

## CURRICULUM VITAE – HOWARD LAWRENCE MCLEOD

**Date: February 26, 2023**

### **Personal Information:**

Sex: Male

Date of Birth: August 1, 1965

Place of Birth: Tacoma, Washington, USA

**Citizenship: USA**

### **Office Address:**

600 Medical Center Drive, St George, UT 84770, USA

Tel: 1-919-259-9397

Email: hmcleod1965@gmail.com

### **Current Positions:**

Executive Clinical Director – Precision Health, Intermountain Healthcare, St George, USA.

January, 2022 – present.

Medical Advisor, Precision Medicine, Geriatric Oncology Consortium, Tampa, USA. January, 2022-present.

Adjunct Professor, Central South University, Changsha, China. February, 2012-present.

### **Commercial activities**

Co-Founder, PGx Accelerator, September, 2021 - present

Board of Directors, Vyant Bio NASDAQ: VYNT September, 2014-present

Co-Founder, Clarified Precision Medicine, January, 2020-present

Pharmazam, Scientific/Medical advisor, March, 2019-August, 2020. Chief Medical Officer (part-time, equity only) September, 2020-April, 2021

Co-Founder, Ortelion, February, 2011-October, 2014. Exit through acquisition

Co-Founder, Interpares Biomedicine, October, 2017-August, 2021. Exit through acquisition

### **Education:**

1988            B.S.            University of Washington School of Pharmacy

1990            Pharm.D.      Philadelphia College of Pharmacy and Science

### **Post-Doctoral Training**

July 1990 – December 1992 Clinical Research Fellow (Mentor: Prof William E Evans), St Jude Children's Research Hospital, Memphis, TN, USA.

January-December 1993    Research Fellow (Mentor: Prof Paul Workman), CRC Dept. of Medical Oncology, Cancer Research Campaign Beatson Laboratories, University of Glasgow, Glasgow, UK.

March/April, 2020            Prescription Drug Regulation, Cost, and Access: Current Controversies in Context. 1962USRx Harvard University, Boston, USA.

### **National Provider Identifier**

NPI 1356953152

**Previous Positions:**

Head, Pharmacology Section, CRC Department of Medical Oncology, Beatson Laboratories, University of Glasgow, Glasgow, UK. January, 1994-May, 1995.

Senior Lecturer, Department of Medicine & Therapeutics, University of Aberdeen and Director of Laboratory Research, Aberdeen Oncology Unit, Aberdeen, UK. May, 1995 to June, 2000. Tenure obtained 1 November, 1998.

Associate Professor, Departments of Medicine, Pharmacology & Molecular Biology, and Genetics, Washington University, St Louis, USA. July, 2000 to July, 2005. (Tenured)

Professor, Departments of Medicine, Pharmacology & Molecular Biology, and Genetics, Washington University, St Louis, USA. July, 2005 to July, 2006. (Tenured)

Director, Pharmacology Core, Alvin Siteman Cancer Center, St Louis, USA. July, 2000-July, 2006

Fred Eshelman Distinguished Professor, Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, Chapel Hill, USA. July, 2006-September, 2013. (Tenured)

Professor, School of Medicine (Departments of Medicine and Pharmacology), University of North Carolina, Chapel Hill, Chapel Hill, USA. July, 2006-September, 2013. (Tenured)

Director, UNC Institute for Pharmacogenomics and Individualized Therapy, Schools of Medicine, Pharmacy, Public Health, Nursing, and Dentistry. Chapel Hill, USA. July, 2006-September, 2013.

Adjunct Professor, Department of Medicine, Washington University, St Louis, USA. July, 2006-October, 2011.

Adjunct Professor, University of North Carolina, Chapel Hill, USA. Sept, 2013-February, 2020

Medical Director, DeBartolo Family Personalized Medicine Institute, Moffitt Cancer Center, Tampa, USA. September, 2013-December, 2019

Senior Member, Division of Population Sciences, Moffitt Cancer Center, Tampa, USA. September, 2013-December, 2019 (Tenured)

State of Florida Endowed Chair, September, 2013-December, 2019

Chair, Department of Individualized Cancer Management, Moffitt Cancer Center, Tampa, USA. September, 2015-December, 2019

Medical Director, Precision Medicine, Geriatric Oncology Consortium, Tampa, USA. December, 2019-January, 2022.

Consultant, Intermountain Precision Genomics, St George, UT, USA. June, 2021-January, 2022.

Professor, USF Taneja College of Pharmacy, Tampa, USA. March, 2014-January, 2022.

### **Honors and Awards:**

1. Alumni Professional Excellence Award. University of Washington School of Pharmacy, 1988.
2. American College of Clinical Pharmacy Young Investigator Award. April, 2000.
3. Fellow, American College of Clinical Pharmacy. October, 2004.
4. 1st John Rodman Endowed Lectureship, St Jude Children's Research Hospital. Individualized Therapy: In Our Lifetime? January 10, 2008.
5. 2008 ASCPT - FDA Abrams Award and Lecture, FDA White Oak, MD, April, 2008.
6. 2008 ACCP Therapeutic Frontiers Award, Louisville, KY, October, 2008
7. UNC Eshelman School of Pharmacy Academic Excellence Award in Research, 2007-2008
8. UNC Eshelman School of Pharmacy Academic Excellence Award in Mentoring, 2007-2008.
9. Guest Professor, Central South University, Changsha, China, October, 2009 – October 2014.
10. Guest Professor, Shanghai Sixth People's Hospital, April, 2011.
11. Foreign 1000 Talents Award, Central South University, People's Republic of China, January, 2012
12. Coriell Scientific Award, Coriell Institute for Medical Research, May, 2012
13. The 17<sup>th</sup> Annual Roy H. Behnke Distinguished Lectureship, University of South Florida 23<sup>rd</sup> Annual Health Research Day, Tampa, FL. February, 2013.
14. Tenth Annual Charles M. Gruber Lecture, Jefferson Medical College, May, 2014
15. Moffitt Cancer Center 2014 Population Science Top Publication Award, February, 2015
16. American College of Clinical Pharmacy Russell R. Miller Award, October, 2015
17. Fellow, American Society of Clinical Oncology (FASCO designation), July, 2020
18. 2020 Expertise in Pharmacogenetics #1 USA, #2 World <https://www.expertscape.com/ex/pharmacogenetics>
19. 2021 Expertise in Pharmacogenetics #1 USA, #2 World <https://www.expertscape.com/ex/pharmacogenetics>
20. 2022 Expertise in Pharmacogenetics #1 USA, #2 World <https://www.expertscape.com/ex/pharmacogenetics>
21. 2022 Clarivate ISI Highly Cited Researcher. Pharmacology and Toxicology - 2022, World top 0.1%

### **Editorial Review Responsibilities:**

Blood	Lancet
British Journal of Cancer	Nature Genetics
British Journal of Clinical Pharmacology	Nature Medicine
Cancer Cell	New England Journal of Medicine
Cancer Research	Pharmacogenetics and genomics
Clinical Cancer Research	Pharmacogenomics
Clinical Pharmacology and Therapeutics	Proc Natl Acad Sci, USA
Journal of the American Medical Association	Science
Journal of Clinical Oncology	Trends in Genetics
Journal of the National Cancer Institute	Trends in Pharmaceutical Sciences

### **Editorial Board Membership**

American Journal of Health Systems Pharmacy 2002-2005  
Annals of Oncology, Associate Editor 2006-2014  
Biomarkers in Medicine 2006-present  
Clinical Cancer Research 2002-2011  
Clinical Pharmacology & Therapeutics 2008-2010  
JCO Precision Oncology Founding Associate Editor, 2016-2020  
Journal of Clinical Oncology 2005-2010  
NCBI Medical Genetic Summaries 2017-2019  
Personalized Medicine 2004-present

Pharmacogenetics and genomics 2001-present  
Pharmacogenomics Senior Editor 2002-2018

**Grant Reviewer:**

American Association for Cancer Research

Stand Up To Cancer Innovative Research Grants. June, 2009

American College of Clinical Pharmacy

Canada Foundation for Innovation

Genome Canada

National Institutes of Health

*Ad hoc* study section/intramural reviewer

NICHD July, 2003, April, 2015 ZRG1 GGG-Q (51) R, November, 2015 ZRG1 GGG-A (51)

NCRR October, 2003, November, 2004

NIGMS April, 2004, ZGM1 BRT-0 May, 2007 (Chair), May, 2008, May, 2009, April, 2012.

NCI -Cancer Therapeutics Branch Site Visit Team, October, 2004,

-Medical Oncology Branch Site Visit Team, November, 2009.

-DT Study Section: 6/2005, 6/2006, 10/2006, 2/2007, 5/2007, 6/2008.

-ZRG1 OTC-D(95), June, 2009

-Urologic Oncology Branch/Genitourinary Malignancies Branch Site visit Team

NCBC May, 2005 ZRG BST-A (55)

NIH PAR14-274, February 10, 2016, June 30, 2016

Study Section member

NCI Developmental Therapeutics, July, 2008-June, 2010

National Science Foundation, USA

*Ad hoc* reviewer

Singapore Biomedical Research Council-National Science and Technology Board

**Professional Societies and Organizations:**

American Association for Cancer Research

Pharmacology/Preclinical Toxicology Committee, Annual Meeting 2000, 2003.

Clinical Pharmacology and Phase I Clinical Trials Section of the Clinical Research

Subcommittee, Annual Meeting 2005

The Pharmacology, Pharmacogenetics, and Pharmacogenomics Section of the Experimental

and Molecular Therapeutics Subcommittee, Annual Meeting 2005

Session Chair, AACR Symposium: Pharmacogenetics: The Role of SNPs Affecting  
Response, Toxicity, and Secondary Cancers. Charleston, South Carolina. January, 2006.

Integrative Molecular Epidemiology Workshop, Lecturer August, 2015

American Association of Colleges of Pharmacy

Paul Dawson Biotechnology Award Committee, 2008-2009.

American College of Clinical Pharmacy

Educational Affairs Committee, 1991-1992

International Affairs Committee, 1995-1996

Abstract reviewer for Annual Meeting, 1998, 2001-2005

Pharmacogenomics Taskforce, 2001

Awards Committee, 2003

Constitution and Bylaws Committee, 2004

Elected Fellow, October, 2004

3rd International Congress on Clinical Pharmacy Scientific Program Committee, 2007-2009.

Elected Trustee, Research Institute, July, 2005-September, 2008

American Society for Clinical Oncology  
Invited Discussant, Annual Meeting 2000, 2003-2007, 2009, 2011, 2013-2016  
Session Chair, Annual Meeting, 2003, 2009, 2010, 2015, 2016, 2018  
Annual Meeting New Drug Symposium. 2017-2020, Chair, 2017-2019  
Scientific Program Committee, 2005-2007  
Cancer Education Committee, 2013-2016, 2018  
Biomarkers/Imaging Task Force, 2005-2006  
Cancer Research Committee, 2006-2009  
    Chair, FDA Critical Path Subcommittee  
    Chair, ASCO-FDA Alternative Design Working Group  
ASCO Taxonomy Task Force, July-December, 2016  
ASCO Taxonomy Committee, Jan, 2017-Mar, 2020  
TAPUR study tumor board, June, 2016-March, 2020

American Society for Clinical Pharmacology and Therapeutics  
Vice Chair, Hematology/Oncology Section 2003-2006  
Invited Discussant, Annual Meeting, 2003, 2004  
Member, Scientific Program Committee, 2005-2008  
Academic Team Member, ASCPT Quiz Bowl 2013, 2014  
Awards Nominations Task Force, 2018-present.

American Society for Human Genetics  
Information and Education Committee, 2004-2006

British Association for Cancer Research  
Session Chairman, BACR Special Conference, September, 2001

European Organization for the Research and Treatment of Cancer  
Pharmacology and Molecular Mechanisms (PAMM) Group  
    Session Chairman, Annual Meeting, Nancy, France, January, 1998  
    Session Chairman, Annual Meeting, Verona, Italy, January, 2001

Society for Immunotherapy of Cancer  
Communications Committee, 2016-2017

**Teaching/Academic Committee Service:**

Washington University School of Medicine

*First Year Medicine*

Medical Genetics-Pharmacogenomics, 2001-2006, Human Functional Genomics, 2002.

*Second Year Medicine*

Principles of Pharmacology-Pharmacogenomics I & II 2001-2006

Molekoolz course (BIO 5511) lecture: Applying the human genome to guide therapeutics

·Genetic Epidemiology Masters of Science (GEMS) program, M21-620 Applied Topics in Genetic Epidemiology. Six lectures on pharmacogenomics.

*Siteman Cancer Center*

Member, Protocol Review and Monitoring Committee 2002-2006

University of North Carolina, Chapel Hill

*Service to the University Community*

Center for Integrative Chemical Biology and Drug Discovery Advisory Board, 2008-2013.

Carolina Center for Computational Toxicology Advisory Board, 2008-2013

Lineberger Cancer Center Translational Pathology Laboratory Advisory Board, 2009-2013.

UNC University Research Council, April, 2010-2013. Chair, 2012-2013.

Selected as a feature Faculty member for 2008-2010 UNC ONE media campaign  
Invited Speaker, UNC Alumni Association, Carolina College for Lifelong Learning, Sept., 2010  
Invited speaker, UNC Mini-Medical School, April, 2009.

*School of Pharmacy*

Pharmacy Profession program teaching

PHCY 433: Drug Literature Analysis and Interpretation. October-December, 2007, 2008

PHCY 447: Hematology/Oncology - Pharmacogenomics. October, 2006, 2007, 2008, 2009

MOPH 810 Cancer Chemotherapy - A Pharmacogenomic Approach. November, 2006, 2007, 2009, 2010, 2011, 2012

DPET Fellows Course Pharmacogenomics lectures, March-April, 2007

DPET 832: Clinical Pharmacogenomics. Coordinator and lecturer. August-December, 2009-2012.

**Campbell Mentoring Program**

Craig Lee, (2007-2012)

Chris Walko (2008-2013)

Lynn Dressler (2008-2013)

**Committee Service**

Full Professor Committee, 2006-2013

Committee for Internationalization, 2008-2013

**Student Advisor**

UNC chapter of the Student National Pharmaceutical Association 2011-2013

**Academic Awards**

Academic Excellence Award in Research, 2007-2008

Academic Excellence Award in Mentoring, 2007-2008.

Student-selected Speaker, White Coat Ceremony, March, 2010

*School of Public Health*

EPID 805 / 806 Translational Research A Career Example. March, 2007, April, 2008, March, 2009, April, 2010, 2011.

EPID 765 Pharmacogenomics. March, 2007.

**Committee Service**

Gillings Innovation Laboratory (GIL) Reviewer November, 2008

*School of Medicine*

MEDI 140 Pharmacogenetics, September, 2007, 2008, 2009, 2010, 2011, 2012.

Hematology/Oncology Fellows training program. Pharmacogenetics. 1/2007-9/2013

*School of Nursing*

N781, Genomics and Society, Personalizing medical therapy. November, 2010-2013

*Teaching at regional institutions*

UNC Greensboro

Pharmacogenomics for genetic counselors. September, 2006-2009

Duke University

PHAR170S Cancer Pharmacogenomics. March, 2011, May, 2012, March, 2013  
IGSP Teaching Seminar. Applying the genome. September, 2007  
IGSP Retreat. 'Boring' as a key endpoint for genomics research. November, 2011

North Carolina State University  
Computation for Undergraduates in Statistics Program, July, 2010

University of South Florida  
Longitudinal Project Mentor: Kevin Klein (2014-2017)  
USF Personalized Medicine Club: Faculty Advisor 2014-2017  
PHA 6130C Translational Pharmacogenomics November, 2014-present  
USF Grant Writing Bootcamp for Clinical Educators, October, 2014

**Graduate Student Training:**

University of Aberdeen

*Masters of Science*

MSc Clinical Pharmacology

Kevin Dewar 1996 completed

Lloyd Matowe 1997 completed

MSc Human Genetics

Philip Carrott 1998 completed

Chrysteley Lennou 1998 completed

*Doctor of Philosophy (PhD)*

Leslie Milne 1994-1998 University of Glasgow completed

Wiboon Wattanatorn 1994-1998 Robert Gordon University completed

Stephen Johnston 1995-1999 University of Aberdeen completed

Sharon Marsh 1996-1999 University of Aberdeen completed

Patrick Rooney 1996-1999 University of Aberdeen completed

Margaret-Mary Ameyaw 1997-2000 University of Aberdeen completed

Mohammed Tayeb 1998-2002 University of Aberdeen completed

Washington University School of Medicine

*Division of Biology and Biomedical Sciences*

*MA/MD program*

Steering committee 2001-2006

Chairman, Thesis committee, Eunice Lee 2001-2002, Margo Funk, 2003-2004.

Thesis committee membership, Dan Tu 2002-2003, Isaiah Turnbull 2002-2003

*Doctor of Philosophy (PhD)*

PhD Thesis committee service: Eric Snyder 2001-2004; Yue Yu 2002-2004; Corey Pelletier 2003-2006; Taylor Maxwell 2003-2006, Sharon Young 2003-2006,

PhD Thesis Advisor: Patrick Cahan 2005-2009, Janna Hutz 2005-2010.

University of North Carolina

*Doctor of Philosophy (PhD)*

PhD Thesis Advisor: Roshawn Watson 2006-2010 (Royster Fellowship Awardee), Venita Grisham

2006-2010 (NIH F31 Awardee), Dan Hertz 6/2008-1/2013 (AFPE Awardee), Nancy Gillis (6/2012-5/2017 (AFPE Awardee).

PhD Thesis committee service: Patrick Roberts, 2006-2007, Huali Wu, 2006-2011 (committee Chair), Christina Santos 2007-2011 (committee Chair), Katie Theken, 2007-2011 (AFPE Awardee), Jasmine Taleme, 6/2008-12/2012 (AFPE awardee, committee Chair), Gina Song (6/2008-5/2014, committee chair), Crissy Dodson (School of Nursing), 1/2010-12/2012, Katie Hacker (1/2011-10/2013), Kim Maxfield (1/2011-6/2015).

*Masters of Science (MSc)*

MSc Thesis Advisor: Brent Hehl 2010-2012.

Central South University – thesis advisor

*Masters of Science* Biaobo Xu (2016)

Weili Wang (2017)

Shangchen Xie (2018)

Ping Liao (2019)

Wei Li (expected 2020)

*Doctor of Philosophy (PhD)*

Chengfang Zhou (2017)

Dongya Shen (expected 2019)

*Precision Oncology Clinical Fellowship – Moffitt Cancer Center*

1. Todd Knepper, PharmD (2016)
2. Cory Vela, PharmD (2016)
3. James Saller, MD (2016)
4. Daryoush Saeed-Vafa, MD (2017)
5. Ryan Nelson, PharmD (2020)
6. Bendiya Patel, MD (2020)
7. Michael Fusco, PharmD (2021)

**National Committee Service:**

American Medical Association

AMA/FDA Pharmacogenomics and Personalized Medicine CME, Faculty,  
<http://ama.learn.com>, March, 2006-July, 2007

Cancer And Leukemia Group B/Alliance

Vice-Chair, Pharmacology and Experimental Therapeutics (PET) Committee March, 2001-September, 2011

Vice-Chair, Population Pharmacology and Pharmacogenomics (PPP) Committee September, 2011-February, 2020

Member, Board of Directors, September, 2006-June, 2007.

Member, Executive Committee, September, 2010-2015

Member, Translational Research Executive Committee, September, 2011-2018

Coriell Personalized Medicine Collaborative. Pharmacogenetics Advisory Committee March, 2010-2018.



C3:Colorectal Cancer Coalition. Member, Medical Review Network. 2006-present.

Foundation for the National Institutes of Health. Member, The Biomarkers Consortium. June, 2007-May, 2008.

#### Food and Drug Administration

Member, Sub-committee on Clinical Pharmacology September, 2002-July, 2007

Member, Committee on Clinical Pharmacology August, 2007-June, 2013.

Consultant & *ad hoc* reviewer, Gastrointestinal Advisory Committee. Aprepitant approval. March, 2003

Consultant & presenting expert, Pediatric Hematology/Oncology subcommittee, Oncology Drugs Advisory Committee July, 2003

Consultant, Third Wave Technologies Invader assay for UGT1A1, October, 2004.

Consultant, carbamazepine-induced cutaneous adverse effects. July, 2007.

#### National Institutes of Health

##### NIGMS Pharmacogenetics Research Network

Member, Executive Committee August, 2001-July, 2010

##### National Cancer Institute

NCI Colorectal Cancer Progress Review Group Roundtable, January, 2000.

Aids Malignancy Consortium Advisory meeting. September, 2003.

Translational Research Working Group. October, 2005-2007

NCI Colon/Rectal Clinical Trials Planning group, January, 2011

NCI Frontiers of Predictive Oncology and Computing, July, 2016

##### National Human Genome Research Institute

Member and Chair, Expert Scientific Panel, eMERGE Network (Electronic Medical Record and Genomics). February, 2008-December, 2019.

National Advisory Council for Human Genome Research, September, 2010-September, 2014

NHGRI Genomic Medicine Working Group, December, 2011-December, 2019

Organizer: Genome Medicine VIII meeting

Speaker: Genome Medicine II-IX meetings

#### Personalized Medicine Coalition

Board of Director, January, 2015-March, 2021

Chairman (with Dr Lincoln Nadauld), Science Policy Committee, January, 2019-March, 2021

Medco Health Solutions, Laboratory & Therapeutics Committee, November, 2006-July, 2012

#### International Committee Service

Cancer Research United Kingdom (CRUK) Scientific Plan Review: Biomarkers. Committee member. January, 2008.

Cancer Research United Kingdom (CRUK) Experimental Cancer Medicine Centre (ECMC) Quinquennial Review. Lead Reviewer. June, 2011.

World Health Organization. Expert Panel of the WHO project, *Grand Challenges in Genomics for Public Health in Developing Countries*. June, 2011-2014.

#### **Previous NIH peer-reviewed grant support**

2R01CA161608 Motsinger-Reif, McLeod, Wiltshire (MPI)

03/01/2012 – 03/31/2022

NCI/NIH  
Genetic Etiology of Cancer Drug Response  
Role: Principal Investigator

R01 CA219389 (Jim) 6/1/2018 – 05/31/2023  
NCI/NIH  
Improving Prediction of Chemotherapy-Induced Nausea: Integrating Genes, Behavior, and the  
Microbiome  
Role: Co-Investigator

R01 CA214647 (Jim) 06/12/2018 – 05/31/2023  
NCI/NIH  
Randomized Placebo Controlled Trial of Bupropion for Cancer Related Fatigue  
Role: Co-Investigator

U01HG007437 (PI: Berg) 9/23/13-7/31/17  
NIH/NHGRI \$1,400,000  
A knowledge base for clinically relevant genes and variants  
Role: Co-Investigator, PI on Moffitt Cancer Center subcontract

1R01HL110380-01A1 (PI: Buse, Wagner, McLeod) 05/01/12-04/30/16  
NIH/NHLBI \$520,496  
An Exome-Focused Approach to Pharmacogenetic Analysis of the ACCORD Trial

UL1 RR025747 (PI: Runge) 05/19/08-04/30/13  
NIH/NCRR \$8,000,000  
UNC Clinical and Translational Science Award

P01 CA142538 (PI: Kosorok) 04/01/10-03/31/15  
NIH/NCI \$2,116,531  
Statistical methods for cancer clinical trials (Proj 4)

P01 CA101937 (PI: Ley) 09/19/03-08/31/13  
NIH/NCI \$2,000,000  
Genomics of Acute myelogenous Leukemia (Project 6)

R21CA123881 (PI: Lockhart) 05/22/07 – 4/30/11  
NIH/NCI \$65,186  
Pharmacogenomically Selected Treatment for Gastric and Gastroesophageal Junction:

P50 CA106991 (PI: Tepper) 08/09/04 – 7/31/10  
NIH/NCI \$1,650,186  
Specialized Programs of Research Excellence in Gastrointestinal Cancer:  
Pharmacogenomic dissection of metastatic colorectal cancer (Project 6)

UO1 GM063340 (PI: McLeod) 08/01/01 - 07/31/10  
Functional polymorphism analysis in drug pathways \$1,513,752

P50 HL077113 (PI: Kelly)	2/22/05 – 12/31/09
NIH SCCOR Project 5 & Core B	\$2,785,749
The major goals of these projects are to evaluate genetic predictors of therapy for metabolic syndrome/acute cardiac syndrome.	
Role: Co-Investigator	
R21 CA113491 (PI: McLeod)	7/01/05 – 6/30/09
NIH/NCI	\$120,000
Ovarian Cancer Pharmacogenetics	
The major goals of this project are to evaluate genetic predictors of toxicity and efficacy to chemotherapy for ovarian cancer.	
MO1 RR00036 (PI: Peck)	12/01/01 – 4/30/06
NIH/NCRR	\$4,092,450
Washington University General Clinical Research Center	
The major goals of this project are to provide a pharmacogenetics core for GCRC users.	
Role: Co-Investigator	
R01 HL71083 (PI: Gage)	03/01/03 – 02/28/04
NIH/NHLBI	\$130,690
Pharmacogenetics and Antithrombotic Therapy	
The major goals of this project are to evaluate the influence of CYP2C9 and other candidate genes on the anticoagulate activity of warfarin.	
Role: Co-Investigator	
R21CA102461 (PI: McLeod)	08/01/03 – 07/31/05
NIH/NCI	\$168,055
Pharmacogenetics of advanced colorectal cancer	
The major goal of this project is to evaluate the relationship between genetic polymorphism in candidate genes and measures of toxicity, tumor response, and survival after 5-fluorouracil, irinotecan, and oxaliplatin.	
R01CA095713 (PI: Rader)	08/01/03 – 07/31/08
NIH/NCI	\$336,651
Genetic Susceptibility to Cervical Cancer	
The major goals of this project are to identify markers that associate with cervical cancer.	
Role: Co-Investigator	
R01 HL74724 (PI: Gage)	09/30/2003 - 08/31/2007
NIH	\$ 563,026
Pharmacogenetics, Biomarkers, and Antithrombotic Therapy	
The major goals of this project are to evaluate the pharmacogenetics of antithrombotic therapy.	
Role: Co-Investigator	
P30CA091842 (PI: Eberlein)	08/02/01 - 06/30/06
NIH/NCI	\$850,000
Cancer Center Support Grant	
The major goal of this project is operation of the Cancer Center Pharmacology Core.	



## **Publications:**

1. McGuire TR, McLeod HL. Viral infections in bone marrow transplantation. Highlight on Antineoplastic Drugs 1988;6:42-47.
2. McLeod HL, Baker Jr DK, Pui C-H, Rodman JH. Somnolence, hypotension, and metabolic acidosis following high-dose teniposide treatment in children with leukemia. Cancer Chemother Pharmacol 1991;29:150-154.
3. McLeod HL, McGuire TR, Yee GC. Stability of cyclosporine in dextrose 5%, NaCl 0.9%, dextrose/amino acid solution, and lipid emulsion. Ann Pharmacotherapy 1992;26:172-175.
4. McLeod HL, Relling MV, Crom WR, Silverstein K, Groom S, Rodman JH, Rivera GK, Crist WM, Evans WE. Disposition of antineoplastic agents in the very young child. Br J Cancer, 1992;66 (Suppl. XVIII), S23-S29.
5. McLeod HL, Relling MV. Stability of etoposide solution at room temperature. Am J Hosp Pharm 1992;49:2784-2785.
6. McLeod HL, Evans WE. Pediatric pharmacokinetics and therapeutic drug monitoring. Pediatr Rev 1992;13:413-421.
7. Rodman JH, Relling MV, Stewart CF, Synold TW, McLeod H, Kearns C, Stute N, Crom WR, Evans WE. Clinical pharmacokinetics and pharmacodynamics of anticancer drugs in children. Semin Oncol 1993;20:18-29.
8. Evans WE, Relling MV, Rahman A, McLeod HL, Scott EP, Lin J-S. Genetic basis for a lower prevalence of deficient CYP2D6 oxidative drug metabolism phenotypes in Black American. J Clin Invest 1993;91:2150-2154.
9. McLeod HL, Miller DR, and Evans WE. Azathioprine-induced myelosuppression in thiopurine methyltransferase deficient heart transplant recipient [letter]. Lancet 1993;341:1151.
10. McLeod HL, Lin J-S, Pui C-H, Scott EP, Evans WE. Thiopurine methyltransferase activity in American white subjects and black subjects. Clin Pharmacol Ther 1994;55:15-20.
11. McLeod HL, Fang L, Luo X, Scott EP, Evans WE. Ethnic differences in erythrocyte catechol-O-methyltransferase activity in black and white Americans. J Pharmacol Exper Ther 1994; 270:26-29.
12. McLeod HL, Concordance of phenotype and genotype for CYP2D6 [letter]. Clin Pharmacol Ther 1994;56:463.
13. McLeod HL, Douglas F, Oates M, Symonds RP, Prakash D, van der Zee AGJ, Kaye SB, Brown R, Keith WN. Topoisomerase I and II activity in human breast, cervix, lung, and colon cancer. Int J Cancer 1994; 59:607-611.
14. McLeod HL. Clinical reversal of the multidrug resistance phenotype: True tumour modulation or pharmacokinetic interaction? Eur J Cancer 1994; 30A:2039-2041.
15. Relling MV, McLeod HL, Bowman LC, Santana VM. Etoposide pharmacokinetics and pharmacodynamics after acute and chronic exposure to cisplatin. Clin Pharmacol Ther 1994;

- 56:503-11.
16. Hollander D, Pradas J, Kaplan R, McLeod HL, Evans WE, Munsat TL. High-dose dextromethorphan in amyotrophic lateral sclerosis: Phase I safety and pharmacokinetic studies. *Ann Neurol* 1994;36:920-924.
  17. McLeod HL, Relling MV, Liu Q, Pui C-H, Evans WE. Polymorphic thiopurine methyltransferase in erythrocytes is indicative of activity in leukemic blasts from children with acute lymphoblastic leukemia. *Blood* 1995;85:1897-1902.
  18. McLeod HL. Commentary on interactions between 6-mercaptopurine therapy and thiopurine-methyl-transferase (TPMT) activity. *Eur J Clin Pharmacol* 1995;48:85-86.
  19. McLeod HL, Krynetski EY, Wilimas JA, Evans WE. Higher activity of polymorphic thiopurine S-methyltransferase in erythrocytes from neonates compared to adults. *Pharmacogenetics* 1995;5:281-286.
  20. Cassidy J, McLeod HL. Is it possible to design a logical development plan for an anticancer drug? *Pharmaceutical Medicine* 1995;9:95-103.
  21. McMurrough J, McLeod HL, Analysis of the dihydropyrimidine dehydrogenase polymorphism in a British population. *Brit J Clin Pharmacol* 1996;41:425-427.
  22. McLeod HL, Graham MA, Aamdal S, Setanoians A, Groot Y, Lund B on behalf of the EORTC Early Clinical Trials Group. Phase I pharmacokinetics and limited sampling strategies for the bioreductive alkylating drug EO9. *Eur J Cancer* 1996;32:1518-1522.
  23. McLeod HL, Kumar A. Metabolism of Azathioprine [letter]. *Transplantation* 1996;61:1425.
  24. McLeod HL, Fernandez-Salguero P, Gonzalez FJ. Pyrimidines and CNS regulation- Reply [letter]. *TiPS* 1996;17:107.
  25. McLeod HL, Keith WN. Variation in topoisomerase I gene copy number as a mechanism for intrinsic drug sensitivity. *Br J Cancer* 1996;74:508-512.
  26. Wei X, McLeod HL, McMurrough J, Gonzalez FJ, Fernandez-Salguero P. Molecular basis of the human dihydropyrimidine dehydrogenase deficiency and 5-fluorouracil toxicity. *J Clin Invest* 1996;98:610-615.
  27. McLeod HL, Murray LS, Wanders J, Setanoians A, Graham MA, Pavlidis N, Heinrich B, ten Bokkel Huinink WW, Wagener DJTh, Aamdal S, Verweij J. Multicentre phase II pharmacological evaluation of rhizoxin. *Br J Cancer* 1996;74:1944-1948.
  28. McLeod HL, Brunton VG, Eckardt N, Lear MJ, Robins DJ, Workman P, Graham MA. *In vivo* pharmacology and antitumour evaluation of the tyrphostin tyrosine kinase inhibitor RG13022. *Br J Cancer* 1996;74:1714-1718.
  29. Ridge SA, Brown O, McMurrough J, Fernandez-Salguero P, Evans WE, Gonzalez FJ, McLeod HL. Mutations at Codon 974 of the *DPYD* gene are a rare event. *Br J Cancer* 1997;75:178-179.
  30. Wattanatorn W, McLeod HL, Cassidy J, Kendle KE. High-performance liquid chromatographic assay of 5-fluorouracil in human erythrocytes, plasma, and whole blood. *J*

- Chromat B 1997;692:233-237.
31. McLeod HL, Therapeutic drug monitoring opportunities in cancer therapy. *Pharmacol Ther* 1997;74:39-54.
  32. Wattanatorn W, McLeod HL, MacKlon F, Reid M, Kendle KE, Cassidy J. Comparison of 5-fluorouracil pharmacokinetics in whole blood, plasma, and red blood cell in patients with colorectal cancer. *Pharmacotherapy* 1997;17:881-886.
  33. McLeod HL. Therapeutic drug monitoring of antineoplastic therapy. *Syva Drug Monitor* 1997;2:1-4.
  34. McKay JA, Murray GI, Keith WN, McLeod HL. Amplification of fluorescent *in situ* hybridisation signals in formalin fixed paraffin wax embedded sections of colon tumour using biotinylated tyramide. *J Clin Pathol: Mol. Pathol.* 1997;50:322-325.
  35. Boyle J, Henderson D, McCall J, McLeod H, Usher J. Exploring novel chemotherapy treatments using the WWW. *Int J Med Informatics* 1997;47:107-114.
  36. McLeod HL, Sludden J, Murray GI, Keenan RA, Davidson AI, Park K, Koruth M, Cassidy J. Characterization of dihydropyrimidine dehydrogenase in human colorectal tumours. *Br J Cancer* 1998;77:461-465.
  37. Ridge SA, Sludden J, Wei X, Sapone A, Brown O, Hardy S, Canney P, Fernandez-Salguero P, Gonzalez FJ, Cassidy J, McLeod HL. Dihydropyrimidine dehydrogenase pharmacogenetics in patients with colorectal cancer. *Br J Cancer* 1998;77:497-500.
  38. Sludden J, Hardy SC, Vandenbranden MR, Wrighton SA, McLeod HL. Liver dihydropyrimidine dehydrogenase activity in human, cynomolgus monkey, rhesus monkey, dog, rat, and mouse. *Pharmacology* 1998;56:276-280.
  39. McLeod HL. Clinically relevant drug-drug interactions in oncology. *Br J Clin Pharmacol* 1998;45:539-544.
  40. McLeod HL, Syvänen A-C, Githang'a J, Indalo A, Ismail D, Dewar K, Ulmanen I, Sludden J. Ethnic differences in catechol O-methyltransferase pharmacogenetics: frequency of codon 108/158 low activity allele is lower in Kenyan than Caucasian or South-west Asian individuals. *Pharmacogenetics* 1998;8:195-199.
  41. McLeod HL, Kearns CM, Kuhn JG, Bruno R. Evaluation of the linearity of docetaxel pharmacokinetics. *Cancer Chemother Pharmacol* 1998;42:155-159.
  42. Ridge SA, Sludden J, Brown O, Robertson L, Wei X, Sapone A, Fernandez-Salguero PM, Gonzalez FJ, Vreken P, van Kuilenburg ABP, van Gennip AH, McLeod HL. Dihydropyrimidine dehydrogenase pharmacogenetics in Caucasian subjects. *Br J Clin Pharmacol* 1998;46:151-156.
  43. Wei X, Elizondo G, Sapone A, McLeod HL, Raunio H, Fernandez-Salguero P, Gonzalez FJ. Characterization of the human dihydropyrimidine dehydrogenase gene. *Genomics* 1998;51:391-400.
  44. McLeod HL, Sludden J, Hardy SC, Lock RE, Hawksworth GM, Cassidy J. Autoregulation of

- 5-fluorouracil metabolism. *Eur J Cancer* 1998;34:1623-1627.
45. Black AJ, McLeod HL, Capell HA, Powrie RH, Matowe LK, Pritchard SC, Collie-Duguid ESR, Reid DM. Thiopurine methyltransferase genotype predicts therapy-limiting severe toxicity from azathioprine. *Ann Intern Med* 1998;129:716-718.
  46. Rooney PH, Stevenson DAJ, Marsh S, Johnston PG, Haites NE, Cassidy J, McLeod HL. Comparative genomic hybridization analysis of chromosomal alterations induced by the development of resistance to thymidylate synthase inhibitors. *Cancer Res* 1998;58:5042-45.
  47. McLeod HL, Murray GI. Tumour markers of prognosis in colorectal cancer. *Br J Cancer* 1998;79:191-203.
  48. McLeod HL, Collie-Duguid ESR, Vreken P, Johnson MR, Wei X, Sapone A, Diasio RB, Fernandez-Salguero P, van Kuilenburg ABP, van Gennip AH, Gonzalez FJ. Nomenclature for human *DPYD* alleles. *Pharmacogenetics* 1998;8:455-459.
  49. Ameyaw MM, Collie-Duguid ESR, Powrie RH, Ofori-Adjei D, McLeod HL. Thiopurine methyltransferase alleles in British and Ghanaian populations. *Hum Mol Gen* 1998;8:367-370.
  50. Collie-Duguid ESR, Pritchard SC, Powrie RH, Sludden J, Collier DA, Li T, McLeod HL. The frequency and distribution of thiopurine methyltransferase alleles in Caucasian and Asian populations. *Pharmacogenetics* 1999;9:37-42.
  51. McLeod HL Pharmacokinetics for the prescriber. *Medicine* 1999;27:10-14
  52. Rooney PH, Murray GI, Stevenson DAJ, Haites NE, Cassidy, McLeod HL. Comparative genomic hybridization and chromosomal instability in solid tumours. *Br J Cancer* 1999;80:862-873.
  53. McLeod HL, Coulthard S, Thomas A, Pritchard SC, King D, Hall A, Gibson BES. Analysis of thiopurine methyltransferase variant alleles in childhood acute lymphoblastic leukaemia. *Br J Haem* 1999;105:696-700.
  54. Marsh S, Collie-Duguid ESR, Li T, Liu X, McLeod HL. Ethnic variation in the thymidylate synthase enhancer region polymorphism among Caucasian and Asian populations. *Genomics* 1999;58:310-312.
  55. Ahmed FY, Johnston SJ, Cassidy J, O'Kelly T, Binnie N, Murray GI, van Gennip AH, Abeling NGGM, Knight S, McLeod HL. Eniluracil treatment completely inactivates dihydropyrimidine dehydrogenase in colorectal tumors. *J Clin Oncol* 1999;17:2439-2445.
  56. Johnston SJ, Ridge SA, Cassidy J, McLeod HL. Regulation of dihydropyrimidine dehydrogenase in colorectal cancer. *Clin Cancer Res* 1999;5:2566-2570.
  57. McLeod HL, Pritchard SC, Githang'a J, Indalo A, Ameyaw MM, Powrie RH, Booth L, Collie-Duguid ESR. Ethnic differences in thiopurine methyltransferase pharmacogenetics: evidence for allele specificity in Caucasian and Kenyan subjects. *Pharmacogenetics* 1999;9:773-776.
  58. McLeod HL, Evans WE. Oral chemotherapy: The promise and the pitfalls. *Clin Cancer Res* 1999;5:2669-2671.



59. Milano G, McLeod HL. Can dihydropyrimidine dehydrogenase impact 5FU-based treatment? *Eur J Cancer* 1999;36:37-42.
60. McLeod HL, Murray GI, Mollison J, McKay JA, Cassidy J. Selection of markers of tumour response or survival: Description of a novel approach. *Eur J Cancer* 1999;35:1650-1652.
61. Caponigro F, Casaretti R, McLeod H, De Vita F, Avallone A, Gravina A, Carteni G, De Lucia L, Tucci A, Morsman J, Catalano G, Comella P, Comella G. Phase I and Pharmacokinetic study of tomudex combined with 5-fluorouracil plus levofolinic acid in advanced head and neck cancer and colorectal cancer. *Clin Cancer Res* 1999;5:3948-3955.
62. Ishioka S, Hiyama K, Sato H, Yamanishi Y, McLeod HL, Kumagai K, Maeda H, Yamakido M. Thiopurine methyltransferase genotype and toxicity of azathioprine in Japanese. *Intern Medicine* 1999;38:944-947.
63. Roberts JD, Shibata S, Spicer DV, McLeod HL, Tombes MB, Kyle B, Carroll M, Sheedy B, Collier MA, Pithavala YK, Paradiso LJ, Clendeninn NJ. Phase I study of AG2034, a targeted GARFT inhibitor, administered once every three weeks. *Cancer Chemother Pharmacol* 2000;45:423-427.
64. Collie-Duguid ESR, Etienne MC, Milano G, McLeod HL. Known *DPYD* alleles do not explain DPD deficiency in cancer patients. *Pharmacogenetics* 2000;10:217-223.
65. McKay JA, Douglas JJ, Ross VG, Curran S, Ahmed FY, Loane JF, Murray GI, McLeod HL. Expression of cell cycle control proteins in primary colorectal tumors does not always predict expression in lymph node metastases. *Clin Cancer Res* 2000;6:1113-1118.
66. Curran S, McKay JA, McLeod HL, Murray GI. Laser Capture Microscopy. *Mol. Pathol* 2000;53:64-68.
67. Collie-Duguid ESR, McLeod HL, Cassidy J. Estimation of dihydropyrimidine dehydrogenase activity. Does it have a role in cancer therapy? *Ann Oncol* 2000;11:255-257.
68. McLeod HL, Krynetski EY, Relling MV, Evans WE. Genetic polymorphism of thiopurine methyltransferase and its clinical relevance for childhood acute lymphoblastic leukemia. *Leukemia* 2000;14:567-572.
69. Collie-Duguid ESR, Johnston SJ, Powrie RH, Milano G, Etienne MC, Rochat B, Watson G, McLeod HL. Cloning and initial characterization of the human *DPYD* gene promoter. *Biochem Biophys Res Commun* 2000;271:28-35.
70. McKay JA, Lloret C, Murray GI, Johnston PG, Bicknell R, Cassidy J, McLeod HL. Application of the *enrichment approach* to identify putative markers of response to 5-fluorouracil therapy in advanced colorectal carcinomas. *Int J Oncol* 2000;17:153-158.
71. McLeod HL, Cassidy J, Powrie RH, Priest DG, Zorbas MA, Synold TW, Shibata S, Spicer D, Bisset D, Pithavala YK, Collier MA, Paradiso LJ, Roberts JD. Pharmacokinetic and pharmacodynamic evaluation of the Glycinamide Ribonucleotide Formyltransferase Inhibitor AG2034<sup>1</sup>. *Clin Cancer Res* 2000;6:2677-2684.
72. Boonsong A, Marsh S, Rooney PH, Stevenson DAJ, Cassidy J, McLeod HL. Characterization

- of the topoisomerase I locus in human colorectal cancer. *Cancer Genetics Cytogenetics* 2000;121:56-60.
73. McLeod HL, McKay JA, Collie-Duguid ESR, Cassidy J. Therapeutic opportunities from tumour biology in metastatic colon cancer. *Eur J Cancer* 2000;36:1706-1712.
  74. Morsman JM, McLeod HL. Taxane Chemotherapy and New Microtubule-interactive agents. *Current Opin Oncol Endoc Metab Invest Drugs* 2000;2:305-311.
  75. Morsman JM, Sludden J, Ameyaw M-M, Githang'a J, Indalo A, Ofori-Adjei D, McLeod HL. Evaluation of dihydropyrimidine dehydrogenase activity in South-west Asian, Kenyan and Ghanaian populations. *Br J Clin Pharmacol* 2000;50:269-272.
  76. Jaffrey RG, Pritchard SC, Clark C, Murray GI, Cassidy J, Kerr KM, Nicolson MC, McLeod HL. Genomic instability at the *BUB1* locus in colorectal cancer, but not in non-small cell lung cancer. *Cancer Res* 2000;60:4349-4352.
  77. McKay JA, Douglas JJ, Ross VG, Curran S, Murray GI, Cassidy J, McLeod HL, on behalf of the Aberdeen Colorectal Initiative. Cyclin D1 protein expression and gene polymorphism in colorectal cancer. *Int J Cancer* 2000;88:77-81.
  78. Bissett D, Ahmed F, McLeod HL, Cassidy J. Oral Fluoropyrimidines in the Treatment of Colorectal Cancer. *Clin Oncol* 2000;12:240-245.
  79. Terret C, Erdociain E, Guimbaud R, Boisdron-Celle M, McLeod HL, Féty-Deporte R, Lafont T, Gamelin E, Bugat R, Canal P, Chatelut E. Dose and time dependencies of 5- fluorouracil pharmacokinetics. *Clin Pharmacol Ther* 2000;68:270-279.
  80. McKay JA, Murray GI, McLeod HL. Clinician's guide to immunohistochemistry. *Uro-Oncology* 2000;1:11-16.
  81. Ameyaw MM, Syvanen AC, Ulmanen I, Ofori-Adjei D, McLeod HL. Pharmacogenetics of catechol-O-methyltransferase: Frequency of low activity allele in a Ghanaian population. *Human Mut* 2000;16:445-446.
  82. Tayeb MM, Clark C, Ameyaw MM, Haites NE, Price Evans DA, Tariq M, Mobarek A, Ofori-Adjei D, McLeod HL. CYP3A4 promoter variant in Saudi, Ghanaian, and Scottish Caucasian populations. *Pharmacogenetics* 2000;10:753-756.
  83. Marsh S, Ameyaw MM, Githang'a J, Indalo A, Ofori-Adjei D, McLeod HL. Novel thymidylate synthase enhancer region alleles in African populations. *Human Mut* 2000;16:528.
  84. Ameyaw MM, Thornton N, McLeod HL. Re: population-based, case-control study of HER2 genetic polymorphism and breast cancer risk. *J Natl Cancer Inst* 2000;92:1947.
  85. Rochat B, Morsman JM, Murray GI, Figg WD, McLeod HL. Human CYP1B1 and anticancer agent metabolism: Mechanism for tumor-specific drug inactivation? *J Exp Pharmacol Ther* 2001;296:537-541.
  86. McLeod HL, Evans WE. Pharmacogenomics: Unlocking the human genome for better therapy. *Ann Rev Pharmacol Tox* 2001;41:101-121.

87. Bisset D, McLeod HL, Sheedy B, Collier M, Pithavala Y, Paradiso L, Pitsiladis M, Cassidy J. Phase I dose-escalation and pharmacokinetic study of a novel folate analogue AG2034. *Br J Cancer* 2001;84:308-312.
88. Dusseau C, Murray GI, Keenan RA, O'Kelly T, Krokan HE, McLeod HL. Analysis of Uracil DNA glycosylase in human colorectal cancer. *Int J Oncol* 2001;18:393-399.
89. Pritchard SC, Nicolson MC, Lloret C, McKay JA, Ross VG, Kerr KM, Murray GI, McLeod HL. Expression of matrix metalloproteinases 1, 2, 9 and their tissue inhibitors in stage II non-small cell lung cancer: Implications for MMP inhibition therapy. *Oncol Rep* 2001;8:421-424.
90. Chapman AD, Pritchard SC, Yap WW, Rooney PH, Cockburn JS, Hutcheon AW, Nicolson MC, Kerr KM, McLeod HL. Primary pulmonary osteosarcoma: Case report and molecular analysis. *Cancer* 2001;91:779-784.
91. Collie-Duguid ESR, McLeod HL. A clinician's guide to the polymerase chain reaction. *Uro-oncology* 2001;1:103-112.
92. Balciuniene J, Syvänen A-C, McLeod HL, Pettersson U, Jazin EE. The Geographic Distribution of Monoamine Oxidase Haplotypes Supports A Bottleneck During The Dispersion Of Modern Humans From Africa. *J Mol Evol* 2001;52:157-163.
93. Evans DAP, McLeod HL, Pritchard S, Tariq M, Mobarek A. Interethnic variability in human drug responses. *Drug Metab Dis* 2001;29:606-610.
94. Ameyaw MM, Regateiro F, Li T, Liu X, Tariq M, Mobarek A, Thornton N, Folayan G, Githang'a J, Indalo A, Ofori-Adjei D, Price-Evans D, McLeod HL. *MDR1* pharmacogenetics: Frequency of the C3435T mutation in exon 26 is significantly influenced by ethnicity. *Pharmacogenetics* 2001;11:217-221.
95. Kumagai K, Hiyama K, Ishioka S, Sato H, Yamanishi Y, McLeod HL, Konishi F, Maedal H, Yamakidol M. Allelotype frequency of the thiopurine methyltransferase (TPMT) gene in Japanese. *Pharmacogenetics* 2001;11:275-278.
96. McFadyen MCE, McLeod HL, Jackson FC, Melvin WT, Doehmer J, Murray GI. Cytochrome P450 CYP1B1 protein expression: A novel mechanism of anticancer drug resistance. *Biochem Pharmacol* 2001;62:207-212.
97. Wang WG, Marsh S, Cassidy J, McLeod HL. Pharmacogenomic dissection of resistance to thymidylate synthase inhibitors. *Cancer Res* 2001;61:5505-5510.
98. Marsh S, McKay JA, Cassidy J, McLeod HL. Polymorphism in the thymidylate synthase promoter enhancer region in colorectal cancer. *Int J Oncol* 2001;19:383-386.
99. McFadyen MCE, Cruickshank ME, Miller ID, McLeod HL, Melvin WT, Haites NE, Parkin D, Murray GI. CYP1B1 over-expression in primary and metastatic ovarian cancer. *Br J Cancer* 2001;85:242-246.
100. Lawrie L, Curran S, McLeod HL, Fothergill JE, Murray GI. Application of laser capture

- microdissection and proteomics in colon cancer. *Mol Pathol* 2001;54:253-258.
101. Collie-Duguid ESR, Johnston SJ, Boyce L, Smith N, Cowieson A, Cassidy J, Murray GI, McLeod HL. Thymidine phosphorylase and dihydropyrimidine dehydrogenase protein expression in colorectal cancer. *Int J Cancer* 2001;94:297-301.
  102. McLeod HL. Race and responsiveness to drugs for heart failure (letter). *N Engl J Med*. 2001;345:766-7.
  103. McLeod HL. Pharmacogenetics: more than skin deep. *Nat Genet* 2001;29:247-248.
  104. Xu G, McLeod HL. Strategies for enzyme/prodrug cancer therapy. *Clin Cancer Res*. 2001;7:3314-3324.
  105. Marsh S, McLeod HL. Thymidylate Synthase Pharmacogenetics in Colorectal Cancer. *Clin Colorectal Cancer* 2001;1:175-178.
  106. McKay JA, Githang'a J, Indalo A, Li T, Liu X, Ameyaw MM, Ofori-Adjei D, McLeod HL. Distinct differences in a cyclin D1 single nucleotide polymorphism between ethnic groups. *GeneScreen* 2001;1:139-142.
  107. Rooney PH, McKay JA, Marsh S, Boonsong A, Jaffrey RG, Stevenson DAJ, Murray GI, Curran S, Haites NE, Cassidy J, McLeod HL. Colorectal cancer genomics: evidence for multiple genotypes which influence survival. *Br J Cancer* 2001;85:1492-1498.
  108. McLeod HL. Pharmacokinetic differences between ethnic groups. *Lancet* 2002;359:78.
  109. McLeod HL, Siva C. The thiopurine S-methyltransferase gene locus- implications for clinical pharmacogenomics. *Pharmacogenomics* 2002;3:89-98.
  110. McKay JA, Loane JF, Ross VG, Ameyaw MM, Murray GI, Cassidy J, McLeod HL. C-ERBB2 is not a major factor in the development of colorectal cancer. *Br J Cancer* 2002;86:568-573.
  111. Marsh S, McKay JA, Curran S,..., McLeod HL. Primary colorectal tumour is not an accurate predictor of thymidylate synthase in lymph node metastasis. *Oncol Rep* 2002;9:231-234.
  112. Peters GJ, Backus HH, Freemantle S, van Triest B, Codacci-Pisanelli G, van der Wilt CL, Smid K, Lunec J, Calvert AH, Marsh S, McLeod HL, Bloemena E, Meijer S, Jansen G, van Groeningen CJ, Pinedo HM. Induction of thymidylate synthase as a 5-fluorouracil resistance mechanism. *Biochim Biophys Acta*. 2002;1587:194-205.
  113. McLeod HL. Individualized cancer therapy: molecular approaches to the prediction of tumor response. *Expert Rev. Anticancer Ther*. 2002;2:113-119.
  114. Ma MK, McLeod HL, Westervelt P, Fracasso PM. Pharmacokinetic study of infusional valspodar. *J Clin Pharmacol* 2002;42:412-418.
  115. Tayeb MM, Clark C, Sharp L, Haites NE, Rooney PH, Murray GI, Payne SNL, McLeod HL. CYP3A4 promoter variant is associated with prostate cancer risk in men with benign prostate hyperplasia. *Oncol Rep* 2002;9:653-655.
  116. Ameyaw MM, Tayeb M, Thornton N, Folayan G, Tariq M, Mobarek A, Price-Evans D,

- Ofori-Adjei D, McLeod HL. Ethnic variation in the HER-2 codon 655 genetic polymorphism previously associated with breast cancer. *J Hum Genet* 2002;47:172-175.
117. McKay JA, Douglas JJ, Ross VG, Curran S, Loane JF, Ahmed FY, Cassidy J, McLeod HL, Murray GI. Analysis of key cell-cycle checkpoint proteins in colorectal tumours. *J Pathol* 2002;196:386-393.
118. McLeod HL. Genetic strategies to individualize supportive care. *J Clin Oncol* 2002;20:2765-2767.
119. Xu G, Zhang W, Ma MK, McLeod HL. Human carboxylesterase 2 is commonly expressed in tumor tissue and is correlated with activation of irinotecan. *Clin Cancer Res* 2002;8:2605-2611.
120. Marsh S, Kwok PY, McLeod HL. Pharmacogenetics and SNP databases: Great start, but a long way to go. *Hum Mutation* 2002;20:174-179.
121. Kolesar JM, Pritchard SC, Kim K, Kerr KM, Nicolson MC, McLeod HL. Evaluation of NQO1 Gene Expression and Point Mutations in Human NSCLC Tumors and Matched Normal Lung Tissue. *Int J Oncol* 2002;21:1119-1124.
122. Reif S, Nicolson MC, Bisset D, Reid M, Kloft C, Jaehde U, McLeod HL. Effect of grapefruit juice intake on etoposide bioavailability. *Eur J Clin Pharmacol* 2002;58:491-494.
123. Watters JW, McLeod HL. Murine pharmacogenomics: using the mouse to understand the genetics of drug therapy. *Pharmacogenomics* 2002;3:781-790.
124. Zhang W, Xu G, McLeod HL. Comprehensive evaluation of carboxylesterase-2 expression in normal human tissues using tissue array analysis. *Appl Immunohistochem Mol Morphol* 2002;10:374-380.
125. Siva C, Yokoyama WM, McLeod HL. Pharmacogenetics in rheumatology: The prospects and limitations of an emerging field. *Rheumatology* 2002;41:1273-1279.
126. Ma MK, Woo MH, McLeod HL. Genetic Basis of Drug Metabolism. *Am J Health Syst Pharm* 2002; 59:2061-9.
127. McKay JA, Murray LJ, Ross VG, Curran S, Murray GI, Cassidy J, McLeod HL. Evaluation of the epidermal growth factor receptor (EGFR) in colorectal tumours and lymph node metastases. *Eur J Cancer* 2002;38:2258-2264.
128. Boonsong, A, Curran S, McKay JA, Cassidy J, Murray GI, McLeod HL. Topoisomerase I protein expression in primary colorectal cancer and lymph node metastases. *Hum Pathol* 2002;33:1114-1119.
129. Reif S, Jetter A, Fuhr U, McLeod H, Kingreen D, Siegert W. Jaehde U. Population pharmacokinetics of etoposide. *Int J Clin Pharmacol Ther.* 2002;40:578-9.
130. Church RD, McLeod HL. Molecular Predictors of prognosis in colorectal cancer. *Gastroenterol Cancer Abstracts* 2002;9:2-6.
131. Watters JW, McLeod HL. Recent advances in the pharmacogenetics of cancer chemotherapy. *Curr Opin Mol Ther* 2002;4:565-571.

132. Ma MK, McLeod HL. Lessons learned from the irinotecan metabolic pathway. *Curr Med Chem* 2003;10:41-49.
133. Ranganathan P, Eisen S, Yokoyama WM, McLeod HL. Will pharmacogenetics allow better prediction of methotrexate toxicity and efficacy in patients with rheumatoid arthritis? *Ann Rheum Dis* 2003;62:4-9.
134. Watters JW, McLeod HL. Using genome-wide mapping in the mouse to identify genes that influence drug response. *Trends Pharmacol Sci* 2003;24:56-58.
135. McLeod HL, Papageorgio C, Watters JW. Using Genetic Variations to Optimize Cancer Chemotherapy. *Clin Adv Hemat Oncol* 2003;1:107-111.
136. Evans WE, McLeod HL. Drug Therapy: Pharmacogenomics - drug disposition, drug targets, and side effects. *N Engl J Med* 2003;348:538-549.
137. Wang W, McLeod HL, Cassidy J. Disulfiram-mediated inhibition of NF-kB activity enhances cytotoxicity of 5-fluorouracil in human colorectal cancer cell lines. *Int J Cancer* 2003;104:504-511.
138. Watters JW, McLeod HL. Cancer pharmacogenomics: current and future applications. *Biochim Biophys Acta* 2003;1603:99-111.
139. Tayeb MT, Clark C, Haites NE, Sharp L, Murray GI, McLeod HL. CYP3A4 and VDR gene polymorphisms and the risk of prostate cancer in men with benign prostate hyperplasia. *Br J Cancer* 2003;88:928-932.
140. Marsh S, McLeod HL. Crohn's disease: ethnic variation in CARD15 genotypes. *Gut* 2003;52:770.
141. Plasencia C, Rooney PH, Taron M, Martinez-Balibrea E, McLeod HL, Abad A. Chromosomal imbalance maps of human 5FU-resistant colorectal cancer cell lines: Implications in the analysis of 5FU-acquired resistance mechanisms. *Int J Oncol* 2003;22:945-53.
142. Rose CM, Marsh S, Ameyaw MM, McLeod HL. Pharmacogenetic analysis of clinically relevant genetic polymorphisms. *Methods Mol Med* 2003;85:225-37.
143. Evans WE, McLeod HL. Pharmacogenetics. *N Engl J Med* 2003;348:2042-2043.
144. Ranganathan P, McLeod HL. Will pharmacogenetics allow better prediction of methotrexate toxicity and efficacy in patients with RA?-Reply. *Ann Rheum Dis* 2003;62:591-592.
145. Govindan R, Behnken D, Read W, McLeod H. Wound healing is not impaired by the epidermal growth factor receptor-tyrosine kinase inhibitor gefitinib. *Ann Oncol* 2003;14:1330-1331.
146. McLeod HL, Yu J. Cancer Pharmacogenomics: SNPs, Chips, and the Individual Patient. *Cancer Investig* 2003;21:630-640.
147. McLeod HL. Pharmacokinetics for the prescriber. *MEDICINE* 2003;31:11-15.
148. Church RD, Fleshman JW, McLeod HL. Cyclo-oxygenase 2 inhibition in colorectal cancer therapy. *Br J Surgery* 2003;90:1055-1067.

149. Mathijssen RHJ, Marsh S, Karlsson MO, Xie R, Baker SD, Verweij J, Sparreboom A, McLeod HL. Irinotecan Pathway Genotype Analysis to Predict Pharmacokinetics. *Clin Cancer Res* 2003;9:3246-3253.
150. Watters JW, Kloss EF, Link DC, Graubert TA, McLeod HL. A mouse-based strategy for cyclophosphamide pharmacogenomic discovery. *J Appl Physiol* 2003;95:1352-1360.
151. Ahluwalia R, Freimuth R, McLeod HL, Marsh S. Use of pyrosequencing to detect clinically relevant polymorphisms in dihydropyrimidine dehydrogenase. *Clin Chem* 2003;49:1661-1664.
152. Yu J, Marsh S, Ahluwalia R, McLeod HL. Ferredoxin Reductase: Pharmacogenomic Assessment in Colorectal Cancer. *Cancer Res* 2003;63:6170-6173.
153. Govindan R, Read W, Faust J, McLeod H. Irinotecan and carboplatin in metastatic or recurrent non-small-cell lung cancer. *Oncology* 2003(S7);17:27-9.
154. Govindan R, Read W, Faust J, Trinkaus K, Ma MK, Baker SD, McLeod HL, Perry MC. Phase II study of docetaxel and irinotecan in metastatic or recurrent esophageal cancer: a preliminary report. *Oncology* 2003;17(S8):27-31.
155. Ulrich C, Robien K, McLeod HL. Cancer Pharmacogenetics: Polymorphisms, Pathways and Beyond. *Nat Rev Cancer* 2003;3:912-920.
156. Ley TJ, Minx P, Walter MJ, Ries RE, Sun H, McLellan M, DiPersio JF, Link DC, Tomasson MH, Graubert TA, McLeod H, Khoury H, Watson M, Shannon W, Trinkaus K, Heath S, Vardiman JW, Caligiuri MA, Bloomfield CD, Milbrandt JD, Mardis ER, Wilson RK. A pilot study of high-throughput, sequence-based mutational profiling of primary human acute myeloid leukemia cell genomes. *Proc Natl Acad Sci (USA)* 2003;100:14275-14280.
157. Watters JW, McLeod HL. Cancer pharmacogenomics: predicting chemotherapy response. *Science & Medicine* 2003;9:174-184.
158. Brown DB, Ma MK, Battafarano RJ, Naidu S, Plum D, Zamboni WC, McLeod HL. Endovascular lung perfusion using high-dose cisplatin: uptake and DNA adduct formation in an animal model. *Oncol Rep* 2004;11:237-243.
159. Khoury H, Trinkaus K, Zhang MJ, Adkins D, Brown R, Vij R, Goodnough LT, Ma MK, McLeod HL, Shenoy S, Horowitz M, Dipersio JF. Hydroxychloroquine for the prevention of acute graft-versus-host disease after unrelated donor transplantation. *Biol Blood Marrow Transplant* 2003;9:714-721.
160. Gage BF, Eby C, Milligan PE, Banet GA, Duncan JR, McLeod HL. Use of pharmacogenetics and clinical factors to predict the maintenance dose of warfarin. *Thromb Haemost* 2004;91:87-94.
161. Marsh S, McLeod HL. Cancer pharmacogenetics. *Br J Cancer* 2004; 90:8-11.
162. Freeman BD, McLeod HL. Challenges of implementing pharmacogenetics in the critical care environment. *Nat Rev Drug Discov* 2004;3:88-93.

163. McLeod HL, Watson MA. Molecular therapeutics: Are we making progress? *Curr Opin Mol Ther* 2003;5:573-574.
164. Azrak RG, Cao S, Slocum H, Toth K, Durrani FA, Yin MB, Pendyala L, Zhang W, McLeod HL, Rustum YM. Therapeutic Synergy Between Irinotecan and 5-Fluorouracil against Human Tumor Xenografts. *Clin Cancer Res* 2004;10:1121-1129.
165. McLeod HL. Drug pathways: moving beyond single gene pharmacogenetics. *Pharmacogenomics* 2004;5:139-141.
166. Xu G, Zhang W, Bertram P, Zheng XF and McLeod HL. Pharmacogenomic profiling of the PI3K/PTEN-AKT-mTOR pathway in common human tumors. *Int J Oncol* 2004;24:893- 900.
167. Freimuth RR, Ameyaw MM, Pritchard SC, Kwok PY and McLeod HL. High-throughput Genotyping Methods for Pharmacogenomic Studies. *Current Pharmacogenomics* 2004;2:21-33.
168. Watters JW, Zhang W, Meucci MA, Hou W, Ma MK and McLeod HL. Analysis of variation in mouse TPMT genotype, expression and activity. *Pharmacogenetics* 2004;14:247-254.
169. McLeod HL, Watters JW. Irinotecan Pharmacogenetics: Is It Time to Intervene? *J Clin Oncol* 2004;22:1356-1359.
170. Hou, W, Watters, JW, McLeod, HL. Simple and rapid docetaxel assay in plasma by protein precipitation and high-performance liquid chromatography-tandem mass spectrometry. *J ChromatogrB* 2004;804:263-267.
171. Tayeb MT, Clark C, Haites NE, Sharp L, Murray GI, McLeod HL. Vitamin D receptor, HER-2 polymorphisms and risk of prostate cancer in men with benign prostate hyperplasia. *Saudi Med J*. 2004;25:447-451.
172. Wang Y, Jatcoe T, Zhang Y, Mutch MG, Talantov D, Jiang J, McLeod HL, Atkins D. Gene Expression Profiles and Molecular Markers To Predict Recurrence of Dukes' B Colon Cancer. *J Clin Oncol* 2004;22:1564-1571.
173. Yamanaka H, Nakajima M, Katoh M, Hara Y, Tachibana O, Yamashita J, McLeod HL, Yokoi T. A novel polymorphism in the promoter region of human UGT1A9 gene (UGT1A9\*22) and its effects on the transcriptional activity. *Pharmacogenetics* 2004;14:329- 332.
174. Sparreboom A, Marsh S, Mathijssen RHJ, Verweij J, McLeod HL. Pharmacogenetics of tipifarnib (R115777) transport and metabolism in cancer patients. *Invest New Drugs* 2004;22:285-289.
175. Zhao T, Chang LW, McLeod HL, Stormo GD. PromoLign: A Database for Upstream Region Analysis and SNPs. *Hum Mutation* 2004;23:534-539.
176. Voora D, McLeod HL, Eby C, Gage BF. Use of pharmacogenetics to guide warfarin therapy. *Drugs Today* 2004;40:247-257.
177. Rodriguez DB, Mackin A, Easley R, Boyle C, Hou W, Langston C, Walsh AM, Province MA, McLeod HL. Relationship between Red Blood Cell Thiopurine Methyltransferase Activity and Myelotoxicity in Dogs Receiving Azathioprine. *J Vet Intern Med* 2004; 18:339-345.



178. McLeod HL, King CR, Marsh S. Application of Pharmacogenomics in the Individualization of Chemotherapy for GI Malignancies. *Clin Colorectal Cancer* 2004;4 (Suppl. 1), S43-S47.
179. Quirk E, McLeod H, Powderly W. The Pharmacogenetics of Antiretroviral Therapy: A Review of Studies to Date. *Clin Infect Dis* 2004;39:98-106.
180. Lanfear DE, Marsh S, Cresci S, Spertus JA, McLeod HL. Frequency of compound genotypes associated with  $\beta$ -blocker efficacy in congestive heart failure. *Pharmacogenomics* 2004;5:553-558.
181. Ranganathan P, Culverhouse R, Marsh S, Ahluwalia R, Shannon WD, Eisen S, McLeod HL. Single nucleotide polymorphism profiling across the methotrexate pathway in normal subjects and patients with rheumatoid arthritis. *Pharmacogenomics* 2004;5:559-569.
182. Lanfear DE, Marsh S, Cresci S, Shannon WD, Spertus JA, McLeod HL. Genotypes associated with myocardial infarction risk are more common in African Americans than in European Americans. *J Am Coll Cardiol.* 2004;44:165-167.
183. Sparreboom A, Gelderblom H, Marsh S, Ahluwalia R, Obach R, Principe P, Twelves C, Verweij J, McLeod HL. Diflomotecan pharmacokinetics in relation to ABCG2 421C>A genotype. *Clin Pharmacol Ther.* 2004;76:38-44.
184. Nakajima M, Yoshida R, Fukami T, McLeod HL, Yokoi T. Novel human CYP2A6 alleles confound gene deletion analysis. *FEBS Lett.* 2004;569:75-81.
185. Watters J, Kraja A, Meucci M, Province M, McLeod HL. Genome-wide discovery of loci influencing chemotherapy cytotoxicity. *Proc Natl Acad Sci USA.* 2004;101:11809-11814.
186. Xu J, Paradiso A, McLeod HL. Evaluation of epidermal growth factor receptor tyrosine kinase inhibitors combined with chemotherapy: Is there a need for a more rational design? *Eur J Cancer* 2004;40:1807-1809.
187. Lanfear DE, Marsh S, McLeod HL. Caution with  $\beta_1$ -adrenergic receptor genotyping. *Clin Pharmacol Ther* 2004;76:185-186.
188. Tayeb MT, Clark C, Murray GI, Sharp L, Haites NE, McLeod HL. Length and somatic mosaicism of CAG and GGN repeats in the androgen receptor gene and the risk of prostate cancer in men with benign prostatic hyperplasia. *Ann Saudi Med.* 2004;24:21-26.
189. Breckenridge A, Lindpaintner K, Lipton P, McLeod H, Rothstein M, Wallace H. Viewpoint: Pharmacogenetics: ethical problems and solutions. *Nat Rev Genet* 2004;5:676-680.
190. de Jong FA, Marsh S, Mathijssen RHJ, King C, Verweij J, Sparreboom A, McLeod HL. ABCG2 Pharmacogenetics: Ethnic Differences in Allele Frequency and Assessment of Influence on Irinotecan Disposition. *Clin Cancer Res* 2004;10:5889-5894.
191. Fukunaga AK, Marsh S, Murry DJ, Hurley TD, McLeod HL. Identification and analysis of single-nucleotide polymorphisms in the gemcitabine pharmacologic pathway. *Pharmacogenomics J* 2004;4:307-314.
192. Church RD, Yu J, Fleshman JW, Shannon WD, Govindan R, McLeod HL. RNA profiling of

- cyclooxygenases 1 and 2 in colorectal cancer. *Br J Cancer* 2004;91:1015-1018.
193. Thomas FJ, McLeod HL, Watters JW. Pharmacogenomics: The Influence of Genomic Variation on Drug Response. *Curr Top Med Chem* 2004;4:1397-1407.
  194. Min DI, Ellingrod VL, Marsh S, McLeod HL. CYP3A5 Polymorphism and the Ethnic Differences in Cyclosporine Pharmacokinetics in Healthy Subjects. *Ther Drug Monit* 2004;26:524-528.
  195. Marsh S, McLeod HL. Pharmacogenetics of irinotecan toxicity. *Pharmacogenomics* 2004;5:835-843.
  196. Marsh S, Xiao M, Yu J, Ahluwalia R, Minton M, Freimuth RR, Kwok PY, McLeod HL. Pharmacogenomic assessment of carboxylesterases 1 and 2. *Genomics* 2004;84:661-668.
  197. Rooney PH, Boonsong A, McFadyen MCE, McLeod HL, Cassidy J, Curran S, Murray G. The candidate oncogene ZNF217 is frequently amplified in colon cancer. *J Pathol* 2004;204:282-288.
  198. Marsh S, King CR, Ahluwalia R, McLeod HL. Distribution of ITPA P32T alleles in multiple world populations. *J Hum Genet* 2004;49:579-581.
  199. Watters JW, McLeod HL. Candidate gene selection in pharmacogenomics: biology leads the way. *Pharmacogenomics* 2004;5:1019-1022.
  200. Mauritz R, Schwabe W, Haeusler P, Noordhuis P, Smid K, McLeod HL, Behnke D, van Groenigen CJ, Peters, GJ. Comparison of mRNA expression levels determined with TaqMan and competitive template RT-PCR. *Nucleosides Nucleotides Nucleic Acids* 2004;23:1471-1474.
  201. Mauritz R, Beumer IJ, Marsh S, McLeod HL, Smid K, van Groenigen CJ, Pinedo HM, Peters GJ. Polymorphism of the thymidylate synthase gene and thymidylate synthase levels in colon cancer cell lines and different tissues of colorectal cancer patients. *Nucleosides Nucleotides Nucleic Acids* 2004;23:1381-1384.
  202. Lim WT, McLeod HL. Should Screening for DPD Deficiency Be Mandatory before 5-FU Exposure? *Onkologie (Editorial)* 2004;27:531-533.
  203. Fukami T, Nakajima M, Yoshida R, Tsuchiya Y, Fujiki Y, Katoh M, McLeod HL, Yokoi T. Pharmacogenetics and Genomics: A novel polymorphism of human CYP2A6\*17 has an amino acid substitution (V365M) that decreases enzymatic activity in vitro and in vivo. *Clin Pharmacol Ther* 2004;76:519-527.
  204. Freimuth R, Stormo GD, McLeod HL. PolyMAPr: Programs for Polymorphism Database Mining, Annotation, and Functional Analysis. *Hum Mutat* 2005;25:110-117.
  205. King CR, Yu J, Freimuth RR, McLeod HL, Marsh S. Interethnic variability of ERCC2 polymorphisms. *Pharmacogenomics J.* 2005;5:54-59.
  206. Glasgow SC, Yu J, Carvalho LP, Shannon WD, Fleshman JW, McLeod HL. Unfavourable expression of pharmacologic markers in mucinous colorectal cancer. *Br J Cancer* 2005;92:259-264.

207. Ranganathan P, McLeod HL. Methotrexate and long-term treatment of rheumatic disease: Comment on the article by Kremer. *Arthritis Rheum*. 2005;52:670-671.
208. Govindan R, McLeod H, Mantravadi P, Fineberg N, Helft P, Kesler K, Hanna N, Stoner C, Ansari R, Fox E. Cisplatin, fluorouracil, celecoxib, and RT in resectable esophageal cancer: preliminary results. *Oncology* 2004;18(Suppl 14):18-21.
209. Read W, McLeod H, Govindan R. Irinotecan and carboplatin in metastatic or recurrent NSCLC: an update. *Oncology* 2004;18(Suppl 14):15-7.
210. Tan BR, McLeod HL. Pharmacogenetic influences on treatment response and toxicity in colorectal cancer. *Semin Oncol*. 2005;32:113-119.
211. Meucci MA, Marsh S, Watters JW, McLeod HL. CEPH individuals are representative of the European American population: implications for pharmacogenetics. *Pharmacogenomics* 2005;6:59-63.
212. Yu J, Shannon WD, Watson MA, McLeod HL. Gene Expression Profiling of the Irinotecan Pathway in Colorectal Cancer. *Clin Cancer Res* 2005;11:2053-2062.
213. Zhou S, Chan SY, Goh BC, Chan E, Duan W, Huang M, McLeod HL. Mechanism-Based Inhibition of Cytochrome P450 3A4 by Therapeutic Drugs. *Clin Pharmacokinet* 2005;44:279-304.
214. Kidd EA, Yu J, Li X, Shannon WD, Watson MA, McLeod HL. Variance in the Expression of 5-Fluorouracil Pathway Genes in Colorectal Cancer. *Clin Cancer Res* 2005;11:2612-2619.
215. Voora D, Eby C, Linder MW, Milligan PE, Bukaveckas BL, McLeod HL, Maloney W, Clohisy J, Steven Burnett R, Grosso L, Gatchel SK, Gage BF. Prospective dosing of warfarin based on cytochrome P-450 2C9 genotype. *Thromb Haemost* 2005;93:700-705.
216. Fox CA, Sapinoso LM, Zhang H, Zhang W, McLeod HL, Petroni GR, Mullick T, Moskaluk CA, Frierson HF, Hampton GM, Powell SM. Altered Expression of *TFF-1* and *CES-2* in Barrett's Esophagus and Associated Adenocarcinomas. *Neoplasia* 2005;7:407-416.
217. Azrak RG, Yu J, Pendyala L, Smith PF, Cao S, Li X, Shannon WD, Durrani FA, McLeod HL, Rustum YM. Irinotecan pharmacokinetic and pharmacogenomic alterations induced by methylselenocysteine in human head and neck xenograft tumors. *Mol Cancer Ther* 2005;4:843-854.
218. Rieder MJ, Reiner AP, Gage BF, Nickerson DA, Eby CS, McLeod HL, Blough DK, Thummel KE, Veenstra DL, Rettie AE. Effect of VKORC1 Haplotypes on Transcriptional Regulation and Warfarin Dose. *N Engl J Med* 2005;352:2285-2293.
219. Garsa AA, McLeod HL, Marsh S. CYP3A4 and CYP3A5 genotyping by Pyrosequencing. *BMC Med Genet* 2005;6:19
220. Van Eyk JE, Huber LA, McLeod HL. Genomics, proteomics and pharmacogenetics – experimental approaches. *Curr Opin Mol Ther* 2005;7:200-201.
221. Cai SR, Garbow JR, Culverhouse R, Church RD, Zhang W, Shannon WD, McLeod HL. A

- mouse model for developing treatment for secondary liver tumors. *Int J Oncol.* 2005;27:113-120.
222. Zhang W, Hart J, McLeod HL, Wang HL. Differential Expression of the AP-1 Transcription Factor Family Members in Human Colorectal Epithelial and Neuroendocrine Neoplasms. *Am J Clin Pathol* 2005;124:11-19.
223. Wood ET, Stover DA, Ehret C, Destro-Bisol G, Spedini G, McLeod H, Louie L, Bamshad M, Strassmann BI, Soodyall H, Hammer MF. Contrasting patterns of Y chromosome and mtDNA variation in Africa: evidence for sex-biased demographic processes. *Eur J Hum Genet.* 2005;13:867-876.
224. Fracasso PM, Blum KA, Ma MK, Tan BR, Wright LP, Goodner SA, Fears CL, Hou W, Arquette MA, Picus J, Denes A, Mortimer JE, Ratner L, Ivy SP, McLeod HL. Phase I study of pegylated liposomal doxorubicin and the multidrug-resistance modulator, valspodar. *Br J Cancer* 2005;93:46-53.
225. Walgren RA, McLeod HL. Small inhibitory RNA—a tool for credentialing candidate genes. *Pharmacogenomics* 2005;6:281-292.
226. Voora D, McLeod HL, Eby C, Gage BF. The Pharmacogenetics of coumarin therapy. *Pharmacogenomics* 2005;6:503-513.
227. McLeod HL, Marsh S. Pharmacogenetics goes 3D. *Nat Genet.* 2005;37:794-795.
228. Fukami T, Nakajima M, Higashi E, Yamanaka H, McLeod HL, Yokoi T. A novel CYP2A6\*20 allele found in African-American population produces a truncated protein lacking enzymatic activity. *Biochem Pharmacol.* 2005;70:801-808.
229. Morgensztern D, McLeod HL. PI3K/Akt/mTOR pathway as a target for cancer therapy. *Anticancer Drugs.* 2005;16:797-803.
230. Marsh S, King CR, Garsa AA, McLeod HL. Pyrosequencing of clinically relevant polymorphisms. *Methods Mol Biol.* 2005;311:97-114.
231. Maxwell T, Ameyaw MM, Pritchard S, Thornton N, Folayan G, Githang'a J, Indalo A, Tariq M, Mobarek A, Price Evans DA, Ofori-Adjei D, Templeton AR, McLeod HL. Beta-2 adrenergic receptor genotypes and haplotypes in different ethnic groups. *Int J Mol Med.* 2005;16:573-580.
232. Fukami T, Nakajima M, Higashi E, Yamanaka H, Sakai H, McLeod HL, Yokoi T. Characterization of novel CYP2A6 polymorphic alleles (CYP2A6\*18 and CYP2A6\*19) that affect enzymatic activity. *Drug Metab Dispos.* 2005;33:1202-1210.
233. Hoskins JM, Marsh S, McLeod HL. Comment on “a frameshift mutation and alternate splicing in human brain generate a functional form of the pseudogene cytochrome P4502D7 that demethylates codeine to morphine”. *Drug Metab Dispos.* 2005;33:1564-1565.
234. Lanfear DE, Jones PG, Marsh S, Cresci S, McLeod HL, Spertus JA.  $\beta_2$ -Adrenergic Receptor Genotype and Survival Among Patients Receiving  $\beta$ -Blocker Therapy After an Acute Coronary Syndrome. *JAMA.* 2005;294:1526-1533.

235. Teodoridis JM, Hall J, Marsh S, Kannall HD, Smyth C, Curto J, Siddiqui N, Gabra H, McLeod HL, Strathdee G, Brown R. CpG Island Methylation of DNA Damage Response Genes in Advanced Ovarian Cancer. *Cancer Res.* 2005;65: 8961-8967.
236. Bomgaars L, McLeod HL. Pharmacogenetics and pediatric cancer. *Cancer J.* 2005;11:314-323.
237. Walgren RA, Meucci MA, McLeod HL. Pharmacogenomic discovery approaches: will the real genes please stand up? *J Clin Oncol.* 2005;23:7342-7349.
238. McLeod HL. Pharmacogenetic analysis of clinically relevant genetic polymorphisms. *Clin Infect Dis.* 2005;41:S449-452.
239. Henningsson A, Marsh S, Loos WJ, Karlsson MO, Garsa A, Mross K, Mielke S, Vigano L, Locatelli A, Verweij J, Sparreboom A, McLeod HL. Association of CYP2C8, CYP3A4, CYP3A5, and ABCB1 Polymorphisms with the Pharmacokinetics of Paclitaxel. *Clin Cancer Res.* 2005;11:8097-8104.
240. Marsh S, Mallon MA, Goodfellow P, McLeod HL. Concordance of pharmacogenetic markers in germline and colorectal tumor DNA. *Pharmacogenomics.* 2005;6:873-877.
241. Freimuth RR, Xiao M, Marsh S, Minton M, Addleman N, Van Booven DJ, McLeod HL, Kwok PY. Polymorphism discovery in 51 chemotherapy pathway genes. *Hum Mol Genet.* 2005;14:3595-3603.
242. Cowsert LM, Van Eyk JE, Huber LA, McLeod HL. Genomics, proteomics and pharmacogenetics – Therapeutic approaches. *Curr Opin Mol Ther* 2005;7:530-531.
243. Grice GR, Seaton TL, Woodland AM, McLeod HL. Defining the opportunity for pharmacogenetic intervention in primary care. *Pharmacogenomics.* 2006;7:61-65.
244. Cai SR, Xu G, Becker-Hapak M, Ma M, Dowdy SF, McLeod HL. The kinetics and tissue distribution of protein transduction in mice. *Eur J Pharm Sci.* 2006;27:311-319.
245. Hoskins JM, McLeod HL. Cancer Pharmacogenetics: The Move from Pharmacokinetics to Pharmacodynamics. *Current Pharmacogenomics* 2006;4:39-46.
246. Cahan P, Marsh S, McLeod HL. Systems pharmacogenomics in yeast. *Pharmacogenomics* 2006;7:255-259.
247. Lanfear DE, Spertus JA, McLeod HL.  $\beta_2$ -Adrenergic Receptor Genotype and Survival After Acute Coronary. Syndrome. *JAMA.* 2006;295:757-758.
248. Marsh S, McLeod HL. Pharmacogenomics: from bedside to clinical practice. *Hum Mol Genet* 2006;15:R89-R93.
249. Ranganathan P, McLeod HL. Methotrexate Pharmacogenetics. The First Step Toward Individualized Therapy in Rheumatoid Arthritis. *Arthritis Rheum* 2006;54:1366-1377.
250. Zhang W, Shannon WD, Duncan J, Scheffer GL, Scheper RJ, McLeod HL. Expression of drug pathway proteins is independent of tumour type. *J Pathol* 2006;209:213-219
251. Brown DB, Cai S, Fundakowski CE, Zamboni WC, Strychor S, McLeod HL. Pharmacokinetics after Endovascular Lung Perfusion with Cisplatin. *J Vasc Interv Radiol*

2006;17:883-888

252. Fenske TS, McMahon C, Edwin D, Jarvis JC, Cheverud JM, Minn M, Mathews V, Bogue MA, Province MA, McLeod HL, Graubert TA. Identification of Candidate Alkylator – Induced Cancer Susceptibility Genes by Whole Genome Scanning in Mice. *Cancer Res* 2006;66:5029-5038
253. McLeod HL. Individualizing cancer chemotherapy. *Clin Adv Hem Oncol*. 2006;4:259-61.
254. Ratain MJ, Miller AA, McLeod HL, Venook AP, Egorin MJ, Schilsky RL. The cancer and leukemia group B pharmacology and experimental therapeutics committee: a historical perspective. *Clin Cancer Res*. 2006;12:3612s-3616s
255. Marsh S, Van Booven DJ, McLeod HL. Global pharmacogenetics: giving the genome to the masses. *Pharmacogenomics*. 2006;7:625-631.
256. Yu J, McLeod HL. Methylation of the DPYD Promoter and Dihydropyrimidine Dehydrogenase Deficiency. *Clin Cancer Res* 2006;12:3864.
257. Van Eyk JE, Huber LA, Cowser LM, McLeod HL. Genomics, proteomics and pharmacogenetics-experimental approaches. *Current Opin Molec Therap* 2006;8;183-184.
258. Zamboni WC, Ramanathan RK, McLeod HL, Mani S, Potter DM, Strychor S, Maruca LJ, King CR, Jung LL, Parise RA, Egorin MJ, Davis TA, Marsh S. Disposition of 9-nitrocamptothecin and its 9-aminocamptothecin metabolite in relation to ABC transporter genotypes. *Invest New Drugs* 2006;24:393-401.
259. Marsh S, King CR, McLeod HL, . . . ., Brown R. ABCB1 2677G>T/A Genotype and Paclitaxel Pharmacogenetics in Ovarian Cancer. *Clin Cancer Res* 2006;12:4127-4129.
260. Knoche E, McLeod HL, Graubert TA. Pharmacogenetics of alkylator-associated acute myeloid leukemia. *Pharmacogenomics*. 2006;7:719-729.
261. Beitelshes AL, McLeod HL. Applying pharmacogenomics to enhance the use of biomarkers for drug effect and drug safety. *Trends Pharmacol Sci*. 2006;27:498-502.
262. Beitelshes AL, McLeod HL. Clopidogrel pharmacogenetics: promising steps towards patient care? *Arterioscler Thromb Vasc Biol*. 2006;26:1681-1683.
263. O'neil BH, McLeod HL. Thymidine phosphorylase and capecitabine: a predictive marker for therapy selection? *J Clin Oncol*. 2006;24:4051-4053.
264. Yu J, Mallon MA, Zhang W, Freimuth RR, Marsh S, Watson MA, Goodfellow PJ, McLeod HL. DNA Repair Pathway Profiling and Microsatellite Instability in Colorectal Cancer. *Clin Cancer Res*. 2006;12:5104-5111.
265. Nakajima M, Fukami T, Yamanaka H, Higashi E, Sakai H, Yoshida R, Kwon JT, McLeod HL, Yokoi T. Comprehensive evaluation of variability in nicotine metabolism and CYP2A6 polymorphic alleles in four ethnic populations. *Clin Pharmacol Ther*. 2006;80:282-297.
266. Hahn NM, Marsh S, Fisher W, Langdon R, Zon R, Browning M, Johnson CS, Scott-Horton TJ, Li L, McLeod HL, Sweeney CJ. Hoosier Oncology Group randomized phase II study of

- docetaxel, vinorelbine, and estramustine in combination in hormone-refractory prostate cancer with pharmacogenetic survival analysis. *Clin Cancer Res* 2006;12:6094-6099.
267. McLeod HL. Individualizing cancer chemotherapy. *ClinAdvHematol Oncol.* 2006;4:259-61
268. Ambrosone CB, Rebbeck TR, Morgan GJ, ..., McLeod HL, Rowland JH, Ulrich CM. New developments in the epidemiology of cancer prognosis: traditional and molecular predictors of treatment response and survival. *Cancer Epidemiol Biomarkers Prev.* 2006;15:2042-6
269. Roden DM, Altman RB, Benowitz NL, Flockhart DA, Giacomini KM, Johnson JA, Krauss RM, McLeod HL, Ratain MJ, Relling MV, Ring HZ, Shuldiner AR, Weinshilboum RM, Weiss ST; Pharmacogenetics Research Network. Pharmacogenomics: challenges and opportunities. *Ann Intern Med.* 2006;145:749-57.
270. Fukami T, Nakajima M, Sakai H, McLeod HL, Yokoi T. CYP2A7 polymorphic alleles confound the genotyping of CYP2A6\*4A allele. *Pharmacogenomics J.* 2006;6:401-12.
271. McLeod HL. Pharmacokinetics: what you need to know. *The Foundation Years* 2006;2:228-232.
272. Engen RM, Marsh S, Van Booven DJ, McLeod HL. Ethnic differences in pharmacogenetically relevant genes. *Curr Drug Targets.* 2006;7:1641-1648.
273. Lanfear DE, Stolker JM, Marsh S, Rich MW, McLeod HL. Natriuretic peptide receptor 3 genotype modulates the relationship between B-type natriuretic peptide and left ventricular end-diastolic pressure. *Therapy* 2006;3:765-771.
274. Pillot GA, Read WL, Hennenfent KL, Marsh S, Gao F, Viswanathan A, Cummings K, McLeod HL, Govindan R. A Phase II Study of Irinotecan and Carboplatin in Advanced Non-small Cell Lung Cancer with Pharmacogenomic Analysis: Final Report. *J Thoracic Oncol* 2006;1: 972-978.
275. McLeod H. Graying anatomy? Toward molecular tumor characterization. *Pharmacogenomics.* 2007;8:15-16.
276. Smith NF, Marsh S, Scott-Horton TJ, Hamada A, Mielke S, Mross K, Figg WD, Verweij J, McLeod HL, Sparreboom A. Variants in the SLCO1B3 Gene: Interethnic Distribution and Association with Paclitaxel Pharmacokinetics. *Clin Pharmacol Ther.* 2007;81:76-82.
277. de Jong FA, Scott-Horton TJ, Kroetz DL, McLeod HL, Friberg LE, Mathijssen RH, Verweij J, Marsh S, Sparreboom A. Irinotecan-induced Diarrhea: Functional Significance of the Polymorphic ABCC2 Transporter Protein. *Clin Pharmacol Ther.* 2007;81:42-49.
278. McLeod HL. To test or not to test: an update on UGT1A1 testing. *Oncology Issues* 2006;21:20-23.
279. Graubert TA, Cahan P, Edwin D, Selzer RR, Richmond TA, Eis PS, Shannon WD, Li X, McLeod HL, Cheverud JM, Ley TJ. A High-Resolution Map of Segmental DNA Copy Number Variation in the Mouse Genome. *PLoS Genet.* 2007;3:e3
280. Marsh S, McLeod HL. Pharmacogenetics and oncology treatment for breast cancer. *Expert Opin Pharmacother.* 2007;8:119-127.

281. Lanfear DE, Spertus JA, McLeod HL. Beta2-adrenergic receptor genotype predicts survival: implications and future directions. *J Cardiovasc Nurs*. 2006;21:474-477.
282. Miller CR, McLeod HL. Pharmacogenomics of cancer chemotherapy-induced toxicity. *J Support Oncol*. 2007;5:9-14.
283. Giacomini KM, Brett CM, Altman RB, Benowitz NL, Dolan ME, Flockhart DA, Johnson JA, Hayes DF, Klein T, Krauss RM, Kroetz DL, McLeod HL, Nguyen AT, Ratain MJ, Relling MV, Reus V, Roden DM, Schaefer CA, Shuldiner AR, Skaar T, Tantisira K, Tyndale RF, Wang L, Weinshilboum RM, Weiss ST, Zineh I; Pharmacogenetics Research Network. The pharmacogenetics research network: from SNP discovery to clinical drug response. *Clin Pharmacol Ther*. 2007;81:328-345
284. Lim WT, Zhang WH, Miller CR, Watters JW, Gao F, Viswanathan A, Govindan R, McLeod HL. PTEN and phosphorylated AKT expression and prognosis in early- and late-stage non-small cell lung cancer. *Oncol Rep*. 2007;17:853-857.
285. Wang W, McLeod HL, Cassidy J, Collie-Duguid ES. Mechanisms of acquired chemoresistance to 5-fluorouracil and tomudex: thymidylate synthase dependent and independent networks. *Cancer Chemother Pharmacol*. 2007;59:839-845
286. Yen JL, McLeod HL. Should DPD analysis be required prior to prescribing fluoropyrimidines? *Eur J Cancer*. 2007;43:1011-1016
287. Lanfear DE, Stolker JM, Marsh S, Rich MW, McLeod HL. Genetic Variation in the B-Type Natriuretic Peptide Pathway Affects BNP Levels. *Cardiovasc Drugs Ther*. 2007;21:55-62
288. Fukami T, Nakajima M, Yamanaka H, Fukushima Y, McLeod HL, Yokoi T. A novel duplication type of CYP2A6 gene in African-American population. *Drug Metab Dispos*. 2007;35:515-520.
289. Marsh S, Somlo G, Li X, Frankel P, King CR, Shannon WD, McLeod HL, Synold TW. Pharmacogenetic analysis of paclitaxel transport and metabolism genes in breast cancer. *Pharmacogenomics J*. 2007;7:362-365.
290. Gurwitz D, McLeod HL. Primum non nocere: adverse drug events must be taken seriously. *Pharmacogenomics*. 2007;8:311-314.
291. King CR, Xiao M, Yu J, Minton MR, Addleman NJ, Van Booven DJ, Kwok PY, McLeod HL, Marsh S. Identification of NR1I2 genetic variation using resequencing. *Eur J Clin Pharmacol*. 2007;63:547-54.
292. Altman RB, Benowitz N, Gurwitz D, Lunshof J, Relling M, Lamba J, Wieben E, Mooney S, Giacomini K, Weiss S, Johnson JA, McLeod H, Flockhart D, Weinshilboum R, Shuldiner AR, Roden D, Krauss RM, Ratain M. Genetic nondiscrimination legislation: a critical prerequisite for pharmacogenomics data sharing. *Pharmacogenomics*. 2007;8:519.
293. McLeod H. Drug Pathways: One gene is not enough. *Curr Opin Molec Ther* 2007;9:214-215.
294. Oliveira E, Marsh S, van Booven DJ, Amorim A, Prata MJ, McLeod HL. Pharmacogenetically-relevant polymorphisms in Portugal. *Pharmacogenomics* 2007;8:703-712.



295. Hoskins JM, Goldberg RM, Qu PP, Ibrahim JG, McLeod HL. UGT1A1\*28 genotype and irinotecan-induced neutropenia: Dose matters. *J Natl Cancer Inst* 2007;99:1290-1295.
296. Lanfear DE, Jones PG, Marsh S, Cresci S, Spertus JA, McLeod HL. Connexin37 (GJA4) genotype predicts survival after an acute coronary syndrome. *Am Heart J*. 2007;154:561-566.
297. Papageorgio C, Brachmann R, Zeng J, Culverhouse R, Zhang W, McLeod H. MAGED2: A novel p53-dissociator. *Int J Oncol*. 2007;31:1205-11.
298. Jatoi A, Martenson JA, Foster NR, McLeod HL, Lair BS, Nichols F, Tschetter LK, Moore DF Jr, Fitch TR, Alberts SR; North Central Cancer Treatment Group (N0044). Paclitaxel, carboplatin, 5-fluorouracil, and radiation for locally advanced esophageal cancer: phase II results of preliminary pharmacologic and molecular efforts to mitigate toxicity and predict outcomes: North Central Cancer Treatment Group (N0044). *Am J Clin Oncol*. 2007;30:507-513.
299. Marsh S, Paul J, King CR, Gifford G, McLeod HL, Brown R. Pharmacogenetic assessment of toxicity and outcome after platinum plus taxane chemotherapy in ovarian cancer: the Scottish randomised trial in ovarian cancer. *J Clin Oncol*. 2007;25:4528-4535.
300. Lanfear DE, McLeod HL. Pharmacogenetics: using DNA to optimize drug therapy. *Am Fam Physician*. 2007;76:1179-1182.
301. Yen-Revollo JL, Goldberg RM, McLeod HL. Can inhibiting dihydropyrimidine dehydrogenase limit hand-foot syndrome caused by fluoropyrimidines? *Clin Cancer Res*. 2008;14:8-13.
302. Hoskins JM, McLeod HL. Re : *UGT1A1*\*28 Genotype and Irinotecan-Induced Neutropenia: Dose Matters-Response. *J Natl Cancer Inst* 2008;100:225.
303. Roberts PJ, McLeod HL. NSCLC pharmacogenomics: current state-of-the-art approaches to individualized therapy. *CML-Lung Cancer* 2008;1:69-76.
304. Hoskins JM, Marcuello E, Altes A, Marsh S, Maxwell T, Van Booven DJ, Paré L, Culverhouse R, McLeod HL, Baiget M. Irinotecan pharmacogenetics: influence of pharmacodynamic genes. *Clin Cancer Res*. 2008;14:1788-96.
305. Ranganathan P, Culverhouse R, Marsh S, Mody A, Scott-Horton TJ, Brasington R, Joseph A, Reddy V, Eisen S, McLeod HL. Methotrexate (MTX) Pathway Gene Polymorphisms and Their Effects on MTX Toxicity in Caucasian and African American Patients with Rheumatoid Arthritis. *J Rheumatol*. 2008;35:572-579.
306. Cahan P, Godfrey LE, Eis PS, Richmond TA, Selzer RR, Brent M, McLeod HL, Ley TJ, Graubert TA. wuHMM: a robust algorithm to detect DNA copy number variation using long oligonucleotide microarray data. *Nucleic Acids Res*. 2008;36:e41.
307. Marsh S, Paul J, McLeod HL, Brown R. Ethnic considerations in pharmacogenetic studies-Reply. *J Clin Oncol* 2008;26:1767-1768.
308. Paul J, Marsh S, McLeod HL, Brown R. No evidence for taxane/platinum pharmacogenetic markers: just lack of power?-Reply. *J Clin Oncol* 2008;26:1904-1905.

309. Walko CM, McLeod HL. Will we ever be ready for blood level-guided therapy? *J Clin Oncol*. 2008;26:2078-2079.
310. Auman JT, McLeod HL. Cancer pharmacogenomics: DNA genotyping and gene expression profiling to identify molecular determinants of chemosensitivity. *Drug Metab Rev*. 2008;40:303-315.
311. Sureban SM, May R, George RJ, Dieckgraefe BK, McLeod HL, Ramalingam S, Bishnupuri KS, Natarajan G, Anant S, Houchen CW. Knockdown of RNA binding protein musashi-1 leads to tumor regression in vivo. *Gastroenterology*. 2008;134:1448-1458.
312. Gage B, Eby C, Johnson J, Deych E, Rieder M, Ridker P, Milligan P, Grice G, Lenzini P, Rettie A, Aquilante C, Grosso L, Marsh S, Langae T, Farnett L, Voora D, Veenstra D, Glynn R, Barrett A, McLeod HL. Use of Pharmacogenetic and Clinical Factors to Predict the Therapeutic Dose of Warfarin. *Clin Pharmacol Ther*. 2008;84:326-331.
313. Hayes DN, McLeod HL. EGFR regulation by microRNA in lung cancer: a rose by any other name...is an increasingly complicated rose. *Ann Oncol* 2008;19:1036-1037.
314. Crowley JJ, Sullivan PF, McLeod HL. Untapped resources for pharmacogenomic discovery in psychiatry. *Curr Opin Mol Ther*. 2008;10:205-206.
315. McLeod HL. Pharmacokinetics for the prescriber. *Medicine* 2008;36:350-354.
316. Figg WD, Chau CH, Okita R, Preusch P, Tracy TS, McLeod H, Reed M, Pieper J, Knoell D, Miller K, Speedie M, Blouin R, Kroboth P, Koda-Kimble MA, Taylor P, Cohen J, Giacomini K. Pharm.d. Pathways to biomedical research: the national institutes of health special conference on pharmacy research. *Pharmacotherapy*. 2008;28:821-833.
317. Weiss ST, McLeod HL, Flockhart DA, Dolan ME, Benowitz NL, Johnson JA, Ratain MJ, Giacomini KM. Creating and evaluating genetic tests predictive of drug response. *Nat Rev Drug Discov*. 2008;7:568-574.
318. Hutz JE, Kraja AT, McLeod HL, Province MA. CANDID: a flexible method for prioritizing candidate genes for complex human traits. *Genet Epidemiol*. 2008;32:779-790..
319. Auman JT, Church R, Lee SY, Watson MA, Fleshman JW, McLeod HL. Celecoxib pretreatment in human colorectal adenocarcinoma patients is associated with gene expression alterations suggestive of diminished cellular proliferation. *Eur J Cancer*. 2008;44:1754-1760.
320. Johnatty SE, Beesley J, Paul J, Fereday S, Spurdle AB, Webb PM, Byth K, Marsh S, McLeod H, AOCS Study Group, Harnett PR, Brown R, Defazio A, Chenevix-Trench G. ABCB1 (MDR 1) Polymorphisms and Progression-Free Survival among Women with Ovarian Cancer following Paclitaxel/Carboplatin Chemotherapy. *Clin Cancer Res*. 2008;14:5594-5601.
321. Fukami T, Nakajima M, Maruichi T, Takahashi S, Takamiya M, Aoki Y, McLeod HL, Yokoi T. Structure and characterization of human carboxylesterase 1A1, 1A2, and 1A3 genes. *Pharmacogenet Genomics*. 2008;18:911-920.
322. Yu J, Freimuth RR, Culverhouse R, Marsh S, Watson MA, McLeod HL. DNA methylotype

- analysis in colorectal cancer. *Oncol Rep.* 2008;20:921-927.
323. Chau CH, Rixe O, McLeod H, Figg WD. Validation of analytic methods for biomarkers used in drug development. *Clin Cancer Res.* 2008;14:5967-5976.
  324. Ferrell PB, McLeod HL. Carbamazepine, HLA-B\*1502 and risk of Stevens-Johnson syndrome and toxic epidermal necrolysis: US FDA recommendations. *Pharmacogenomics.* 2008;9:1543-1546.
  325. Yu J, Miller R, Zhang W, Sharma M, Holtschlag V, Watson MA, McLeod HL. Copy-number analysis of topoisomerase and thymidylate synthase genes in frozen and FFPE DNAs of colorectal cancers. *Pharmacogenomics.* 2008;9:1459-1466.
  326. Cresci S, Jones PG, Sucharov CC, Marsh S, Lanfear DE, Garsa A, Courtois M, Weinheimer CJ, Wu J, Province MA, Kelly DP, McLeod HL, Spertus JA. Interaction between PPARA genotype and beta-blocker treatment influences clinical outcomes following acute coronary syndromes. *Pharmacogenomics.* 2008;9:1403-1417.
  327. Deverka PA, McLeod HL. Harnessing economic drivers for successful clinical implementation of pharmacogenetic testing. *Clin Pharmacol Ther.* 2008;84:191-193.
  328. Tan BR, Brenner WS, Picus J, Marsh S, Gao F, Fournier C, Fracasso PM, James J, Yen-Revollo JL, McLeod HL. Phase I study of biweekly oxaliplatin, gemcitabine and capecitabine in patients with advanced upper gastrointestinal malignancies. *Ann Oncol.* 2008;19:1742-1748.
  329. McLeod HL, Hoskins JM. Personalized drug therapy: the era of pharmacogenomics. *American Gastroenterological Association Perspectives April/May 2007*
  330. Li L, Yu M, Jason RD, Shen C, Azzouz F, McLeod HL, Borges-Gonzales S, Nguyen A, Skaar T, Desta Z, Sweeney CJ, Flockhart DA. A mixture model approach in gene-gene and gene-environmental interactions for binary phenotypes. *J Biopharm Stat.* 2008;18:1150-1177.
  331. Peters EJ, McLeod HL. Ability of whole-genome SNP arrays to capture 'must have' pharmacogenomic variants. *Pharmacogenomics.* 2008;9:1573-1577.
  332. Yen-Revollo JL, Auman JT, McLeod HL. Race does not explain genetic heterogeneity in pharmacogenomic pathways. *Pharmacogenomics.* 2008;9:1639-1645.
  333. Auman JT, McLeod HL. Applications of genomic tools to colorectal cancer therapeutics. *Curr Opin Mol Ther.* 2008;10:548-554.
  334. Sanoff HK, McLeod HL. Predictive factors for response and toxicity in chemotherapy: *Pharmacogenomics. Semin Colon & Rectal Surgery* 2008;19:226-230.
  335. McWhinney SR, Goldberg RM, McLeod HL. Platinum neurotoxicity pharmacogenetics. *Mol Cancer Res* 2009;8:10-16.
  336. Crowley JJ, Sullivan PF, McLeod HL. Pharmacogenomic genome-wide association studies: lessons learned thus far. *Pharmacogenomics.* 2009;10:161-163.
  337. Gurwitz D, McLeod HL. Genome-wide association studies: powerful tools for improving

- drug safety and efficacy. *Pharmacogenomics*. 2009;10:157-159.
338. Bhushan S, McLeod H, Walko CM. Role of Pharmacogenetics as Predictive Biomarkers of Response and/or Toxicity in the Treatment of Colorectal Cancer. *Clin Colorectal Cancer*. 2009;8:15-21.
339. International Warfarin Pharmacogenetics Consortium. Estimation of the warfarin dose with clinical and pharmacogenetic data. *N Engl J Med*. 2009;360:753-764.
340. Walko CM, McLeod H. Pharmacogenomic progress in individualized dosing of key drugs for cancer patients. *Nat Clin Pract Oncol*. 2009;6:153-162.
341. Wideroff L, Phillips KA, Randhawa G, Ambs A, Armstrong K, Bennett CL, Brown ML, Donaldson MS, Follen M, Goldie SJ, Hiatt RA, Khoury MJ, Lewis G, McLeod HL, Piper M, Powell I, Schrag D, Schulman KA, Scott J. A health services research agenda for cellular, molecular and genomic technologies in cancer care. *Public Health Genomics*. 2009;12:233-244.
342. Peters EJ, Kraja AT, Lin SJ, Yen-Revollo JL, Marsh S, Province MA, McLeod HL. Association of thymidylate synthase variants with 5-fluorouracil cytotoxicity. *Pharmacogenet Genomics*. 2009;19:399-401.
343. Langley MR, Booker JK, Evans JP, McLeod HL, Weck KE. Validation of Clinical Testing for Warfarin Sensitivity. Comparison of CYP2C9-VKORC1 Genotyping Assays and Warfarin-Dosing Algorithms. *J Mol Diagn*. 2009;11:316-325.
344. Gresham V, McLeod HL. Genomics: Applications in mechanism elucidation. *Adv Drug Deliv Rev*. 2009;61:369-374.
345. Lee SC, Xu X, Lim YW, Iau P, Sukri N, Lim SE, Yap HL, Yeo WL, Tan P, Tan SH, McLeod H, Goh BC. Chemotherapy-induced tumor gene expression changes in human breast cancers. *Pharmacogenet Genomics*. 2009;19:181-192.
346. Hoskins JM, McLeod HL. UGT1A and Irinotecan Toxicity: Keeping It in the Family. *J Clin Oncol*. 2009;27:2419-2421.
347. Hoskins JM, Roederer MW, McLeod HL. Nevirapine hypersensitivity reaction: will the real HLA please stand up? *Curr Opin Mol Ther*. 2009;11:226-230.
348. Kuremsky JG, Tepper JE, McLeod HL. Biomarkers for Response to Neoadjuvant Chemoradiation for Rectal Cancer. *Int J Radiat Oncol Biol Phys*. 2009;74:673-688.
349. Gandara DR, Kawaguchi T, Crowley J, Moon J, Furuse K, Kawahara M, Teramukai S, Ohe Y, Kubota K, Williamson SK, Gautschi O, Lenz HJ, McLeod HL, Lara PN Jr, Coltman CA Jr, Fukuoka M, Saijo N, Fukushima M, Mack PC. Japanese-US Common-Arm Analysis of Paclitaxel Plus Carboplatin in Advanced Non-Small-Cell Lung Cancer: A Model for Assessing Population-Related Pharmacogenomics. *J Clin Oncol*. 2009;27:3540-3546.
350. Yang J, Bogni A, Schuetz EG, Ratain M, Eileen Dolan M, McLeod H, Gong L, Thorn C, Relling MV, Klein TE, Altman RB. Etoposide pathway. *Pharmacogenet Genomics* 2009;19:538-551.

351. Marsh S, McLeod H, Dolan E, Shukla SJ, Rabik CA, Gong L, Hernandez-Boussard T, Lou XJ, Klein TE, Altman RB. Platinum pathway. *Pharmacogenet Genomics*. 2009;19:563-564.
352. Jonas DE, McLeod HL. Genetic and clinical factors relating to warfarin dosing. *Trends Pharmacol Sci* 2009;30:375-386.
353. Hoskins JM, Rosner GL, Ratain MJ, McLeod HL, Innocenti F. Pharmacodynamic genes do not influence risk of neutropenia in cancer patients treated with moderately high-dose irinotecan. *Pharmacogenomics*. 2009;10:1139-1146.
354. Hoskins JM, Carey LA, McLeod HL. CYP2D6 and tamoxifen: DNA matters in breast cancer. *Nat Rev Cancer*. 2009;9:576-586.
355. McWhinney SR, McLeod HL. Using germline genotype in cancer pharmacogenetic studies. *Pharmacogenomics* 2009;10:489-493.
356. Sanoff HK, Sargent DJ, Green EM, McLeod HL, Goldberg RM. Racial differences in advanced colorectal cancer outcomes and pharmacogenetics: A subgroup analysis of a large randomized clinical trial. *J Clin Oncol* 2009;27:4109-4115. PMID: PMC2734422
357. Rossi JS, McLeod HL. The pharmacogenetics of statin therapy: when the body aches, the mind will follow. *J Am Coll Cardiol*. 2009;54:1617-1618.
358. Goldberg RM, Sargent DJ, Morton RF, Green E, Sanoff HK, McLeod H, Buckner J. NCCTG Study N9741: Leveraging Learning from an NCI Cooperative Group Phase III Trial. *Oncologist*. 2009;14:970-978.
359. Lee SC, Xu X, Chng WJ, Watson M, Lim YW, Wong CI, Iau P, Sukri N, Lim SE, Yap HL, Buhari SA, Tan P, Guo J, Chuah B, McLeod HL, Goh BC. Post-treatment tumor gene expression signatures are more predictive of treatment outcomes than baseline signatures in breast cancer. *Pharmacogenet Genomics*. 2009;19:833-842.
360. Oliveira E, Pereira R, Amorim A, McLeod H, Prata MJ. Patterns of pharmacogenetic diversity in African populations: role of ancient and recent history. *Pharmacogenomics*. 2009;10:1413-1422.
361. McLeod HL. Using patient DNA to optimize therapy in heart failure patients: a move toward perfection. *Heart Fail Rev*. 2010;15:183-185.
362. Yen-Revollo JL, Van Booven DJ, Peters EJ, Hoskins JM, Engen RM, Kannall HD, Ofori-Adjei D, McLeod HL, Marsh S. Influence of ethnicity on pharmacogenetic variation in the Ghanaian population. *Pharmacogenomics J*. 2009;9:373-379.
363. Ellis KJ, Stouffer GA, McLeod HL, Lee CR. Clopidogrel pharmacogenomics and risk of inadequate platelet inhibition: US FDA recommendations. *Pharmacogenomics*. 2009;10:1799-1817.
364. Ferder N, Eby CS, Deych E, Harris JK, Ridker PM, Milligan P, Goldhaber SZ, King CR, Giri T, McLeod HL, Glynn RJ, Gage BF. Ability of VKORC1 and CYP2C9 to predict therapeutic warfarin dose during the initial weeks of therapy. *J Thromb Haemost*. 2010;8:95-100.

365. Rakhra-Burris TK, Auman JT, Deverka P, Dressler LG, Evans JP, Goldberg RM, Havener TM, Hoskins JM, Jonas DE, Long KM, Motsinger-Reif AA, Irvin WJ, Richards KL, Roederer MW, Valgus JM, Riper M, Vernon JA, Zamboni WC, Wagner MJ, Walko CM, Weck K, Wiltshire T, McLeod HL. Institutional Profile: UNC Institute for Pharmacogenomics and Individualized Therapy: interdisciplinary research for individual care. *Pharmacogenomics*. 2010;11:13-21.
366. Zaza G, Cheok M, Krynetskaia N, Thorn C, Stocco G, Hebert JM, McLeod H, Weinshilboum RM, Relling MV, Evans WE, Klein TE, Altman RB. Thiopurine pathway. *Pharmacogenet Genomics*. 2010;20:573-574. PMID: 19952870.
367. Welsh M, Mangravite L, Medina MW, Tantisira K, Zhang W, Huang RS, McLeod H, Dolan ME. Pharmacogenomic discovery using cell-based models. *Pharmacol Rev*. 2009;61:413-429.
368. Auman JT, McLeod HL. Colorectal cancer cell lines lack the molecular heterogeneity of clinical colorectal tumors. *Clin Colorectal Cancer*. 2010;9:40-47. PMID: 20100687.
369. Deverka PA, Vernon J, McLeod HL. Economic opportunities and challenges for pharmacogenomics. *Annu Rev Pharmacol Toxicol*. 2010;50:423-437. PMID: 20055709.
370. Auman JT, McLeod HL. Now's the time to find biomarkers on purpose. *Ann Oncol*. 2010;21:193-194. PMID: 20047974.
371. Hertz DL, McLeod HL, Hoskins JM. Pharmacogenetics of breast cancer therapies. *The Breast* 2009;S3:S59-S63.
372. Oshiro C, Marsh S, McLeod H, Carrillo MW, Klein T, Altman R. Taxane Pathway. *Pharmacogenetics Genomics* 2009;19:979-983.
373. Van Booven D, Marsh S, McLeod H, Carrillo MW, Sangkuhl K, Klein TE, Altman RB. Cytochrome P450 2C9-CYP2C9. *Pharmacogenet Genomics*. 2010;20:277-281
374. Voora D, Koboldt DC, King CR, Lenzini PA, Eby CS, Porche-Sorbet R, Deych E, Crankshaw M, Milligan PE, McLeod HL, Patel SR, Cavallari LH, Ridker PM, Grice GR, Miller RD, Gage BF. A Polymorphism in the VKORC1 Regulator Calumenin Predicts Higher Warfarin Dose Requirements in African Americans. *Clin Pharmacol Ther*. 2010;87:455-451. PMID: 20200517
375. Maitland ML, Lou XJ, Ramirez J, Desai AA, Berlin DS, McLeod HL, Weichselbaum RR, Ratain MJ, Altman RB, Klein TE. Vascular endothelial growth factor pathway. *Pharmacogenet Genomics*. 2010;20:346-349. PMID: 20124951
376. Ranganathan P, McLeod H. Race and methotrexate pharmacogenetics in rheumatoid arthritis. *J Rheumatol*. 2010;37:1064 PMID: 20439524
377. Roederer MW, McLeod HL. Applying the genome to national drug formulary policy in the developing world. *Pharmacogenomics*. 2010;11:633-636. PMID: 20415551
378. Limdi NA, Wadelius M, Cavallari L, Eriksson N, Crawford DC, Lee MT, Chen CH, Motsinger-Reif A, Sagreiya H, Liu N, Wu AH, Gage BF, Jorgensen A, Pirmohamed M, Shin JG, Suarez-Kurtz G, Kimmel SE, Johnson JA, Klein TE, Wagner MJ; International

- Warfarin Pharmacogenetics Consortium. Warfarin pharmacogenetics: a single VKORC1 polymorphism is predictive of dose across 3 racial groups. *Blood*. 2010;115:3827-3834. PMID: 20203262
379. McLeod HL, Sargent DJ, Marsh S, Green EM, King CR, Fuchs CS, Ramanathan RK, Williamson SK, Findlay BP, Thibodeau SN, Grothey A, Morton RF, Goldberg RM. Pharmacogenetic Predictors of Adverse Events and Response to Chemotherapy in Metastatic Colorectal Cancer: Results From North American Gastrointestinal Intergroup Trial N9741. *J Clin Oncol*. 2010;28:3227-3233. PMID: 20530282.
380. Goldberg RM, Sargent DJ, McLeod H. Leveraging Learning From a Phase III Colorectal Cancer Clinical Trial: Outcomes, Methodology, Meta-Analysis and Pharmacogenetics. *Trans Am Clin Climatol Assoc*. 2010;121:21-33. PMID: 20697547; PMC2917134.
381. Fracasso PM, Williams KJ, Chen RC, Picus J, Ma CX, Ellis MJ, Tan BR, Pluard TJ, Adkins DR, Naughton MJ, Rader JS, Arquette MA, Fleshman JW, Creekmore AN, Goodner SA, Wright LP, Guo Z, Ryan CE, Tao Y, Soares EM, Cai SR, Lin L, Dancey J, Rudek MA, McLeod HL, Piwnica-Worms H. A Phase 1 study of UCN-01 in combination with irinotecan in patients with resistant solid tumor malignancies. *Cancer Chemother Pharmacol*. 2011;67:1225-1237 PMID: 20694727.
382. Thorn CF, Marsh S, Carrillo MW, McLeod HL, Klein TE, Altman RB. PharmGKB summary: fluoropyrimidine pathways. *Pharmacogenet Genomics*. 2011; 21:237-242. PMID: 20601926.
383. Cresci S, Huss JM, Beitelshes AL, Jones PG, Minton MR, Dorn GW, Kelly DP, Spertus JA, McLeod HL. A PPAR $\alpha$  Promoter Variant Impairs ERR-Dependent Transactivation and Decreases Mortality after Acute Coronary Ischemia in Patients with Diabetes. *PLoS One*. 2010;5: e12584. PMID: 20838448.
384. Lee SY, McLeod HL. Pharmacogenetic tests in cancer chemotherapy: what physicians should know for clinical application. *J Pathol*. 2010;223:15-27 PMID: 20818641.
385. Watson RG, Muhale F, Thorne LB, Yu J, O'Neil BH, Hoskins JM, Meyers MO, Deal AM, Ibrahim JG, Hudson ML, Walko CM, McLeod HL, Auman JT. Amplification of thymidylate synthetase in metastatic colorectal cancer patients pretreated with 5-fluorouracil-based chemotherapy. *Eur J Cancer*. 2010;46:3358-3364 PMID: 20727737.
386. Thomas F, Hoskins JM, Dvorak A, Tan BR, McLeod HL. Detection of the G>C SNP and rare mutations in the 28-bp repeat of TYMS using gel-based capillary electrophoresis. *Pharmacogenomics*. 2010;11:1751-1756. PMID: 21142919.
387. Warner A, Nelsen A, Bhatena A, Fitzgerald K, Gilardi S, Kelso E, Knoppers B, McLeod HL, Nelson R, Uyama Y, Weisman J, Rudman A. Enabling pharmacogenomics clinical trials through sampling. *Pharmacogenomics*. 2010;11:1649-1654. PMID: 21142907.
388. Freedman AN, Sansbury LB, Figg WD, Potosky AL, Weiss Smith SR, Khoury MJ, Nelson SA, Weinshilboum RM, Ratain MJ, McLeod HL, Epstein RS, Ginsburg GS, Schilsky RL, Liu G, Flockhart DA, Ulrich CM, Davis RL, Lesko LJ, Zineh I, Randhawa G, Ambrosone CB, Relling MV, Rothman N, Xie H, Spitz MR, Ballard-Barbash R, Doroshow JH, Minasian LM. Cancer pharmacogenomics and pharmacoepidemiology: setting a research

- agenda to accelerate translation. *J Natl Cancer Inst.* 2010;102:1698-1705. PMID: 20944079; Central PMCID: PMC2982809.
389. Schipani A, Siccardi M, D'Avolio A, Baietto L, Simiele M, Bonora S, Rodríguez Novoa S, Cuenca L, Soriano V, Chierakul N, Saguenwong N, Chuchuttaworn C, Hoskins JM, Dvorak AM, McLeod HL, Davies G, Khoo S, Back DJ, Di Perri G, Owen A. Population pharmacokinetic modeling of the association between 63396C->T pregnane X receptor polymorphism and unboosted atazanavir clearance. *Antimicrob Agents Chemother.* 2010;54:5242-5250. PMID: 20921307; Central PMCID: PMC2981241.
390. Crowley JJ, Adkins DE, Pratt AL, Quackenbush CR, van den Oord EJ, Moy SS, Wilhelmsen KC, Cooper TB, Bogue MA, McLeod HL, Sullivan PF. Antipsychotic-induced vacuous chewing movements and extrapyramidal side effects are highly heritable in mice. *Pharmacogenomics J.* 2012;12:147-155 PMID: 21079646.
391. Thorn CF, Oshiro C, Marsh S, Hernandez-Boussard T, McLeod H, Klein TE, Altman RB. Doxorubicin pathways: pharmacodynamics and adverse effects. *Pharmacogenet Genomics.* 2011;21:440-446. PMID: 21048526.
392. Beitelshes AL, Johnson JA, Hames ML, Gong Y, Cooper-Dehoff RM, Wu J, Cresci S, Ma CX, Pepine CJ, Province MA, Spertus JA, McLeod HL. Aromatase Gene Polymorphisms Are Associated with Survival among Patients with Cardiovascular Disease in a Sex-Specific Manner. *PLoS One.* 2010 Dec 10;5(12):e15180. PMID: 21170323.
393. Wang L, McLeod HL. Weinshilboum RM. Genomics and Drug response. *N Engl J Med* 2011;364:1144-1153.
394. Tan BR, Thomas F, Myerson RJ, Zehnbauser B, Trinkaus K, Malyapa RS, Mutch MG, Abbey EE, Alyasiry A, Fleshman JW, McLeod HL. Thymidylate synthase genotype-directed neoadjuvant chemoradiation for patients with rectal adenocarcinoma. *J Clin Oncol.* 2011 Mar 1;29(7):875-83. PMID: 21205745.
395. Padgett L, O'Connor S, Roederer M, McLeod H, Ferreri S. Pharmacogenomics in a community pharmacy: ACT now. *J Am Pharm Assoc* 2011;51:189-193. PMID: 21382809.
396. He Y, Hoskins JM, McLeod HL. Copy number variants in pharmacogenetic genes. *Trends Mol Med.* 2011;17:244-251 PMID: 21388883.
397. Carvalho L, Yu J, Schwartsmann G, McLeod HL, Fleshman JW. RNA expression of the molecular signature genes for metastasis in colorectal cancer. *Oncol Rep.* 2011;25:1321-1327 PMID: 21380492.
398. Watson RG, McLeod HL. Pharmacogenomic contribution to drug response. *Cancer J.* 2011;17:80-88. PMID: 21427551.
399. Mikkelsen TS, Thorn CF, Yang JJ, Ulrich CM, French D, Zaza G, Dunnenberger HM, Marsh S, McLeod HL, Giacomini K, Becker ML, Gaedigk R, Leeder JS, Kager L, Relling MV, Evans W, Klein TE, Altman RB. PharmGKB summary: methotrexate pathway. *Pharmacogenet Genomics.* 2011;21:679-686 PMID: 21317831.
400. Kolesar JM, Dahlberg SE, Marsh S, McLeod HL, Johnson DH, Keller SM, Schiller JH. The NQO1\*2/\*2 polymorphism is associated with poor overall survival in patients following



- resection of stages II and IIIa non-small cell lung cancer. *Oncol Rep.* 2011;25:1765-1772. PMID: 21479364.
401. Watson VG, Motsinger-Reif A, Hardison NE, Peters EJ, Havener TM, Everitt L, Auman JT, Comins DL, McLeod HL. Identification and Replication of Loci Involved in Camptothecin-Induced Cytotoxicity Using CEPH Pedigrees. *PLoS One.* 2011;6:e17561. PMID: 21573211; Central PMCID: PMC3088663.
  402. Roederer MW, Sanchez-Giron F, Kalideen K, Kudzi W, McLeod HL, Zhang W. Pharmacogenetics and rational drug use around the world. *Pharmacogenomics.* 2011;12:897-905. PMID: 21692619.
  403. McLeod HL, Isaacs KL. Preemptive pharmacogenetic testing: insufficient data equal unsatisfactory guidance. *Ann Intern Med.* 2011;154:842-843. PMID: 21690601.
  404. McLeod HL, Tortora G, Rowett LH, Vermorken JB. Found in translation: Annals of Oncology and translational research. *Ann Oncol.* 2011;22:1698-1699. PMID: 21795324.
  405. Irvin WJ Jr, Walko CM, Weck KE, Ibrahim JG, Chiu WK, Dees EC, Moore SG, Olajide OA, Graham ML, Canale ST, Raab RE, Corso SW, Peppercorn JM, Anderson SM, Friedman KJ, Ogburn ET, Desta Z, Flockhart DA, McLeod HL, Evans JP, Carey LA. Genotype-Guided Tamoxifen Dosing Increases Active Metabolite Exposure in Women With Reduced CYP2D6 Metabolism: A Multicenter Study. *J Clin Oncol.* 2011;29:3232-3239 PMID: 21768473.
  406. Won HH, Kim SR, Bang OY, Lee SC, Huh W, Ko JW, Kim HG, McLeod HL, O'Connell TM, Kim JW, Lee SY. Differentially expressed genes in human peripheral blood as potential markers for statin response. *J Mol Med (Berl).* 2011;90:201-211. PMID: 21947165.
  407. Hutz JE, Manning WA, Province MA, McLeod HL. Genomewide Analysis of Inherited Variation Associated with Phosphorylation of PI3K/AKT/mTOR Signaling Proteins. *PLoS One.* 2011;6(9):e24873. PMID: 21949775.
  408. Watson VG, Hardison NE, Harris T, Motsinger-Reif A, McLeod HL. Genomic Profiling in CEPH Cell Lines Distinguishes between the Camptothecins and Indenoisoquinolines. *Mol Cancer Ther.* 2011;10:1839-1845. PMID: 21750217; PMC3191307.
  409. Peters EJ, Motsinger-Reif A, Havener TM, Everitt L, Hardison NE, Watson VG, Wagner M, Richards KL, Province MA, McLeod HL. Pharmacogenomic characterization of US FDA-approved cytotoxic drugs. *Pharmacogenomics.* 2011;12:1407-1415. PMID: 22008047.
  410. Thomas F, Motsinger-Reif AA, Hoskins JM, Dvorak A, Roy S, Alyasiri A, Myerson RJ, Fleshman JW, Tan BR, McLeod HL. Methylenetetrahydrofolate reductase genetic polymorphisms and toxicity to 5-FU-based chemoradiation in rectal cancer. *Br J Cancer.* 2011;105:1654-1662. PMID: 22045187.
  411. Roederer MW, McLeod H, Juliano JJ. Can pharmacogenomics improve malaria drug policy? *Bull World Health Organ.* 2011;89:838-845. PMID: 22084530; PMC3209725.
  412. Brown C, Havener TM, Everitt L, McLeod H and Motsinger-Reif AA A comparison of association methods for cytotoxicity mapping in pharmacogenomics. *Front. Gene.* 2011;2:86. PMID: 22303380

413. Talameh JA, McLeod HL. PON1 Q192R and Clopidogrel: A Case of the Winner's Curse or Inadequate Replication? *Clin Pharmacol Ther.* 2011;90:771-774. PMID: 22089342.
414. Brown KC, Hosseinipour MC, Hoskins JM, Thirumaran RK, Tien HC, Weigel R, Tauzie J, Shumba I, Lamba JK, Schuetz EG, McLeod HL, Kashuba AD, Corbett AH. Exploration of CYP450 and drug transporter genotypes and correlations with nevirapine exposure in Malawians. *Pharmacogenomics.* 2012;13:113-121. PMID: 22111602.
415. Innocenti F, Owzar K, Cox NJ, Evans P, Kubo M, Zembutsu H, Jiang C, Hollis D, Mushiroda T, Li L, Friedman P, Wang L, Glubb DM, Hurwitz HI, Giacomini KM, McLeod HL, Goldberg RM, Schlisky R, Kindler HL, Nakamura Y, Ratain MJ. A genome-wide association study of overall survival in pancreatic cancer patients treated with gemcitabine in CALGB 80303. *Clin Cancer Res.* 2012;18:577-584. PMID: 22142827.
416. Roederer MW, Van Riper M, Valgus J, Knafl G, McLeod H. Knowledge, attitudes and education of pharmacists regarding pharmacogenetic testing. *Pers Med* 2012;9:19–27.
417. Crowley JJ, Kim Y, Szatkiewicz JP, Pratt AL, Quackenbush CR, Adkins DE, van den Oord E, Bogue MA, Yang H, Wang W, Threadgill DW, de Villena FP, McLeod HL, Sullivan PF. Genome-wide association mapping of loci for antipsychotic-induced extrapyramidal symptoms in mice. *Mamm Genome.* 2012;23:322-335 PMID: 22207321.
418. Kaldate RR, Haregewoin A, Grier CE, Hamilton SA, McLeod HL. Modeling the 5-Fluorouracil Area Under the Curve Versus Dose Relationship to Develop a Pharmacokinetic Dosing Algorithm for Colorectal Cancer Patients Receiving FOLFOX6. *Oncologist.* 2012;17:296-302 PMID: 22382460.
419. He YJ, Shapero MH, McLeod HL. Novel tagging SNP rs1495741 and 2-SNPs (rs1041983 and rs1801280) yield a high prediction of the NAT2 genotype in HapMap samples. *Pharmacogenet Genomics.* 2012;22:322-324. PMID: 22414877; PMC3306057.
420. Talameh JA, McLeod HL, Adams KF Jr, Patterson JH. Genetic tailoring of pharmacotherapy in heart failure: optimize the old, while we wait for something new. *J Card Fail.* 2012;18:338-349. PMID: 22464776.
421. Walko CM, McLeod H. Use of CYP2D6 genotyping in practice: tamoxifen dose adjustment. *Pharmacogenomics.* 2012;13:691-697. PMID: 22515611.
422. Hertz DL, Motsinger-Reif AA, Drobish A, Winham SJ, McLeod HL, Carey LA, Dees EC. CYP2C8\*3 predicts benefit/risk profile in breast cancer patients receiving neoadjuvant paclitaxel. *Breast Cancer Res Treat.* 2012;134:401-410. PMID: 22527101.
423. Hertz DL, McLeod HL, Irvin WJ Jr. Tamoxifen and CYP2D6: A Contradiction of Data. *Oncologist.* 2012;17:620-630. PMID: 22531359.
424. Wilke RA, Ramsey LB, Johnson SG, Maxwell WD, McLeod HL, Voora D, Krauss RM, Roden DM, Feng Q, Cooper-Dehoff RM, Gong L, Klein TE, Wadelius M, Niemi M. The Clinical Pharmacogenomics Implementation Consortium: CPIC Guideline for SLCO1B1 and Simvastatin-Induced Myopathy. *Clin Pharmacol Ther.* 2012;92:112-117. PMID:22617227.
425. O'Connor SK, Ferreri SP, Michaels NM, Greco AJ, Viera AJ, Faruki H, McLeod HL,

- Roederer MW. Exploratory planning and implementation of a pilot pharmacogenetic program in a community pharmacy. *Pharmacogenomics*. 2012;13:955-962. PMID: 22676199.
426. McLeod HL, He Y. Pharmacokinetics for the prescriber. *Medicine* 2012;40;357-361.
427. Nakamura Y, Ratain MJ, Cox NJ, McLeod HL, Kroetz DL, Flockhart DA. Re: CYP2D6 Genotype and Tamoxifen Response in Postmenopausal Women With Endocrine-Responsive Breast Cancer: The Breast International Group 1-98 Trial. *J Natl Cancer Inst*. 2012;104:1264. PMID: 22851270.
428. Hoskins JM, Ong PS, Keku TO, Galanko JA, Martin CF, Coleman CA, Wolfe M, Sandler RS, McLeod HL. Association of eleven common, low-penetrance colorectal cancer susceptibility genetic variants at six risk Loci with clinical outcome. *PLoS One*. 2012;7:e41954. PMID: 22848671; PMC3407042.
429. Baldwin RM, Owzar K, Zembutsu H, Chhibber A, Kubo M, Jiang C, Watson D, Eclov RJ, Mefford J, McLeod HL, Friedman PN, Hudis CA, Winer EP, Jorgenson E, Witte JS, Shulman L, Nakamura Y, Ratain MJ, Kroetz D. A Genome-Wide Association Study Identifies Novel Loci for Paclitaxel-Induced Sensory Peripheral Neuropathy in CALGB 40101. *Clin Cancer Res*. 2012 ;18:5099-5109 PMID: 22843789.
430. Kraus WE, Haga SB, McLeod HL, Staples J, Ginsburg GS. Is personalized medicine ready for prime time? *Personalized Medicine* 2012;9:475–478.
431. He YJ, Misher AD, Irvin W, Motsinger-Reif A, McLeod HL, Hoskins JM. Assessing the utility of whole genome amplified DNA as a template for DMET Plus array. *Clin Chem Lab Med*. 2012;50:1329-1334. PMID: 22868796.
432. He YJ, McLeod HL. Ready when you are: easing into preemptive pharmacogenetics. *Clin Pharmacol Ther*. 2012;92:412-414. PMID: 22992667.
433. Brown CC, Havener TM, Medina MW, Auman JT, Mangravite LM, Krauss RM, McLeod HL, Motsinger-Reif AA. A genome-wide association analysis of temozolomide response using lymphoblastoid cell lines shows a clinically relevant association with MGMT. *Pharmacogenet Genomics*. 2012;22:796-802. PMID: 23047291.
434. O'Connor SK, Ferreri SP, Michaels NM, Chater RW, Viera AJ, Faruki H, McLeod HL, Roederer M. Making pharmacogenetic testing a reality in a community pharmacy. *J Am Pharm Assoc* 2012;52:e259-265. PMID: 23188068
435. Lewis LD, Miller AA, Owzar K, Bies RR, Markova S, Jiang C, Kroetz DL, Egorin MJ, McLeod HL, Ratain MJ; for the Alliance for Clinical Trials in Oncology. The relationship of polymorphisms in ABCC2 and SLCO1B3 with docetaxel pharmacokinetics and neutropenia: CALGB 60805. *Pharmacogenet Genomics*. 2013;23:29-33. PMID: 23188068
436. Brown CC, Havener TM, Medina MW, Krauss RM, McLeod HL, Motsinger-Reif AA. Multivariate methods and software for association mapping in dose-response genome-wide association studies. *BioData Min*. 2012;5:21. PMID: 23234571.
437. Jensen BC, McLeod HL. Pharmacogenomics as a risk mitigation strategy for chemotherapeutic cardiotoxicity. *Pharmacogenomics*. 2013;14:205-213. PMID: 23327580.

438. Patel JN, Mandock K, McLeod HL. Clinically relevant cancer biomarkers and pharmacogenetic assays. *J Oncol Pharm Pract*. 2014 20: 65-72. PMID: 23353710.
439. He FZ, McLeod HL, Zhang W. Current pharmacogenomic studies on hERG potassium channels. *Trends Mol Med*. 2013; 19:227-238 PMID: 23369369.
440. Small GW, McLeod HL, Richards KL. Analysis of innate and acquired resistance to anti-CD20 antibodies in malignant and nonmalignant B cells. *PeerJ*. 2013;1:e31. PMID: 23638367; Central PMCID: PMC3628892.
441. Gurwitz D, McLeod HL. Genome-wide studies in pharmacogenomics: harnessing the power of extreme phenotypes. *Pharmacogenomics*. 2013;14:337-339. PMID: 23438876.
442. Hertz DL, Roy S, Motsinger-Reif AA, Drobish A, Clark LS, McLeod HL, Carey LA, Dees EC. CYP2C8\*3 increases risk of neuropathy in breast cancer patients treated with paclitaxel. *Ann Oncol*. 2013;24:1472-1478 PMID: 23413280.
443. Appell ML, Berg J, Duley J, Evans WE, Kennedy MA, Lennard L, Marinaki T, McLeod HL, Relling MV, Schaeffeler E, Schwab M, Weinshilboum R, Yeoh AE, McDonagh EM, Hebert JM, Klein TE, Coulthard SA. Nomenclature for alleles of the thiopurine methyltransferase gene. *Pharmacogenet Genomics*. 2013;23:242-248. PMID: 23407052.
444. Trammel M, Roederer M, Patel J, McLeod H. Does Pharmacogenomics Account for Variability in Control of Acute Chemotherapy-Induced Nausea and Vomiting with 5-Hydroxytryptamine Type 3 Receptor Antagonists? *Curr Oncol Rep*. 2013;15:276-285 PMID: 23512709.
445. McLeod HL. Cancer pharmacogenomics: early promise, but concerted effort needed. *Science*. 2013;339:1563-1566. PMID: 23539596.
446. Krens SD, McLeod HL, Hertz DL. Pharmacogenetics, enzyme probes and therapeutic drug monitoring as potential tools for individualizing taxane therapy. *Pharmacogenomics*. 2013;14:555-574. PMID: 23556452.
447. Shahin MH, Cavallari LH, Perera MA, Khalifa SI, Misher A, Langae T, Patel S, Perry K, Meltzer DO, McLeod HL, Johnson JA. VKORC1 Asp36Tyr geographic distribution and its impact on warfarin dose requirements in Egyptians. *Thromb Haemost*. 2013;109:1045-1050 PMID: 23571513.
448. Smith CG, Naven M, Harris R, Colley J, West H, Li N, Liu Y, Adams R, Maughan TS, Nichols L, Kaplan R, Wagner MJ, McLeod HL, Cheadle JP. Exome Re-Sequencing Identifies Potential Tumor Suppressor Genes that Predispose to Colorectal Cancer. *Hum Mutat*. 2013;34:1026-1034 PMID: 23585368.
449. Rudek MA, Connolly RM, Hoskins JM, Garrett-Mayer E, Jeter SC, Armstrong DK, Fetting JH, Stearns V, Wright LA, Zhao M, Watkins SP Jr, McLeod HL, Davidson NE, Wolff AC. Fixed-dose capecitabine is feasible: results from a pharmacokinetic and pharmacogenetic study in metastatic breast cancer. *Breast Cancer Res Treat* 2013;139:135-143 PMID: 23588952.

450. Hertz DL, McLeod HL. Use of pharmacogenetics for predicting cancer prognosis and treatment exposure, response and toxicity. *J Hum Genet.* 2013;58:346-352 PMID: 23677053.
451. Patel JN, McLeod HL, Innocenti F. Implications of Genome-Wide Association Studies in Cancer Therapeutics. *Br J Clin Pharmacol.* 2013;76:370-380 PMID: 23701381.
452. McCarthy JJ, McLeod HL, Ginsburg GS. Genomic medicine: a decade of successes, challenges, and opportunities. *Sci Transl Med.* 2013;5:189sr4 PMID: 23761042.
453. Caudle KE, Thorn CF, Klein TE, Swen JJ, McLeod HL, Diasio RB, Schwab M. Clinical Pharmacogenetics Implementation Consortium Guidelines for Dihydropyrimidine Dehydrogenase Genotype and Fluoropyrimidine Dosing. *Clin Pharmacol Ther.* 2013;94:640-645 PMID: 23988873.
454. McWhinney-Glass S, Winham SJ, Hertz DL, Yen Revollo J, Paul J, He Y, Brown R, Motsinger-Reif AA, McLeod HL. Cumulative Genetic Risk Predicts Platinum/Taxane-Induced Neurotoxicity. *Clin Cancer Res.* 2013;19:5769-5776 PMID: 23963862.
455. Patel JN, Fuchs CS, Owzar K, Chen Z, McLeod HL. Gastric cancer pharmacogenetics: progress or old tripe? *Pharmacogenomics.* 2013;14:1053-1064. PMID: 23837480.
456. Ramos E, Doumatey A, Elkahlon AG, Shriner D, Huang H, Chen G, Zhou J, McLeod H, Adeyemo A, Rotimi CN. Pharmacogenomics, ancestry and clinical decision making for global populations. *Pharmacogenomics J.* 2013;14:217-222 PMID: 23835662.
457. Jonas DE, Evans JP, McLeod HL, Brode S, Lange LA, Young ML, Shilliday BB, Bardsley MM, Swinton-Jenkins NJ, Weck KE. Impact of genotype-guided dosing on anticoagulation visits for adults starting warfarin: a randomized controlled trial. *Pharmacogenomics.* 2013;14:1593-1603. PubMed PMID: 24088130.
458. Brown CC, Havener TM, Medina MW, Jack JR, Krauss RM, McLeod HL, Motsinger-Reif AA. Genome-wide association and pharmacological profiling of 29 anticancer agents using lymphoblastoid cell lines. *Pharmacogenomics.* 2014;15:137-146. PMID: 24444404.
459. Brewer NT, Defrank JT, Chiu WK, Ibrahim JG, Walko CM, Rubin P, Olajide OA, Moore SG, Raab RE, Carrizosa DR, Corso SW, Schwartz G, Peppercorn JM, McLeod HL, Carey LA, Irvin WJ Jr. Patients' understanding of how genotype variation affects benefits of tamoxifen therapy for breast cancer. *Public Health Genomics* 2014;17:43-47. PMID: 24457521.
460. Chhibber A, Mefford J, Stahl EA, Pendergrass SA, Baldwin RM, Owzar K, Li M, Winer EP, Hudis CA, Zembutsu H, Kubo M, Nakamura Y, McLeod HL, Ratain MJ, Shulman LN, Ritchie MD, Plenge RM, Witte JS, Kroetz DL. Polygenic inheritance of paclitaxel-induced sensory peripheral neuropathy driven by axon outgrowth gene sets in CALGB 40101 (Alliance). *Pharmacogenomics J.* 2014;14:336-342. PMID: 24513692.
461. Ramos EM, Din-Lovinescu C, Berg JS, Brooks LD, Duncanson A, Dunn M, Good P, Hubbard TJ, Jarvik GP, O'Donnell C, Sherry ST, Aronson N, Biesecker LG, Blumberg B, Calonge N, Colhoun HM, Epstein RS, Flicek P, Gordon ES, Green ED, Green RC, Hurler M, Kawamoto K, Knaus W, Ledbetter DH, Levy HP, Lyon E, Maglott D, McLeod HL,

- Rahman N, Randhawa G, Wicklund C, Manolio TA, Chisholm RL, Williams MS. Characterizing genetic variants for clinical action. *Am J Med Genet C Semin Med Genet* 2014;166:93-104. PMID: 24634402.
462. Ferreri SP, Greco AJ, Michaels NM, O'Connor SK, Chater RW, Viera AJ, Faruki H, McLeod HL, Roederer MW. Implementation of a pharmacogenomics service in a community pharmacy. *J Am Pharm Assoc.* 2014;54:172-180. PMID: 24632932.
463. Rosmarin D, Palles C, Church D, Domingo E, Jones A, Johnstone E, Wang H, Love S, Julier P, Scudder C, Nicholson G, Gonzalez-Neira A, Martin M, Sargent D, Green E, McLeod H, Zanger UM, Schwab M, Braun M, Seymour M, Thompson L, Lacas B, Boige V, Ribelles N, Afzal S, Enghusen H, Astrup Jensen S, Etienne-Grimaldi MC, Milano G, Wadelius M, Glimelius B, Garmo H, Gusella M, Lecomte T, Laurent-Puig P, Martinez-Balibrea E, Sharma R, Garcia-Foncillas J, Kleibl Z, Morel A, Pignon JP, Midgley R, Kerr D, Tomlinson I. Genetic Markers of Toxicity From Capecitabine and Other Fluorouracil-Based Regimens: Investigation in the QUASAR2 Study, Systematic Review, and Meta-Analysis. *J Clin Oncol.* 2014;32:1031-1039 PMID: 24590654.
464. Sanoff HK, Renfro LA, Poonen P, Ambadwar P, Sargent DJ, Goldberg RM, McLeod H. Germline variation in colorectal risk Loci does not influence treatment effect or survival in metastatic colorectal cancer. *PLoS One.* 2014;9:e94727. PMID: 24727911; PMC3984266.
465. Hertz DL, Roy S, Jack J, Motsinger-Reif AA, Drobish A, Clark LS, Carey LA, Dees EC, McLeod HL. Genetic heterogeneity beyond CYP2C8\*3 does not explain differential sensitivity to paclitaxel-induced neuropathy. *Breast Cancer Res Treat.* 2014;145:245-254. PMID: 24706167.
466. Shen J, Yin JY, Li XP, Liu ZQ, Wang Y, Chen J, Qu J, Xu XJ, McLeod HL, He YJ, Xia K, Jia YW, Zhou HH. The Prognostic Value of Altered eIF3a and Its Association with p27 in Non-Small Cell Lung Cancers. *PLoS One.* 2014;9:e96008 PMID: 24789280.
467. Dressler LG, Deal AM, Patel J, Markey J, Van Riper M, McLeod HL. Cancer Pharmacogenomics, adoption by oncologists and patient benefit. *Pers. Med.* 2014;11:143–153.
468. Relling MV, McDonagh EM, Chang T, Caudle KE, McLeod HL, Haidar CE, Klein T, Luzzatto L. Clinical Pharmacogenetics Implementation Consortium (CPIC) Guidelines for Rasburicase Therapy in the context of G6PD Deficiency Genotype. *Clin Pharmacol Ther.* 2014;96:169-174. PMID: 24787449.
469. Hertz DL, McLeod HL. Using pharmacogene polymorphism panels to detect germline pharmacodynamic markers in oncology. *Clin Cancer Res.* 2014;20:2530-2540. PMID: 24831276.
470. Liu MZ, McLeod HL, He FZ, Chen XP, Zhou HH, Shu Y, Zhang W. Epigenetic perspectives on cancer chemotherapy response. *Pharmacogenomics.* 2014;15:699-715. PMID: 24798726.
471. Hariani GD, Lam EJ, Havener T, Kwok PY, McLeod HL, Wagner MJ, Motsinger-Reif AA. Application of next generation sequencing to CEPH cell lines to discover variants associated with FDA approved chemotherapeutics. *BMC Res Notes.* 2014;7:360. PMID: 24924344;

PMCID: PMC4068968.

472. Ramsey LB, Johnson SG, Caudle KE, Haidar CE, Voora D, Wilke RA, Maxwell WD, McLeod HL, Krauss RM, Roden DM, Feng Q, Cooper-DeHoff RM, Gong L, Klein TE, Wadelius M, Niemi M. The Clinical Pharmacogenetics Implementation Consortium (CPIC) guideline for SLCO1B1 and simvastatin-induced myopathy: 2014 update. *Clin Pharmacol Ther.* 2014;96:423-428 PMID: 24918167.
473. Walko CM, McLeod HL. Personalizing Medicine in Geriatric Oncology. *J Clin Oncol.* 2014;32:2581-2586 PMID: 25071134.
474. Patel JN, O'Neil BH, Deal AM, Ibrahim JG, Sherrill GB, Olajide OA, Atluri PM, Inzerillo JJ, Chay CH, McLeod HL, Walko CM. A Community-Based Multicenter Trial of Pharmacokinetically Guided 5-Fluorouracil Dosing for Personalized Colorectal Cancer Therapy. *Oncologist.* 2014;19:959–965 PMID: 25117066.
475. Goff LW, Thakkar N, Du L, Chan E, Tan BR, Cardin DB, McLeod HL, Berlin JD, Zehnbauser B, Fournier C, Picus J, Wang-Gillam A, Lee W, Lockhart AC. Thymidylate Synthase Genotype-Directed Chemotherapy for Patients with Gastric and Gastroesophageal Junction Cancers. *PLoS One.* 2014;9:e107424. PMID: 25232828.
476. Patel JN, Jiang C, Hertz DL, Mulkey FA, Owzar K, Halabi S, Ratain MJ, Friedman PN, Small EJ, Carducci MA, Mahoney JF, Kelley MJ, Morris MJ, Kelly WK, McLeod HL. Bevacizumab and the risk of arterial and venous thromboembolism in patients with metastatic, castration-resistant prostate cancer treated on Cancer and Leukemia Group B (CALGB) 90401 (Alliance). *Cancer.* 2015;121:1025-1031 PMID: 25417775.
477. Bonifaz-Peña V, Contreras AV, Struchiner CJ, Roela RA, Furuya-Mazzotti TK, Chammas R, Rangel-Escareño C, Uribe-Figueroa L, Gómez-Vázquez MJ, McLeod HL, Hidalgo-Miranda A, Parra EJ, Fernández-López JC, Suarez-Kurtz G. Exploring the distribution of genetic markers of pharmacogenomics relevance in Brazilian and Mexican populations. *PLoS One.* 2014;9:e112640. PMID: 25419701.
478. McLeod HL. Precision medicine to improve the risk and benefit of cancer care: genetic factors in vincristine-related neuropathy. *JAMA.* 2015;313:803-804. PMID: 25710656.
479. Knepper TC, McLeod HL. Heritage-Specific Mechanisms for Cancer Adverse Reactions: One Gene Does Not Explain the World. *J Clin Oncol.* 2015;33:1230-1231. PMID: 25753435.
480. van Rooij T, Roederer M, Wareham T, van Rooij I, McLeod HL & Marsh S. Fast and frugal trees: translating population-based pharmacogenomics to medication prioritization. *Per. Med.* 2015;12:117–128
481. Marsh S, King CR, Van Booven DJ, Revollo JY, Gilman RH, McLeod HL. Pharmacogenomic assessment of Mexican and Peruvian populations. *Pharmacogenomics.* 2015;16:441-448. PMID: 25916516.
482. Hertz DL, Snavely AC, McLeod HL, Walko CM, Ibrahim JG, Anderson S, Weck KE, Magrinat G, Olajide O, Moore S, Raab R, Carrizosa DR, Corso S, Schwartz G, Peppercorn JM, Evans JP, Jones DR, Desta Z, Flockhart DA, Carey LA, Irvin WJ Jr. In Vivo

- Assessment of the Metabolic Activity of CYP2D6 Diplotypes and Alleles. *Br J Clin Pharmacol.* 2015;80:1122-1130. PMID: 25907378.
483. Rehm HL, Berg JS, Brooks LD, Bustamante CD, Evans JP, Landrum MJ, Ledbetter DH, Maglott DR, Martin CL, Nussbaum RL, Plon SE, Ramos EM, Sherry ST, Watson MS; ClinGen Consortium. ClinGen--the Clinical Genome Resource. *N Engl J Med.* 2015;372:2235-2242. PMID: 26014595; PMCID: PMC4474187.
484. Manolio TA, Abramowicz M, Al-Mulla F, Anderson W, Balling R, Berger AC, Bleyl S, Chakravarti A, Chantratita W, Chisholm RL, W Dissanayake VH, Dunn M, Dzau VJ, Han BG, Hubbard T, Kolbe A, Korf B, Kubo M, Lasko P, Leego E, Mahasirimongkol S, Majumdar PP, Matthijs G, McLeod HL, Metspalu A, Meulien P, Miyano S, Naparstek Y, O'Rourke PP, Patrinos GP, Rehm HL, Relling MV, Rennert G, Rodriguez LL, Roden DM, Shuldiner AR, Sinha S, Tan P, Ulfendahl M, Ward R, Williams MS, L Wong JE, Green ED, Ginsburg GS. Global implementation of genomic medicine: We are not alone. *Sci Transl Med.* 2015;7:290ps13. PMID: 26041702.
485. He Y, Hoskins JM, Clark S, Campbell NH, Wagner K, Motsinger-Reif AA, McLeod HL. Accuracy of SNPs to predict risk of HLA alleles associated with drug-induced hypersensitivity events across racial groups. *Pharmacogenomics.* 2015;6:817-824. PMID: 26083016.
486. Dressler LG, Deal AM, Owzar K, Watson D, Donahue K, Friedman PN, Ratain MJ, McLeod HL. Participation in Cancer Pharmacogenomic Studies: A Study of 8456 Patients Registered to Clinical Trials in the Cancer and Leukemia Group B (Alliance). *J Natl Cancer Inst.* 2015;107:(10): djv188. PMID: 26160883.
487. He YJ, Winham SJ, Hoskins JM, Glass S, Paul J, Brown R, Motsinger-Reif A, McLeod HL. Carboplatin/taxane-induced gastrointestinal toxicity: a pharmacogenomics study on the SCOTROC1 trial. *Pharmacogenomics J.* 2016;16:243-248 PMID: 26194361.
488. Nakano M, Mohri T, Fukami T, Takamiya M, Aoki Y, McLeod HL, Nakajima M. SNPs in CYP2E1 3'-UTR affect the regulation of CYP2E1 by miR-570. *Drug Metab Dispos.* 2015;43:1450-1457 PMID: 26199425.
489. Mason NT, Bell GC, Quilitz RE, Greene JN, McLeod HL. Budget impact analysis of CYP2C19-guided voriconazole prophylaxis in AML. *J Antimicrob Chemother.* 2015;70:3124-3126 PMID: 26233624.
490. Jack J, Havener TM, McLeod HL, Motsinger-Reif AA, Foster M. Evaluating the role of admixture in cancer therapy via in vitro drug response and multivariate genome-wide associations. *Pharmacogenomics.* 2015;16:1451-1463. PMID: 26314407.
491. Jittikoon J, Mahasirimongkol S, Charoenyingwattana A, Chaikledkaew U, Tragulpiankit P, Mangmool S, Inunchot W, Somboonyosdes C, Wichukchinda N, Sawanpanyalert P, He Y, McLeod HL, Chantratita W. Comparison of genetic variation in drug ADME-related genes in Thais with Caucasian, African and Asian HapMap populations. *J Hum Genet.* 2016;61:119-127 PMID: 26423926.
492. Alvarellos ML, McDonagh EM, Patel S, McLeod HL, Altman RB, Klein TE. PharmGKB summary: succinylcholine pathway, pharmacokinetics/pharmacodynamics. *Pharmacogenet*



- Genomics. 2015;25:622-630 PMID: 26398623.
493. Bell GC, Donovan KA, McLeod HL. Clinical Implications of Opioid Pharmacogenomics in Patients With Cancer. *Cancer Control*. 2015;22:426-432. PMID: 26678969.
494. He RH, He YJ, Tang YJ, Zhou HH, McLeod HL, Liu J. The potential anticancer effect of beta-blockers and the genetic variations involved in the interindividual difference. *Pharmacogenomics*. 2016;17:74-79. PMID: 26652861.
495. Hertz DL, McLeod HL. Integrated Patient and Tumor Genetic Testing for Individualized Cancer Therapy. *Clin Pharmacol Ther*. 2016;99:143-146 PMID: 26537014.
496. Kalman LV, Agúndez JA, Appell ML, Black JL, Bell GC, Boukouvala S, Bruckner C, Bruford E, Bruckner C, Caudle K, Coulthard S, Daly AK, Del Tredici AL, den Dunnen JT, Drozda K, Everts R, Flockhart D, Freimuth R, Gaedigk A, Hachad H, Hartshorne T, Ingelman-Sundberg M, Klein TE, Lauschke VM, Maglott DR, McLeod HL, McMillin GA, Meyer UA, Müller DJ, Nickerson DA, Oetting WS, Pacanowski M, Pratt VM, Relling MV, Roberts A, Rubinstein WS, Sangkuhl K, Schwab M, Scott SA, Sim SC, Thirumaran RK, Toji LH, Tyndale R, van Schaik RH, Whirl-Carrillo M, Yeo KJ, Zanger UM. Pharmacogenetic Allele Nomenclature: International Workgroup Recommendations for Test Result Reporting. *Clin Pharmacol Ther*. 2016;99:172-185 PMID: 26479518.
497. García-González X, Cabaleiro T, Herrero MJ, McLeod H, López-Fernández LA. Clinical implementation of pharmacogenetics. *Drug Metabol Personal Ther*. 2016;31:9-16 PMID: 26751902.
498. Jackson JN, Long KM, He Y, Motsinger-Reif AA, McLeod HL, Jack J. A comparison of DMET Plus microarray and genome-wide technologies by assessing population substructure. *Pharmacogenet Genomics*. 2016;26:147-153 PMID: 26731477.
499. Jia FF, Tan ZR, McLeod HL, Chen Y, Ou-Yang DS, Zhou HH. Effects of quercetin on pharmacokinetics of cefprozil in Chinese-Han male volunteers. *Xenobiotica*. 2016;46:896-900 PMID: 26928207
500. Hertz DL, Owzar K, Lessans S, Wing C, Jiang C, Kelly WK, Patel JN, Halabi S, Furukawa Y, Wheeler HE, Sibley A, Lassiter C, Weisman LS, Watson D, Krens SD, Mulkey F, Renn CL, Small EJ, Febbo PG, Shterev I, Kroetz D, Friedman PN, Mahoney JF, Carducci MA, Kelley MJ, Nakamura Y, Kubo M, Dorsey SG, Dolan ME, Morris MJ, Ratain MJ, McLeod HL. Pharmacogenetic Discovery in CALGB (Alliance) 90401 and Mechanistic Validation of a VAC14 Polymorphism That Increases Risk of Docetaxel-Induced Neuropathy. *Clin Cancer Res*. 2016;22:4890-4900 PMID: 27143689.
501. He Y, McLeod HL. Pharmacokinetics for the prescriber. *Medicine* 2016;44:407-411.
502. Hertz DL, Deal A, Ibrahim JG, Walko CM, Weck KE, Anderson S, Magrinat G, Olajide O, Moore S, Raab R, Carrizosa DR, Corso S, Schwartz G, Graham M, Peppercorn JM, Jones DR, Desta Z, Flockhart DA, Evans JP, McLeod HL, Carey LA, Irvin WJ Jr. Tamoxifen Dose Escalation in Patients With Diminished CYP2D6 Activity Normalizes Endoxifen Concentrations Without Increasing Toxicity. *Oncologist* 2016;21:795-803. PMID: 27226358.

503. Gillis NK, McLeod HL. The pharmacogenomics of drug resistance to protein kinase inhibitors. *Drug Resist Updat*. 2016;28:28-42. PMID: 27620953; PMC5022787.
504. Zhou C, Chen X, Zeng W, Peng C, Huang G, Li X, Ouyang Z, Luo Y, Xu X, Xu B, Wang W, He R, Zhang X, Zhang L, Liu J, Knepper TC, He Y, McLeod HL. Propranolol induced G0/G1/S phase arrest and apoptosis in melanoma cells via AKT/MAPK pathway. *Oncotarget*. 2016;7:68314-68327 PMID: 27582542.
505. Ritter DI, Roychowdhury S, Roy A, Rao S, Landrum MJ, Sonkin D, Shekar M, Davis CF, Hart RK, Micheel C, Weaver M, Van Allen EM, Parsons DW, McLeod HL, Watson MS, Plon SE, Kulkarni S, Madhavan S; ClinGen Somatic Cancer Working Group.. Somatic cancer variant curation and harmonization through consensus minimum variant level data. *Genome Med*. 2016;8:117. PMID: 27814769; PMC5095986.
506. Miranda-Massari JR, Rodriguez-Gomez JR, Gonzalez MJ, Cidre C, Duconge J, Marin H, Grace K, McLeod HL. Metabolic Correction in Patients Sample with Diabetes: Clinical Outcomes and Costs Reductions. *Int J Diabetes Res* 2016;5;92-101.
507. Xu BB, He YJ, Wang WL, Zhou CF, Xie SC, Shen DY, Howard LM. Research progress of immune checkpoint therapy for cancer. *Chinese Journal of Clinical Pharmacology and Therapeutics*, 2016;21:218-224.
508. Moriyama B, Obeng AO, Barbarino J, Penzak SR, Henning SA, Scott SA, Agúndez JA, Wingard JR, McLeod HL, Klein TE, Cross S, Caudle KE, Walsh TJ. Clinical Pharmacogenetics Implementation Consortium (CPIC®) Guideline for CYP2C19 and Voriconazole Therapy. *Clin Pharmacol Ther*. 2017;102:45-51 PMID: 27981572.
509. Gillis NK, Ball M, Zhang Q, Ma Z, Zhao Y, Yoder SJ, Balasis ME, Mesa TE, Sallman DA, Lancet JE, Komrokji RS, List AF, McLeod HL, Alsina M, Baz R, Shain KH, Rollison DE, Padron E. Clonal haemopoiesis and therapy-related myeloid malignancies in elderly patients: a proof-of-concept, case-control study. *Lancet Oncol*. 2017;18:112-121 PMID: 27927582.
510. Scott JG, Berglund A, Schell MJ, Mihaylov I, Fulp WJ, Yue B, Welsh E, Caudell JJ, Ahmed K, Strom TS, Mellon E, Venkat P, Johnstone P, Foekens J, Lee J, Moros E, Dalton WS, Eschrich SA, McLeod H, Harrison LB, Torres-Roca JF. A genome-based model for adjusting radiotherapy dose (GARD): a retrospective, cohort-based study. *Lancet Oncol*. 2017;18:202-211 PMID: 27993569.
511. Jia F, Teer JK, Knepper TC, Lee JK, Zhou HH, He YJ, McLeod HL. Discordance of Somatic Mutations Between Asian and Caucasian Patient Populations with Gastric Cancer. *Mol Diagn Ther*. 2017;21:179-185. PMID: 28039579.
512. Knepper TC, Bell GC, Kevin Hicks J, Padron E, Teer JK, Vo TT, Gillis NK, Mason NT, McLeod HL, Walko CM. Key Lessons Learned from Moffitt's Molecular Tumor Board: The Clinical Genomics Action Committee Experience. *Oncologist*. 2017;22:144-151 PMID: 28179575.
513. Walko CM, Aubert RE, La-Beck NM, Clore G, Herrera V, Kourlas H, Epstein RS, McLeod HL. Pharmacoepidemiology of Clinically Relevant Hypothyroidism and Hypertension from Sunitinib and Sorafenib. *Oncologist*. 2017;22:208-212 PMID: 28167571.
514. Jim HS, McLeod HL. American Society of Clinical Oncology Value Framework:

- Importance of Accurate Toxicity Data. *J Clin Oncol*. 2017;35:1133-1134. PMID: 28165908.
515. Vela CM, Knepper TC, Gillis NK, Walko CM, McLeod HL, Hicks JK. Quantitation of Targetable Somatic Mutations among Patients Evaluated by a Personalized Medicine Clinical Service: Considerations for Off-Label Drug Use. *Pharmacotherapy*. 2017;37:1043-1051. PMID: 28235141.
516. Manolio TA, Fowler DM, Starita LM, Haendel MA, MacArthur DG, Biesecker LG, Worthey E, Chisholm RL, Green ED, Jacob HJ, McLeod HL, Roden D, Rodriguez LL, Williams MS, Cooper GM, Cox NJ, Herman GE, Kingsmore S, Lo C, Lutz C, MacRae CA, Nussbaum RL, Ordovas JM, Ramos EM, Robinson PN, Rubinstein WS, Seidman C, Stranger BE, Wang H, Westerfield M, Bult C. Bedside Back to Bench: Building Bridges between Basic and Clinical Genomic Research. *Cell*. 2017;169:6-12. PMID: 28340351.
517. Knepper TC, Freeman ML, Gibney GT, McLeod HL, Russell JS. Clinical Response to Pazopanib in a Patient With KDR-Mutated Metastatic Basal Cell Carcinoma. *JAMA Dermatol*. 2017;153:607-609 PMID: 28384659.
518. Marvel SW, Rotroff DM, Wagner MJ, Buse JB, Havener TM, McLeod HL, Motsinger-Reif AA; The ACCORD/ACCORDion Investigators.. Common and rare genetic markers of lipid variation in subjects with type 2 diabetes from the ACCORD clinical trial. *PeerJ*. 2017 May 2;5:e3187. doi: 10.7717/peerj.3187. PMID: 28480134; PMCID: PMC5417062.
519. Gillis NK, Hicks JK, Bell GC, Daly AJ, Kanetsky PA, McLeod HL. Incidence and triggers of Stevens-Johnson syndrome and toxic epidermal necrolysis in a large cancer patient cohort. *J Invest Dermatol*. 2017;137:2021-2023. PMID: 28549953.
520. Shen H, Zhong M, Wang W, Liao P, Yin X, Rotroff D, Knepper TC, McLeod HL, Zhou C, Xie S, Li W, Xu B, He Y. EBV infection and MSI status significantly influence the clinical outcomes of gastric cancer patients. *Clin Chim Acta*. 2017;471:216-221 PMID: 28601671.
521. Reed DR, Oshrine B, Pratt C, Fridgen O, Elstner C, Wilson L, Soliman H, Lee MC, McLeod HL, Shah B, Donovan KA, Pabbathi S, Turney M, Binitie O, Healy C, Nieder M, Shaw PH, Galligan A, Letson GD, Stern M, Quinn GP, Davies S. Sink or Collaborate: How the Immersive Model Has Helped Address Typical Adolescent and Young Adult Barriers at a Single Institution and Kept the Adolescent and Young Adult Program Afloat. *J Adolesc Young Adult Oncol*. 2017;6:503-511.PMID: 28777007.
522. Wang W, Liu J, He Y, McLeod HL. Prospect for immune checkpoint blockade: dynamic and comprehensive monitorings pave the way. *Pharmacogenomics*. 2017;18:1299-1304. PMID: 28745931.
523. Marcath LA, Deal AM, Van Wieren E, Danko W, Walko CM, Ibrahim JG, Weck KE, Jones DR, Desta Z, McLeod HL, Carey LA, Irvin WJ Jr, Hertz DL. Comprehensive assessment of cytochromes P450 and transporter genetics with endoxifen concentration during tamoxifen treatment. *Pharmacogenet Genomics*. 2017;27:402-409. PMID: 28877533.
524. Rotroff DM, Pijut SS, Marvel SW, Jack JR, Havener TM, Pujol A, Schluter A, Graf GA, Ginsberg HN, Shah HS, Gao H, Morieri ML, Doria A, Mychalekyi JC, McLeod HL, Buse JB, Wagner MJ, Motsinger-Reif AA; ACCORD/ACCORDion Investigators. Genetic variants in HSD17B3, SMAD3, and IPO11 impact circulating lipids in response to

- fenofibrate in individuals with type 2 diabetes. *Clin Pharmacol Ther.* 2018;103:712-721. PMID: 28736931.
525. Manolio TA, Hutter CM, Avigan M, Cibotti R, Davis RL, Denny JC, Grenade L, Wheatley LM, Carrington MN, Chantratita W, Chung WH, Dalton AD, Hung SI, Lee MTM, Leeder JS, Lertora JLL, Mahasirimongkol S, McLeod HL, Mockenhaupt M, Pacanowski M, Phillips EJ, Pinheiro S, Pirmohamed M, Sung C, Suwankesawong W, Trepanier L, Tumminia SJ, Veenstra D, Yuliwulandari R, Shear NH. Research Directions in Genetic Predispositions to Stevens-Johnson Syndrome / Toxic Epidermal Necrolysis. *Clin Pharmacol Ther.* 2018;103:390-394. PMID: 29105735.
526. Wang WL, Liao P, Xu BB, Zhou CF, Xie SC, Shen DY, He YJ, Howard LM. Research progress of personalized medicine for immune checkpoint blockades. *Chinese Journal of Clinical Pharmacology and Therapeutics*, 2017;22:228-232.
527. Huang J, He Y, McLeod HL, Xie Y, Xiao D, Hu H, Chen P, Shen L, Zeng S, Yin X, Ge J, Li L, Tang L, Ma J, Chen Z. miR-302b inhibits tumorigenesis by targeting EphA2 via Wnt/  $\beta$ -catenin/EMT signaling cascade in gastric cancer. *BMC Cancer.* 2017;17:886. PMID: 29273006.
528. Gillis NK, Rotroff DM, Mesa TE, Yao J, Chen Z, Carulli MA, Yoder SJ, Walko CM, Teer JK, McLeod HL. Tumor exome sequencing and copy number alterations reveal potential predictors of intrinsic resistance to multi-targeted tyrosine kinase inhibitors. *Oncotarget.* 2017;8:115114-115127. PMID: 29383146; PMC5777758
529. Pritchard DE, Moeckel F, Villa MS, Housman LT, McCarty CA, McLeod HL. Strategies for integrating personalized medicine into healthcare practice. *Per Med.* 2017;14:141-152. PMID: 29754553.
530. Mizzi C, Dalabira E, Kumuthini J, Dzimiri N, Balogh I, Bařak N, Böhm R, Borg J, Borgiani P, Bozina N, Bruckmueller H, Burzynska B, Carracedo A, Cascorbi I, Deltas C, Dolzan V, Fenech A, Grech G, Kasiulevicius V, Kádaři L, Kućinskas V, Khusnutdinova E, Loukas YL, Macek M Jr, Makukh H, Mathijssen R, Mitropoulos K, Mitropoulou C, Novelli G, Papantoni I, Pavlovic S, Saglio G, Setric J, Stojiljkovic M, Stubbs AP, Squassina A, Torres M, Turnovec M, van Schaik RH, Voskarides K, Wakil SM, Werk A, Del Zompo M, Zucic B, Katsila T, Lee MT, Motsinger-Rief A, McLeod HL, van der Spek PJ, Patrinos GP. A European Spectrum of Pharmacogenomic Biomarkers: Implications for Clinical Pharmacogenomics. *PLoS One.* 2016;11:e0162866. PMID: 27636550; PMCID: PMC5026342.
531. Williams GR, Deal AM, Shachar SS, Walko CM, Patel JN, O'Neil B, McLeod HL, Weinberg MS, Choi SK, Muss HB, Sanoff HK. The impact of skeletal muscle on the pharmacokinetics and toxicity of 5-fluorouracil in colorectal cancer. *Cancer Chemother Pharmacol.* 2018;81:413-417. PMID: 29159476.
532. Amstutz U, Henricks LM, Offer SM, Barbarino J, Schellens JHM, Swen JJ, Klein TE, McLeod HL, Caudle KE, Diasio RB, Schwab M. Clinical Pharmacogenetics Implementation Consortium (CPIC) Guideline for Dihydropyrimidine Dehydrogenase Genotype and Fluoropyrimidine Dosing: 2017 Update. *Clin Pharmacol Ther.* 2018;103:210-216. PMID: 29152729.

533. Jack J, Small GW, Brown CC, Havener TM, McLeod HL, Motsinger-Reif AA, Richards KL. Gene expression and linkage analysis implicate CBLB as a mediator of rituximab resistance. *Pharmacogenomics J*. 2018;18:467-473. PMID: 29205205.
534. Xie S, Ma W, Guo Q, Liu J, Li W, McLeod HL, He Y. The pharmacogenetics of medications used in general anesthesia. *Pharmacogenomics*. 2018;19:285-298. PMID: 29318929; PMC5741943.
535. Goetz MP, Sangkuhl K, Guchelaar HJ, Schwab M, Province M, Whirl-Carrillo M, Symmans WF, McLeod HL, Ratain MJ, Zembutsu H, Gaedigk A, van Schaik RH, Ingle JN, Caudle KE, Klein TE. Clinical Pharmacogenetics Implementation Consortium (CPIC) Guideline for CYP2D6 and Tamoxifen Therapy. *Clin Pharmacol Ther*. 2018;103:770-777 PMID: 29385237.
536. Volpi S, Bult C, Chisholm RL, Deverka PA, Ginsburg GS, Jacob HJ, Kasapi M, McLeod HL, Roden DM, Williams MS, Green ED, Lyman Rodriguez L, Aronson S, Cavallari LH, Denny JC, Dressler L, Johnson JA, Klein TE, Steven Leeder J, Piquette-Miller M, Perera M, Rasmussen-Torvik LJ, Rehm HL, Ritchie MD, Skaar TC, Wagle N, Weinshilboum R, Weitzel KW, Wildin R, Wilson J, Manolio TA, Relling MV. Research directions in the clinical implementation of pharmacogenomics – An Overview of US programs and projects. *Clin Pharmacol Ther*. 2018;103:778-786 PMID: 29460415.
537. Puri S, Hyland KA, Weiss KC, Bell GC, Gray JE, Kim R, Lin HY, Hoogland AI, Gonzalez BD, Nelson AM, Kinney AY, Fischer SM, Li D, Jacobsen PB, McLeod HL, Jim HSL. Prediction of chemotherapy-induced nausea and vomiting from patient-reported and genetic risk factors. *Support Care Cancer*. 2018;26:2911-2918. PMID: 29546524.
538. Mosley SA, Kevin Hicks J, Portman DG, Donovan KA, Gopalan P, Schmit J, Starr J, Silver N, Gong Y, Langae T, Clare-Salzler M, Starostik P, Chang YD, Rajasekhara S, Smith JE, Soares HP, George TJ Jr, McLeod HL, Cavallari LH. Design and rationale for the precision medicine guided treatment for cancer pain pragmatic clinical trial. *Contemp Clin Trials*. 2018;68:7-13. PMID: 29535047.
539. Wang W, Wang K, Chen Z, Chen L, Guo W, Liao P, Rotroff D, Knepper TC, Liu Z, Zhang W, McLeod HL, He Y. Immunoclassification characterized by CD8 and PD-L1 expression is associated with the clinical outcome of gastric cancer patients. *Oncotarget*. 2018;9:12164-12173. PMID: 29552300; PMCID: PMC5844736.
540. He Y, Seminario-Vidal L, McLeod HL. Avoidance of Severe Cutaneous Adverse Drug Events as a First Step in Precision Neurology. *JAMA Neurol*. 2018;75:793-795. PMID: 29610896.
541. Patel JN, Wiebe LA, Dunnenberger HM, McLeod HL. Value of Supportive Care Pharmacogenomics in Oncology Practice. *Oncologist*. 2018;23:956-964 PMID: 29622698.
542. Rotroff DM, Yee SW, Zhou K, Marvel SW, Shah HS, Jack JR, Havener TM, Hedderson MM, Kubo M, Herman MA, Gao H, Mychaleckyi JC, McLeod HL, Doria A, Giacomini KM, Pearson ER, Wagner MJ, Buse JB, Motsinger-Reif AA; MetGen Investigators and the ACCORD/ACCORDion Investigators. Genetic Variants in CPA6 and PRPF31 are Associated with Variation in Response to Metformin in Individuals with Type 2 Diabetes. *Diabetes*. 2018;67:1428-1440. PMID: 29650774.

543. Knepper TC, McLeod HL. When will clinical trials finally reflect diversity? *Nature*. 2018;557:157-159. PMID: 29743700.
544. Li M, Mulkey F, Jiang C, O'Neill BH, Schneider BP, Shen F, Friedman PN, Momozawa Y, Kubo M, Niedzwiecki D, Hochster HS, Lenz HJ, Atkins JN, Rugo HS, Halabi S, Kelly WK, McLeod HL, Innocenti F, Ratain MJ, Venook A, Owzar K, Kroetz D. Identification of a Genomic Region Between SLC29A1 and HSP90AB1 Associated with Risk of Bevacizumab-Induced Hypertension: CALGB 80405 (Alliance). *Clin Cancer Res*. 2018;24:4734-4744 PMID: 29871907.
545. Liao P, Jia F, Teer JK, Knepper TC, Zhou HH, He YJ, McLeod HL. Geographic variation in molecular subtype for gastric adenocarcinoma. *Gut*. 2019;68:1340-1341. PMID: 29960981.
546. Innocenti F, Owzar K, Jiang C, Etheridge AS, Gordân R, Sibley AB, Mulkey F, Niedzwiecki D, Glubb D, Neel N, Talamonti MS, Bentrem DJ, Seiser E, Yeh JJ, Van Loon K, McLeod H, Ratain MJ, Kindler HL, Venook AP, Nakamura Y, Kubo M, Petersen GM, Bamlet WR, McWilliams RR. The vitamin D receptor gene as a determinant of survival in pancreatic cancer patients: Genomic analysis and experimental validation. *PLoS One* 2018;13:e0202272. PMID: 30107003.
547. Xie S, Ma W, Shen M, Guo Q, Wang E, Huang C, Wang Y, Chen X, Liu Z, Zhang W, McLeod HL, He Y. Clinical and pharmacogenetics associated with recovery time from general anesthesia. *Pharmacogenomics* 2018;19:1111-1123 PMID: 30136624.
548. Tang L, Hu H, He Y, McLeod HL, Xiao D, Chen P, Shen L, Zeng S, Yin X, Ge J, Li L, Ma J, Chen Z, Huang J. The relationship between miR-302b and EphA2 and their clinical significance in gastric cancer. *J Cancer* 2018;9:3109-3116. PMID: 30210634; PMCID: PMC6134821.
549. Ramamoorthy A, Knepper TC, Merenda C, Mendoza M, McLeod HL, Bull J, Zhang L, Pacanowski M. Demographic Composition of Select Oncologic New Molecular Entities Approved by the FDA Between 2008 and 2017. *Clin Pharmacol Ther*. 2018;104:940-948. PMID: 30218447.
550. Rashkin SR, Chua KC, Ho C, Mulkey F, Jiang C, Mushiroda T, Kubo M, Friedman PN, Rugo HS, McLeod HL, Ratain MJ, Castillos F, Naughton M, Overmoyer B, Toppmeyer D, Witte JS, Owzar K, Kroetz DL. A Pharmacogenetic Prediction Model of Progression-Free Survival in Breast Cancer using Genome-Wide Genotyping Data from CALGB 40502 (Alliance). *Clin Pharmacol Ther*. 2019;105: 738-745 PMID: 30260474.
551. Liao P, Li W, Liu RZ, Teer JK, Xu BB, Zhang W, Li X, McLeod HL, He YJ. Genome-scale analysis identifies SERPINE1 and SPARC as diagnostic and prognostic biomarkers in gastric cancer. *Onco Targets Ther*. 2018;11:6969-6980.
552. Innocenti F, Jiang C, Sibley AB, Etheridge AS, Hatch AJ, Denning S, Niedzwiecki D, Shterev ID, Lin J, Furukawa Y, Kubo M, Kindler HL, Auman JT, Venook AP, Hurwitz HI, McLeod HL, Ratain MJ, Gordan R, Nixon AB, Owzar K. Genetic variation determines VEGF-A plasma levels in cancer patients. *Sci Rep*. 2018;8:16332. PMID: 30397360.
553. West H, Coffey M, Wagner MJ, McLeod HL, Colley JP, Adams RA, Fleck O, Maughan TS, Fisher D, Kaplan RS, Harris R, Cheadle JP. Role for Nucleotide Excision Repair Gene

- Variants in Oxaliplatin-Induced Peripheral Neuropathy. *JCO Precision Oncology* 2018 2:1, 1-18 PO.18.00090.
554. Naghavi AO, Yang GQ, Latifi K, Gillies R, McLeod H, Harrison LB. The Future of Radiation Oncology in Soft Tissue Sarcoma. *Cancer Control* 2018;25:1-12. PMCID: PMC6291881.
555. Xie WY, He RH, Zhang J, He YJ, Wan Z, Zhou CF, Tang YJ, Li Z, McLeod HL, Liu J.  $\beta$ -blockers inhibit the viability of breast cancer cells by regulating the ERK/COX-2 signaling pathway and the drug response is affected by ADRB2 single-nucleotide polymorphisms. *Oncol Rep.* 2019;41:341-350. PMID: 30542705.
556. Dorsey SG, Kleckner IR, Barton D, Mustian K, O'Mara A, St Germain D, Cavaletti G, Danhauer SC, Hershman D, Hohmann AG, Hoke A, Hopkins JO, Kelly KP, Loprinzi CL, McLeod HL, Mohile S, Paice J, Rowland JH, Salvemini D, Segal RA, Lavoie Smith E, McCaskill Stevens W, Janelsins MC. NCI Clinical Trials Planning Meeting for prevention and treatment of chemotherapy-induced peripheral neuropathy. *J Natl Cancer Inst.* 2019;111 531–537. PMID: 30715378.
557. Innocenti F, Jiang C, Sibley AB, Denning S, Etheridge AS, Watson D, Niedzwiecki D, Hatch AJ, Hurwitz HI, Nixon AB, Furukawa Y, Kubo M, Crona DJ, Kindler HL, McLeod HL, Ratain MJ, Owzar K. An initial genetic analysis of gemcitabine-induced high-grade neutropenia in pancreatic cancer patients CALGB 80303 (Alliance). *Pharmacogenet Genomics.* 2019;29:123-131. PMID: 30889042.
558. Knepper TC, Montesion M, Russell JS, Sokol ES, Frampton GM, Miller VA, Albacker LA, McLeod HL, Eroglu Z, Khushalani NI, Sondak VK, Messina JL, Schell MJ, DeCaprio JA, Tsai KY, Brohl AS. The Genomic Landscape of Merkel Cell Carcinoma and Clinicogenomic Biomarkers of Response to Immune Checkpoint Inhibitor Therapy. *Clin Cancer Res.* 2019;25:5961-5971. PMID: 31399473; PMCID: PMC6774882.
559. Roden DM, McLeod HL, Relling MV, Williams MS, Mensah GA, Peterson JF, Van Driest SL. Pharmacogenomics. *Lancet.* 2019;394(10197):521-532. PMID: 31395440; PMCID: PMC6707519.
560. Manolio TA, Rowley R, Williams MS, Roden D, Ginsburg GS, Bult C, Chisholm RL, Deverka PA, McLeod HL, Mensah GA, Relling MV, Rodriguez LL, Tamburro C, Green ED. Opportunities, resources, and techniques for implementing genomics in clinical care. *Lancet.* 2019;394:511-520. PMID: 31395439; PMCID: PMC6699751.
561. Hicks JK, McLeod HL. Probabilistic medicine: a pre-emptive approach is needed for cancer therapeutic risk mitigation. *Biomark Med.* 2019;13:987-990. PMID: 31385527.
562. Fradley MG, Gliksman M, Emole J, Viganego F, Rhea I, Welter-Frost A, Armanious M, Lee DH, Walko C, Shah B, Chavez JC, McLeod H, Pinilla-Ibarz J, Schabath MB. Rates and Risk of Atrial Arrhythmias in Patients Treated With Ibrutinib Compared With Cytotoxic Chemotherapy. *Am J Cardiol.* 2019;124:539-544. PMID: 31208701.
563. Yuan C, Renfro L, Ambadwar PB, Ou FS, McLeod HL, Innocenti F, Meyerhardt JA, Wolpin BM, Goldberg RM, Grothey A, Fuchs CS, Ng K. Influence of genetic variation in the vitamin D pathway on plasma 25-hydroxyvitamin D(3) levels and survival among patients with metastatic colorectal cancer. *Cancer Causes Control.* 2019;30:757-765. PMID: 31104167; PMCID: PMC6639016.

564. Roell KR, Havener TM, Reif DM, Jack J, McLeod HL, Wiltshire T, Motsinger-Reif AA. Synergistic Chemotherapy Drug Response Is a Genetic Trait in Lymphoblastoid Cell Lines. *Front Genet.* 2019;10:829. PMID: 31681399; PMCID: PMC6804467.
565. Manolio TA, Bult CJ, Chisholm RL, Deverka PA, Ginsburg GS, Jarvik GP, McLeod HL, Mensah GA, Relling MV, Roden DM, Rowley R, Tamburro C, Williams MS, Green ED. Genomic Medicine Year in Review: 2019. *Am J Hum Genet.* 2019;105:1072-1075. PMID: 32027834.
566. Wang Y, Zhang P, Han Y, Nelson RS, McLeod HL, Tao K, Yuan Y, Zhang M, Xiang H, Zhou H. Adherence to Adjuvant Imatinib Therapy in Patients with Gastrointestinal Stromal Tumor in Clinical Practice: A Cross-Sectional Study. *Chemotherapy.* 2019;64:197-204. PMID: 31955170.
567. Nelson RS, Mehta RJ, McLeod HL, Walko CM. Prioritization of Therapy Options for a Patient With High Tumor Mutation Burden and Microsatellite Instability but No Clinical Benefit From Immunotherapy. *JCO Precision Oncology*, 2019;3:1-7. PO.19.00197
568. Patel JN, McLeod HL. Clarity Also Needed for Direct-to-Consumer Pharmacogenetic Tests. *J Clin Oncol.* 2020;38:283-284. PMID: 31751161.
569. Berry DK, Wang X, Michalski ST, Kang HC, Yang S, Creelan BC, McLeod HL, Hicks JK. Clinical Cohort Analysis of Germline EGFR T790M Demonstrates Penetrance Across Ethnicities and Races, Sexes, and Ages. *JCO Precision Oncology* 2020;4:170-175.
570. McLeod HL, Mariam A, Schveder KA, Rotroff DM. Assessment of Adverse Events and Their Ability to Discriminate Response to Anti-PD-1/PD-L1 Antibody Immunotherapy. *J Clin Oncol.* 2020;38:103-104. PMID: 31675248.
571. Hicks JK, Quilitz RE, Komrokji RS, Kubal TE, Lancet JE, Pasikhova Y, Qin D, So W, Caceres G, Kelly K, Salchert YS, Shahbazian K, Abbas-Aghababazadeh F, Fridley BL, Velez AP, McLeod HL, Greene JN. Prospective CYP2C19-Guided Voriconazole Prophylaxis in Patients With Neutropenic Acute Myeloid Leukemia Reduces the Incidence of Subtherapeutic Antifungal Plasma Concentrations. *Clin Pharmacol Ther.* 2020;107:563-557 PMID: 31549389.
572. McLeod HL, He Y. Pharmacokinetics for the prescriber. *Medicine (UK)* 2020;48:433-438.
573. Liao P, Song K, Zhu Z, Liu Z, Zhang W, Li W, Hu J, Hu Q, Chen C, Chen B, McLeod HL, Pei H, Chen L, He Y. Propranolol Suppresses the Growth of Colorectal Cancer Through Simultaneously Activating Autologous CD8 + T Cells and Inhibiting Tumor AKT/MAPK Pathway. *Clin Pharmacol Ther.* 2020;108:606-615. PMID: 32418204.
574. Chua KC, Xiong C, Ho C, Mushiroda T, Jiang C, Mulkey F, Lai D, Schneider BP, Rashkin SR, Witte JS, Friedman PN, Ratain MJ, McLeod HL, Rugo HS, Shulman LN, Kubo M, Owzar K, Kroetz DL. Genome-Wide Meta-Analysis Validates a Role for S1PR1 in Microtubule Targeting Agent-Induced Sensory Peripheral Neuropathy. *Clin Pharmacol Ther.* 2020;108:625-634. PMID: 32562552.
575. Li W, Wang W, Liao P, Song K, Zhu Z, Wang K, Liu Z, Zhang W, Xie S, He Y, McLeod



- HL, Chen L. High levels of tumor-infiltrating lymphocytes showed better clinical outcomes in FOLFOX-treated gastric cancer patients. *Pharmacogenomics*. 2020;21:751-759. PMID: 32615909.
576. Akhtari FS, Havener TM, Hertz DL, Ash J, Larson A, Carey LA, McLeod HL, Motsinger-Reif AA. Race and smoking status associated with paclitaxel drug response in patient-derived lymphoblastoid cell lines. *Pharmacogenet Genomics*. 2021;31:48-52. PMID: 32941389.
577. Innocenti F, Sibley AB, Patil SA, Etheridge AS, Jiang C, Ou FS, Howell S, Plummer SJ, Casey G, Bertagnolli MM, McLeod HL, Auman JT, Blanke CD, Furukawa Y, Venook AP, Kubo M, Lenz HJ, Parker JS, Ratain MJ, Owzar K. Genomic analysis of germline variation associated with survival of colorectal cancer patients treated with chemotherapy plus biologics in CALGB/SWOG 80405 (Alliance). *Clin Cancer Res*. 2021;27:267-275. PMID: 32958699.
578. Fusco MJ, Saeed-Vafa D, Carballido EM, Boyle TA, Malafa M, Kirsten LB, Teer JK, Walko CM, McLeod HL, Hicks JK, Extermann M, Fleming JB, Knepper TC, Kim, DW. Identification of Targetable Gene Fusions and Structural Rearrangements to Foster Precision Medicine in KRAS Wild-Type Pancreatic Cancer. *JCO Precision Oncology* 2021;5:65-74. PMID: 34250383
579. Mason NT, Burkett JM, Nelson RS, Pow-Sang JM, Gatenby RA, Kubal T, Peabody JW, Letson GD, McLeod HL, Zhang J. Budget Impact of Adaptive Abiraterone Therapy for Castration-Resistant Prostate Cancer. *Am Health Drug Benefits*. 2021;14:15-20. PMID: 33841621; PMC8025923.
580. Mariam A, Miller-Atkins G, Pantalone KM, Zimmerman RS, Barnard J, Kattan MW, Shah H, McLeod HL, Doria A, Wagner MJ, Buse JB, Motsinger-Reif AA, Rotroff DM. Type 2 Diabetes Subtype Responsive to ACCORD Intensive Glycemia Treatment. *Diabetes Care*. 2021;44:1410-8. PMID: 33863751.
581. Hu Q, Liao P, Li W, Hu J, Chen C, Zhang Y, Wang Y, Chen L, Song K, Liu J, Zhang W, Li Q, McLeod HL, He Y. Clinical Use of Propranolol Reduces Biomarkers of Proliferation in Gastric Cancer. *Front Oncol*. 2021;11:628613. PMID: 33981600; PMC8108985.
582. Patel JN, Jiang C, Owzar K, Mulkey F, Luzum JA, Mamon HJ, Haller DG, Dragovich T, Alberts SR, Bjarnason G, Willet CG, Niedzwiecki D, Enzinger P, Ratain MJ, Fuchs C, McLeod HL. Pharmacogenetic study in gastric cancer patients treated with adjuvant fluorouracil/leucovorin or epirubicin/cisplatin/fluorouracil before and after chemoradiation on CALGB 80101 (Alliance). *Pharmacogenet Genomics*. 2021;39:215-220. PMID: 34149004.
583. Zhang L, McLeod HL, Liu KK, Liu WH, Huang HX, Huang YM, Sun SS, Chen XP, Chen Y, Liu FZ, Jian X. Effect of Physician-Pharmacist Participation in the Management of Ambulatory Cancer Pain Through a Digital Health Platform: Randomized Controlled Trial. *JMIR Mhealth Uhealth*. 2021;9:e24555. PMID: 34398796.
584. Akhtari FS, Green AJ, Small GW, Havener TM, House JS, Roell KR, Reif DM, McLeod HL, Wiltshire T, Motsinger-Reif AA. High-throughput screening and genome-wide

- analyses of 44 anticancer drugs in the 1000 Genomes cell lines reveals an association of the NQO1 gene with the response of multiple anticancer drugs. *PLoS Genet.* 2021;17:e1009732. PMID: 34437536.
585. Hu J, Lu R, Zhang Y, Li W, Hu Q, Chen C, Liu Z, Zhang W, Chen L, Xu R, Luo J, McLeod HL, He Y.  $\beta$ -adrenergic receptor inhibition enhances oncolytic herpes virus propagation through STAT3 activation in gastric cancer. *Cell Biosci.* 2021;11:174. PMID: 34544479.
  586. Linskey DW, Linskey DC, McLeod HL, Luzum JA. The need to shift pharmacogenetic research from candidate gene to genome-wide association studies. *Pharmacogenomics.* 2021;22:1143-1150. PMID: 34608812.
  587. Quintanilha JCF, Wang J, Sibley AB, Jiang C, Etheridge AS, Shen F, Jiang G, Mulkey F, Patel JN, Hertz DL, Dees EC, McLeod HL, Bertagnolli M, Rugo H, Kindler HL, Kelly WK, Ratain MJ, Kroetz DL, Owzar K, Schneider BP, Lin D, Innocenti F. Bevacizumab-induced hypertension and proteinuria: a genome-wide study of more than 1000 patients. *Br J Cancer.* 2022;126:265-274. PMID: 34616010.
  588. Hu J, Chen C, Lu R, Zhang Y, Wang Y, Hu Q, Li W, Wang S, Jing O, Yi H, Zhang W, Chen L, Huang W, Luo J, McLeod HL, Xu R, He Y.  $\beta$ -Adrenergic Receptor Inhibitor and Oncolytic Herpesvirus Combination Therapy Shows Enhanced Antitumoral and Antiangiogenic Effects on Colorectal Cancer. *Front Pharmacol.* 2021;12:735278. PMID: 34721024; PMC8554205.
  589. Wang, Y., Xiao, F., Chen, Y., Xiao, L.-D., Wang, L.-Y., Zhan, Y., Xiong, X.-L., Zhou, G., Liu, R., Ouyang, D.-S., Li, Z., McLeod, HL, Zhang, W., Li, Q., Liu, Z.-Q., Zhou, H.-H. and Yin, J.-Y. (2021), Analytics of the clinical implementation of pharmacogenomics testing in 12 758 individuals. *Clin. Transl. Med.* 2021;11:e586.
  590. Wang X, Han Y, Zhou H, Cao B, Zhu M, Liu C, Gao C, McLeod HL, Fang, M. Prediction of steady-state plasma concentrations of olanzapine in Chinese Han in patients based on a retrospective population pharmacokinetic model. *Tropical Journal of Pharmaceutical Research* 2021;20:2433-2441.
  591. Hulshof EC, de With M, de Man FM, Creemers GJ, Deiman BALM, Swen JJ, Houterman S, Koolen SLW, Bins S, Thijs AMJ, Laven MMJ, Hövels AM, Luelmo SAC, Houtsma D, Shulman K, McLeod HL, van Schaik RHN, Guchelaar HJ, Mathijssen RHJ, Gelderblom H, Deenen MJ. UGT1A1 genotype-guided dosing of irinotecan: A prospective safety and cost analysis in poor metaboliser patients. *Eur J Cancer.* 2022;162:148-157. PMID: 34998046.
  592. Pritchard D, Patel JN, Stephens L, McLeod HL. Comparison of FDA Table of Pharmacogenetic Associations and Clinical Pharmacogenetics Implementation Consortium guidelines. *Am J Health Syst Pharm.* 2022;79:993-1005 PMID: 35230418.
  593. Li W, Wan J, Chen C, Zhou C, Liao P, Hu Q, Hu J, Wang Y, Zhang Y, Peng C, Huang Y, Huang W, Zhang W, McLeod HL, He Y. Dissecting the role of cell signaling versus CD8<sup>+</sup> T cell modulation in propranolol antitumor activity. *J Mol Med (Berl).* 2022;100:1299-1306. PMID: 35895125.

594. Wang Y, Xiao F, Zhao Y, Mao CX, Yu LL, Wang LY, Xiao Q, Liu R, Li X, McLeod HL, Hu BW, Huang YL, Lv QL, Xie XX, Huang WH, Zhang W, Guo CX, Li JG, Yin JY. A two-stage genome-wide association study to identify novel genetic loci associated with acute radiotherapy toxicity in nasopharyngeal carcinoma. *Mol Cancer*. 2022;21:169. PMID: 35999636.
595. Gammal RS, Pirmohamed M, Somogyi AA, Morris SA, Formea CM, Elchynski AL, Oshikoya KA, McLeod HL, Haidar CE, Whirl-Carrillo M, Klein TE, Caudle KE, Relling MV. Expanded Clinical Pharmacogenetics Implementation Consortium (CPIC) Guideline for Medication Use in the Context of G6PD Genotype. *Clin Pharmacol Ther*. 2022 Epub ahead of print. PMID: 36049896.
596. Shen D, Luo J, Chen L, Ma W, Mao X, Zhang Y, Zheng J, Wang Y, Wan J, Wang S, Jing O, Yi H, Liu D, Huang W, Zhang W, Liu Z, McLeod HL, He Y. PARPi treatment enhances radiotherapy-induced ferroptosis and antitumor immune responses via the cGAS signaling pathway in colorectal cancer. *Cancer Lett*. 2022;550:215919. PMID: 36116741.
597. Walton NA, Hafen B, Graceffo S, Sutherland N, Emmerson M, Palmquist R, Formea CM, Purcell M, Heale B, Brown MA, Danford CJ, Rachamadugu SI, Person TN, Shortt KA, Christensen GB, Evans JM, Raghunath S, Johnson CP, Knight S, Le VT, Anderson JL, Van Meter M, Reading T, Haslem DS, Hansen IC, Batcher B, Barker T, Sheffield TJ, Yandava B, Taylor DP, Ranade-Kharkar P, Giauque CC, Eyring KR, Breinholt JW, Miller MR, Carter PR, Gillman JL, Gunn AW, Knowlton KU, Bonkowsky JL, Stefansson K, Nadauld LD, McLeod HL. The Development of an Infrastructure to Facilitate the Use of Whole Genome Sequencing for Population Health. *J Personalized Med*. 2022;12:1867. PMID: 36579594

#### **Invited Book Reviews:**

1. McLeod HL, Marsh S. Using the genome to improve therapeutics (book review). *Lancet* 2001;358:1559.
2. Marsh S, McLeod HL. Drugs in the post genomic era (book review). *Trends Mol Med* 2001;7:532.
3. Duhig S, McLeod HL. Pharmacogenomics: Social, Ethical, and Clinical Dimensions (book review). *Am J Health-Syst Pharm* 2004;61:414-415.

#### **Book Chapters:**

1. McLeod HL, Evans WE. Clinical pharmacokinetics and pharmacodynamics of epipodophyllotoxins. Paul Workman and Martin A Graham (eds). *Cancer Surveys: Pharmacokinetics and Cancer Chemotherapy*, Cold Spring Harbor Laboratory Press. 1993;17:253-68.
2. McLeod HL, Evans WE. Clinical pharmacodynamics of anticancer drugs. Derendorf H and Hochaus G (eds). *Handbook of pharmacokinetic/pharmacodynamic correlation*, CRC press, Boca Ratan 1995, pp389-413.
3. McLeod HL, Evans WE. Epipodophyllotoxins. Louis B Grochow and Matthew M Ames (eds). *A Clinician's Guide to Chemotherapy Pharmacokinetics and Pharmacodynamics*, Williams & Wilkins, Baltimore 1998, pp259-287.

4. McLeod HL, Milne LH, Johnston SJ. 5-Fluorouracil metabolising enzymes. Robert Brown and Ute Boger-Brown (eds). *Methods in Molecular Medicine*, Humana Press, Camden, 1999, pp111-120.
5. Newell DR, Schellens JHM, McLeod HL. The pharmacology of anticancer drugs. *Oxford Textbook of Oncology*. Robert Souhami, Ian Tannock, Peter Hohenberger and Jean-Claude Horiot (eds). Oxford University Press, Oxford, 2001, pp623-638.
6. McLeod HL, Ameyaw MM. Ethnicity and Pharmacogenomics. *Pharmacogenomics: The search for individualized therapies*. Julio Licinio and Ma-Li Wong (eds). Wiley-VCH, Weinheim, 2002, pp489-514.
7. Papageorgio C, McLeod HL. Chemotherapy: Principles and pharmacology. *The Washington Manual of Oncology*. Ramaswamy Govindan (ed). Lippincott Williams & Wilkins, 2002, pp11-49.
8. McLeod HL. Contributor, Topoisomerase inhibitors. *Oxford Handbook of Oncology*. Jim Cassidy, Donald Bissett and Roy AJ Spence (eds). Oxford University Press, 2002.
9. McLeod HL, Church R. Molecular predictors of prognosis and response to therapy in colorectal cancer. G. Giaccone, R. Schilsky and P. Sondel (eds). *Cancer Chemotherapy and Biological Response Modifiers, Annual 21*, Elsevier B.V., 2003, pp791-801.
10. McLeod HL, Papageorgio C. Chemotherapeutic Agents. *Anesthetic Pharmacology: Physiologic Principles and Clinical Practice*. Alex S. Evers and Mervyn Maze (eds). Churchill Livingstone, 2004, pp887-907.
11. Evans WE, McLeod HL. Pharmacogenomics-Drug Disposition, Drug Targets, and Side Effects. Alan E. Guttmacher, Francis S. Collins and Jeffrey Drazen (eds). *Genomic Medicine, Articles from New England Journal of Medicine*, Johns Hopkins Univ Press, 2004, pp54-69.
12. Cancer Drug Discovery and Development. *Handbook of Anticancer Pharmacokinetics and Pharmacodynamics*. William D. Figg and Howard L. McLeod (eds). Humana Press, 2004.
13. McLeod HL, Goh BC. Pharmacogenomics. *Cancer: Principles and Practice of Oncology*, 7th edition. Vincent T. DeVita, Samuel Hellman, Steven A. Rosenberg (Eds). Lippincott, Williams, and Wilkins, 2005, pp327-332.
14. McLeod HL. Epipodophyllotoxins. *Cancer Clinical Pharmacology*, Jan H.M. Schellens, Howard L. McLeod, David R. Newell (Eds). Oxford University Press, 2005, pp104-117.
15. Linder MW, Evans WE, McLeod HL. Application of pharmacogenetic principles to clinical pharmacology. *Applied Pharmacokinetics & Pharmacodynamics: Principles of Therapeutic Drug Monitoring*. Michael E. Burton, Leslie M. Shaw, Jerome J. Schentag, William E. Evans (Eds). Lippincott Williams & Wilkins, 2005, pp165-185.
16. Synold TW, McLeod HL. Pharmacogenomics. *Remington: The Science and Practice of Pharmacy*, 21<sup>st</sup> edition. Randy Hendrickson (Ed). Lippincott Williams & Wilkins, 2005, pp1230-1248.
17. Ameyaw M-M, McLeod HL. Improving the efficacy and safety of anticancer agents-the role of pharmacogenetics. *Novel Anticancer Agents: strategies for discovery and clinical testing*.

- Alex A. Adjei, John K. Buolamwini (Eds). Academic Press, 2006, pp285-298.
18. McLeod HL, Eby C, Gage B. Hematological pharmacogenetics. Pharmacogenetics. Ian P. Hall, Munir Pirmohamed (Eds). Informa Healthcare Press, 2006, pp111-128.
  19. Lim W-T, McLeod HL. Individualising cancer therapy. Cancer biotherapy: An introductory guide. Annie Young, Lewis Rowett and David Kerr (eds). Oxford University Press, 2006, pp279-301.
  20. Liu GG, Zhou W, Wang Z, McLeod HL. Incorporating molecular oncology into prognosis. Prognostic factors in cancer. Mary K. Gospodarowicz, Brian O’Sullivan, and Leslie H. Sobin (Eds). Wiley-Liss, 2006, pp79-94.
  21. Marsh S, McLeod HL. Pharmacogenomic targeting of treatment for cancer. The Lancet Treating Individuals: from randomized trials to personalized medicine. Peter M. Rothwell (Editor). Elsevier Ltd, 2007, pp.307-318.
  22. Walgren RA, McLeod HL. Pharmacogenomics. The Washington Manual of Oncology, 2<sup>nd</sup> edition. Ramaswamy Govindan (ed). Lippincott Williams & Wilkins, 2007, pp87-94.
  23. Figg WD, McLeod HL editors. Handbook of AntiCancer Pharmacokinetics and Pharmacodynamics. Humana Press, 2004. **ISBN-10: 1588291774**
  24. McLeod HL, Goh BC. Pharmacogenomics. Cancer: Principles & Practice of Oncology, 7<sup>th</sup> edition. Vincent DeVita, Samuel Hellman, Steven Rosenberg (Eds). Lippincott Williams & Wilkins, 2005, pp327-331.
  25. McLeod HL. Pharmacogenetics and pharmacogenomics. Genomics and Personalized Medicine. Geoff S. Ginsburg and Huntington F. Willard (Eds). Academic Press. 2012, pp362-371.
  26. Davies JM, McLeod HL. Prognostic markers in colon cancer. Biomarkers in oncology: Prediction and prognosis. Heinz-Josef Lenz (Ed). Springer. 2012, pp131-162.
  27. Walko CM, McLeod HL. Pharmacogenomics. Cancer: Principles and Practice of Oncology, 10<sup>th</sup> edition. Vincent T. DeVita, Theodore S. Lawrence, Steven A. Rosenberg (Eds). Wolters Kluwer, 2015, pp183-188.
  28. Hertz DL and McLeod HL. Cancer Pharmacogenomics. Reviews in Cell Biology and Molecular Medicine. Robert A. Meyers (Ed) 2015, 1:164–191.
  29. Hertz DL and McLeod HL. Cancer Pharmacogenomics. Translational Medicine Cancer. Robert A. Meyers (Ed) 2016, 2:469–496.
  30. Hicks JK and McLeod HL. Pharmacogenetics and Pharmacogenomics. Genomics and Precision Medicine: Primary Care. Sean P. David, Geoff S. Ginsburg and Huntington F. Willard (Eds). Academic Press. 2017, pp89-108.

#### **Patents (none as primary applicant)**

1. United States Patent 8,440,442. Issued May 14, 2013 Method of assaying 5-fluorouracil. Inventors: Roa; Benjamin; (Salt Lake City, UT) ; Colvin; Carrie; (Salt Lake City, UT) ;

Overfield; Michael; (Salt Lake City, UT) ; McLeod; Howard; (Chapel Hill, NC) ; Salamone; Salvatore; (Bethlehem, PA) (International patent application pending).

2. United States Patent Application 20080108712 NUCLEOTIDE SEQUENCE ASSOCIATED WITH ACUTE CORONARY SYNDROME AND MORTALITY Cresci; Sharon; (St. Louis, MO) ; McLeod; Howard L.; (Chapel Hill, NC) ; Kelly; Daniel P.; (St. Louis, MO) ; Spertus; John A.; (Kansas City, MO)

**Published Abstracts:**

Dr McLeod has over 500 published abstracts

**Invited Lectures/Presentations:**

Dr McLeod has given over 1000 invited lectures in 42 countries.