

CURRICULUM VITAE

Chunhai “Charlie” Hao, MD, PhD, FRCPC

Bicentennial Chair and Professor (tenured)
Department of Pathology and Laboratory Medicine
Adjunct Professor, Department of Neurological Surgery
Indiana University School of Medicine

Neuropathology Attending
Indiana University Health Pathology Laboratory
Indiana University Health Physicians Group
Indiana University Health (Methodist, University, North, West Hospital)
Eskenazi Health, Riley Children’s Health
Veteran Health Indiana, U.S. Department of Veteran Affairs
Indianapolis, Indiana, USA

Research Address

950 W Walnut St, IN016-Room E378
Indianapolis, IN 46202-5188

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Fax: 317-278-2018
E-mail: chunhao@iu.edu

Clinic Address

IU Health Pathology Laboratory
350 W. 11th Street, Indianapolis, IN 46202

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Fax: 317-491-6419
Email: chao@iuhealth.org

EDUCATION

1978.03 - 1982.12	MD	Jilin Medical College (Beihua University), Jilin, China
1983.01 - 1985.12	MSc	Norman Bethune University of Medical Sciences (Jilin University) Changchun, China
1986.10 - 1991.04	PhD	University of Saskatchewan, Saskatoon, Canada

PhD Dissertation (Supervisor: Dr. Sergey Fedoroff)
Origin of microglia and their regulation by astroglia, University of Saskatchewan, Canada, 1991

POSTGRADUATE TRAINING AND CERTIFICATION

Neuropathology Residency

1992.07-1997.06 FRCPC University of Western Ontario, London, Canada

Medicine/Specialty/Board Certification

1995.06.16	Licentiate of the Medical Council of Canada, Registration #: 78775
1997.07.30	Specialist Certificate in Neuropathology, Royal College of Physicians of Canada
1997.08.07	Fellow of Royal College of Physicians of Canada (FRCPC), ID #: 490962
1996.06.14	U.S. Educational Commission for Foreign Medical Graduates, ID #: 0-522-626-1

MEDICAL LICENSURE

1997.07.11 - 2007.05.12 License #: 65755, College of Physicians & Surgeons of Ontario, Canada
1997.07.01 - 2007.10. License #: 011809, College of Physicians & Surgeons of Alberta, Canada
2003.05.02 - 2015.03.31 Physician License #: 52949, Georgia Composite Medical Board, GA, USA
2013.10.13 - 2015.10.13 Specialist Certificate #: 32797, Collège des médecins du Québec, Canada
2014.08.25 – 2021.05.01 Physician License #: 4301106362, Michigan Board of Medicine, MI, USA
2017.08.11 - Physician License #: 01079059A, Indiana Professional Licensing Agency, IN
2017.09.01 - Physician License #: D84080, Maryland Board of Physicians, MD, USA

ADVANCED TRAINING AND CERTIFICATION

1987.05.01 - 05.08 International Course on Tissue Culture in Neurobiology; Univ. Saskatchewan
2004.12.08 - 12.09 Learning to be Better Teachers; Emory University
2009.04.15 - 4.28 Cold Spring Harbor Lab Course: Protein Purification & Characterization
2009.07.17 - 08.01 Cold Spring Harbor Lab Course: Proteomics
2015.02.02 - 02.03 Henry Ford Production System Lean for Healthcare Leaders

ACADEMIC AND PROFESSIONAL APPOINTMENTS

1997.08 - 2002.06 Assistant Professor
2002.07 - 2004.08 Associate Professor
Department of Laboratory Medicine and Pathology
Faculty of Medicine and Dentistry, University of Alberta

Neuropathology Attending
University Hospital
Alberta Children Hospital
Edmonton, Alberta, Canada

Member of Research and Clinical Programs
Brain Tumor Research Group
Center of Neurodegenerative Diseases
Comprehensive Epilepsy Program
Comprehensive Stroke Program

2004.09 - 2013.08 Associate Professor
Department of Pathology and Laboratory Medicine
Emory University School of Medicine

Neuropathology Attending
Emory Healthcare (Emory University Hospital, Emory Midtown Hospital)
Children's Healthcare of Atlanta at Egleston Hospital
Atlanta, Georgia

Clinical and Research Program Membership
Winship Cancer Institute
Emory Brain Tumor Board
Discovery and Development Therapeutics Program

2013.09 - 2014.12 Associate Professor, Neuropathology Attending
 Department of Pathology
 Montreal Neurological Institute and Hospital
 McGill University

Neuropathology Attending and Consultant
 McGill University Health Centre:
 Montreal General Hospital,
 Royal Victoria Hospital
 Montreal Children's Hospital

Neuropathology Consultant
 The Douglas-Bell Canada Brain Bank (neurodegenerative diseases)
 Douglas Mental Health Institute/Hospital
 Montreal, Canada

2014.12 – 2018.01 Senior Staff, Chief of Neuropathology
 Pathology and Laboratory Medicine
 Henry Ford Health System, Detroit, MI

Principle Investigator
 Henry Ford Research Institute
 Detroit, MI

2018.01 – Bicentennial Chair and Professor (tenured)
 Department of Pathology & Laboratory Medicine
 Adjunct Professor, Department of Neurological Surgery
 Co-leader of Experimental and Developmental Therapeutics program 2020-2021
 Member of Indiana University Simon Comprehensive Cancer Center

Neuropathology Attending
 Indiana University Health Physicians Group
 Indiana University Health Pathology Laboratory
 Indiana University Health
 Methodist Hospital, University Hospital, North Hospital, West Hospital
 Eskenazi Health
 Riley Children's Health
 Veteran Health Indiana, U.S. Department of Veteran Affairs
 Indianapolis, IN

MAJOR PROFESSIONAL SOCIETIES

1997 - Canadian Association of Neuropathologists (CANP)
 2001 - American Association of Neuropathologists (AANP)
 2001 - American Association of Cancer Research (AACR)
 2005 - Society of Neuro-oncology (SNO)
 2009 - American Association for the Advancement of Science (AAAS)

HONORS AND AWARDS

- 1982.12 Outstanding Graduate of Jilin Medical College, China
1986.09 - 1991.04 University of Saskatchewan Scholarship for Graduate Studies (PhD), Canada
1993.09 Morrison H. Finlayson Award at the 35th Annual Meeting, CANP
1995.09 Morrison H. Finlayson Award at the 33rd Annual Meeting, CANP

2000.07 - 2004.07 Clinical Investigator, Alberta Heritage Foundation for Medical Research, Canada
2005.07 - 2010.06 Distinguished Cancer Clinician and Scholar, Georgia Cancer Coalition, USA

NATIONAL AND INSTITUTE COMMITTEES

Grant Review Committees/Study Sections (Regional, National, and International)

- 2002 - 2004 Member, Alberta Cancer Board Scientific Committee, Alberta, Canada
2005 - 2013 Ad hoc reviewer, Cancer Care Manitoba, Canada
2005 - 2006 Member, Cancer Progression and Therapeutics Panel B, CIHR, Canada
2005 - 2006 Ad hoc reviewer, Natural Sciences & Engineering Research Council of Canada

2005 - 2006 Ad hoc reviewer, US National Science Foundation (NSF)
2009 - 2010 Ad hoc reviewer, Research Competitiveness Program, AAAS
2014 - 2015 Ad hoc reviewer, Medical Research Council's Developmental Pathway Funding Scheme, UK

2009 - 2011 Ad hoc reviewer, Cancer Molecular Pathobiology Study Section (CAMP), NCI
2017 - 2021.03 Ad hoc reviewer, Developmental Therapeutics (DT) Study Section, NCI
2020/03/26 Ad hoc reviewer, NCI Clinical and Translational R21 and Omnibus R03 Review
2021.07 - Ad hoc Reviewer, the ZRG1 OTC1 B-60 Special Emphasis panel, NCI

2022.07- 2026.06 Member, Institutional Training and Education Study Section (F), NCI

Manuscript Review (in alphabetical order of the journals):

- | | |
|---|---|
| <i>Apoptosis</i> | <i>Cell Death and Differentiation</i> |
| <i>BBA – Molecular Cell Research</i> | <i>Cellular and Molecular Life Sciences</i> |
| <i>BBA – Molecular Basis of Disease</i> | <i>Clinical Cancer Research</i> |
| <i>Biochemistry and Cell Biology</i> | <i>Experimental Cell Research</i> |
| <i>Biochemical Pharmacology</i> | <i>FEBS Journal</i> |
| <i>BMC Cancer</i> | <i>Frontiers in Aging Neuroscience</i> |
| <i>Brain Pathology</i> | <i>Frontiers in Immunology</i> |
| <i>British Journal of Cancer</i> | <i>Gastroenterology</i> |
| <i>British Journal of Pharmacology</i> | <i>Internal Journal of Medical Sciences</i> |
| <i>Canadian J. Clinical Neurosciences</i> | <i>Journal of Biological Chemistry</i> |
| <i>Cancer</i> | <i>Journal of Cancer</i> |
| <i>Cancer Biology & Therapy</i> | <i>Journal of Cell Science</i> |
| <i>Cancer Biology and Therapy</i> | <i>Journal of Cellular & Molecular Medicine</i> |
| <i>Cancer Letters</i> | <i>Journal of Child Neurology</i> |
| <i>Cancer Research</i> | <i>Journal of Clinical Investigation</i> |
| <i>Cancer Treatment Reviews</i> | <i>Journal of Clinical Investigation Insight</i> |

Journal of Molecular Cell Biology
Journal of Neurochemistry
Journal of Neuro-Oncology
Journal of Neuropathology & Exp. Neurology
Leukaemia
Molecular and Cellular Biochemistry
Molecular Cancer Therapeutics
Neurochemistry International

Neuro-Oncology
OncoImmunology
Oncogene
Oncotarget
Plos One
Scientific Reports
Surgical Endoscopy
Stem Cells

Editorial Board Membership

2014.01 - *Genes & Diseases*, Elsevier
2013.06 - *Advances in Medicine*, Hindawi Publishing
2012.10 - *Open Journal of Apoptosis*, Scientific Research Publishing

Professional in Medical and Scientific Organizations and Societies

2014.06 - 2014.12 Specialty Committee of Neuropathology
Royal College of Physicians & Surgeons of Canada
2014. 02.20-21 Advisory Board, *the 4TH Ubiquitin Research and Drug Discovery Conference*
San Diego, CA
2013.11.20-22 Organizing Committee, *Cell Science-2013*
Baltimore, MD
2013.02.25-26, Advisory Board, *the 3rd Ubiquitin Research and Drug Discovery Conference*
Las Vegas, NV
2011.11.12-15 Organizing Committee, *IEEE International Conference on Bioinformatics & Biomedicine (BIBM11)*, Atlanta, GA
2005.09 - 2005.10 Faculty Committee, *Second Neuro-Oncology Update: State of the Art*
Winship Cancer Institute, Emory University, Atlanta, GA

Institute Committees

2020.6 – Biomedical Research Committee, Indiana University School of Medicine
2020.5 – Promotion & Tenure Primary Committee, Pathology and Laboratory Medicine
Indiana University School of Medicine
2015.04 – 2015.12 Clinical Evaluation and Technical Assessment Committee,
Department of Pathology & Laboratory Medicine, Henry Ford Health System
2014.05 – 2014.12 Medical Evaluation Committee, Council of Physicians, Dentists and Pharmacists
Montreal Neurological Hospital, McGill University Health Centre, Canada
2013.10 – 2014.12 Academic Committee, Department of Pathology
McGill University, Canada
1997.08 – 2004.07 Clinical Neuroscience Subcommittee, Faculty of Medicine & Dentistry
University of Alberta, Canada
1997.08 – 2004.07 Graduate Committee, Department of Laboratory Medicine & Pathology
University of Alberta, Canada

GRANT AND OTHER FUNDING

Current Grant

Source: [NIH/NCI](#), R01 CA203893 2017.01.01 – 2022.12.31 (NCE: 2023.12.31)

Role: PI: Hao C

Title: SUMO1 inhibition compound as a new anticancer drug for glioblastoma therapy

Source: IUSM/ Lilly Endowment Inc. 2018.01.13 – 2023.01.12

Role: PI: Hao C

Title: Indiana University School of Medicine Physician Scientist Initiative funded by

Source: [NIH/NINDS](#), 1 R01 NS126358-01 2022.03.01 – 2027.02.28

Role: PIs: Hao C, Hamdouchi C, co-Is: Bellail AC, Zeng L, Desta Z,

Title: Development of BBB-permeable SUMO1 small molecule degraders for glioblastoma therapy.

Source: [NIH/NCI](#), R01 CA288899 2022.07.01 – 2027.06.30

Role: PI: Bellail A, co-Is: O'Connell, Hao C

Title: Targeting SUMO1 degradation for advanced colon cancer therapy

Source: [NIH/NCI](#), R44 CA265547 2022.05.01 – 2024.04.30

Role: Multi-PIs: Bellail A, Hamdouch C, Hao C

Title: Development of SUMO1 small molecule degraders as the first-in-class anticancer drugs for metastatic colorectal cancer

Previously Funded Grants

Source: [NIH/NCI](#), 1R43CA224461-01A1 2018.07.01 – 2019.06.30

Role: PI: Bellail A, Co-PI: Hao C

Title: Development of Small Molecule SUMO1 Inhibitors for Treatment of Glioblastoma

Source: IUSCC 100 Voice of Hope 2019.06.01 – 2020.06/30

Role: PI: Hao C, Bellail A

Title: Evaluation of SUMO1 inhibition compounds in treatment of metastatic breast cancers

Elsa U. Pardee Foundation, 2016.10.01 – 2017.11.30

Role: PI: Bellail A, Co-PI: Hao C

Title: Development of potent SUMO1 as a new anticancer drug for cancer treatment

Source: American Brain Tumor Association Discovery Grant 2016.07.01 – 2017.06.30

Role: PI: Bellail A; Mentor: Hao C

Title: Development of potent SUMO1 inhibitors as anticancer drugs for glioblastoma therapy

Source: Cancer Research Society; 2014.09.01 - 2015.08.30

Role: PI: Hao C

Title: Evaluating the therapeutic potential of a novel SUMO1 inhibitor in treating glioblastoma

Source: [NIH/NCI](#) R01CA129687; 2009.01.01 - 2013.12.30

Role: PI: Hao C

Title: Molecular mechanisms of TRAIL resistance in glioblastoma

Source: [NIH/NIAID](#), RC1AI081273; 2010.06.15 - 2011.11.30
 Role: PI: Shu H-K; Co-PI: Hao C
 Title: Blockade of the SDF-1/CXCR4 axis as a novel strategy for mitigating radiation-induced lung fibrosis

Source: [NIH/NCRR](#) 2R44RR025713-02 2011.06.01 - 2012.04.30
 Role: PI: Meacham JM; Co-PI: Hao C
 Title: Electrosonic actuation microarray: High-throughput tool for transfection of different genes

Source: Georgia Cancer Coalition 2005.07.01 - 2010.06.30
 Role: PI: Hao C
 Title: Georgia Cancer Coalition Distinguished Cancer Scholar Award

Source: Nova Scotia Health Research Foundation, Canada, 2005.07.01 - 2008.06.30
 Role: PI: Easton A; Co-PI: Hao C
 Title: How do Fas ligand and TRAIL contribute to inflammatory disease like stroke or multiple sclerosis?

Source: Cancer Research Society, Canada; 2005.07.01 - 2008.06.30
 Role: PI: Kneteman N; Co-PI: Hao C
 Title: Development of TRAIL-based chemotherapy-combination treatment of human pancreatic cancers

Source: [NIH/NCRR](#) 1R43RR025713 2009.02.02 - 2010.01.30
 Role: PI: Meacham JM; Co-PI: Hao C
 Title: Electrosonic ejector microarray for development of cancer therapies

Source: Southeastern Brain Tumor Foundation 2008.02.01 - 2009.01.31
 Role: PI: Hao C
 Title: Development of the combination treatment of glioblastoma with TRAIL and Hsp90 inhibitors

Source: Georgia Cancer Coalition 2005.03.01 - 2006.06.30
 Role: PI: Hao C
 Title: Therapeutic targeting of TRAIL apoptotic pathways in NSCLC

Source: Southeastern Brain Tumor Foundation 2005.01.20 - 2006.01.31
 Role: PI: Hao C
 Title: TRAIL-induced apoptosis in glioblastomas: A Pre-Clinical Trial Study

Source: [National Cancer Institute of Canada \(NCIC\)](#) 2004.07.01 - 2007.06.30
 Role: PI: Hao C,
 Title: Molecular signaling and therapeutic targeting of TRAIL-induced apoptosis in glioma cells

Source: University Hospital Foundation 2004.01.01 - 2004.12.30
 Role: PI: Hao C,
 Title: Targeting TRAIL apoptotic pathways for lung cancer therapy

Source: AHFMR Clinical Investigator Award (renewal) 2003.09.01 - 2006.06.30
 Role: PI: Hao C

Title: PED/PEA-15 modulation of TRAIL-induced apoptosis in glioma cells and astrocytes

Source: University Hospital Foundation 2003.01.01 - 2003.12.30

Role: PI: Hao C

Title: Development of pre-clinical therapeutic protocols in treatment

Source: Ida Hoffman/HPB Cancer Research fund 2001.09.01 - 2004.07.30

Role: Multiple PIs: Kneteman C, Hao C

Title: Development of pancreatic cancer research program

Source: [Canadian Institutes of Health Research \(CIHR\) MOP49621](#) 2001.07.01 - 2004.06.30

Role: PI: Hao C

Title: PED/PEA-15 modulation of TRAIL-induced apoptosis in glioma cells and astrocytes

Source: University Hospital Foundation; 2001.01.01 - 2001.12.30

Role: PI: Hao C

Title: TRAIL induces apoptosis of malignant gliomas

Source: [CHIR Interdisciplinary Health Research Team](#) 2001.01.01 - 2006.12.30

Role: PI: Yong W-V; Co-PI: Hao C

Title: Matrix metalloproteinases in multiple sclerosis: Environmental influence, biology, pathology and therapeutic strategies

Source: University Hospital Foundation 2000.01.01 - 2001.12.30

Role: PI: Hao C

Title: Activation of glioma Th1 cytokine pathways to inhibit tumor growth

Source: Alberta Heritage Foundation for Medical Research 2000.09.01 - 2003.08.30

Role: PI: Hao C

Title: Activation of glioma and microglia Th1 cytokine pathways to enhance anti-glioma immunity

PATENT

The initial application # 62291193 and subsequent application #62669640 (inventors: Bellail, Hao, Lo)

Title: Compositions and Methods for treating cancer, 05/10/2019: PCT/US2019/031245 filed

START-UP COMPANY

HB Therapeutic Inc., Co-founders: Chunhai Hao, Anita C. Bellail

Current Office Address: Indiana Center of Biomedical Innovation (ICBI)
1800 N. Capital Ave, E504, Indianapolis, IN 46202, USA

TEACHING

Undergraduates

1997.08 - 2004.07 Medical Laboratory Science 250, Classroom
Lecturer: *CNS: Anatomy, Histology and Pathology*
University of Alberta, Canada

1997.08 - 2004.07 Pharmacology 412, Classroom, Lecturer: *Dementias and Alzheimer's disease*

University of Alberta, Canada

Graduates

2004.08 - 2006.08 Emory Graduate Cancer Biology IBS 524, Classroom
Lecturer: *Apoptosis: Regulation of apoptotic pathways*
Emory University, USA

MD program

2014.09 - 2014.12 FMD Block A-C, Class 2017 and 2018, Medical Students
Lecturer: CNS Pathology, Faculty of Medicine, McGill University

1997.08 - 2004.07 DMED 520 Neuroscience/Special Senses Block, Medical/Dental Students
Faculty of Medicine & Dentistry University of Alberta, Canada
Lecturer: i. CNS tumors
ii. Neurodegenerative diseases
iii. CNS Infectious Diseases
iv. Cerebrovascular Diseases

Residents/Fellows

2021 – Pathology Residency Programs, Indiana University School of Medicine
Lecturer: i. CNS Tumor 1
ii. CNS Tumor 2
iii. CNS Tumor 3
iv. Cerebrovascular diseases
v. CNS infectious diseases
vi. Neurodegenerative diseases 1
iv. Neurodegenerative diseases 2

2004.08 – 2013.08 Emory University School of Medicine: Neuropathology Fellowship Program a
Lecturer: i. infectious diseases
ii. CNS vascular diseases
iii. Neurodegenerative diseases
iv. Tumors of CNS and its coverings

Residency Programs: Neurology, Neurosurgery & Pathology

Lecturer: i. CNS infectious diseases
ii. CNS vascular diseases
iii. Neurodegenerative diseases
iv. Tumors of CNS and its coverings

2013.09 – 2014.12 McGill University: Residency Programs: Neurology, Neurosurgery & Pathology
Lecturer: i. Genomic Diagnosis of CNS tumors

2012 – 2013 Webinar Series in Clinical Pathology: *CNS Tumors*; GoPath Diagnostics, USA
2011 – 2017 *Clinical Practice Series*, Norman Bethune College of Medicine, Jilin University

2014.12 – Henry Ford Health System
Residency Programs: Pathology, Neurology, Neurosurgery, Neuroradiology
Lecturer: i. CNS infectious diseases
ii. Cerebrovascular diseases
iii. Neurodegenerative diseases
iv. Multiple sclerosis
v. Human Prion Diseases

2021.09 – Indiana University School of Medicine
Residency Programs: Pathology,
Lecturer: i. Neuropathology CNS Tumor (1)
ii. Neuropathology CNS Tumor (2)

Mentorship of Postdoctoral Fellows

2000.06 – 2002.06 Chang Xiao, PhD, Immunology, Norman Bethune U. of Medicine Science
Current position: Team Leader, Synairgen Research Ltd, UK.

2001.11 – 2005.07 Jin H. Song, PhD, Biochemistry, Tohoku University, Sendai, Japan
Current position: Assistant professor, Medical University of South Carolina

2004.01 – 2004.12 Guoyue Lu, MD, Visiting Scholar, Jilin University First Hospital
Current position: Party Chief, Jilin University First Hospital

2005.07 - 2007.08 Anita C. Bellail, PhD, Neuroscience, Caen University, Caen, France
Current position: Assistant professor of Pathology and Laboratory Medicine
Indiana University School of Medicine

2005.11 – 2008.04 Margaret C. L. Tse, PhD, Biochemistry, University of Hong Kong University
Current position: Lab Manager, The University of Hong Kong.

2007.10 – 2009.10 Ling (Lucy) Qi, MD, PhD, Pathology & Pathobiology, Jilin University
Current position: Associate Professor, Jilin Medical College, Jilin, China

2011.09 – 2012.08 Quan Wang, MD, PhD, Visiting Professor
Current position: Chair, General Surgery, Jilin U. First Hospital, China

2016.04 – 2018.01 Ruchi Ghildiyal, PhD, National Brain Research Centre, Haryana, India
Current position: Postdoctoral fellow, Moffitt Cancer Center, Florida

2017.03 – 2018.01 Dipak Maskey, PhD, Institute Pharmacology, University of Bern, Switzerland
Current position: Instructor, Henry Ford Research Institute, Michigan

2017.04 – 2018.01 Hongri Jim, PhD, University of Chicago, Illinois
Current position: Senior Vice President, HB Therapeutics, Inc.

2019.06 – 2021.04 Ryan K. Higgins, PhD, Florida State University, Florida
Current position: Senior Scientist, QC at Catalent Pharma Solutions

2018.03 – Sunghan Jung, PhD, Konkuk University, South Korea

2018.06 – Daeho Kim, PhD, Seoul National University, South Korea

Mentorship of Clinical Fellows

2004.07 - 2006.06 Meenakshi Gupta, MD, Neuropathology Fellow
Current position: Pathology Attending, West Georgia Health System, Lagrange

2006.07 - 2008.06 Mahtab Tehrani, MD, Neuropathology Fellow
Current position: Assistant Prof & Pathology Attending, Uni. of Arkansas

2008.07 - 2010.06 Matthew Schniederjan, MD, Neuropathology Fellow

2010.07 - 2012.06	Current position: Assistant Prof & Pathology Attending, Emory University Cristina Vincentelli, MD, Neuropathology Fellow
2012.07 – 2013.08	Current position: Pathology Attending, Mount Sinai Medical Center, Miami Christina Appin, MD, Neuropathology Fellow
2018.01 – 2019.06	Current position: Assistant Professor, Northwestern University, Chicago David Priemer, MD, Neuropathology Fellow
2018.01 – 2019.06	Current position: Instructor, John Hopkins University, Maryland Logan DeWitt, MD, Neuropathology Fellow
	Current position: Fellow, Marion County Coroner’s Office, Indianapolis

Interns and Summer Research Undergraduates

2011.09 - 2012.08	Rohan Gupta, Biology, Summer Research Georgia Institute of Technology
2010.05 - 2011.05	Kai Zhang, Biology Program, Summer Research, Emory University
2009.05 - 2010.05	Harry Zhang, Biology Program, Summer Research, Emory University
2008.05 - 2010.05	Alexander Z. Robin, Biology Program, Summer Research, Emory University
2008.05 - 2008.08	Tianyi Wang, Biology, Internship, John Hopkins University
2005.06 - 2007.07	Patrick Muligan, Science program, Research Project, Emory University
2003.05 - 2003.08	Michael D. McCall, MD program, AHFMR Summer Research Award, UofA
2002.04 - 2002.08	Lisa (Xi) Y. Li, BSc of Science, AHFMR Summer Research Award, U of A
2002.04 - 2002.08	Shirley Cheung, BSc Pharmacy, AHFMR Summer Research Award, U of A
2001.05 - 2001.08	Michael Nikolukis, MD program, AHFMR Summer Research Award, UofA
1999.05 - 2000.08	Hannah Cheung, BSc Pharmacology, Industrial Internship, U. of Alberta

High School Students in Research

2001.04 - 2001.08	Jon Hilner, AHFMR HYRS (Heritage Youth Research Scholarship), Canada
2003.07 - 2003.08	Prakash Jayaraman, AHFMR HYRS, Canada
2002.09 - 2003.08	Shannah Sutherland, WISEST* Summer Research, Alberta, Canada
2002.09 - 2004.07	Andrew Guardamano & Julia Grochowsk, Summer Research Project “Fighting the crab within: Lobitoinin in the treatment of cancer” Bronze Medal at the Canada National Science Fair, Canada, 2004.5.7 2 nd Award, International Science & Engineering Fair, Arizona, USA, 2005.5.7
2020.06 - 2020.08	Jenny Chen, Carmel High School, Indiana CTSI Project STEM Summer Research, Indiana, USA

Theses/Dissertations

2003.09 - 2008.03	Peng Wang, MD, PhD program, These Title: “The resistance mechanisms located at the DISC level and the mitochondria level regulate the sensitivity of cancer cells to TRAIL-induced apoptosis” Department of Laboratory Medicine and Pathology, University of Alberta
2004.09 - 2006.04	Jing Zhang, MD, MSc program, These Title: “c-FLIP and resistance to TRAIL-induced apoptosis in pancreatic cancer” Department of Laboratory Medicine and Pathology, University of Alberta

Join PhD Programs with Jilin University

2012.04 - 2013.07	Chunsheng Li, MD, PhD program of Jilin University Current position: Attending Surgery, Jilin University Third Hospital, China
2009.11 - 2010.06	Lijuan Ding, MD, PhD program of Jilin University Current position: Attending Hematology & Oncology, Jilin U. First Hospital
2009.11 - 2012.03	Feng Wei, MD, PhD, PhD program of Jilin University Current position: Associate Professor, General Surgery, Jilin U. First Hospital
2007.10 - 2009.10	Ling Qi, MD, PhD program of Jilin University Current position: Associate Professor, Jilin Medical College, Jilin, P.R. China
2006.01 - 2006.12	Guoyue Lu, MD, PhD program of Jilin University Current position: Vice President of Jilin U. First Hospital, China
2018.08 - 2020.08	Jinquan Zhao, MD, Jilin University First Hospital, China

PhD/MSc Thesis Committees, University of Alberta

2002.09 - 2004.05	David Omahen, MD, PhD candidate, Experimental Surgery
2002.09 - 2004.05	Janka Hegedus, BSc, MSc candidate, Neuroscience
2002.09 - 2004.05	Conrad Aglah, BSc, PhD candidate, Neuroscience
2001.09 - 2004.05	Q. Li, BSc, MSc candidate, Chemistry
2001.09 - 2004.05	Monique Ding, BSc, MSc candidate, Neuroscience
2001.09 - 2004.05	Alexander Zouros, MD, MSc candidate, Experimental Surgery
2000.09 - 2008.05	Rober Kurr, MD, PhD candidate, Experimental Surgery
2000.09 - 2003.05	Olawale A R Sulaiman, MD, PhD candidate, Neuroscience

PhD/MSc Theses/Dissertations External Examiner

2006.3.9	Jamie Mader, PhD thesis Defense, Supervisor Dr David Hoskin Department of Pathology, Dalhousie University, Halifax, Canada
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PUBLICATIONS

Four Recent and Key Reports of Original Work (° correspondent)

1. Bellail AC°, Jin HR, Lo HY, Jung SH, Hamdouchi C, Kim D, Higgins RK, Blanck M, le Sage C, Cross BCS, Li J, Mosley AL, Wijeratne AB, Jiang W, Ghosh M, Zhao YQ, Hauck PM, Shekhar A, Hao C°. Ubiquitination and degradation of SUMO1 by small-molecule degraders extends survival of mice with patient-derived tumors. *Sci Transl Med.* 2021 Oct 13;13(615):eabh1486. doi: 10.1126/scitranslmed.abh1486. Epub 2021 Oct 13. PMID: 34644148.
2. Mirzaei R, Gordon A, Zemp FJ, Kumar M, Sarkar S, Luchman HA, Bellail AC, Hao C, Mahoney DJ, Dunn JF, Bose P, Yong VW. PD-1 independent of PD-L1 ligation promotes glioblastoma growth through the NFκB pathway. *Sci Adv.* 2021 Nov 5;7(45):eabh2148. doi: 10.1126/sciadv.abh2148. Epub 2021 Nov 5. PMID: 34739319 Free PMC article.
3. Bellail AC°, Olson JJ, Hao C°. SUMO1 modification stabilizes CDK6 protein and drives the cell cycle and glioblastoma progression. *Nat Commun* 2014 June 23; 5:4234. PMID: 24953629.
4. Bellail AC, Olson J, Yang X, Chen Z, Hao C°. A20 ubiquitin ligase-mediated polyubiquitination of RIP1 inhibits caspase-8 cleavage and TRAIL-induced apoptosis in glioblastoma. *Cancer Discov*

Reports of Original Work (® correspondent)

5. Dzikowski L, Mirzaei R, Sarkar S, Kumar M, Bose P, Bellail A, Hao C, Yong VW. Fibrinogen in the glioblastoma microenvironment contributes to the invasiveness of brain tumor-initiating cells. *Brain Pathol* 2021 Sep;31(5):e12947. doi:10.1111/bpa.12947. Epub 2021 Mar 10. PMID: 33694259
Free PMC article
6. Miller SA, Policastro RA, Sriramkumar S, Lail T, Hungtington TD, Ladaika CA, Kim DH, Hao C, Zentner GE, O'Hagan HM. LSD1 promotes secretory cell specification to drive BRAF mutant colorectal cancer. *Cancer Res* 2021 Jul 15;81(14):3791-3805. doi: 10.1158/0008-5472.CAN-20-3562. Epub 2021 May 25. PMID: 34035083
7. Li C, Qi L, Bellail A, Hao C®, Liu T®. PD-0332991 induces G1 arrest of colorectal carcinoma cells through inhibition of the cyclin-dependent kinase-6 and retinoblastoma protein axis. *Oncol Lett* 2014 May;7(5):1673-1678. Epub 2014 Mar 10. PMID: 24765199
8. Willie JT, Laxpati NG, Drane DL, Gowda A, Appin C, Hao C, Helmers SL, Saindane A, Nour S, Gross RE. Real-time magnetic resonance-guided stereotactic laser amygdalo-hippocampotomy for mesial temporal lobe epilepsy. *Neurosurgery* 2014 Jun;74(6):569-85. PMID: 24618797
9. Shu HK, Yoon Y, Hong S, Xu K, Gao H, Hao C, Torres-Gonzalez E, Nayra C, Rojas M, Shim H. Inhibition of the CXCL12/CXCR4-axis as preventive therapy for radiation-induced pulmonary fibrosis. *PLoS One* 2013 Nov 7;8(11):e79768. PMID: 24244561
10. Wang Q, Wei F, Lv G, Li C, Liu T, Zhang K, Hao C®, Bellail AC®. The association of TP53 mutations with the resistance of colorectal carcinoma to the insulin-like growth factor-1 receptor inhibitor picropodophyllin. *BMC Cancer* 2013 Nov 4;13:521. PMID:24182354
11. Wang Q, Wei F, Li C, Lv G, Liu T, Wang G, Bellail AC, Hao C®. Combination of mTOR and EGFR Kinase Inhibitors Blocks mTORC1 and mTORC2 Kinase Activity and Suppresses the Progression of Colorectal Carcinoma. *PLoS One* 2013 Jul;23(4):454-61. PMID:2328997
12. Appin CL, Gao J, Chisolm C, Torian M, Alexis D, Vincentelli C, Schniederjan MJ, Hadjipanayis C, Olson JJ, Hunter S, Hao C, Brat DJ. Glioblastoma with oligodendroglial component (GBM-O): Molecular genetic and clinical characteristics. *Brain Pathol* 2013 Jul; 23(4):454-61. PMID: 23289977
13. Mauzo SH, Lee M, Petros J, Hunter S, Chang CM, Shu HK, Bellail AC, Hao C, Cohen C. Immunohistochemical demonstration of isocitrate dehydrogenase 1 (IDH1) mutation in a small subset of prostatic carcinoma. *Appl Immunohistochem M M* 2014 Apr;22(4):284-7. PMID: 23235339
14. Li B, Gao S, Wei F, Bellail AC, Hao C®, Liu T®. Simultaneous targeting of EGFR and mTOR inhibits the growth of colorectal carcinoma cells. *Oncol Rep* 2012 Jul;28(1):15-20. Epub 2012 Apr 26. PMID: 22552366
15. Wei F, Liu Y, Bellail AC, Olson JJ, Sun S-Y, Guoyue Lu, Lijuan Ding, Changji Yuan, Wang G®,

- Hao C^φ. *K-Ras* mutation-mediated IGF-1-induced feedback ERK activation contributes to the rapalog resistance in pancreatic ductal adenocarcinomas. *Cancer Lett* 2012 Sep 1;322(1):58-69. Epub 2012 Feb 14. PMID: 22342683
16. Dong B, Lv G, Wang Q, Wei F, Bellail AC, Hao C^φ, Wang G^φ. Targeting A20 enhances TRAIL-induced apoptosis in hepatocellular carcinoma cells. *Biochem Bioph Res Co* 2012 Feb 10;418(2):433-8. Epub 2012 Jan 20. PMID:22285182
 17. Ding L, Yuan C, Wei F, Wang G, Zhang J, Bellail AC, Zhang Z, Olson JJ, Hao C^φ. Cisplatin restores TRAIL apoptotic pathway in glioblastoma-derived stem cells through up-regulation of DR5 and down-regulation of c-FLIP. *Cancer Invest* 2011 Oct; 29(8):511-20. Epub 2011 Aug 30. PMID:21877938
 18. Qi L, Bellail AC, Rossi MR, Zhang Z, Peng H, Hunter S, Cohen C, Moreno CS, Olson JJ, Li S, Hao C^φ. Heterogeneity of primary glioblastoma cells in the expression of caspase-8 and the response to TRAIL-induced apoptosis. *Apoptosis* 2011 Nov; 16(11):1150-64. Epub 2011 Aug 30. PMID:21877214
 19. Chen S, Cao W, Yue P, Hao C, Khuri FR, Sun S-Y. Celecoxib promotes c-FLIP degradation through Akt-independent inhibition of GSK3. *Cancer Res* 2011 Oct 1;71(19):6270-81. Epub 2011 Aug 25. PMID: 21868755
 20. Chan CB, Liu X, Pradoldej S, Hao C, An J, Yepes M, Luo HR, Ye K. Phosphoinositide 3-kinase enhancer regulates neuronal dendritogenesis and survival in neocortex. *J Neurosci* 2011 June 1; 31(22): 8083-92. Epub 2011 Aug 25. PMID: 21632930
 21. Lu J, McEachern D, Sun H, Bai L, Peng Y, Qiu S, Miller RS, Liao J, Yi H, Liu M, Bellail AC, Hao C, Sun SY, Ting AT, Wang S. Therapeutic potential and molecular mechanism of a novel, potent, nonpeptide, Smac mimetic SM-164 in combination with TRAIL for cancer treatment. *Mol Cancer Ther* 2011 May; 10(5):902-14. Epub2011 Mar 3. PMID: 21372226
 22. Jiang Y, Ma Z, Xin G, Yan H, Xu H, Hao C, Niu J and Li W. Th1 and Th2 Immune Response in Chronic Hepatitis B Patients during a Long-Term Treatment with Adefovir Dipivoxil. *Mediat Inflamm* 2010; 2010:143026. Epub 2010 Nov 29. PMID: 21127728
 23. Hadjipanayis CG, Schuette AJ, Boulis N, Hao C, Barrow DL, Teo C. Full scope of options. *Neurosurgery* 2010 Jul; 67(1):197-203. PMID 20559107
 24. Yan D, Ng WL, Zhang X, Wang P, Zhang Z, Mo Y-Y, Mao H, Hao C, Olson J, Curran W, Wang Y. Targeting DNA-PKcs and ATM with *miR-101* Sensitizes Tumors to Radiation. *PLOS ONE* 2010 July 1; 5(7):e11397. PMID: 20617180
 25. Lu GU*, Liu YH, Wei F, Ji B, Hao C^φ, Wang GY^φ. Synergistic effect of celecoxib on tumor necrosis factor-related apoptosis-inducing ligand-induced apoptosis in hepatocellular carcinoma cells. *Cancer Invest* 2010 Jul; 28(6):629-634. Epub 2010 April. PMID:21372226
 26. Bellail AC, Tse MCL, Song JH, Phuphanich S, Olson JJ, Sun SY, Hao C^φ. DR5-mediated DISC controls caspase-8 cleavage and initiation of apoptosis in human glioblastomas. *J Cell Mol Med*

2010 June; 14(6a): 1303-1317. Epub 2009 May 11. PMID:19432816

27. Wang P, Lo A, Young JB, Song JH, Lai R, Kneteman NM, Hao C^φ, Li L^φ. Targeted quantitative mass spectrometric identification of differentially expressed proteins between Bax-expressing and deficient colorectal cancer cells. *J Proteome Res* 2009 Jul; 8(7): 3403-14.
28. Chan CB, Abe M, Hashimoto N, Hao C, Williams IR, Liu X, Nakao S, Yamamoto A, Li SY, Hara-Nishimura I, Asano M, Ye K. Mice Lacking asparagine endopeptidase develop disorders resembling hemophagocytic syndrome. *Pro Natl Acad Sci USA* 2009 Jan 13; 106(2): 468-73. Epub 2008 Dec 23. PMID:19106291
29. Zarnitsyn VG, Meacham JM, Varady M, Hao C, Degertekin FL, Fedorov AG. Electrosonic ejector microarray for drug and gene delivery. *Biomed Microdevices* 2008 Apr;10(2):299-308. PMID: 17994280
30. Wang P, Zhang J, Bellail AC, Jiang W, Hugh J, Kneteman NM, Hao C^φ. Inhibition of RIP and c-FLIP enhances TRAIL-induced apoptosis in pancreatic cancer cells. *Cell Signal* 2007 Nov; 19(11): 2237-46. Epub 2007 Jun 21. PMID: 17693058
31. Liu X, Hu Y, Hao C, Rempel S, Ye K. PIKE-A is a proto-oncogene, promoting cell growth, transformation and invasion. *Oncogene* 2007 Jul; 26(34):4918-27. PMID: 17297440
32. Song JH, Tse MG, Bellail AC, Khuri F, Phuphanich S, Kneteman NM, Hao C^φ. Lipid rafts and non-rafts mediate tumor necrosis factor-related apoptosis-inducing ligand-induced apoptotic and non-apoptotic signals in non-small cell lung carcinoma cells. *Cancer Res* 2007 Jul 15; 67(14): 6946-55. PMID: 17638906
33. Parney IF, Chang LJ, Farr-Jones MA, Hao C, Smylie M, Petruk KC. Technical hurdles in a pilot clinical trial of combined B7-2 and GM-CSF immunogene therapy for glioblastomas and melanomas. *J Neuro-Oncol* 2006 May; 78(1):71-80. Epub 2006 Apr 21. PMID: 16718522
34. Li YC, Tzeng CC, Song JH, Tsia FJ, Hsieh LJ, Liao SJ, Tsai CH, Van Meir EG, Hao C, Lin CC. Genomic alterations in human malignant glioma cells associate with the cell resistance to the combination treatment with tumor necrosis factor-related apoptosis-inducing ligand and chemotherapy. *Clin Cancer Res* 2006 May 1;12(9):2716-29. PMID: 16675563
35. Song JH, Bellail AC, Tse MC, Yong VW, Hao C^φ. Human astrocytes are resistant to Fas ligand and tumor necrosis factor-related apoptosis-inducing ligand-induced apoptosis. *J Neurosci* 2006 Mar 22;26(12):3299-308. PMID: 16554480
36. Wang P, Song J, Song DK, Zhang J, Hao C^φ. Role of death receptor and mitochondrial pathways in conventional chemotherapy drug induction of apoptosis. *Cell Signal* 2006 Sep; 18(9):1528-35. Epub 2006 Jan 25. PMID: 16442262
37. Wang CX, Song JH, Song DK, Yong VW, Shuaib A, Hao C^φ. Cyclin-dependent kinase-5 prevents neuronal apoptosis through ERK-mediated upregulation of Bcl-2. *Cell Death Differ* 2006 Jul; 13(7): 1203-12. PMID:16273078

38. Alladina SJ, Song JH, Davidge ST, Hao C, Easton AS. TRAIL-Induced Apoptosis in Human Vascular Endothelium Is Regulated by Phosphatidylinositol 3-Kinase/Akt through the Short Form of Cellular FLIP and Bcl-2. *J Vasc Res* 2005 Jul-Aug; 42: 337-347. Epub 2005 Jun 28. PMID: 15985761
39. Wang S, Tang H, Wilkinson V, Lukat T, Gelfand ET, Koshal A, Modry DL, Mullen JC, Hao C, Finegan BA. Saphenous vein harvest with SaphLITE system versus conventional technique: a prospective, randomized study. *Ann Thorac Surg* 2005 Jun; 79: 2018-2023. PMID: 15919302
40. Camicioli R, Rajput A, Rajput M, Reece C, Payami H, Hao C, Rajput A. Apolipoprotein E ϵ 4 and catechol-*O*-methyltransferase alleles in autopsy-proven Parkinson's disease: Relationship to dementia and hallucinations. *Movement Disord* 2005 Aug; 20: 989-994. PMID: 15852364
41. Xiao C, Yang BF, Song JH, Schulman H, Li L, Hao C^o. Inhibition of CaMKII-mediated c-FLIP expression sensitizes melanoma cells to TRAIL-induced apoptosis. *Exp Cell Res* 2005 March 1; 304 (1): 244-255. Epub 2004 Nov 26. PMID: 15707589
42. Song JH, Wang CX, Song D, Wang P, Shuaib A, Hao C^o. Interferon γ Induces Neurite Outgrowth by Up-regulation of p35 Neuron-specific Cyclin-dependent Kinase 5 Activator via Activation of ERK1/2 Pathway. *J Biol Chem* 2005 April 1; 280 (13): 12896-12901. Epub 2005 Feb 3. PMID: 15695523
43. Hao C^o, Song JH, Hsi B, Lewis J, Song DK, Petruk KC, Tyrrell LJ, Kneteman NM. TRAIL inhibits tumor growth but is nontoxic to human hepatocytes in chimeric mice. *Cancer Res* 2004 Dec 1; 64:8502-8506, 2004. PMID: 15574753
44. Roa W, Brasher PM, Bauman G, Anthes M, Bruera E, Chan A, Fisher B, Fulton D, Gulavita S, Hao C, Husain S, Murtha A, Petruk K, Stewart D, Tai P, Urtasun R, Cairncross JG, Forsyth P. Abbreviated course of radiation therapy in older patients with glioblastoma multiforme: a prospective randomized clinical trial. *J Clin Oncol* 2004 May 1; 22(9):1583-1588.
45. Sinclair DB, Aronyk K, Snyder T, McKean JD, Wheatley M, Gross D, Bastos A, Ahmed S N, Hao C, Colmers W. Extratemporal resection for childhood epilepsy. *Pediatr Neurol* 2004 March; 30 (3):177-85. PMID: 14643392
46. Song JH, Song DK, Pyrzynska P, Petruk KC, Van Meir EG, Hao C^o. TRAIL induces apoptosis in human glioma cells through extrinsic and intrinsic pathways. *Brain Pathol* 2003, Oct; 13 (4): 539 - 553. PMID: 14655759
47. Sinclair DB, Aronyk KE, Synder TJ, Wheatley BM, McKean JD, Bhargava R, Hoskinson M, Hao C, Commers WF, Berg M, Mak W. Pediatric epilepsy surgery at the University of Alberta: 1988-2000. *Pediatr Neurol* 2003 Oct;29(4):302-311. PMID: 14643392
48. Song JH, Song DK, Herlyn M, Petruk KC, Hao C^o. Cisplatin down-regulation of cellular Fas-associated death domain-like interleukin-1 β -converting enzyme-like inhibitory proteins to restore tumor necrosis factor-related apoptosis-inducing ligand-induced apoptosis in human melanoma cells. *Clin Cancer Res* 2003, Sep 15; 9 (11): 4255-4266. PMID: 14519653

49. Sinclair DB, Aronyk K, Snyder T, McKean J, Wheatley M, Bhargava R, Hoskinson M, Hao C, Colmers W. Pediatric temporal lobectomy for epilepsy. *Pediatr Neurosurg* 2003 Apr; 38(4):195-205. PMID: 12646739
50. Li Q, Dai Y, Guo L, Liu Y, Hao C, Wu G, Basora N, Michalak M, Chen X-Z. Polycystin-2 associates with tropomyosin-1, an actin microfilament component. *J Mol Biol* 2003 Jan 31; 325(5): 949-962. PMID: 12527301
51. Yang BF, Xiao C, Roa WH, Krammer PH, Hao C^φ. Calcium/calmodulin-dependent protein kinase II regulation of c-FLIP expression and phosphorylation in modulation of Fas-mediated signaling in malignant glioma cells. *J Biol Chem* 2003 Feb 28; 278 (9): 7043-7050. PMID: 12496285
52. Zhou Y, Larsen PH, Hao C, Yong VW. CXCR4 is a major chemokine receptor on glioma cells and mediates their survival. *J Biol Chem* 2002 Dec 20; 277 (51): 49481-49487. PMID: 12388552
53. Wang CX, Reece C, Wrathall JR, Shuaib A, Olschowka JA, Hao C. Expression of tumor necrosis factor alpha and its mRNA in the spinal cord following a weight-drop injury. *NeuroReport* 2002 August 7; 13(11): 1391-1393. PMID: 12167759
54. Xiao C, Yang BF, Asadi N, Beguinot F, Hao C^φ. Tumor necrosis factor-related apoptosis-inducing ligand-induced death inducing signaling complex and its modulation by c-FLIP and PED/PEA-15 in glioma cells. *J Biol Chem* 2002 July 12; 277(28):25020-25025. PMID: 11976344
55. Findlay JM, Hao C, Emery D. Nonatherosclerotic fusiform cerebral aneurysms. *Can J Neurol Sci* 2002 Feb; 29(1): 41-48. PMID: 11858533
56. Hao C^φ, Parney IF, Roa WH, Turner J, Petruk KC, Ramsay DA. Cytokine and cytokine receptor mRNA expression in human glioblastomas: evidence of Th1, Th2 and Th3 cytokine dysregulation. *Acta Neuropathol (Berl)*. 2002 Feb; 103(2):171-178. PMID: 11810184
57. Sinclair DB, Wheatley M, Aronyk K, Hao C, Snyder T, Javidan M, McKean JDS. Pathology and neuroimaging in pediatric temporal lobectomy for intractable epilepsy. *Pediatr Neurosurg* 2001 Nov; 35(5):239-246. PMID: 11741117
58. Koski S, Hao C, Mackey JR, Fields AL. Wernicke encephalopathy in association with malignancy: A case Report and Review of the Literature. *Curr Oncol* 2001; 8 (2):104-108.
59. Mercer DF, Schiller DE, Elliott JF, Douglas DN, Hao C, Rinfret A, Addison B, Fischer KP, Churchill, TA, Tyrrell LJ, Kneteman NM. Hepatitis C virus replication in mice with chimeric human livers. *Nature Med* 2001 Aug; 7(8):927-933. PMID: 11479625
60. Maeda T, Hao C, Tron VA. UV induced regulation of TNF receptor superfamily decoy receptors in human keratinocytes. *J Cutan Med Surg* 2001 Jul-Aug; 5(4):294-298. PMID: 11907838
61. Yee D, Hao C, Chen H, Fulton D, Petruk KC, Roa WH. Effect of radiation on cytokine and cytokine receptor messenger-RNA profiles in p53 wild and mutated human glioblastoma cell lines. *Clin Invest Med* 2001 Apr; 24(2):76-82. PMID: 11368149
62. Jennings LL, Hao C, Cabrita MA, Vickers MF, Baldwin SA, Young JD, Cass CE. Distinct regional

distribution of human equilibrative nucleoside transporter proteins 1 and 2 (hENT1 and hENT2) in the central nervous system. *Neuropharmacol* 2001 Apr; 40(5):722-731. PMID: 11311901

63. Catania A, Urban S, Yan E, Hao C, Barron G, Allalunis-Turner J. Expression and localization of cyclin dependent kinase 5 in apoptotic human glioma cells. *Neuro-Oncol* 2001 Apr; 3(2):89-98. PMID: 11296485
64. Hao C^φ, Beguinot F, Condorelli G, Trencia A, Van Meir EG, Yong WV, Parney IF, Roa WH, Petruk KC. Induction and intracellular regulation of tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) mediated apoptosis in human malignant glioma cells. *Cancer Res* 2001 Feb 1; 61(3):1162-1170. PMID: 11221847 IF: 9.2
65. Byers DM, Rose SD, Cook HW, Hao C, Fedoroff S. Lipopolysaccharide induction of MARCKS-related protein and cytokine secretion are differentially impaired in microglia from LPS-nonresponsive (C3H/HeJ) mice. *Neurochem Res* 1998 Dec; 23(12): 1493-1499. PMID: 9821152
66. Mackenzie IRA, Hao C, Munoz DG. The role of microglia in senile plaque formation. *Neurobiol Aging*. 1995 Sep-Oct; 16(5): 797-804. PMID: 8532113
67. Richardson A, Hao C, Fedoroff S. Microglia progenitor cells: A subpopulation in cultures of mouse neopallial astroglia. *Glia*. 1993 Jan; 7(1):25-33.
68. Hao C, Richardson A, Fedoroff S. Macrophage-like cells originate from neuroepithelium in culture: characterization and properties of the macrophage-like cells. *Int J Dev Neurosci* 1991;9(1): 1-14. PMID: 201476
69. Fedoroff S, Hao C. Origin of microglia and their regulation by astroglia. *Adv Exp Med Biol*. 1991;296:135-42. doi: 10.1007/978-1-4684-8047-4_14. PMID: 1781324
70. Hao C, Guilbert LJ, Fedoroff S. Production of colony stimulating factor-1 (CSF-1) by mouse astroglia *in vitro*. *J Neurosci Res* 1990 Nov; 27(3):314-323. PMID: 2151455
71. Hao C, Chen Y. Detection of neutralization titer of monoclonal antibodies by using micro-culture and immunoperoxidase techniques. *Journal of Norman Bethune University*. 1987; 2:3.
72. Hao C, Chen Y. Measurement of relative affinity and specificity of monoclonal antibodies. *Chinese Journal of Immunology*. 1986; 5:1.
73. Chen Y, Qi Y, Yin H, Xu J, Hao C, Li K, Wang D, Song Y, Fu W, Zhao Z, Lu J, Guo H, Leng L, Yang H, Li L. Establishment of hybridisms secreting monoclonal antibodies against adenovirus type 3 or 7 and application of screening technique of immune enzymatic histochemistry. *Chinese Journal of Immunology*. 1985; 4:2.

Review Articles

74. Bellail AC, Qing L, Mulligan P, Chhabra V, Hao C. TRAIL agonists on clinical trials for cancer therapy: the promises and the challenges. *Rev Recent Clin Trials* 2009 Jan; 4(1):34-41. PMID: 19149761. Review.

75. Parney IF, Hao C, Petruk KC. Glioma immunology and immunotherapy. *Neurosurgery* 2000 Apr; 46(4):778-791. PMID: 10764250. Review.

Editorials/Commentaries:

76. Bellail AC, Hao C. Development of small molecules activating TRAIL apoptosis pathway for cancer therapy. *Open J Apoptosis* 2013, 2, 48-50. <http://dx.doi.org/10.4236/ojapo.2013.24008>
77. Bellail AC, Hao C. The roadmap of clinical trials of TRAIL agonists for cancer therapies: what is next? *Expert Rev. Anticancer Ther* 2012 May; 12(5):547-549. PMID: 22594889
78. Bellail AC, Hao C. TRAIL apoptotic pathway-targeted therapies for NSCLC. *Translational Lung Cancer Research* 2012 Mar 4; 1 (2): 155-157. DOI: 10.3978/j.issn.2218-6751.2012.02.02

Book Chapters

79. Bellail AC, Hao C. Chapter 11: Human cancer resistance to TRAIL-apoptotic pathway-targeted therapies. In: *Tumor cells resistance to apoptosis by cytotoxic drugs and reversal of resistance by targeted sensitizing agents*. Ed: Bonavida B, Springer, 2013; pp 213-243.
80. Bellail AC, Mulligan P, Hao C. Chapter 41: Targeting TRAIL apoptotic pathways for glioblastoma therapy. In: *CNS Cancer, Cancer Drug Discovery and Development*. Ed: Van Meir EG. Humana Press (Springer), 2009; pp 977-1009.
81. Hao C, Song JH, Vilimanovich U, Kneteman NM. Chapter 6: Modulation of TRAIL Signaling Complex. In: *Vitamins and Hormones*. Ed: Gerry Litwack, Academic Press (Elsevier), 2004, Volume 67:81-99. PMID: 15110173
82. Van Meir EG, Hao C, Post D, Liao LM, Brat DJ. Chapter 18: Therapeutic targeting of the molecular pathways that induce brain tumor development. In: *Genomic and Molecular Neuro-Oncology*. Eds: Wei Zhang and Gregory N. Fuller. Jones and Bartlett Publishers, Inc., 2004; pp 303 – 331.
83. Fedoroff S, Hao C, Ahmed I, Guilbert LJ. Paracrine and autocrine signalling in regulation of microglia survival. In: *Biology and Pathology of Astrocyte-Neuron Interactions*. Eds: S Fedoroff, BHJ Juurlink & R Doucette. Plenum Press, New York. 1993; pp 247-261.
84. Hao C, Richardson A, Fedoroff S. Chapter 7: Isolation of microglia from mouse astroglia cultures. In: *Protocols for Neural Cell Culture*. Eds: Fedoroff S and Richardson A. Humana Press, Totowa, New Jersey, 1992; pp 97-104.
85. Hao C, Bellail A: Brain Cancer Pathology. In: Schwab M. (Ed.) *Encyclopedia of Cancer*: Springer Reference (www.springerreference.com). Springer-Verlag Berlin Heidelberg, 2009. 2012-10-07 19:46:56 UTC

PRESENTATIONS

Podium Presentations (refereed)

1. Hao C. Small molecule degraders of SUMO1 protein as new anticancer drugs for breast cancer

therapy. Amelia Project Annual Meeting, Indianapolis, Indiana, Mar 23, 2019.

2. Hao C, Bellail A. SUMO1-CDK6 conjugation drives the cell cycle and retains the self renewal of glioblastoma stem cells. The 54th Annual Meeting of Canadian Association of Neuropathologists, Banff, Canada, Oct 15-18, 2014.
3. Bellail A, Hao C. SUMO1 modification stabilizes CDK6 protein and drives the cell cycle in glioblastoma. 7th International Conference SUMO, Ubiquitin, UBL proteins: Implications for human diseases. Shanghai, China, May 10-13, 2014.
4. Bellail AC, Olson JJ, Hao C. SUMO1 Modification stabilizes CDK6 protein and drives the cell cycle and glioblastoma progression. The 89th Annual Meeting of American Association of Neuropathologists, Charleston, SC, June 19-23, 2013.
5. Rossi MR, Appin CL, Bellail AC, Mann KP, Saxe DF, Hill CE, Olson JJ, Hadjipanayis C, Hunter S, Brat DJ, Hao C. Genomic characterization of diffuse astrocytoma by SNP-CN arrays and hot-spot mutation sequencing. The 89th Annual Meeting of American Association of Neuropathologists, Charleston, SC, June 19-23, 2013.
6. Bellail AC, Hao C. A20 Ubiquitin E3 ligase is a biomarker of the cancer stem cell resistance to apoptotic drugs. Cambridge Healthtech Institute's Ninth Annual Biomarkers & Diagnostics World Congress, Philadelphia, PA, May 6-8, 2013.
7. Bellail AC, Hao C. Ubiquitin-like proteins regulate the cancer stem cell growth and death. The 3rd Ubiquitin Research and Drug Discovery conference, Las Vegas, NV. Feb 25-26, 2013.
8. Bellail AC, Hao C. A20 inhibits TRAIL-induced apoptosis in glioblastoma-derived cancer stem cells. Ubiquitin Drug Discovery & Diagnostics 2012, Philadelphia, PA, July 23-25, 2012.
9. Hao C, Tse MCL and Bellail AC. Ubiquitination of the DISC defines TRAIL-induced apoptotic and non-apoptotic signals: Implications in cancer therapies. Experimental Biology 2007 (Platform presentation at Minisymposium: Novel Therapeutic Advances in Cancer: A Peek into the Future), Washington DC, April 28-May 2, 2007.
10. Bellail AC, Tse MCL, and Hao C. A20-mediated RIP ubiquitination in glioblastoma resistance to TRAIL treatment. AACR 98th Annual Meeting (Platform presentation at Minisymposium of Cellular and Molecular Biology: Apoptosis), Las Angeles CA, April 14-18, 2007: 1596.
11. Song JH, Song DK and Hao C. Cellular FLIP targeting alters RIP-mediated inhibition of TRAIL-DISC clustering in lipid raft microdomains and cell survival in NSCLC cells. AACR 97th Annual Meeting (Platform Presentation), Washington DC, April 1-5, 2006: 563.
12. Hao C, Wang CX, Song JH, Yong WV and Shuaib A. Cdk5 prevents neuronal apoptosis through ERK-mediated upregulation of Bcl-2. The 45th Annual Meeting of the Canadian Association of Neuropathologists. Sept 21-24, 2005. St. John's NF, Canada. *Can J Neurol Sci* 32(4):553, 2005.
13. Hao C, Li YC, Van Meir EG, and Lin CC. Genomic alternation in triploid human malignant glioma cells associate with the inhibition of DR5, caspase-8, Bid and Smac expression and TRAIL resistance. The 45th Annual Meeting of the Canadian Association of Neuropathologists.

Sept 21-24, 2005. St. John's, NF. *Can J Neurol Sci* 32(4):555, 2005.

14. Xiao C, Yang BF, Asadi N, Beguinot B and Hao C. Molecular dissection of TRAIL-induced death-inducing signaling complex in glioma cells. 2002 Canadian Neuro-Oncology Meeting, May 3-5, Montreal, QC. *Neuro-Oncology* 4(3):225, Jul 2002.
15. Hao C, Hsi B, Zhang Y, Song JH, Asadi N, Xiao C, Douglas DN, Mercer DF, Tyrrell LJ Kneteman NM. TRAIL: a new cancer therapeutic agent. 2002 Canadian Neuro-Oncology Meeting, May 3-5, Montreal, QC. *Neuro-Oncology* 4(3): 218, Jul 2002.
16. Hao C, Petruk KC, Gondorelli G, Trencia A., Beguinot F. PED/PEA-15 protein inhibits TRAIL-induced apoptosis in glioma cells. The 77th annual meeting of the American Association of Neuropathologists, Chicago, IL, June 21-24, 2001, *J Neuropath Exp Neurol* 60 (5):538, 2001.
17. Hao C, Roa WH, Chen H, Parney IF, Yong VW, Van Meir EG, and Petruk, KC. Molecular regulation of TNF-related apoptosis-inducing ligand (TRAIL)-induced apoptosis in human glioma cells and fetal astrocytes. Canadian Neuro-Oncology Meeting, Granville Island, Vancouver, May 26-28, 2000.
18. Hao C. mRNA cytokine and cytokine receptor Profile in glioblastoma tumors and cell lines: Th1/Th2/Th3 cytokine dysregulation is not associated with altered p53 gene expression. 39th Canadian Association of Neuropathologists Annual Meeting, Quebec City, Oct 13-16, 1999. *Can J Neurological Sci* 26:344, 1999.
19. Hao C and Munoz DG. Development of Microglia In CNS. 35rd Annual Meeting of Canadian Association of Neuropathologists. Jasper, Alberta, October 6th-8th, 1995. *Can J Neurol Sci* 23:153, 1996.
20. Hao C, Mackenzie IRA and Munoz DG. The association of microglia with the formation of senile plaques. 33rd Annual Meeting of Canadian Association of Neuropathologists. Whistler, BC, Sept 3rd-5th, 1993. *Can J Neurol Sci* 21:164, 1994.
21. Hao C. Induction of function-related morphological changes of microglia by glia-produced cytokines in culture. 32nd Annual Meeting of Canadian Association of Neuropathologists. Toronto, Sept 17th-19th, 1992. *Can J Neurol Sci* 20:82, 1993.

Poster Presentations (refereed)

22. Bellail AC, Hao C. Ubc9 SUMOylation is required for its interaction with CDK6 through SUMO-interacting motif (SIC) and regulates SUMOylation in glioblastoma. AACR Annual Meeting 2016. New Orleans, Louisiana, April 16-20, 2016. *Cancer Res*, July 15 2016, 76 (14 Supplement) 4546; DOI:10.1158/1538.AM2016-4546. *Proceedings of the AACR*, 57: 4546.
23. Bellail AC, Hao C. Preclinical development of small molecule SUMO1 inhibitors for treatment of human cancers. 3rd World Congress on Cell Science & Stem Cell Research. Baltimore, MD, Nov 20-22, 2013.
24. Bellail AC, Olson JJ, Hao C. Discovery of small molecule SUMO1 Inhibitors for glioblastoma therapy. Primary and Metastatic Brain Cancers: Molecular Pathways and Clinical Challenges.

Montreal International Symposium on Angiogenesis and Metastasis. Montreal, Canada, June 12-14, 2013.

25. Danish HH, Schreiber E, Holder C, Vincentelli C, Hao C, Curran W, Fox T, Crocker I, Shu HK. Post-radiation diffusion MRIs may distinguish true progression from pseudoprogression in GBM patients. American society for Radiation Oncology (ASTRO) Annual Meeting 2013, Atlanta GA, Sept 22-25, 2013.
26. Yoon Y, Hong S, Rojas M, Hao C, Shim H, Shu H-K. Blocking radiation-induced lung fibrosis by CXCR4 antagonists. The 2012 Winship Scientific Research and Academic Development symposium, April 12-13, 2012.
27. Bellail AC, Olson JJ, Yang X, Chen ZJ and Hao C. A20 ligase-mediated RIP1 polyubiquitin chains inhibits TRAIL-induced apoptosis in glioblastoma. The 2012 Winship Scientific Research and Academic Development symposium, April 12-13, 2012.
28. Bellail AC, Olson JJ, Yang X, Chen ZJ and Hao C. A20 ligase-mediated RIP1 polyubiquitin chains inhibits TRAIL-induced apoptosis in glioblastoma. Late-Breaking Research, AACR Annual Meeting 2012, Chicago, IL, March 31-April 4, 2012.
29. Bellail AC, Qi L, Zhang Z, Olson J, Li S and Hao C. Heterogeneity of glioblastoma stem and non-stem cells in the expression of caspase-8 and response to TRAIL-induced apoptosis. AACR Annual Meeting 2010, Washington DC, April 17-21, 2010.
30. Bellail AC, Lin CC and Hao C. Bid loss due to gene translocation results in the resistance of NSCLC H23 cell line to TRAIL-based treatments. AACR Annual Meeting 2008, Denver Co, April 18-22, 2009.
31. Bellail AC, Qi L, James CD and Hao C. A20 inhibits caspase-8 cleavage and TRAIL-induced apoptosis in glioblastomas. Society for Neuro-Oncology 13th annual Scientific Meeting, Las Vegas, Nevada, Nov 20-23, 2008; Neuro-Oncology 10 (5):773, CB-52, 2008.
32. Bellail AC, Tse MCL and Hao C. The DISC modification defines TRAIL resistance in glioblastoma cells. AACR Annual Meeting 2008, San Diego CA, April 12-16, 2008: 818.
33. Tse MCL, Bellail AC, Song JH, Olson JJ, and Hao C. Lipid Raft and non-raft modulate the TRAIL sensitivity of glioblastoma cells. Winship Cancer Institute 5th Annual Scientific Research Symposium, Atlanta GA, Oct 25, 2007.
34. Bellail AC, Tse MCL, Song JH, Sun SY, Olson JJ and Hao C. The DISC modifications inhibit TRAIL-induced apoptosis in glioblastoma cells. Winship Cancer Institute 5th Annual Scientific Research Symposium, Atlanta GA, Oct 25, 2007.
35. Chhabra VS, Bellail A, Oyesiku NM, Hao C, and Olson JJ. Hsp90 Inhibitor Sensitizes Glioblastoma Multiforme to TRAIL-induced Apoptosis. 2007 Congress of Neurological Surgeons Annual Meeting, San Diego, Ca, Sept 15-20, 2007.
36. Zarnitsyn VG, Meacham JM, Varady M, Hao C, Degertekin FL, and Fedorov AG. Electrosonic DNA gun microarray for drug and gene delivery. Integrated Biosystems Initiative, Georgia

Institute of Technology, March 14, 2007.

37. Wang P, Zhang J, Song JH, Kneteman NM, and Hao C. RIP and c-FLIP inhibits TRAIL-induced apoptosis in human pancreatic cancer cells. AACR 97th Annual Meeting, Washington DC, April 1-5, 2006: 180.
38. Liu, R.-Z., Coles, J.E., Hao, C. and Godbout, R. Expression and function of intracellular fatty acid-binding proteins in human malignant glioma cells and tissues. American Association for Cancer Research 97th Annual Meeting, Washington D.C. April 1-5, 2006: 198.
39. Bellail AC, Song JH, and Hao C. Normal human astrocytes are resistant to TRAIL-induced apoptosis. AACR 97th Annual Meeting, Washington DC, April 1-5, 2006: 177.
40. Song JH, Song DK, Lin CC, Phuphanich S, Brat D, J Olson, Van Meir EG, and Hao C. Development of TRAIL therapeutic strategies for malignant gliomas. WFNO II/EANO VI, Edinburgh UK, May 5-8, 2005. *Neuro-Oncology* 7 (3):384 (401) Jul 2005.
41. Song DK, Song JH, Wilson TL, Yong VW, and Hao C. TRAIL is nontoxic to normal human astrocytes. WFNO II/EANO VI, Edinburgh UK, May 5-8, 2005. *Neuro-Oncology* 7 (3): 301 (77) Jul 2005.
42. Vilimanovich U, Song JH, Guilbert LJ, and Hao C. TRAIL induces proliferation of malignant glioma cells through c-FLIP-mediated ERK1/2 Pathway. WFNO II/EANO VI, Edinburgh UK May 5-8, 2005. *Neuro-Oncology* 7 (3): 295 (53) Jul 2005.
43. Lin CC, Tzeng CC, Song JH, Hsieh LJ, Liao SJ, Tsia FJ, Tsai CH, and Hao C. Genomic alternations in glioblastoma cell resistance to TRAIL-induced apoptosis. AACR 96th Annual Meeting, Anaheim, CA April 16-20, 2005: 851.
44. Song JH, Wang CX, Song DK, Wang P, and Hao C. Cdk5 mediated PI3K/Akt pathway coupling with up-regulation of Bcl-2 confers differentiated neuroblastoma resistance to apoptosis. AACR 96th Annual Meeting, Anaheim CA, April 16-20, 2005: 827.
45. Song JH, Song DK and Hao C. Both RIP and cFLIP are required for TRAIL-induced apoptosis in cancer cells. 16th EORTC-NCI-AACR Symposium on “Molecular targets and cancer therapeutics”, Geneva Switzerland, Sept 28 – Oct 1, 2004.
46. Hao C, Song JH, Song DK and Kneteman NM. TRAIL inhibits tumor growth, but does not cause hepatotoxicity in mice with chimeric human livers. 16th EORTC-NCI-AACR Symposium on “Molecular targets and cancer therapeutics”, Geneva Switzerland, Sept 28 – Oct 1, 2004.
47. Song JH, Song DK and Hao C. Bak is crucial for TRAIL-induced apoptosis in cancer cells. AACR 95th Annual Meeting, Orlando, Florida, March 27-31, 2004: 823.
48. Song DK, Song JH, Kneteman MN and Hao C. siRNA targeting c-FLIP sensitizes non-small cell lung carcinoma cells to TRAIL-induced apoptosis. AACR 95th Annual Meeting, Orlando, Florida, March 27-31, 2004: 681.
49. Vilimanovich U, Song JH, Altieri DC, and Hao C. Tumor necrosis factor-related apoptosis

- inducing ligand induces glioma cells proliferation that is dependent on ERK1/2 and survivin. XIVth International Congress of Neuropathology, Sept 14-18, Turin, Italy, 2004.
50. Hao C, Hsi B, Song JH, Petruk KC, Tyrrell DLJ and Kneteman NM. TRAIL Inhibits Glioma Growth, But Does Not Cause Hepatotoxicity In Mice With Chimeric Human Livers. XIVth International Congress of Neuropathology, Sept 14-18, Turin, Italy, 2004.
 51. Hao C, Song JH, Kneteman NM. Non-tagged TRAIL induces apoptosis of malignant glioma cells, but not normal human neurons, astrocytes and hepatocytes. Society for Neuro-Oncology 8th Annual Meeting, Keystone, Colorado, Nov 13-16, 2003.
 52. Song JH, Song DK, Young VW and Hao C. Chemotherapeutic drugs sensitize malignant glioma cells to TRAIL-induced apoptosis: Involvement of extrinsic and intrinsic pathways. American Association for Cancer Research 94th Annual Meeting, Washington DC, USA, July 11-14, 2003.
 53. Steckley JL, Findlay JM, Easton AS, and Hao C. Hypertrophic inflammatory neuropathology of the brachial plexus. 38th Meeting of Canadian Congress of Neurological Sciences, Quebec City, Quebec, June 17-21, 2003. *Can J Neurol Sci Suppl.* 2-S56, 2003.
 54. Hao C, Song JH, Song DK and Herlyn M. TRAIL-induced apoptosis in melanoma cells: Molecular signaling and therapeutic targeting. Keystone Symposia, *Keystone Symposia* 63, March 19 –24, 2003.
 55. Findlay JM, Hao C, Emery D. Nonatherosclerotic fusiform cerebral aneurysms. *Can J Neurol Sci Suppl* 2:S28, 2001.
 56. Laassami R, Fulton D, Hao C, Murtha A, Turner J, Urtasun R. Hanson J, Bistriz A, and Roa W. A phase I/II study of single-agent BCNU chemotherapy as the initial postoperative treatment in patients with glioblastoma multiforme. Innovative Technology in Radiation Medicine, Toronto, Canada, Oct 22-27, 2002. *Radiother Oncol* 65 (Suppl), S32, 2002.
 57. Hao C, Chen H, Roa WH, Yong VW, Van Meir EG, Beguinot F, Parney IF, and Petruk KC. Induction and intracellular regulation of TNF-related apoptosis-inducing ligand (TRAIL)-induced apoptosis in human glioma cells. XIVth International Congress of Neuropathology, Birmingham, England, 3-6 September 2000, *Brain Path* 4:730, 2000.
 58. Chen H, Petruk KC, Roa WH, Ramsay DA, and Hao C. Silencer of death domain (SODD) regulation of tumor necrosis factor (TNF)-induced apoptosis in malignant gliomas. XIVth International Congress of Neuropathology, Birmingham, England, 3-6 September 2000, *Brain Path* 4:730, 2000.
 59. Yee D, Cheung HC, Chen HT, Dabbagh R, Coupland R, Petruk KC, Fulton D, Hao C, Roa WH. Radiation-induced cell cycle arrest, apoptosis and cytokine/receptor expression in p53 wild and mutated human malignant glioma cell lines. *Int J Radiat Oncol Biol Phys* 48:280, 2000.
 60. Sinclair DB, Aronyk K, Snyder T, Javidan M, Wheatley M, McKean J, Bhargava R, Hao C, Berg M, Mak B. Pediatric epilepsy surgery at the University of Alberta: 1988-1998. Annual meeting of the American Epilepsy Society, Orlando, FL December 3-8, 1999, *Epilepsia* 40 (7):205, 1999.

61. Hao C, Ahmed I and Fedoroff S. Survival of microglia in cultures depends on autocrine secretion of CSF-1 induced by LPS. 21th Annual Meeting of Society for Neuroscience, New Orleans, Louisiana, Nov 10th-15th, 1991.
62. Hao C and Fedoroff S. The *lps^d* mutation implicated in endotoxin resistance in macrophages is also expressed in microglia and astroglia of the central nervous system. Third IBRO World Congress of Neuroscience, Montreal. Canada, Aug 1st-9th, 1991.
63. Hao C, Richardson A and Fedoroff S. Development of microglia-like cells in primary mouse cultures. World Congress on Cell and Tissue Culture, Anaheim, California, June 16th-20th, 1991.
64. Hao C, Guilbert LJ and Fedoroff S. Paracrine relationship between astroglia and microglia in cultures. 20th Annual Meeting of Society for Neuroscience, Oct 28th-Nov 2nd, 1990.
65. Fedoroff S, and Hao C. Origin of microglia and their regulation by astroglia. Third Conference of Institute of Developmental Neuroscience and Aging. Torino, Italy, April 4th-7th, 1990.
66. Hao C, Richardson A and Fedoroff S. Does the mouse brain have its own macrophages? 18th Annual Meeting of Society of Neuroscience, Toronto, Canada, Nov 13th-19th, 1988.
67. Fedoroff S, Hao C, Richardson and Ahmed I. Do astrocytes contribute to the phagocytic cell population in the CNS? 7th General Meeting of the Institute of Developmental Neuroscience. Jerusalem, 1987.

Invited Lectures/Presentations (National and International)

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| 2019.11.13 | Small molecule degraders of SUMO1 as new anticancer drugs for glioblastoma therapy. University of Cincinnati Gardner Neuroscience Institute Seminars, Cincinnati |
| 2019.09.27 | Discovery and development of SUMO1 degraders for glioblastoma therapy
Neurosurgery Grand Rounds, Cedars-Sinai, Los Angeles, California |
| 2019.09.27 | Targeted protein degradation discovery of small molecule degraders as anticancer and antiaging drugs. Neurosciences Grand Rounds, Cedars-Sinai, Los Angeles, California |
| 2018. 11.07 | Small molecule degraders of SUMO1 protein as new anticancer drugs
Lineberger Comprehensive Cancer Center, University of North Carolina |
| 2017.06.21 | Development of SUMO-targeted new drugs for glioblastoma and Alzheimer's disease
Stark Neurosciences Institute, Indiana University School of Medicine |
| 2017.05.11 | Discovery and Development of a New Class of SUMO-Targeted Anticancer Drugs
Department of Pathology, University of Maryland School of Medicine |
| 2014.11.14 | Development of glioblastoma stem cells-targeted therapies
Translational Oncology Research Symposium, Josephine Ford Cancer Institute
Henry Ford Health System, Detroit |
| 2013.02.26 | Ubiquitin-like proteins regulate the cancer stem cell growth and death |

Distinguished Speaker, the 3rd Ubiquitin Research and Drug Discovery Conference
Las Vegas, NV

2012.07.25 Title: A20 ubiquitin pathway and TRAIL targeted cancer therapies
Distinguished Speaker, the 4th Ubiquitin Drug Discovery & Diagnostics Conference
Philadelphia, PA

2010.05.05 Title: Cancer stem cells in glioblastoma: diagnosis, research and therapy
Keynote Speaker of Pathology Department Research Day, Dalhousie University

Seminars and Grand Rounds

2019.11.21 Targeted protein degradation discovery of small molecule degraders of SUMO1 as
new anticancer drugs. Indiana University Simon Cancer Center Seminars

2019.03.28 Small molecule degraders of SUMO1 protein as new anticancer drugs:
Targeted protein degradation drug discovery
Gregory Derringer Pathology Grand Rounds, Indiana University School of Medicine

2018.10.15 Small molecule degraders of SUMO1 protein as new anticancer drugs
Biochemistry and Molecule Biology Seminar, Indiana University School of Medicine

2016.11.02 Title: SUMO pathway and targeted therapy: Surviving in the Hunger Games.
Hermelin Brain Tumor Center, Henry Ford Health System, Detroit, Michigan

2015.04.15 Title: Genomic diagnosis and targeted therapies of glioblastoma
Neurology and Neurosurgery Grand Round, Henry Ford Health System

2014.11.14 Title: Development of glioblastoma stem cells-targeted therapies
Translational Oncology Research Symposium, Josephine Ford Cancer Institute
Henry Ford Health System, Detroit

2013.07.31 Title: Genomic diagnosis and targeted therapy in neuropathology practice and research
Montreal Neurological Institute & Hospital, McGill University, Canada

2013.07.24 Genomic diagnosis & targeted therapy of glioblastoma
Department of Pathology, University of Washington, Seattle, USA

2012.09.06 Title: Ubiquitin regulation of cell death and growth and targeted cancer therapies
Department of Pathology Seminars, University of Chicago, Chicago

2011.11.29 Title: TRAIL apoptotic pathway and clinical trials: Update
Hermelin Brain Tumor Center, Henry Ford Hospital, Detroit

2011.04.13 TRAIL apoptotic pathway-targeted cancer therapy: will it work?
The Winship Cancer Institute Grand Rounds, Emory University, Atlanta

2011.04.01 Title: Cancer cell growth and death pathways and therapeutic implications.
Department of Biology Graduate Seminars, Georgia State University, Atlanta

- 2011.03.03 Title: TRAIL-induced apoptosis and targeted cancer therapies.
Department of Biochemistry and Molecular Biology, University of Georgia, Athens
- 2010.05.13 Title: Recent advances in glioblastoma diagnosis, research and therapies.
Neurosurgery Grand Rounds, Emory University
- 2010.01.06 Title: Therapeutic targeting of glioblastoma stem cells
Winship Cancer Institute Grand Rounds, Emory University
- 2007.10.16 Title: Development of TRAIL as a cancer therapeutic agent
Developmental Cancer Therapeutics Program, City of Hope, Duarte, CA
- 2007.01.12 Title: Targeting of TRAIL apoptotic pathways for cancer therapies: the promise
and challenge. Division of Digestive Diseases Seminars, Emory University
- 2006.03.29 Title: Selective killing of cancer cells by TRAIL: a new cancer therapeutic?
Department of Pathology Seminars, Dalhousie University, Halifax, Canada
- 2003.07.22 Title: TRAIL-induced apoptosis: Molecular Signaling and Therapeutic Targeting
of Cancer Cells. Dept of Pathology, University of Alabama at Birmingham
- 2003.07.25 Title: Targeting TRAIL-induced Apoptotic Pathways for Cancer Therapy.
Dept. Lab. Medicine Seminars, St. Michael Hospital, University of Toronto
- 2002.08.08 Title: Molecular Signaling & Therapeutic Targeting of Apoptosis in Cancer Cells.
Department of Medicine Seminars, University of Louisville
- 2002.02.20 Title: Proteomics of TRAIL-induced apoptosis: From Bench to Clinic.
Montreal Neurological Institute Seminars, McGill, Montreal
- 2001.11.11 Title: Proteomics of Apoptosis: Targeting Cell Death for Cancer Therapy.
Department of Oncology Seminars, University of Alberta, Canada
- 2000.09.15 Title: TRAIL-Induced Apoptosis in Cancer Cells.
Department of Medical Genetics Seminars, University of Alberta, Canada