by participation status.

METHODS

1496 cardiac outpatients (n=430, 28.7% female) of 97 cardiologists completed a mailed survey to

National Research Council Canada | Conseil national de recherches Canada

Canada

Error 404
Not Found

The page requested could not be found at this location.

Web sites belonging to the National Research Council are constantly being updated. If you cannot find the page you are looking for, may we recommend that you

- Go to the Home page
- Or use your browser's "Back" button to return to the Referring page

---

Date modified: 2005-07-05

Important Notices

http://pubmedcentralcanada.ca/redirect3.cgi?&&reftype=authsrch&refto=entrez&reffrom=sidebar&article-id=1698273&issue-id=73785&journal-id=1025&
FROM=Article|Navigation&TO=Entrez|PubMed|Author%20Search&rendering-type=normal&&
http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=search&db=PubMed&holding=capmc&term=%20Grace%2BSL[auth]

P

M

Display Settings: Abstract

Send to:

Reprod Biol Endocrinol. 2009 Dec 9;7:146.

Transforming growth factor-beta inhibits aromatase gene transcription in human trophoblast cells via the Smad2 signaling pathway.

Zhou H, Fu G, Yu H, Peng C.

Department of Biology, York University, Toronto, Ontario M3J1P3, Canada. zhouhongzh@uestc.edu.cn

Abstract

BACKGROUND: Transforming growth factor-beta (TGF-beta) is known to exert multiple regulatory functions in the human placenta, including inhibition of estrodial production. We have previously reported that TGF-beta1 decreased aromatase mRNA levels in human trophoblast cells. The objective of this study was to investigate the molecular mechanisms underlying the regulatory effect of TGF-beta1 on aromatase expression.

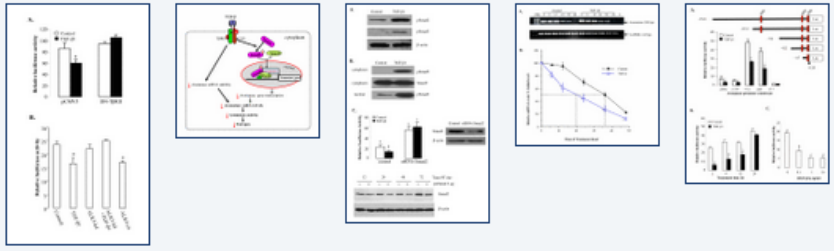
METHODS: To determine if TGF-beta regulates aromatase gene transcription, several reporter constructs containing different lengths of the placental specific promoter of the human aromatase gene were generated. JEG-3 cells were transiently transfected with a promoter construct and treated with or without TGF-beta1. The promoter activity was measured by luciferase assays. To examine the downstream signaling molecule mediating the effect of TGF-beta on aromatase transcription, cells were transiently transfected with dominant negative mutants of TGF-beta type II (TbetaRII) and type I receptor (ALK5) receptors before TGF-beta treatment. Smad2 activation was assessed by measuring phophorylated Smad2 protein levels in cytosolic and nuclear fractions. Smad2 expression was silenced using a siRNA expression construct. Finally, aromatase mRNA half-life was determined by treating cells with actinomycin D together with TGF-beta1 and measuring aromatase mRNA levels at various time points after treatment.

RESULTS AND DISCUSSION: TGF-beta1 inhibited the aromatase promoter activity in a time- and dose-dependent manner. Deletion analysis suggests that the TGF-beta1 response element resides between -422 and -117 nucleotides upstream from the transcription start site where a Smad binding element was found. The inhibitory effect of TGF-beta1 was blocked by dominant negative mutants of TbetaRII and ALK5. TGF-beta1 treatment induced Smad2 phosphorylation and translocation into the nucleus. On the other hand, knockdown of Smad2 expression reversed the inhibitory effect of TGF-beta1 on aroamtase transcription. Furthermore, TGF-beta1 accelerated the degradation of aromatase mRNA.

CONCLUSION: Our results demonstrate that TGF-beta1 exerts regulatory effects on aromatase gene at both transcriptional and post-transcriptional levels. The transcriptional regulation of aromatase gene by TGF-beta1 is mediated by the canonical TGF-beta pathway involving TbetaRII, ALK5 and Smad2. These findings further support the role of TGF-beta1 in regulating human placental functions and pregnancy.

PMID: 20003198 [PubMed - indexed for MEDLINE] PMCID: PMC2797513 Free PMC Article

Images from this publication. See all images (5) Free text



Publication Types, MeSH Terms, Substances, Grant Support

LinkOut - more resources

Save items

Favorite

Related citations in PubMed

The transforming growth factor-beta/SMAD signaling pathway is present [Kidney Int. 1999]

Smads in human trophoblast cells: expression, regulati [Mol Cell Endocrinol. 2001]

The role of internalization in transforming growth factor beta1-induce [J Biol Chem. 2005]

Review The transforming growth factor beta 1/SMAD signaling pathway invol [Tumori. 2010]

Review Transforming growth factor-β signaling in motor neuron [Curr Mol Med. 2011]

See reviews...

See all...

Related information

Related Citations

References for this PMC Article

Substance (MeSH Keyword)

Free in PMC

Recent activity

Turn Off Clear

Transforming growth factor-beta inhibits aromatase gene transcription in hun PubMed

Out of place: mediating health and social care in Ontario's long-term care sect PubMed

(York University[Affiliation]) AND (Canadian Institutes of Health... (170) PubMed

("york university"[Affiliation]) NOT ("new york"[Affiliation] OR ... (615) PMC

See more...

PMC

Reprod Biol Endocrinol. 2009; 7: 146. PMCID: PMC2797513

Published online 2009 December 9. doi: 10.1186/1477-7827-7-146

Transforming growth factor-beta inhibits aromatase gene transcription in human trophoblast cells via the Smad2 signaling pathway

Hong Zhou,[1,2] Guodong Fu,[1] Hui Yu,[1] and Chun Peng[1]

Author information ▶ Article notes ▶ Copyright and License information ▶

Abstract

Go to:

Background

Transforming growth factor-beta (TGF-beta) is known to exert multiple regulatory functions in the human placenta, including inhibition of estrodial production. We have previously reported that TGF-beta1 decreased aromatase mRNA levels in human trophoblast cells. The objective of this study was to investigate the molecular mechanisms underlying the regulatory effect of TGF-beta1 on aromatase expression.

Methods

To determine if TGF-beta regulates aromatase gene transcription, several reporter constructs containing different lengths of the placental specific promoter of the human aromatase gene were generated. JEG-3 cells were transiently transfected with a promoter construct and treated with or without TGF-beta1. The promoter activity was measured by luciferase assays. To examine the downstream signaling molecule mediating the effect of TGF-beta on aromatase transcription, cells were transiently transfected with dominant negative mutants of TGF-beta type II (TbetaRII) and

Formats:

Abstract | Full Text | PDF (571K)

Related citations in PubMed

The transforming growth factor-beta/SMAD signaling pathway is present and functional in humar [Kidney Int. 1999]

Smads in human trophoblast cells: expression, regulation and role in TGF-beta-induced tran [Mol Cell Endocrinol. 2001]

The role of internalization in transforming growth factor beta1-induced Smad2 association with S [J Biol Chem. 2005]

The transforming growth factor beta 1/SMAD signaling pathway involved in human chronic myeloid le [Tumori. 2010]

Transforming growth factor-β signaling in motor neuron diseases. [Curr Mol Med. 2011]

See reviews...

See all...

Links

PubMed

Substance PubChem

Recent activity

Turn Off Clear

Transforming growth factor-beta inhibits aromatase gene transcription in human t... PMC

transforming growth factor beta inhibits aromatase (123) PMC

Protocol for an economic evaluation alongside the University Health Network Whip... PMC

UKPMC

Transforming growth factor-beta inhibits aromatase gene transcription in human trophoblast cells via the Smad2 signaling pathway.

(PMID:20003198)

Zhou H, Fu G, Yu H, Peng C

Department of Biology, York University, Toronto, Ontario M3J1P3, Canada.
zhouhongzh@uestc.edu.cn

Reproductive Biology and Endocrinology : RB&E [2009, 7:146]

Type: Journal Article, Research Support, Non-U.S. Gov't, In Vitro

DOI: 10.1186/1477-7827-7-146

Back to results

Formats

Abstract

Full Text

PDF

Export citation (RIS)

Email citation

Search by Subject

Aromatase
Blotting, Western
Cells, Cultured
Gene Expression Regulation, Enzymologic
Humans
Luciferases
Reverse Transcriptase Polymerase Chain Reaction
RNA, Messenger
Signal Transduction
Smad2 Protein
Transfection
Transforming Growth Factor beta1
Trophoblasts

Abstract

Highlight Terms

☐ Gene Ontology(6) ☑ Genes/Proteins(5) ☐ Species(1) ☐ Chemicals(2)

BACKGROUND: Transforming growth factor-beta (TGF-beta) is known to exert multiple regulatory functions in the human placenta, including inhibition of estrodial production. We have previously reported that TGF-beta1 decreased aromatase mRNA levels in human trophoblast cells. The objective of this study was to investigate the molecular mechanisms underlying the regulatory effect of TGF-beta1 on aromatase expression.

METHODS: To determine if TGF-beta regulates aromatase gene transcription, several reporter constructs containing different lengths of the placental specific promoter of the human aromatase gene were generated. JEG-3 cells were transiently transfected with a promoter construct and treated with or without TGF-beta1. The promoter activity was measured by luciferase assays. To examine the downstream signaling molecule mediating the effect of TGF-beta on aromatase transcription, cells were transiently transfected with dominant negative mutants of TGF-beta type II (TbetaRII) and type I receptor (ALK5) receptors before TGF-beta treatment. Smad2 activation was assessed by measuring phophorylated Smad2 protein levels in cytosolic and nuclear fractions. Smad2 expression was silenced using a siRNA expression construct. Finally, aromatase mRNA half-life was determined by treating cells with actinomycin D together with TGF-beta1 and measuring aromatase mRNA levels at various time points after treatment.

RESULTS AND DISCUSSION: TGF-beta1 inhibited the aromatase promoter activity in a time- and dose-dependent manner. Deletion analysis suggests that the TGF-beta1 response element resides between -422 and -117 nucleotides upstream from the transcription start site where a Smad binding element was found. The inhibitory effect of TGF-beta1 was blocked by dominant negative mutants of TbetaRII and ALK5. TGF-beta1 treatment induced Smad2 phosphorylation and translocation into the nucleus. On the other hand, knockdown of Smad2 expression reversed the inhibitory effect of TGF-beta1 on aroamtase transcription. Furthermore, TGF-beta1 accelerated the degradation of aromatase mRNA.

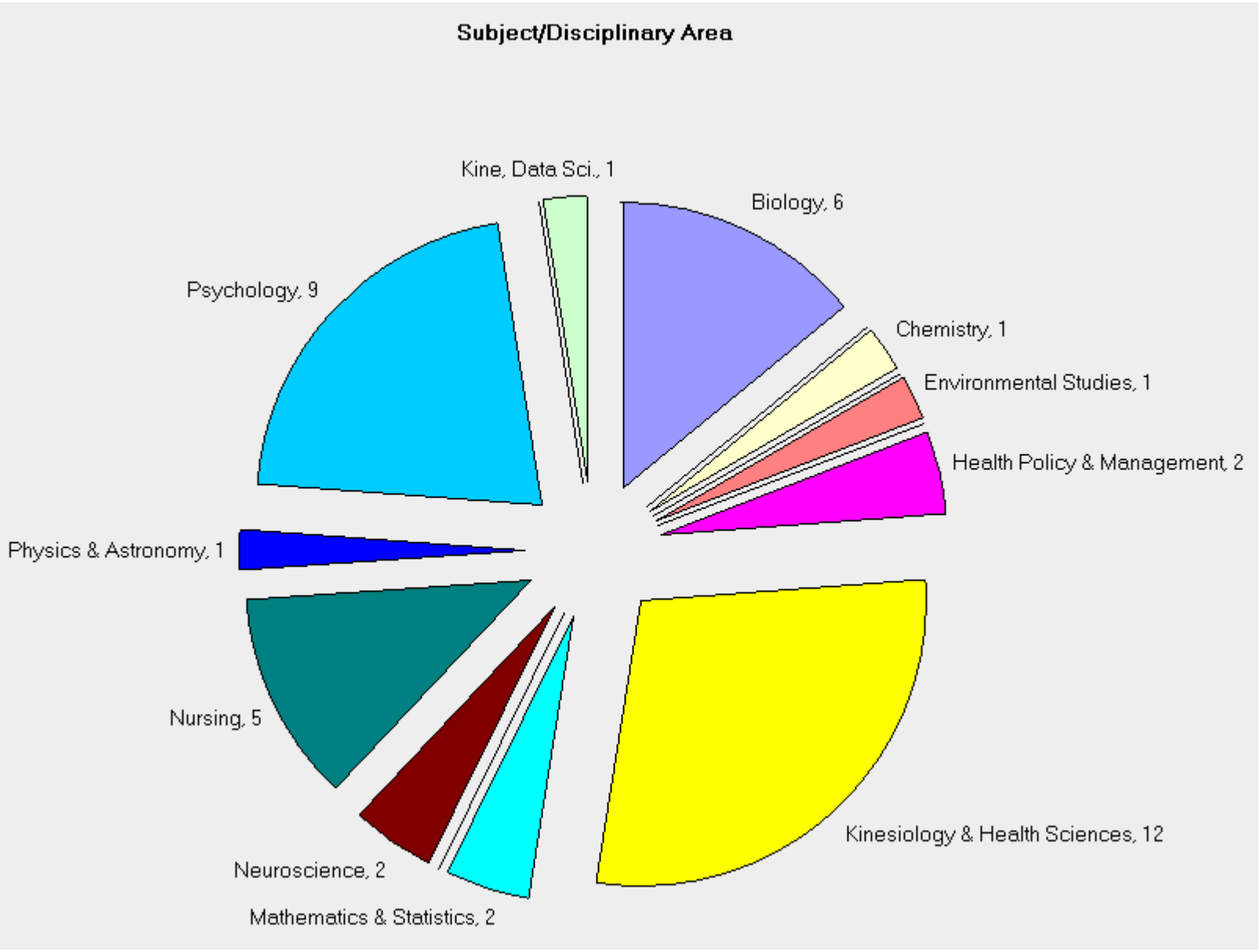
CONCLUSION: Our results demonstrate that TGF-beta1 exerts regulatory effects on aromatase gene at both transcriptional and post-transcriptional levels. The transcriptional regulation of aromatase gene by TGF-beta1 is mediated by the canonical TGF-beta pathway involving TbetaRII, ALK5 and Smad2. These findings further support the role of TGF-beta1 in regulating human placental functions and pregnancy.

Funding

Canadian Institutes of Health Research [MOP-53174, MOP-81370]

Faculty Survey: PMC Canada

- Survey done April 2012
- Number of faculty who completed the survey: 42
- Completed by faculty who had CIHR grants post 2008 and also those without CIHR funding
  - 21% of them had received CIHR funding
- Faculty from 10 Departments/Schools


Subject/Disciplinary Area
Kine, Data Sci., 1
Biology, 6
Psychology, 9
Chemistry, 1
Environmental Studies, 1
Health Policy & Management, 2
Physics & Astronomy, 1
Nursing, 5
Kinesiology & Health Sciences, 12
Neuroscience, 2
Mathematics & Statistics, 2

Survey Questions

PMC Canada

1. PubMed Central Canada & Faculty Perspectives

I am conducting this survey to gauge faculty perceptions of PubMed Central Canada and how it can be of assistan the research community.
Since your article(s) are deposited in PubMed Central Canada (PMC Canada) or you have received Canadian Instit Health Research (CIHR) funding and/or have published in an Open Access journal, I will appreciate if you can kind devote 7-8 minutes of your time and complete this survey. No personal information is being collected. This project been reviewed and approved by the Human Participants Review Committee at York University. Please let me know require additional information. Thank you very much for your time.
Rajiv Nariani
Science Librarian
York University Libraries
(rajivn@yorku.ca - ext. 20396)

1. Subject/Disciplinary Area

- Biology
- Business
- Chemistry
- Computer Science & Engineering
- Earth & Space Science & Engineering
- Environmental Studies
- Faculty of Liberal Arts & Professional Studies
- Fine Arts
- Geography
- Health Policy & Management
- Kinesiology & Health Sciences
- Mathematics & Statistics
- Natural Science
- Neuroscience
- Nursing
- Physics & Astronomy
- Psychology
- Science & Technology Studies
- Other (please specify)

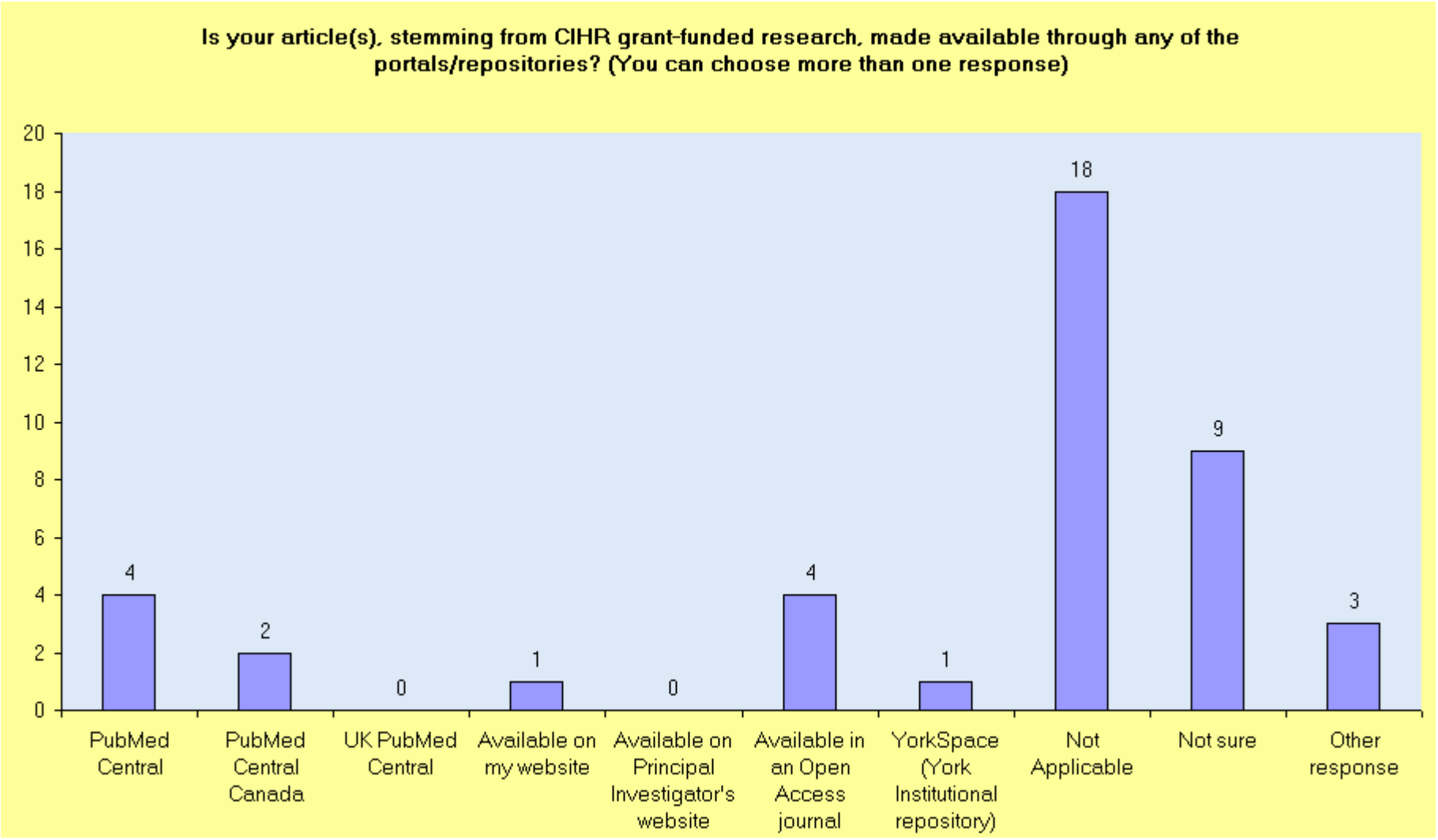
PMC Canada

***1. Features that are particularly important while browsing/searching content in PubMed Central Canada (http://pubmedcentralcanada.ca/)**

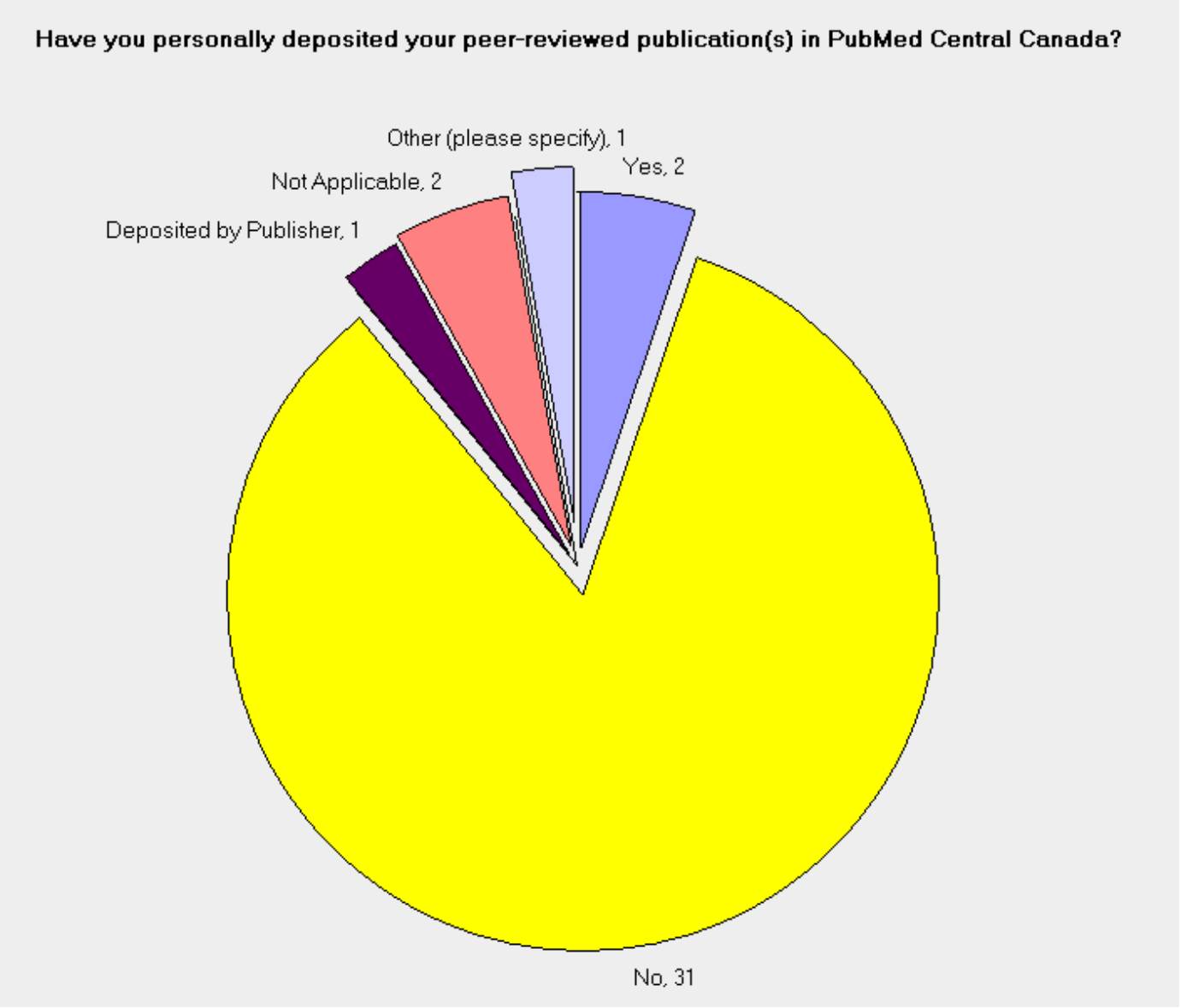
	Very Important	Important	Not Important
Ease of depositing articles in PMC Canada			
PMC Canada User Guide			
Clarity about journal deposit policies			
Ability to locate similar articles			
Ability limit to articles receiving research grants (including NSERC, SSHRC)			
Ability to search genetic/biological information related to the article			
Ability to create e-mail alerts			
Ability to search Patents			
Ability to export citation to a reference management program			
Ability to search Author manuscripts			
Initiate new searches or refine existing searches on a selected facet			
Restrict results to systematic reviews or guidelines			
List of Open Access journals			
List of Open Access journals for a specific field			
Number of downloads for each article			
'Times cited' for each article			
RSS feeds			
Ability to post to social networking tools (Twitter, Facebook etc)			

Any other criteria (if any)

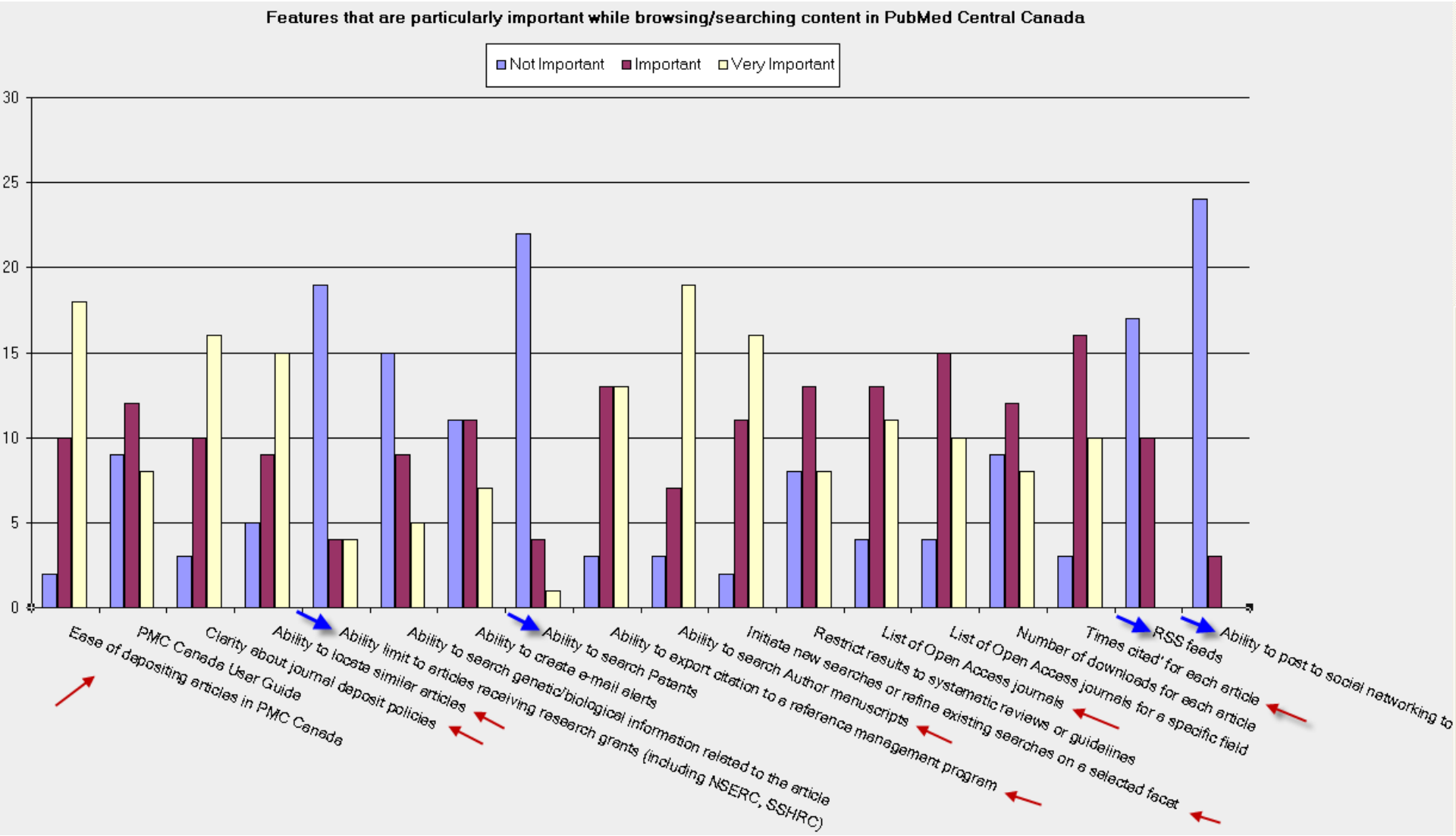
Where is your article available?



Who deposited your article?



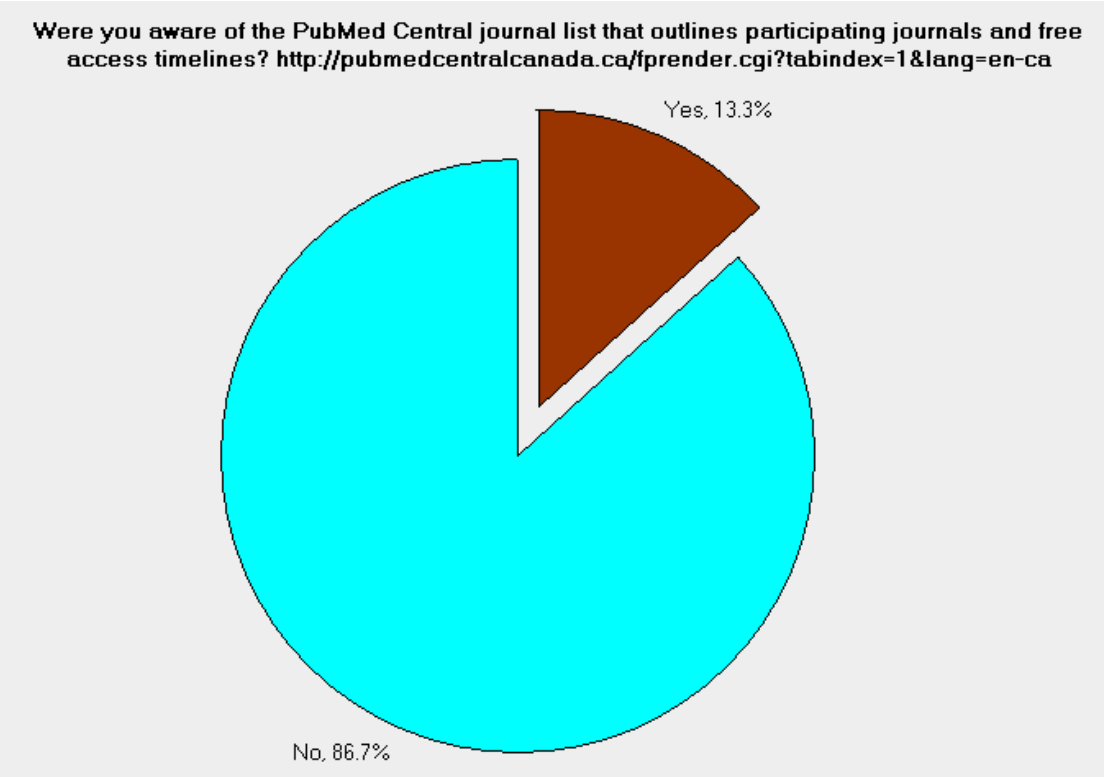
PMCC Features: Important /Not Important

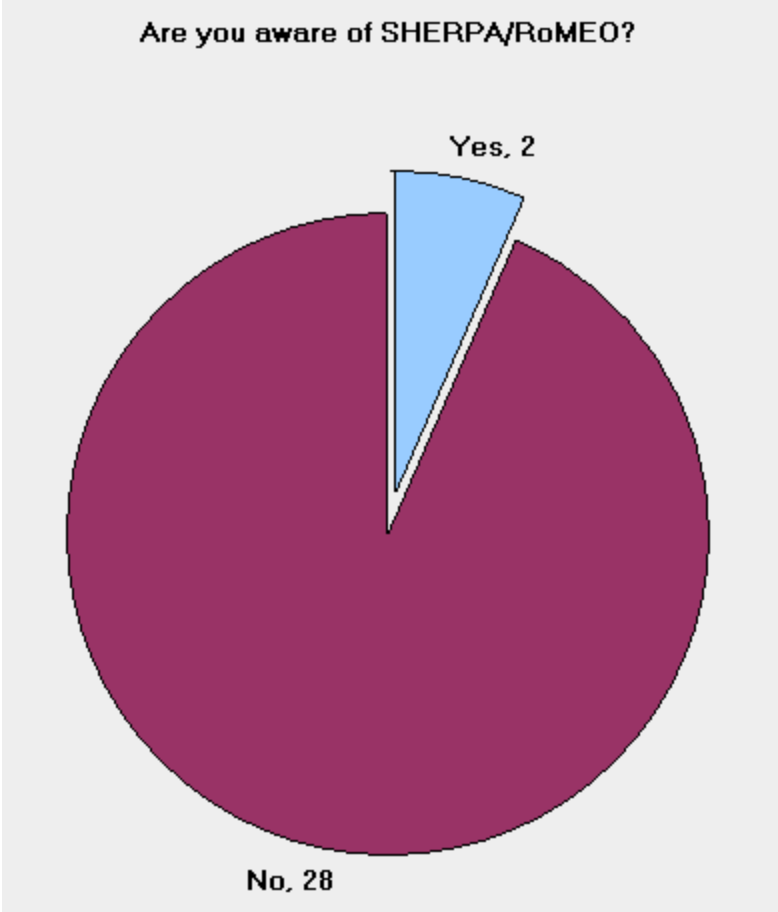


Feature	**PMC Canada**	**UK PubMed Central**	**York Faculty Responses Important/V.Imp**
Export to citation management program	thru' publishers' platform	RIS format for every article	Very Imp./Imp. 89%
Ease of depositing articles	Yes – make guide/tutorial more visible	User guide on depositing articles – open to all	Very Imp./Imp. 93%
Links to patent databases	No	Yes	***Not Imp***. 81.5%
Faceted searching - *Ability to locate similar articles*	No	Yes	Very Imp/Imp 93%
Clarity about journal deposit policies & policy on OA	Make it more upfront	Yes – one of the tabs	Very Imp. 90%
User Guide	Webinar on PMCC- Guide make it more visible	PDF Guide – detailed with screenshots	V.Imp./Imp. 69%

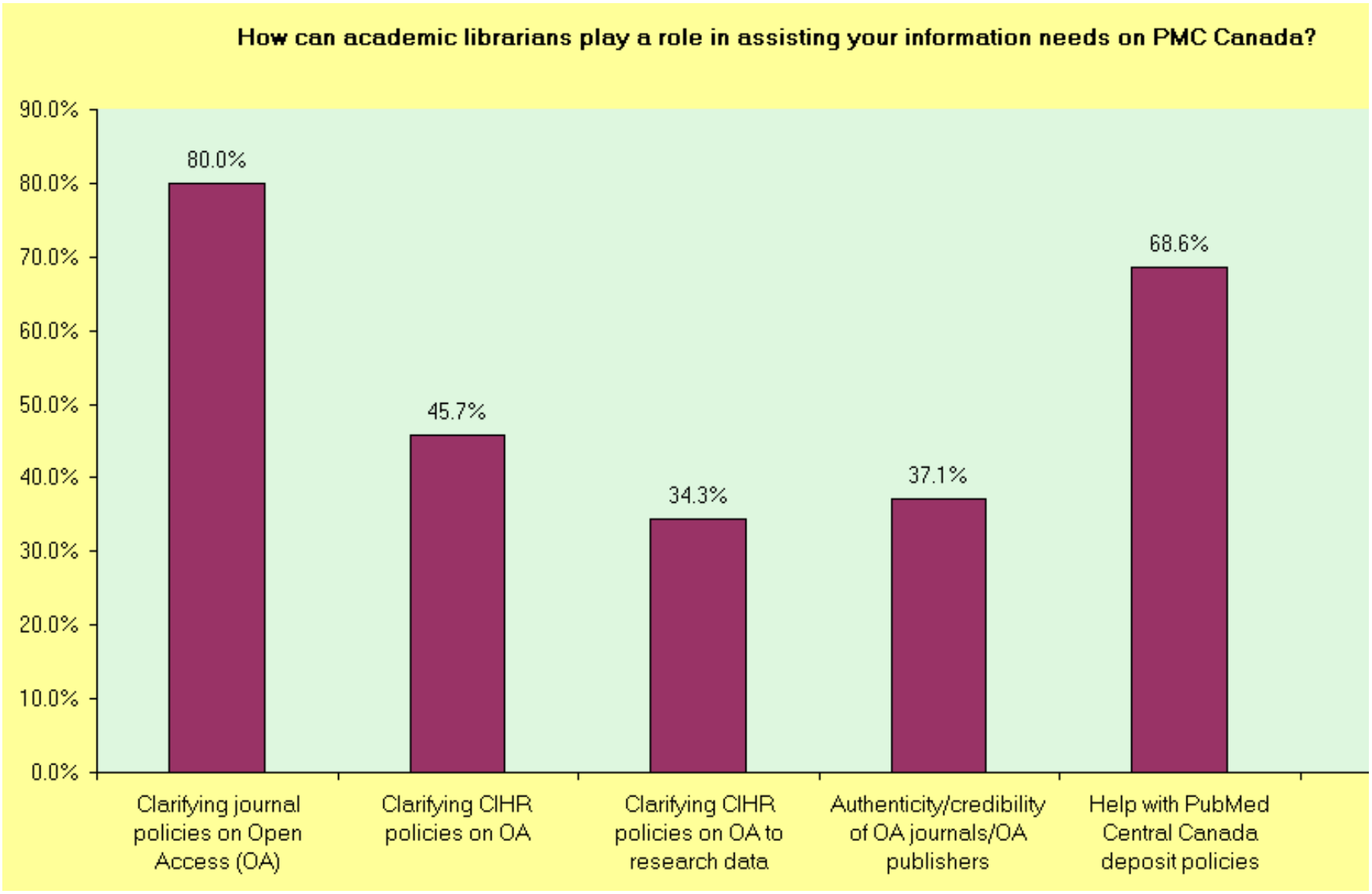
Feature	**PMC Canada**	**UK PubMed Central**	**York Faculty Responses Important/V.Imp**
Times cited	No – some publishers provide data	Yes	V.Imp./Imp. 89.5%
No. of downloads	No	No	Vimp/Imp. 68%
Limit to Syst. Reviews	No	Yes, meta-analysis, RCTs, Clin. Trials	V.Imp./Imp. 72%
Searching for author manuscript	Limits from PMC	Easier	Very Imp./Imp. 90%
Ability to limit to NSERC, SSHRC papers	No	Other funders – through Grant Lookup tool	***Not Imp.*** 70.4%
search genetic information related to the article	No	Yes	50 (Yes) - 50 (No)

OA Journals and publisher deposit policies

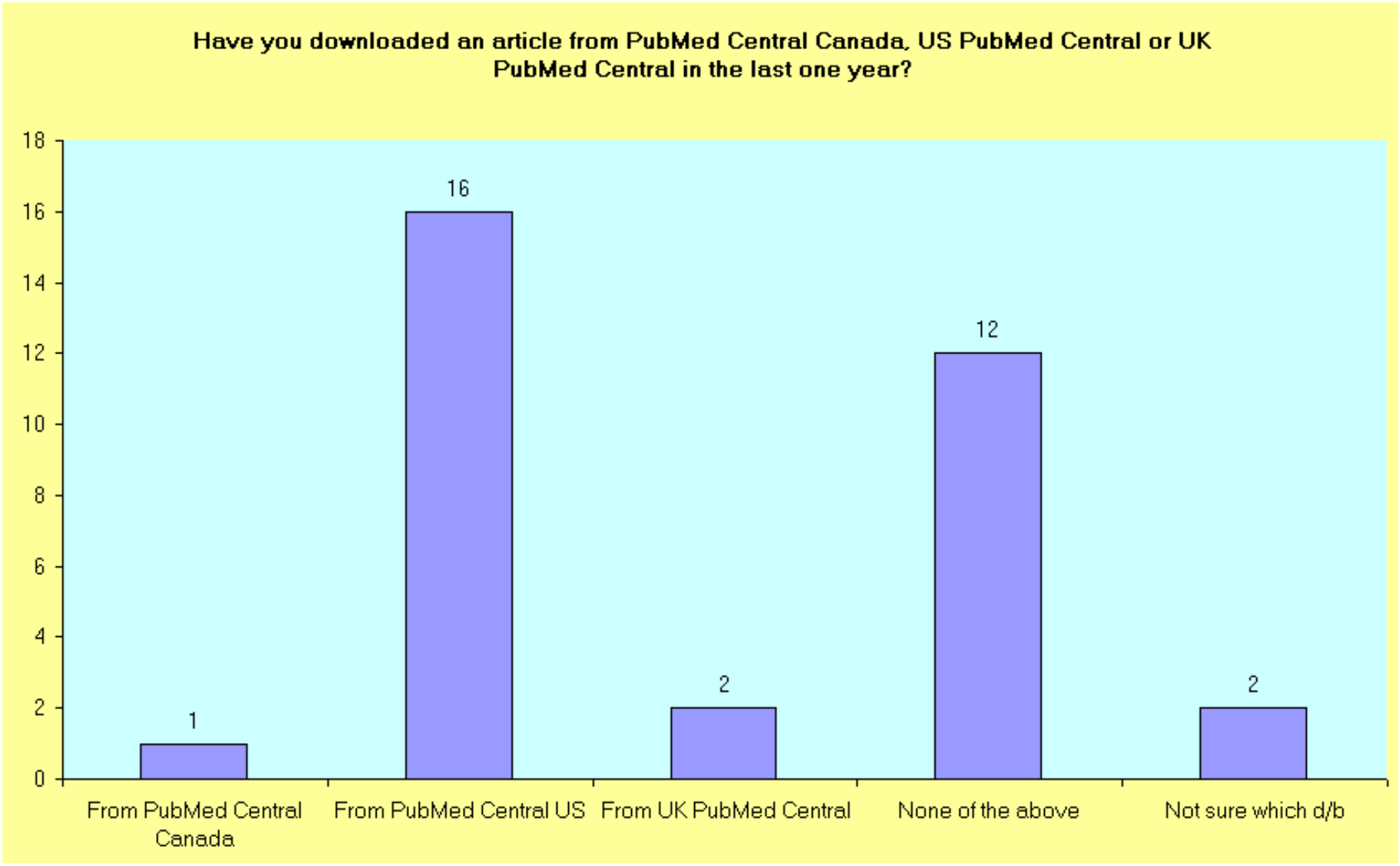




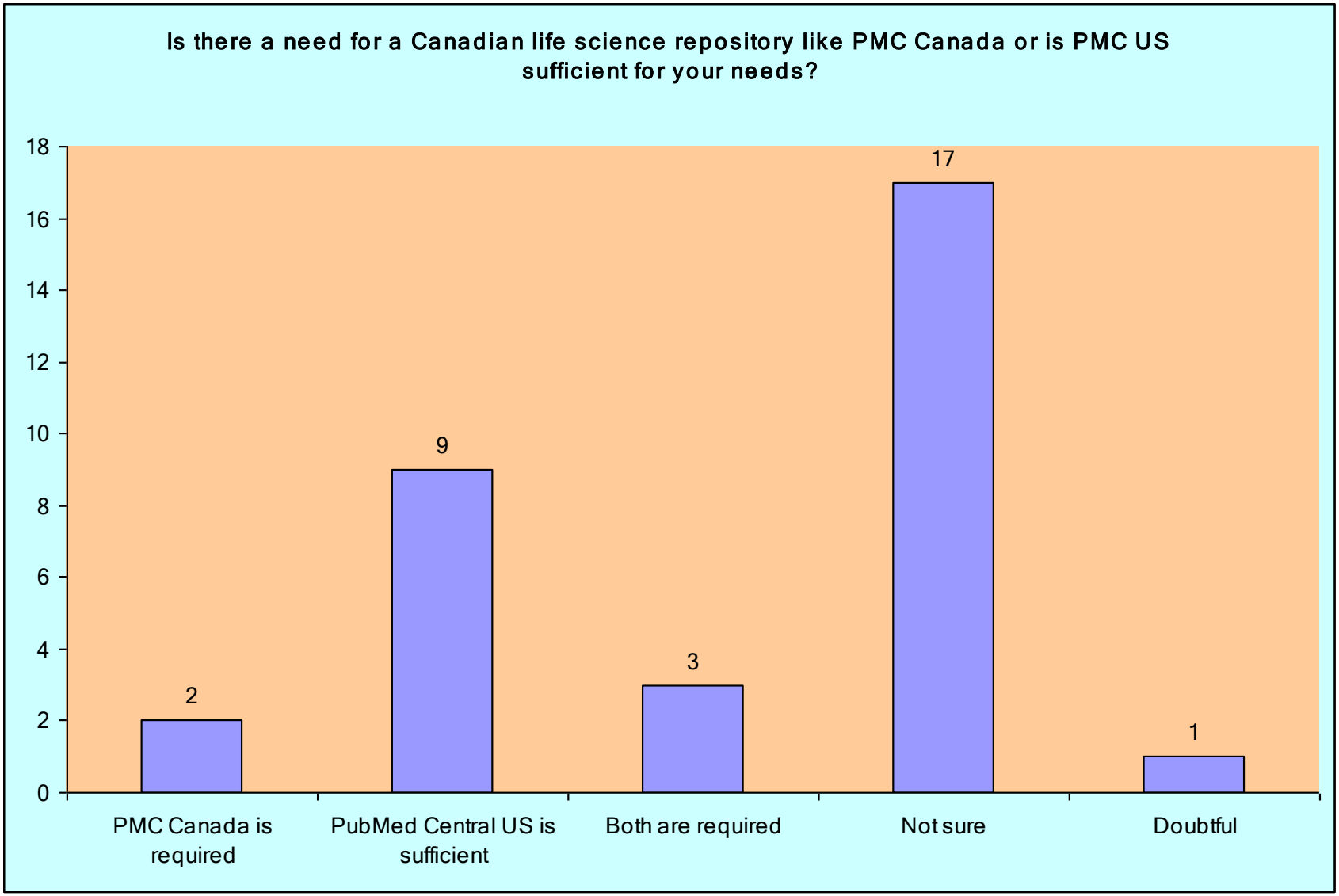
Academic Librarians: PMC Canada



PMC Canada: Last used



Do we need PMC Canada?



What do the results tell us?

- Bare basics of an archival life sciences repository then value difficulty to prove
  - Not sure why we need another repository
- Librarians & Research Officers will need to explain the value of this repository
  - Scholarly communication & promotion activities
- Extend study to other universities
  - Those receiving major CIHR funding

PMC Canada: Road Ahead

- Improve user-friendliness of site
- Develop tools for researchers e.g. export citations, fund agencies limiters
- Expand PMC Canada content to non-CIHR funded health researchers?
- Increase publisher bulk deposits
- Evaluation and Impact Analysis: Citations? Collaborations? Downloads

References

- UK PMC: a full text article resource for life sciences
- UK PubMed Central (UK PMC)
- UK PubMed Central: becoming the information resource of choice for the UK's life sciences research community
- Enabling Exploratory Search in UK PMC

Thank you & Questions!