Changho Choi

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EDUCATION

1990-1996 Ph.D., Physics, University of Waterloo (Waterloo, ON, Canada)
Thesis : *Tunneling Spectroscopy by Level Matching in the Spin Rotating Frame*
Supervisor: Dr. M. Mik Pintar (*deceased*)
1987-1989 M.Sc., Physics, Korea University (Seoul, Korea)
Thesis : *Study of CoMn Thin Films as a High-Density Magnetic Recording Medium*
Supervisor: Dr. Mann-Jang Park (*deceased*)
1980-1987 B.Sc., Physics, Korea University (Seoul, Korea)
(3-year army service)

FELLOWSHIP

1998-1999	Postdoctoral Fellow	Physics, University of New Brunswick, NB, Canada
1996-1998	Postdoctoral Fellow	Physics, University of Waterloo, ON, Canada

EMPLOYMENT

2015-Present	Professor	Advanced Imaging Research Center / Radiology University of Texas Southwestern Medical Center, TX, USA
2007-2015	Associate Professor	Advanced Imaging Research Center / Radiology University of Texas Southwestern Medical Center, TX, USA
2006-2007	Faculty Service Officer	Biomedical Engineering, University of Alberta, AB, Canada
2000-2006	Research Associate	Biomedical Engineering, University of Alberta, AB, Canada
1999-2000	Research Scientist	Chemical Engineering, Texas A&M University, TX, USA
1989-1990	Teaching assistant	Physics, Korea University, Seoul, Korea

PROFESSIONAL MEMBERSHIP

International Society of Magnetic Resonance in Medicine (ISMRM)
Society of Neuro-Oncology (SNO)

RESEARCH CONSULTANCY

Agios Pharmaceuticals

CURRENT RESEARCH SUPPORT

CPRIT RP200456 (PI Choi) 3/1/2020 - 2/28/2023
Clinical MR spectroscopy development of malignancy biomarkers in gliomas

NIH/NCI R01 CA184584 (PI Choi) 9/1/2014 - 8/31/2020 (NCE)
Clinical development of cancer-specific MRS biomarkers in malignant gliomas

NIH/NCI R01 CA1547843 (PI Maher) 05/01/18 - 04/30/23
Understanding the role of IDH in malignant gliomas
Role: Co-I

NIH/NHLBI R01 HL142775-01 (PI Ritz - SMU) 07/15/2018 - 07/14/2022
The Dallas asthma brain and cognition study.
Role: Co-I (UT Southwestern Subcontract PI: Brown)

NIH/NCCIH R61 AT009625-01 (PI Brown) 09/01/2018 - 08/31/2020
Development of pregnenolone as a treatment for depression.
Role: Co-I

NIH/NIMH R01MH115932-01A1 (PI Brown) 04/01/2019 – 03/31/2014
Exploring the effect of cortocosteroids on the human hippocampus using neurocognitive testing and high-resolution brain imaging.
Role: Co-I

REPRESENTATIVE PUBLICATIONS

Tiwari V, Daoud EV, Hatanpaa KJ, Gao A, Zhang S, An Z, Ganji SK, Raisanen JM, Lewis CM, Askari P, Baxter J, Levy M, Dimitrov I, Thomas BP, Pinho MC, Madden CJ, Pan E, Patel TR, DeBerardinis RJ, Sherry AD, Mickey BE, Malloy CR, Maher EA, Choi C. Glycine by MR spectroscopy is an imaging biomarker of glioma aggressiveness. Neuro-oncology (in press). PMID:32055850.

Tiwari V, Mashimo T, An Z, Vemireddy V, Piccirillo S, Askari P, Hulsey KM, Zhang S, de Graaf RA, Patel TR, Pan E, Mickey BE, Maher EA, Bachoo R, Choi C. In vivo MRS measurement of 2-hydroxyglutarate in patient-derived IDH-mutant xenograft mouse models versus glioma patients. Magn Reson Med (in press). PMID:32003035.

An Z, Tiwari V, Baxter J, Levy M, Hatanpaa KJ, Pan E, Maher EA, Patel TR, Mickey BE, Choi C. 3D High-Resolution Imaging of 2-Hydroxyglutarate in Glioma Patients using DRAG-EPSI at 3T In Vivo. Magn Reson Med 2019;81(2):795-802. PMID:30277274.

An Z, Tiwari V, Ganji SK, Baxter J, Levy M, Pinho MC, Pan E, Maher EA, Patel TR, Mickey BE, Choi C. Echo-planar spectroscopic imaging with dual-readout alternated gradients (DRAG-EPSI) at 7T: Application for 2-hydroxyglutarate imaging in glioma patients. Magn Reson Med 2018;79:1851-1861. PMID:28833542.

An Z, Ganji SK, Tiwari V, Pinho MC, Patel T, Barnett S, Pan E, Mickey BM, Maher EM, Choi C. Detection of 2-hydoroxyglutarate in brain tumors by triple-refocusing MRS at 3T in vivo. Magn Reson Med 2017;78:40-48. PMID:27454352.

Choi C, Raisanen JM, Ganji SK, Zhang S, McNeil SS, An Z, Madan A, Hatanpaa KJ, Vemireddy V, Sheppard CA, Oliver D, Hulsey KM, Tiwari V, Mashimo T, Battiste J, Barnett S, Madden CJ, Patel TV, Pan E, Malloy CR, Mickey BE, Bachoo RM, Maher EM. Prospective longitudinal analysis of 2-hydroxyglutarate MR spectroscopy identifies broad clinical utility for the management of IDH-mutant glioma patients. Journal of Clinical Oncology. 2016;34(33):4030-4039. PMID:28248126.

Choi C, Ganji SK, DeBerardinis RJ, Hatanpaa KJ, Rakheja D, Kovacs Z, Yang XL, Mashimo T, Raisanen JM, Marin-Valencia I, Pascual JM, Madden CJ, Mickey BE, Malloy CM, Bachoo R, Maher EA. 2-Hydroxyglutarate detection by magnetic resonance spectroscopy in IDH-mutated glioma patients. Nature Medicine 2012;18:624-629.