

Curriculum Vitae of Michael Lim

Stanford University School of Medicine

DEMOGRAPHIC INFORMATION

Current Appointment

Professor and Chair of Neurosurgery, and by courtesy Oncology, Otolaryngology, Radiation Oncology, Stanford University School of Medicine

Education and Training

Undergraduate

1995 B.S., Biochemistry, University of New Hampshire, Durham, NH

Doctoral/Graduate

2000 M.D., The Johns Hopkins University School of Medicine, Baltimore, MD

Postdoctoral

2000-2001 Intern, General Surgery, Stanford University Medical Center, Stanford, CA

2001-2007 Resident, Neurosurgery, Stanford University Medical Center, Stanford, CA

Professional Experience

2007-2013 Assistant Professor of Neurosurgery, Oncology, and Radiation Oncology and Radiation Molecular Sciences, The Johns Hopkins University School of Medicine

2013-2017 Associate Professor of Neurosurgery, Oncology, and Radiation Oncology and Radiation Molecular Sciences, The Johns Hopkins University School of Medicine

2017-2020 Professor of Neurosurgery, Oncology, Otolaryngology, and Radiation Oncology and Radiation Molecular Sciences, The Johns Hopkins University School of Medicine

2020- Present Adjunct Professor of Neurosurgery, The Johns Hopkins University School of Medicine

2020- Present Professor and Chair of Neurosurgery, and by courtesy, Oncology, Otolaryngology Radiation Oncology and Neurology, Stanford University School of Medicine

PUBLICATIONS:

Peer Reviewed Original Science Publications: *Co-Authors

1. Khimani AH, **Lim M**, Graf TG, Smith TF, Ruprecht RM. Complete Genome of Rauscher Murine Leukemia Virus and its Phylogenetic Relationship with Other Murine Leukemia Viruses. *Virology*. 1997;(238):64-67.
2. Simons JW, Mikhak B, Chang JF, DeMarzo AD, Carducci MA, **Lim M**, Weber CE, Baccala AA, Goemann MA, Clift SM, Ando DG, Levitsky HI, Cohen LK, Sanda MG, Mulligan RC, Partin AW, Carter HB, Piantadosi S, Marshall FF, Nelson WG. Induction of Immunity to Prostate Cancer Antigens: Results of a Clinical Trial of Vaccination with Irradiated Autologous Prostate Tumor Cells Engineered to Secrete GM-CSF using *Ex Vivo* Gene Transfer. *Cancer Res*. 1999;59(20):5160-68.

3. Zhong H, DeMarzo AM, Laughner E, **Lim M**, Hilton DA, Zagzag D, Puechler P, Isaacs WB, Semenza GL, Simons JW. Overexpression of Hypoxia-Inducible Factor 1 Alpha in Common Human Cancers and Their Metastases. *Cancer Res.* 1999;59(22):5830-35.
4. **Lim M** Simons JW. Emerging concepts in GM-CSF Gene-Transduced Tumor Vaccines for Human Prostate Cancer. *Curr Opin in Mol Ther.* 1999;(1):64-71.
5. Moriarti J, **Lim M**, Beauchamp, NJ Jr, Olivi A. Reversible Posterior Leukoencephalopathy Occurring During Resection of a Posterior Fossa Tumor: Case Report and Review of the Literature. *Neurosurg.* 2001;49(5):1237-39.
6. **Lim M**, Gibbs I, Adler JR, Martin D, Chang S. The Efficacy of Linear Accelerator Radiosurgery In Treating Glomus Jugulare Tumors. *Technol Cancer Res Treat.* 2003;2(3):261-266.
7. **Lim M**, Gibbs I, Adler JR, Chang S. Efficacy and Safety of Stereotactic Radiosurgery for Glomus Jugulare Tumors. *Neurosurg Focus.* 2004;17(2):E11.
8. Sims L, **Lim M**, Harsh GH. Review of Brain Abscesses. *Operative Techniques in Neurosurgery* 2004;7(4):176-181.
9. Ryu S, **Lim M**, Harsh GH. Management of Epidural Abscesses and Subdural Empyemas. *Operative Techniques in Neurosurgery* 2004;7(4):182-187.
10. **Lim M**, Haddix T, Harsh GR, Vogel H, Steinberg G, Guccione S. Characterization of the Integrin $\alpha\beta 3$ in Arteriovenous Malformations and Cavernous Malformations. *Cerebrovasc Dis.* 2005;20(1):23-27.
11. **Lim M**, Villavicencio A, Burneikiene S, Chang SD, Romanelli P, McNeely L, McIntyre M, Thramann JJ, Adler JR. Cyberknife Radiosurgery for Idiopathic Trigeminal Neuralgia. *Neurosurg Focus.* 2005;18(5):E9.
12. **Lim M**, Guccione S, Haddix T, Sims L, Cheshier SH, Chu P, Vogel H, Harsh GH. $\alpha\beta 3$ Integrin in Central Nervous System Tumors. *Hum Pathol.* 2005;36(6):665-9.
13. Sinclair J, Marks MP, Levy RP, Adler JR, Chang SD, Lopez JR, Do HM, Bell-Stephens TE, **Lim M**, Steinberg GK. Visual Field Preservation After Curative Multi-modality Treatment of Occipital Lobe Arteriovenous Malformations. *Neurosurg.* 2005;57(4):655-67.
14. **Lim M** and Adler JR. Cyberknife Radiosurgery for Extremity Schwannomas: Technical Note and Case Report. *Stereotact. Funct. Neurosurg.* 2006;84(2-3):60-63. Cover Article.
15. **Lim M**, Cotruz C, Romanelli P, Schaal D, Gibbs I, Chang SD, Adler JR. Stereotactic Radiosurgery Using CT Cisternography and Non-Isocentric Planning for the Treatment of Trigeminal Neuralgia. *Comput Aided Surg.* 2006;11(1):11-20.
16. Simons JW, Carducci MA, Mikhak B, **Lim M**, Biedrzycki B, Borrellini F, Clift SM, Hege KM, Ando DG, Piantadosi S, Mulligan R, Nelson WG. Phase I/II Trial of an Allogeneic Cellular Immunotherapy in Hormone-Naïve Prostate Cancer. *Clin Cancer Res.* 2006;12(11 Pt 1):3394-401.
17. **Lim M***, Cheshier SH*, Steinberg GK. New Vessel Formation in the Central Nervous System During Tumor Growth, Vascular Malformations, and MoyaMoya. *Neurovasc Research.* 2006;3(3):237-245.

18. Lad SP, Guzman R, Kelly ME, Li G, **Lim M**, Lovbald K, Steinberg GK. Cerebral Perfusion Imaging in Vasospasm. *Neurosurgical Focus*. 2006;21(3):E7.
19. Bower R, **Lim M**, Harsh GR. Current State of Immunotherapy for Gliomas – Part I: Tumor-Induced Immunosuppression and Cytokine Therapy. *Contemporary Neurosurgery*. 2007;29(14):1-6.
20. Bower R, **Lim M**, Harsh GR. Current State of Immunotherapy for Gliomas – Part II: Passive Immunotherapy and Active Immunotherapy. *Contemporary Neurosurgery*. 2007;29(15):1-6.
21. **Lim M**, Bower R, Nangiana JS, Chang SD. Radiosurgery for Glomus Jugulare Tumors. *Technol Cancer Res Treat*. 2007;6(5):419-23.
22. Li G, Chang SD, Adler JR, **Lim M**. Irradiation of Glomus Jugulare Tumors: a Historical Perspective. *Neurosurg Focus*. 2007;23(6):E13.
23. Patil CG, Veeravagu A, Bower R, Li G, Chang SD, **Lim M**, Adler JR. Cyberknife Radiosurgery for the Treatment of Atypical Trigeminal Pain. *Neurosurg Focus*. 2007;23(6):E9.
24. Villavicencio A*, **Lim M***, Burneikiene S, Romanelli P, Chang SD, McNeely L, Fariselli L, McIntyre M, Bower R, Broggi G, Thramann JJ, Adler JR. CyberKnife Radiosurgery for Trigeminal Neuralgia: A Preliminary Multicenter Experience. *Neurosurg*. 2008;62(3):647-55.
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26. Ford E, Purger D, Tryggestad E, McNutt T, Christodouleas J, Rigamonti D, Shokek O, Won S, Zhou J, **Lim M**, Wong J, Kleinberg L. A Virtual Frame System for Stereotactic Radiosurgery Planning. *Int J Radiat Oncol Biol Phys*. 2008;72(4):1244-49.
27. Nangiana JS, **Lim M**, Silva R, Guzman R, Chang SD. Vein of Galen Malformations Part I. *Contemporary Neurosurgery*. 2008;30(4):1-8.
28. Nangiana JS, **Lim M**, Silva R, Guzman R, Chang SD. Vein of Galen Malformations Part II. *Contemporary Neurosurgery*. 2008;30(5):1-8.
29. Cheshier SH, Kalani MYS, **Lim M**, Ailles L, Huhn SL, Weissman IL. A Neurosurgeon's Guide to Stem Cells, Cancer Stem Cells, and Brain Tumor Stem Cells. *Neurosurg*. 2009;65(2):237-49.
30. Guss ZD, Batra S, Li G, Chang SD, Parsa AT, Rigamonti D, Kleinberg L, **Lim M**. Radiosurgery of Glomus Jugulare: History and Recent Progress. *Neurosurg Focus*. 2009;27(6):E5.
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32. Albesiano E, Han J, **Lim M**. Mechanisms of Local Immuno-resistance in Gliomas. *Neurosurg Clin N Am*. 2010;21(1):17-29.
33. Han SJ, Kaur G, Yang I, **Lim M**. Biologic Principles of Immunotherapy for Malignant Gliomas. *Neurosurg Clin N Am*. 2010;21(1):1-16.

34. Frazier J, **Lim M**, Olivi A. Immunotherapy Combined with Chemotherapy in the Treatment of Tumors. *Neurosurg Clin N Am*. 2010;21(1):187-94.
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36. Frazier JL, Batra S, Kapur S, Gandhi R, Carson K, Shokek O, **Lim M**, Kleinberg L, and Rigamonti D. Stereotactic Radiosurgery in the Management of Brain Metastases: an institutional retrospective analysis of survival. *Int J Radiat Oncol Biol Phys*. 2010;76(5):1486-92.
37. Sun DQ, Cheng J, Frazier JL, Batra S, Wand G, Kleinberg LR, Rigamonti D, Quinones- Hinojosa A, Salvatori R, **Lim M**. Treatment of pituitary adenomas using radiosurgery and radiotherapy: A single center experience and review of literature. *Neurosurg Review*. 2011;34(2):181-9.
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42. See AP*, Zeng J*, Tran P, **Lim M**. Acute Toxicity of Second Generation HIV Protease-Inhibitors in Combination With Radiotherapy: a Retrospective Case Series. *Radiat Oncol*. 2011;6:25.
43. Sun DQ, Carson KA, Raza SM, Batra S, Kleinberg LR, **Lim M**, Huang J, Rigamonti D. The radiosurgical treatment of arteriovenous malformations: obliteration, morbidities, and performance status. *Int J Radiat Oncol Biol Phys*. 2011;80(2):354-61.
44. See AP, Pradilla G, Yang I, Han S, Parsa AT, **Lim M**. Heat Shock Protein-Peptide Complex (HSPPC-96, Oncophage) in the Treatment of Glioblastoma. *Expert Rev Vaccines*. 2011;10(6):721-731.
45. Jackson C, Jallo G, **Lim M**. Clinical Outcomes After Treatment of Germ Cell Tumors. *Neurosurg Clin N Am*. 2011;22(3):385-94.
46. Chan JYK, Li RJ, **Lim M**, Quinones-Hinojosa A, Boahene K. Endoscopic Transvestibular Paramandibular Exploration of the Infratemporal Fossa and Parapharyngeal Space: A Minimally Invasive Approach to the Middle Cranial Base. *Laryngoscope*. 2011;121(10):2075-80.
47. Nguyen T, Hsu W, **Lim M**, Naff N. Stereotactic Radiosurgery: A Cross-Platform Comparison. *Neurol Res*. 2011;33(8):787-91.

48. Zeng J*, See AP*, Aziz K, Thiyagarajan S, Salih T, Gajula RP, Armour M, Phallen J, Terezakis S, Kleinberg L, Redmond K, Hales RK, Salvatori R, Quinones-Hinojosa, Tran PT*, **Lim M***. Nelfinavir Induces Radiation Sensitization in Pituitary Adenoma Cells. *Cancer Bio Ther.* 2011;12(7):657-63.
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51. Jackson C, Ruzevick J, Phallen J, Belcaid Z, **Lim M**. Challenges in Immunotherapy Presented by the Glioblastoma Multiforme Microenvironment. *Clin and Dev Immunol.* 2011:732413.
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58. Raza S, See AP, **Lim M**. Real-Time Imaging with the O-Arm for Skull Base Applications: A Cadaveric Feasibility Study. *J Neurol Surg B Skull Base.* 2012; 73(05): 293-301.
59. Jain A, Amin A, Jain P, Burger P, Jallo G, **Lim M**, Bettegowda C. Subependymoma: Clinical Features and Surgical Outcomes. *Neurol Res.* 2012;34(7):677-84.
60. Chaichana KL, Jackson C, Patel A, Miller NR, Subramanian P, **Lim M**, Gallia G, Olivi A, Weingart J, Brem H, Quinones-Hinojosa A. Predictors of Visual Outcome Following Surgical Resection of Medial Sphenoid Wing Meningiomas. *J Neurol Surg B Skull Base.* 2012;73(5):321-6.
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62. Jackson C, Ruzevick J, Brem H, **Lim M**. . Vaccine strategies for Glioblastoma: Progress and Future Directions. *Immunotherapy.* 2013;5(2):155-67.

63. Nicholas S, Mathios D, Jackson C, Lim M. Metastatic Melanoma to the Brain: Surgery and Radiation is Still the Standard of Care. *Curr Treat Options Oncol*. 2013;14(2):264-279.
64. Chaichana KL, Pendleton C, Xaidi H, Olivi A, Weingart JD, Gallia GL, Lim M, Brem H, Quinones-Hinojosa A. Seizure Control for Patients Undergoing Meningioma Surgery. *World Neurosurg*. 2013;79(3-4):515-24.
65. Nicholas S, Mathios D, Ruzevick J, Jackson C, Yang I, Lim M. Current Trends in Glioblastoma Multiforme Treatment: Radiation Therapy and Immune Checkpoint Inhibitors. *Brain Tumor Res Treat*. 2013;1(1):2-8
66. Zeng J, Harris TJ, Lim M, Drake CG, Tran PT. Immune Modulation and Stereotactic Radiation: Improving Local and Abscopal Responses. *BioMed Res Intl*. 2013:658126
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69. See AP, Han J, Phallen J, Binder Z, Gallia G, Pan F, Jinasena D, Jackson C, Belcaid Z, Jeong SJ, Gottschalk C, Zeng J, Ruzevick J, Nicholas S, Kim Y, Albesiano E, Pardoll DM, Lim M. The Role of STAT3 Activation in Modulating the Immune Microenvironment of GBM. *J Neurooncol*. 2012;110:359-68
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71. Chaichana KL, Pendleton C, Jackson C, Martinez-Gutierrez JC, Diaz-Stransky A, Aguayo J, Olivi A, Weingart J, Gallia G, Lim M, Brem H, Quinones-Hinojosa A. Deep Venous Thrombosis and Pulmonary Embolisms in Adult Patients Undergoing Craniotomy for Brain Tumors. *Neurol Res*. 2013;35(2):206-11.
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74. Chaichana KL, Martinez-Gutierrez JC, De la Garza-Ramos R, Weingart JD, Olivi A, Gallia GL, Lim M, Brem H, Quinones-Hinojosa A. Factors associated with survival for patients with glioblastoma with poor pre-operative functional status. *J Clin Neurosci*. 2013;20(6):818-23.
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* co-first or co-senior

Underlined authors are people I mentored

Book Chapters, Monographs

1. **Lim M**, Sinclair J, Jayaraman MV, Chang SD. Neurobase. Vein of Galen Malformations. Gilman S, Goldstein GW, Waxman SG. Medlink.com. 2004.
2. **Lim M**, Harsh GH. Neuro-Oncology: Overview. Rengachary SS, Wilkins RH. Principles of Neurosurgery. 2nd Ed. 2004; 25.2-2.22
3. **Lim M**, Gibbs IC, Chang SD: Cyberknife Radiosurgery for Glomus Jugulare Tumors. Mould RF, Schulz RA, Bucholz RD, Gagnon GJ, Gerszten PC, Kresl JJ, Levendag PC (eds): Pioneering Techniques in Robotic Radiosurgery, vol 1, The Cyberknife Society, Sunnyvale, 2005;213-222
4. **Lim M**, Sinclair J, Jayaraman MV, Chang SD. Neurobase. Vein of Galen Malformations. Gilman S, Goldstein GW, Waxman SG. Medlink.com. 2005.
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6. **Lim M**, Sinclair J, Jayaraman MV, Chang SD. Neurobase. Vein of Galen Malformations. Gilman S, Goldstein GW, Waxman SG. Medlink.com. 2007.
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14. **Lim M**. Stereotactic Biopsies: Superficial. *Fundamentals of Operative Techniques in Neurosurgery*. Connolly ES, McKhann II GM, Huang J, Choudhri TF. New York. Thieme. 2010:253-254.
15. Pradilla G, **Lim M**. Stereotactic Biopsies: Deep. *Fundamentals of Operative Techniques in Neurosurgery*. Connolly ES, McKhann II GM, Huang J, Choudhri TF. New York. Thieme. 2010:255-257.
16. Li G, **Lim M**, Khan N, Steinberg GK. Cerebral Revascularization for Moya Moya Disease. *Cerebral Revascularization: Techniques in Extracranial-to-Intracranial Bypass Surgery*. Abdulrauf SI. Philadelphia. Elsevier. 2011:185-191.
17. Recinos P, **Lim M**. Parasagittal approach to midline deep tumors and arterio-venous malformations. *Core Techniques in Operative Neurosurgery*. Jandial R, McCormick PC, Black PM. Philadelphia. Elsevier. 2011:75-81.
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19. Nguyen T, Recinos PF, **Lim M**. Trigeminal neuralgia and atypical facial pain. In Simpson D, McArthur J, Dworkin D (eds): *Neuropathic Pain: Mechanisms, Diagnosis, and Treatment*. New York: Oxford University Press. 2012:398-413.
20. Amin AG, Raza SM, **Lim M**. Posterior and Far-Lateral Approaches to the Craniovertebral Junction (Lateral Transcondylar Approach). *Surgical Anatomy and Techniques to the Spine*. Philadelphia: Elsevier/Saunders. 2013:54-59.
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26. Hung A, Wu A, Jackson C, **Lim M**. Thalamic Gliomas: Advances in the Surgical Management. In (eds Sughrue E and Yang I) *New Techniques for Management of 'Inoperable' Gliomas*. 2019 Sept; 13;117-135

*-co-first of co-senior

Editor/Guest Editor

1. Isaac Yang, **Michael Lim**. *Neurosurgery Clinics of North America: Immunotherapy Vol 21:1*. Philadelphia, PA:W.B Saunders Co. 2010.
2. **Michael Lim**, Wesley Hsu, Daniele Rigamonti, Lawrence Kleinberg. *Handbook of Radiosurgery in CNS Disease*. New York, NY: Demos Medical Publishing, LLC. 2013.
3. **Michael Lim**, Linda Liau. *Journal of Neuro-Oncology. Special Issue: Brain Tumor Immunotherapy. Vol 123:3*. Springer. 2015.
4. John Lee, **Michael Lim**. *Neurosurgery Clinics of North America: Trigeminal Neuralgia*. Philadelphia, PA:W.B Saunders Co. 2016
5. Christopher Jackson, **Michael Lim**. *Glioma. Special Issue: Glioma Immunotherapy. Vol 2:1*. 2019
6. Alfredo Conti, Pantaleo Romanelli, Evangelos Pantelis, Scott Soltys, Young Hyun Cho, **Michael Lim**. *Cyberknife NeuroRadiosurgery*. Cham, Switzerland: Springer Nature. 2020.

Editorials

1. **Lim M**, Steinberg GK. Integrins in Arteriovenous and Cavernous Malformations: Comment. *Neurosurgery*. 2006;Jan; 58(1): 167.
2. **Lim M**, Chang SD. Recurrent Craniofacial Meningiomas: Comment. *Neurosurgery*. 2006; May; 58(5):880.
3. **Lim M**, Chang SD: Chained Lightning – Part III: Emerging technology, novel therapeutic strategies and new energy modalities for radiosurgery. *Neurosurgery*, 2007;61(6): 1129.
4. Yang I, Cho JM, Colen CB, Li G, **Lim M**, Sherman JH, Wang VY. Neurosurgery Concepts. *Surg Neurol Int*. 2011;2:173. Epub 2011 Nov 30.
5. **Lim M**, Sherman JH, Wang VY, Smith ZA, Cho JM, Colen CB, Kim CY, Zada G, Li G, Yang I. Perspectives on Key Articles in Neurosurgery. *Surg. Neurol. Int*. 2012;3:58
6. Wen PY, Weller M, Chiocca EA, **Lim M**, Tonn JC, Zadeh G, Aldape K, van den Bent M. Role of Surgery for Glioblastoma: Response to Letters from Dr. Gerritsen and His Colleagues and Dr. Vargas Lopez. *Neuro. Oncol*. 2021 Jan 20
7. Xia Y, **Lim M**. In Reply: Absence of Ischemic Injury After Sacrificing the Superior Petrosal Vein During Microvascular Decompression. *Oper. Neurosurg*. 2021 Jan 13

Other Media

- 2010 Wired Magazine. Toolkit: A Neurosurgeon's Must-Have
- 2011 Webinar – Trigeminal Neuralgia: Leave No One in Pain
- 2013 Readers Digest Article featuring my TN Patient Treated by a MVD

- 2016 Washington Post – Health and Science – March 14, 2016 – Article featuring my TN Patient Treated by MVD
- 2016 ABTA Webinar – Metastatic Brain Tumors: What Patients Need to Know
- 2017 Medscape-SITC – Online Video – Current State of Immunotherapy for GBM: Checkpoint Inhibitors
- 2017 Medscape – Online Interview – Immunotherapy for GBM- Checkpoint Inhibitors
- 2017 Medscape – Online Roundtable Discussion – Advanced in GBM – Checkpoint Inhibitors
- 2017 AERO Webinar – “Rationale Approaches to Immunotherapy”
- 2018 ABTA Webinar – Immunotherapy for Brain Tumors

Extramural Sponsorship

Current

- 12/01/18-11/30/22 R01 CA228188 (Zhou)
Amide Proton Transfer (APT) MRI of Brain Tumors at 3T
Role: Co-I (0.3 mos). The major goal of this project is to develop highly sensitive, fast, and quantitative APT-MRI methodologies on 3T clinical MRI scanners and to evaluate the potential of these methodologies in brain cancer diagnosis in the molecular era.
- 06/01/19-05/30/24 R01 CA230285 NCI (Lim)
Generating a Systemic Immune Response Using Localized Delivery of Chemotherapy in Brain Tumors
Role: PI (1.8 mos). The goal is to understand the mechanisms of local chemotherapy in augmenting an antitumor immune response using mice models and samples from a clinical trial.
- 09/01/20-08/31/21 Stanford Cancer Institute
Expanding the Reach of the Stanford Brain Metastases Consortium: Deep Profiling of Brain Metastases through Multiplexed Analysis and Multi-PI Collaborations
Role: Investigator (0.12 mos)
- 03/01/21-02/28/26 1R01NS119609 (Suk/Lim)
Nanocage-based systemic delivery of TGFβ trap for immunomodulation of brain neoplasms
Role: Multi PI (0.12 mos). The goal of this proposal is to use a self-assembly human ferritin nanocages that bind to transferrin receptor 1 (TfR1) and TGFβ to inhibit TGFβ signaling
- 04/01/22-03/31/27 1R01NS121404-01A1 (Lim)
Targeting Lag-3 and PD-1 in Myeloid Cells of GBM
Role: PI (1.8 mos). The goal of this project is to study novel immunotherapy-based combination therapies for primary brain tumors, specifically Glioblastoma by harnessing Lag-3/PD-1 checkpoint blockade

OVERLAP

There is no scientific, budgetary or effort overlap. Should all pending applications become active, effort will be reduced by all awards in accordance with sponsors' policies.

Previous

- 3/01/09-02/28/11 Characterization of STAT3 in GBM: A Potential Mediator of Immune Evasion
Academy of Academic Surgeons
Role: PI, 3% effort. The goal of this project was to assess for assess the effects of STAT3 activation on immune cells in GBM. We will then locally deliver a STAT3 inhibitor STATTIC in the GL261 model with biodegradable polymers to assess for immune responses and survival.
- 07/1/09-06/30/10 Immune Characterization of STAT3 in GBM with a Novel Transgenic Model
Neurosurgery Research Education Foundation
Role: PI, 10% effort. The goal of this project was to study the role of STAT3 in the immune microenvironment of GL261 tumors. We will characterize STAT3's effect on immune cells in the GL261 cell lines and then use STAT3 transgenic animals to test dendritic cell vaccination strategies.
- 07/1/09-07/31/17 Amide Proton Transfer (APT) MRI of Brain Tumors at 3T and 7T
R01EB009731
NIH
PI: Jinyuan Zhou, 32% effort
Role: Co-I, 2% effort. The goal of this project was to use APT to distinguish treatment effects as well as higher grade tumors with imaging.
- 01/01/10-12/31/11 Characterization of STAT3's role in the Immune Microenvironment of GBMs
Clinician Scientist Award
Role: PI, 75% effort. The goal of this project was to assess for assess the effects of STAT3 activation on immune cells in GBM cells lines, GBM samples from patients, and GBM stem cell lines.
- 01/01/11-10/31/12 A Novel Immunotherapy Approach Against GBM
WW Smith Charitable Foundation
Role: PI, 5% effort. The goal of this project was to understand the mechanism of anti-PD-1 therapy combined with stereotactic radiation's antitumor immune response.
- 11/01/11-10/31/12 Immunotherapy for Chordomas
Chordoma Foundation
Role: PI, 5% effort. The goal of this project was to use the checkpoint inhibitor anti-PD-1 in efforts to design an immunotherapy approach against Chordomas
- 11/14/11-11/13/12 Spine Metastases and Pain
Johns Hopkins Neurosurgery Pain Institute
Role: PI, 2% effort. The goal of this project was to develop an immune based approach to targeting spine metastases to improve tumor control and decrease pain.
- 12/01/11-11/30/20 Subependymoma/Ependymoma Center Grant
Role: PI (2.4 mos), 20%, Co-PI: Henry Brem, (0.6 mos)

The goal of this project is to develop a complete center for research that encompasses basic, translational, and clinical science around subependymomas and ependymomas

- 02/01/14-01/31/15 Augmenting Immunotherapy with Chemotherapy
Arbor Pharmaceuticals
Role: PI, 5% effort. The goal of this project was to try and augment vaccine strategies with using Carmustine Wafers
- 11/01/14-10/30/15 Creating a Humanized Immune Model for Chordomas
Chordoma Foundation
Role: PI, 5% effort. The goal of this project was to create a humanized immune model in mice to design future immunotherapy approach against Chordomas
- 11/03/14-11/02/20 Genetic Determinants of Response to Nivolumab or Nivolumab in Combination with Ipilimumab in Individuals with Glioblastoma
Role PI. The goal of this project was to assess patient samples from a randomized Phase II/III clinical trial assessing the efficacy of anti-PD-1 and anti-CTLA-4 in patients with recurrent GBM.
- 11/19/14-08/1/15 Cranioplasty Outcomes
Stryker Corp
Role: PI. The goal of this project was to assess CSF leak rates with different cranioplasty techniques.
- 03/10/15-07/31/17 Anti PD-1 and HSPCC-96 Combination Therapy in Murine Glioblastoma
Agenus Inc
Role: PI, 3% effort. The goal of this project was to assess survival and immunophenotype mice treated with the combination of heat shock proteins and checkpoint inhibitors.
- 02/01/16-06/31/17 Checkpoint Inhibitors in GBM
BMS
Role: PI, 5% effort. The goal of this project was to assess the efficacy of novel checkpoint inhibitors in preclinical models for GBM
- 04/01/16-03/31/17 Adoptive transfer of genetically polarized myeloid cells to favorably alter tumor associated macrophages in glioblastoma multiforme
Role: Co-I. Goal Statement: I was a co-investigator on this project that assessed the role of myeloid cells in producing an antitumor immune response.
- 09/15/16-04/30/18 Administrative supplement to support biomarker studies associated with NCI supported clinical trials of immunotherapy
Adult Brain Tumor Consortium – NCI - 3UM1CA137443-07S1
Role: Project Manager; The goal of this project was to immunophenotype the blood and tumor specimens (particularly IHC and RNAscope) obtained from patients on the anti-Lag-3, anti-CD137, anti-PD-1 trial (ABTC 1501)
- 06/15/16-05/01/20 Bristol Myers Squibb (BMS) CA209-596 (Lim)
Correlative Studies for ABTC 1501: A Phase I Trial of Anti-LAG-3 or Anti-CD137 Alone and in Combination with Anti-PD-1 in Patients with Recurrent

GBM

Role: PI (.22 mos).

The goal is to correlative studies on samples (namely sequencing) of patients from a clinical trial in recurrent GBM patients were treated with anti-LAG-3 and anti-CD137 alone and in Combination with anti-PD-1 in patients with recurrent GBM

07/01/18-06/30/20

R21 CA227783 (Heo)

Highly Accelerated Chemical Exchange Saturation Transfer MRI Using Compressed Sensing

Role: Co-I (0.24 mos). The goal is to develop a highly accelerated molecular imaging method called amide proton transfer-weighted (APT_w) MRI, using a data acquisition technique with less sampling and an analysis based on a developed dictionary for such sparse sampling, and then, to integrate this into a clinical MRI protocol to detect brain tumors and assess tumor response to therapy.

04/01/19-01/1/20

R01 CA230341 (Wang)

X-ray/optical tomographic guidance and assessment for pre-clinical radiation research

Role: Co-I (0.36 mos). The goal of this project is to advance the in vivo cancer imaging capability of SARRP to include quantitative bioluminescence and fluorescence tomography.

07/01/19-1/1/20

R01 CA240811 (Wang)

Quantitative bioluminescence tomography for pre-clinical radiotherapy research

Role: Co-I (0.36 mos). The goal of this project is to construct and validate a quantitative bioluminescence tomography (QBLT) to significantly advance in vivo image-guided capability for pre-clinical radiotherapy research.

Clinical Extramural Funding

Current

07/01/13-present

A Pilot Study of Stereotactic Radiosurgery combined with Ipilimumab in Patients with Newly Diagnosed Melanoma Metastases in the Brain and Spine

Investigator Initiated

Accuray

Role: PI; 5% effort

02/14/14-present

A Randomized Phase IIB Open Label Study of Nivolumab or Nivolumab in Combination with Ipilimumab vs Bevacizumab in Adult Subjects with Recurrent Glioblastoma

Bristol-Myers Squibb

Role: Site PI; 2% effort

2015-present

A Phase 2 Study to Evaluate the Clinical Efficacy and Safety of MEDI4736 in Patients With GBM

Ludwig Institute for Cancer Research

Role: Site PI; 3% effort

2016-present

A Phase I Trial of Anti-LAG-3 or Anti-CD137 Alone and in Combination with Anti-PD-1 in Patients with Recurrent GBM

NCI – Adult Brain Tumor Consortium protocol 1501

Role: PI

- 2016-Present A Randomized Phase 3 Open Label Study of Nivolumab vs Temozolomide each in Combination with Radiation Therapy in Newly Diagnosed Adult Subjects with Unmethylated MGMT (tumor O-6-methylguanine DNA methyltransferase) Glioblastoma CA209-498-0016
Bristol Meyers Squibb
Role: Site PI
- 2016-Present A Randomized Phase 3 Single Blind Study of Temozolomide plus Radiation Therapy combined with Nivolumab or Placebo in Newly Diagnosed Adult Subjects with MGMT-Methylated (tumor O6-methylguanine DNA) CA209548
Bristol Meyers Squibb
Role: Site PI
- 2017-present Phase I Safety study of Stereotactic Radiosurgery with Concurrent and Adjuvant PD-1 Antibody Nivolumab (CA209-003) in Patients with Recurrent or Advanced Chordoma. Chordoma Foundation
Role: PI
- 2019-present Phase I Check-point Positive-Driven/Biomarker Master Protocol for Safety of Individual Immune Checkpoint Inhibitor in Combination with Anti-PD-1 (nivolumab) in Patients with Recurrent GBM
Bristol Meyers Squibb
Role: PI
- 2020-present A Phase I Trial of anti-Tim-3 combination with anti-PD-1 and SRS in Recurrent GBM
Novartis
Role: Co-PI
- 02/04/21-02/01/23 BHV3000-202: Phase 2: A Double-Blind, Placebo Controlled, Crossover Trial of BHV-3000 (Rimegepant) for Treatment Refractory Trigeminal Neuralgia
Biohaven Pharmaceuticals, Inc.
Role: PI
- Previous
- 03/01/08-10/31/09 Phase II/III EGFRvIII Vaccine Clinical Trial
CellDex
PI – Amy Heimberger, MD Anderson
Role: Site PI; 10% effort
- 04/01/12-2015 Phase II/III Heat Shock Protein Trial
Agenus
PI – Andrew Parsa, UCSF
Role: Site PI; 2% effort
- 2012-06/01/16 An International, Randomized, Double-blind, Controlled Study of Rindopepimut/Gm
Celldex Therapeutics Inc
Role: Site PI; 4% effort

- 06/01/12-07/01/16 Phase II/III Dendritic Cell Vaccine Trial
 Immunocellular
 PI – John Yu, Cedars Sinai
 Role: Site PI – Michael Lim, 15% effort
- 02/14/14-2015 ReACT: A Phase 2 Study of Rindopepimut (CDX-110) plus Bevacizumab in Relapsed
 Glioblastoma
 Celldex
 Role: Site PI – Michael Lim, 11% effort

CLINICAL ACTIVITIES

Clinical Focus

1. Brain Tumors – One of my clinical focuses is on the treatment of brain tumors. A large part of my practice is dedicated to treating patients surgically with brain tumors. I offer patients the latest technologies (such as endoscopic, laser, stereotactic radiosurgery, and brachytherapy) for the surgical treatment of their brain tumors.
2. Trigeminal Neuralgia – My other clinical focus is on the treatment of trigeminal neuralgia. I offer patients all of the surgical options for the treatment of TN.

Certification

Medical, other state/government licensure

2001-Present California License #A76130

2007-Present Maryland Medical License #D65890

Boards, other specialty certification

2001-Present DEA License

2012-Present Board Certified by the American Board of Neurological Surgeons

Clinical Draw

Nationally and Internationally

Clinical Program Building / Leadership

2007-2020 Brain Tumor Immunotherapy Program, Director at Johns Hopkins

2009-2020 Metastatic Brain Tumor Center, Director at Johns Hopkins

2011-2020 Ependymoma/Subependymoma Center, Director at Johns Hopkins

2013-2020 Trigeminal Neuralgia Center, Director at Johns Hopkins

2015-2020 Stereotactic Radiosurgery, Division Director at Johns Hopkins

Clinical Demonstration Activities to external audience, on or off campus

2014 Observership of Dr. Chih-Wei Chen from Taiwan for Surgery

2015-2016 Postdoctoral Fellowship of Dr. Chul-Kee Park from Seoul National University, South Korea

2014	Observership of Dr. Xu Wu from China for Surgery
2017	Observership of Dr. Tao Zhang from China for Surgery
2018	Observership of Dr. Yun-Sik Dho from Seoul National University, South Korea
2018	Observership of Dr. Jung Won Park from Assan Medical Center, South Korea
2018-2019	Postdoctoral Fellowship of Dr. Young-Hoon Kim from Assan Medical Center, South Korea
2020	Observership – Dr. Yu Zhu from China for Surgery
2020	Observership – Dr. Ying Tong from China for Surgery

EDUCATIONAL ACTIVITIES

Teaching

Classroom Instruction

None

Clinical Instruction

2007-2020	Faculty for Resident Teaching in clinics, operating rooms, and wards; Johns Hopkins Hospital
2007-2020	Faculty for Medical Student Teaching in clinics, operating rooms, and wards; Johns Hopkins Hospital
2020-Present	Faculty for Resident Teaching in clinics, operating rooms, and wards; Stanford University School of Medicine
2020-Present	Faculty for Medical Student Teaching in clinics, operating rooms, and wards; Stanford University School of Medicine

CME Instruction

09/08	Faculty for International Neuro-Oncology Updates, Speaker, Baltimore, MD; Immunotherapy for Brain Tumors
10/08	Faculty for CNS Tumor Course, Speaker, Orlando, FL; Immunotherapy for Brain Tumors
10/09	Faculty for CNS Tumor Course, Speaker, New Orleans, LA; Immunotherapy for Brain Tumors
04/10	Hopkins CME, Speaker, Rockville, MD; Metastatic Brain Tumors
05/10	Johns Hopkins Spine CME: Speaker, Baltimore, MD; Stereotactic Radiosurgery for Spine Tumors
10/10	Faculty for CNS Tumor Course, Speaker, San Francisco, CA; Immunotherapy for Brain Tumors
10/11	Faculty for CNS Tumor Course, Speaker, Washington, DC; Immunotherapy for Brain Tumors
10/12	Faculty for CNS Tumor Course, Speaker, Chicago, IL; Immunotherapy for Brain Tumors
10/13	Faculty for CNS Tumor Course, Speaker, San Francisco, CA; Immunotherapy for Brain Tumors
10/14	Faculty for CNS Tumor Course, Speaker, Boston, MA; Immunotherapy for Brain Tumors
05/15	Faculty for AANS Tumor Course, Speaker, Washington, DC; Management of Brain Metastases
10/15	Faculty for CNS Tumor Course, Speaker, New Orleans, LA; Immunotherapy for Brain Tumors

- 10/17 Faculty for CNS Tumor Course, Speaker, Boston, MA; Checkpoint Inhibitors for Brain Tumors
- 10/18 Faculty for CNS Tumor Course, Speaker, Houston, TX; Checkpoint Inhibitors for Brain Tumors

Workshops/Seminars

- 06/09 Faculty for Hopkins Sinus and Skull Base Course: Speaker; Endoscopic Approaches to the Sella, Baltimore, MD
- 09/09 Faculty for Hopkins: Combined Approach for Skull Base Tumors: Speaker; Radiosurgery for Skull Base Tumors: Faculty, Baltimore, MD
- 06/10 Faculty for Hopkins Sinus and Skull Base Course: Speaker; Approaches to the Sella Baltimore, MD
- 07/10 Faculty for Senior Society – Boot Camp for Neurosurgery Interns: Speaker; Neurotrauma, Philadelphia, PA
- 12/10 Faculty for Hopkins: Combined Approach for Skull Base Tumors: Speaker; Radiosurgery for Skull Base Tumors, Baltimore, MD
- 03/11 Webinar: Speaker; Treatment of Trigeminal Neuralgia
- 11/11 Faculty for Skull Base Session at Society for Neuro-Oncology: Speaker; Acoustic Neuromas, Orange County, CA
- 06/12 Webinar: Speaker; Management of Cerebral Brain Metastases
- 12/28 Course Director – Approaches to Skull Base, Stryker Resident Skull Base Course, Chapel Hill, NC
- 01/20 Course Director – Approaches to Skull Base, Stryker Resident Skull Base Course, Atlanta, GA
- 05/21 Scientific Committee, Focused Ultrasound for GBM Workshop, Virtual

Mentoring

Advisees

- 2008 Jennifer Cheng, MD, Research Elective as a medical student - currently an Assistant Professor of Neurosurgery at Kansas University Medical Center
- 2008-2009 Trang Nguyen, MD, Doris Duke Fellowship– currently a Surgical Oncology Fellow at the John Wayne Cancer Institute
- 2008-2010 James Frazier, MD, NREF Fellowship recipient – currently a Neurosurgeon at Sinai Hospital
- 2008-2011 Alfred See, MD, Dean’s Medical Student Fellowship and Summer Research Fellowship recipient, currently a Neurosurgery Resident at Brigham and Women’s Hospital
- 2008-2012 Matthew Bender, Summer Research Fellowship - currently a Neurosurgery Resident at Johns Hopkins Hospital
- 2009-2012 Jake Ruzevik, Doris Duke Fellowship and Summer Research Fellowship – will start as an Assistant Professor in Neurosurgery at University of Washington
- 2009-2012 Christopher Jackson, Howard Hughes Medical Student Fellowship and Summer Research Fellowship – currently an Assistant Professor of Neurosurgery at Johns Hopkins
- 2009-2012 Zachary Guss, Summer Research Fellowship – currently a Radiation Oncologist at Providence

Sacred Heart Medical Center

- 2010 Julie Ng, Summer Research Fellowship – currently a Pulmonary and Critical Care Faculty at Harvard-BWH
- 2010-2012 Jing Zeng, MD, Postdoctoral Fellow – currently an Associate Professor in Radiation Oncology at University of Washington
- 2010-2011 Gustavo Pradilla, M.D., Postdoctoral Fellow - currently an Associate Professor in Neurosurgery at Emory University
- 2011-2012 Anu Amin, Dean’s Medical Student Fellowship and Summer Research – currently a Neurosurgery Resident at New York Medical College
- 2012-2015 Dimitrios Mathios, Postdoctoral Fellow – currently a Neurosurgery Resident at Johns Hopkins Hospital
- 2012-2013 Sarah Nicholas, Doris Duke Fellowship – currently a Radiation Oncologist at Banner Health
- 2011-Present Allison Martin, T32 NIH Fellowship – Assistant Professor of Pediatric Oncology at Albert Einstein Medical Center
- 2014-2015 Jennifer Kim, Howard Hughes Medical Student Fellowship – currently a Neurosurgery Resident at Johns Hopkins University School of Medicine
- 2014-2015 Mira Patel, Howard Hughes Medical Student Fellowship – currently a Radiation Oncology Resident at Memorial Sloan Kettering
- 2015-2016 Debebe Theodros, Dean’s Medical Student Fellowship – currently a Neurosurgery Resident at Stanford Hospital
- 2015-2017 Tomas Garzon-Muvdi, Postdoctoral Fellowship – currently an Assistant Professor at Emory University
- 2015-2016 Alice Hung, Medical Student Research Year – currently a Neurosurgery Resident at the Johns Hopkins University School of Medicine
- 2015-Present Adela Wu, Medical Student Research Year – currently a Neurosurgery Resident at Stanford University School of Medicine
- 2015-Present Russell Maxwell, Medical Student Research Year – currently a Radiation Oncology Resident at the University of Pennsylvania School of Medicine
- 2015-Present Andrew Luksik, Medical Student Research Year –Neurosurgery Resident at the Johns Hopkins University School of Medicine
- 2016-Present Yuan Xia, Howard Hughes Medical Student Fellowship – Neurosurgery Resident at the Johns Hopkins University School of Medicine
- 2018-Present John Choi, Deans Medical Student Fellowship – currently a Neurosurgery Resident at Stanford University School of Medicine
- 2018-Present Ayush Pant, M.D./Ph.D. Candidate – currently in lab
- 2018-Present Christina Jackson, M.D. – Postdoctoral Fellowship – now Assistant Professor of Neurosurgery at the University of Pennsylvania School of Medicine
- 2019-Present Ravi Medikonda, Dean’s Medical Student Fellowship – currently a Neurosurgery Resident at Stanford University School of Medicine

2019-2020 Luqing Tong, Postdoctoral Fellowship – now Assistant Professor of Neurosurgery at the First Affiliated Hospital of Zhejiang University

2019-2020 Peidong Lu, M.D./Ph.D. – Postdoctoral Fellowship from Tianjin University, China

2019-2020 Liang Zhang, M.D. – Postdoctoral Fellow – now Assistant Professor

2020-2021 Timothy Kim, Medical Student Research Year

2020-2021 Siddhartha Srivastava, Medical Student Research Year

2021-2022 Leila Mashouf, Medical Student Research Year

2021-2022 Pavan Shah, Medical Student Research Year

2021-2022 Nivedha Kaanapadi, Medical Student Research Year

2022-Present Rohit Verma, Post-Doc

2022-Present Kwang-Bog Cho, Post Doc

2022-Present Janet Wu, Medical Student; Med Scholar Research Fellowship

2022-Present Alexander Ren, Medical Student; Med Scholar Research Fellowship

Educational Program Building Leadership

3/11 International Lecture Series for South Korea, Co-Director of Course

3/12 International Lecture Series for China, Co-Director of Course

Educational Extramural Funding

2010-1011 Stryker Unrestricted Educational Grant

RESEARCH ACTIVITIES

Research Focus:

Research Program Building/ Leadership

2007-2020 Director, Brain Tumor Immunotherapy Program at Johns Hopkins
Laboratory Efforts – studying the immune microenvironment of Gliomas
Clinical –PI for several clinical trials

2009-2020 Director, Metastatic Brain Tumor Center at Johns Hopkins
Laboratory – studying the effect of metastatic tumors of the brain on systemic Immunity
Clinical – Outcomes center

2013-2020 Director, Trigeminal Neuralgia Center at Johns Hopkins
Clinical Director

2011-2020 Director, Ependymoma/Subependymoma Center at Johns Hopkins
Laboratory – studying epigenetics and immune microenvironment of Ependymomas and Subependymomas

2015-2020 Director, Stereotactic Radiosurgery Program at Johns Hopkins
Clinical Director

Inventions, Patents, Copyrights

- 09/15/2015 Patent #: 9132281
14/127,597; C11601-04 issued; Inventors Jing Zeng, Charles Drake, Drew Pardoll, and **Michael Lim**. Patent for Technique: Using Focused Radiation to Augment Immune Based Strategies Against Cancer.
- 01/08/2019 Patent #: 10174384
15/071,800; C13155-02; Inventors Dimitrios Mathios, Chetan Bettegowda, Patrick Ha, Taeyoung Hwang, and **Michael Lim**. Use of the ZMIZ1 Marker in Directing Treatment and Predicting Survival in Cancer.
- 12/15/2020 Patent #: 10864180
15/136,149; C13490 Inventors Dimitrios Mathios, Drew Pardoll, Betty Tyler, Henry Brem, and **Michael Lim**. Combination of Immunotherapy with Local Chemotherapy for the Treatment of Malignancies.
- 12/07/2021 Patent#: 1119183
15/503,887; C13093; Inventors: **Michael Lim**, Henry Brem, Betty Tyler, Jason Liauw, Sheng-Fu Lo. Post-surgical imaging marker: A marker for imaging includes a bio-dissolvable material and a contrast agent configured to provide contrast during an imaging procedure.

Provisional Patents

- C13320 Inventors Christopher Jackson, Drew Pardoll, Charles Drake, and **Michael Lim**. Polyfunctional lymphocytes as a biomarker of antitumor activity
- C13547 Inventors Juvenal Reyes and **Michael Lim**. Universal Microport
- C15146 Inventors Michael Lim, . Novel Immunotherapeutic Targets Identified in Patients with Glioblastoma using RNA Sequencing to Compare Gene Expression Patterns in Tumor Infiltrating (TIL) and Peripheral Blood Lymphocytes
- C15683 Inventors Michael Lim, . Program Death 1 (PD-1) Agonists for the Treatment of Cerebral Vasospasm
- C16043 Inventors Michael Lim, . Meteorin-like (METRNL) as an Immuno-oncology Target
- C16393 Inventors Michael Lim, . Sustained and Localized Antibody and Immunotherapeutic Delivery to Lymph Nodes
- C16438 Inventors Michael Lim, . Modulation of Oxidative Stress as a Therapeutic Pathway in Trigeminal Neuralgia
- C16798 Inventors Michael Lim, . Use of Anti-PD-1 Delivery with the Urogen® Polymer to Tumor Draining Lymph Nodes for Treatment of Cancers

C16960 Inventors Michael Lim, . CXCR6 as an Immuno-oncology Target to Improve T cell Metabolic Response

SYSTEM INNOVATION and QUALITY IMPROVEMENT ACTIVITIES

None

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments

2010-2014 Department Liaison for Compliance at Johns Hopkins

2010-2018 Physician Advisor for Credentialing at Johns Hopkins

Institutional Committees

2019-2020 Plastic Surgery Search Committee at Johns Hopkins

Editorial Activities

Editorial Board Appointments

2009 Co-Editor for Neurosurgery Clinics of North America edition on Immunotherapy for Brain Tumors

2011-Present Academic Editor for *PLOS One*

2010-2012 Board Member, Society of Brain Mapping and Therapeutics (SBMT)

2011-Present Editorial board – Current Surgery Reports

2016-2018 Editorial board – Annals of Surgical Oncology

2018-Present Editorial board – Journal of Neuro-Oncology

2022-Present Editorial board – Journal of Neurosurgery

Journal Reviewer

Cancer Research

Clinical Cancer Research

JAMA

Journal of Clinical Investigation

Journal of Neuro-Oncology

Nature

Nature Medicine

Nature Biotechnology

Nature Communication
NEJM
Neuro-Oncology
Neurosurgery
Science Translation Medicine
Surgical Neurology International

Advisory Committees, Review Groups/Study Sections

2007-2009 Scientific Committee of the American Society for Clinical Oncology (ASCO)
2007-2010 Young Neurosurgeons Committee
2013-Present Tumor Section (AANS-CNS) Executive Committee member
2013-Present Immunotherapy Working Group for Brain Malignancy Steering Committee (NCI)
2013-Present Executive Committee for the Joint Tumor Section of American Association of Neurological Surgeons (AANS) and Congress of Neurological Surgeons (CNS)
2018 R01 Study Section – CII – Ad Hoc Reviewer
2018 -Present Bylaws Committee Chair for the Society for Neuro-Oncology
2018 -Present Program Chair for the Society for Neuro-Oncology
2019 -Present R01 Study Section – CII – Ad Hoc Reviewer
2018 -Present Medical Advisory Board – Facial Pain Association
2020 -Present R03/R21 Study Section – Special Topic – Ad Hoc Reviewer
2021 -Present R03/R21 Study Section – Special Topic – Ad Hoc Reviewer
2021 -Present Brain Malignancy Steering Committee (BMSC)

Professional Societies

2007-Present Congress of Neurological Surgeons (CNS)
2007-Present American Association of Neurological Surgeons (AANS)
2007-Present Society for Neuro-Oncology (SNO)
2008-Present American Society for Clinical Oncology (ASCO)
2021-Present American Academy of Neurological Surgery
2021-Present Society for Neurological Surgery

Conference Organizer, Session Chair

04/08 Platform Chairman, American Society for Clinical Oncology (ASCO), CNS Session
04/09 Platform Chairman, American Society for Clinical Oncology (ASCO), CNS Session
05/09 Moderator and Discussant, American Association of Neurological Surgeons, Tumor Session
06/12 Co-Moderator, Brain Tumor Biotech Summit, Immunotherapy Session

- 09/12 Co-Moderator, International Updates in Neuro-Oncology, Immunotherapy and Other Novel Therapies Session
- 02/13 Co-Moderator, Intraoperative Imaging Society, Abstract Presentations
- 06/13 Co-Moderator, Brain Tumor Biotech Summit, Immunotherapy Session
- 09/13 Co-Moderator, Glioma Clinical Research I, 15th World Congress of Neurosurgery, Seoul, Korea
- 09/13 Co-Moderator, Glioma Clinical Research III, 15th World Congress of Neurosurgery, Seoul, Korea
- 06/14 Tumor Section Organizer for Congress of Neurological Surgeons (CNS) 2015 meeting
- 06/14 Co-Moderator, Brain Tumor Biotech Summit, Scientific Barriers Session, New York, NY
- 09/15 Co-Moderator, Congress of Neurological Surgeons Meeting, Tumor Session, New Orleans, LA
- 11/15 Organizing co-Chair for Education Day on Immunotherapy for Society for Neuro-Oncology (SNO) Meeting, San Antonio, TX
- 11/15 Co-Moderator, Education Day for Society for Neuro-Oncology (SNO) Meeting, San Antonio, TX
- 09/16 Co-Moderator, Immunotherapy Session, Christopher Davidson Foundation Meeting, St. Louis, MO
- 11/16 Co-Moderator, Clinical Trials Session II, Rapid Reports, Society for Neuro-Oncology (SNO) Meeting, Scottsdale, AZ
- 11/16 Chair and Organizer, “Future Directions for Immunotherapy,” New Considerations for the Management of Glioblastoma, SNO meeting, Scottsdale, AZ
- 02/17 Co-Moderator, “Immunotherapy in GBM,” International Immuno-Oncology Network (II-ON) BMS Meeting, London, England
- 05/17 Co-Moderator, “Meet the Expert Session 1 – Immuno-Oncology,” Zurich, Switzerland
- 06/17 Organizing Committee, SITC-ASTRO Immunotherapy Workshop, Bethesda, MD
- 07/18 Meeting Organizer, Hanbery Society Meeting, Maui, HI
- 10/18 Co-Moderator, Abstract Section, Tumor Section Satellite Symposium, Houston, TX
- 10/18 Co-Moderator, Section on Tumors, Congress of Neurological Surgeons Meeting, Houston, TX
- 11/19 Program Co-Chair for Society for Neuro-Oncology (SNO) Meeting
- 11/19 Program Co-Chair for SNO Sunrise Session on Role of Surgeons for Clinical Trials
- 11/20 Program Co-Chair for Society for Neuro-Oncology (SNO) Meeting
- 11/20 Moderator, 7th International Symposium on Focused Ultrasound, Focused Ultrasound and Immunotherapy for Brain Tumor Session, Virtual
- 05/21 Steering Committee, Focused Ultrasound for Glioblastoma Workshop, Virtual
- 07/21 Session Co-Chair for Immunotherapy, Society for Brain Mapping and Therapeutics, Virtual
- 10/21 Co-Moderator for Congress of Neurological Surgeon (CNS), Practical Applications for Immunotherapy
- 11/21 Moderator, Society of NeuroOncology 2021 Annual Meeting, Basic Science II Abstract Session, Boston MA
- 05/22 Moderator, Society of Neurological Surgeons Meeting, “Disruptive Collaborations”. Detroit, MI.

06/22 Organizing Co-Chair with Dr. Michelle Monje and Dr. Paul Mischel, Stanford - National Brain Tumor Society (NBTS) Brain Tumor Symposium, Stanford, CA.

Consultantships/Speaker

2010-Present Stryker Corporation – Consultant
2013-2014 Accuray Corporation – Consultant
2014-2015 Izi Medical - Consultant
2014-2016 BMS – Consultant
2015-2016 Scientific Advisory Board - BMS
2016 Scientific Advisory Board – Oncorus
2016, 2020 Scientific Advisory Board – Merck
2016 Scientific Advisory Board – Agenus
2016 Scientific Advisory Board – Boston Biomedical
2017 Scientific Advisory Board – Baxter
2017-19 Scientific Advisory Board – Tocagen
2018-19 Scientific Advisory Board – SQZ
2020 Scientific Advisory Board – Pyramid Biosciences
2020 Scientific Advisory Board – Insightec

Industry

2021 Chief of Scientific Board – Egret Therapeutics

RECOGNITION

Awards and Honors

1991 Harry Evans Honors Program Scholarship, University of New Hampshire
1992 Phi Beta Kappa Honor Society, University of New Hampshire
1993 Alpha Zeta Honors Fraternity for Biological Sciences, University of New Hampshire
1993 Mortar Board Honor Society, University of New Hampshire,
1994 Premedical Committee Scholarship, University of New Hampshire
1991-1995 Presidential Scholar, University of New Hampshire
1991-1995 Governor's Success Grant Scholar – 4 year Scholarship, University of New Hampshire
1991-1995 Granite State Scholar, University of New Hampshire
A full tuition 4 year merit scholarship given to 12 students
1995 John McConnell Scholarship, University of New Hampshire
1995 Valedictorian, University of New Hampshire

1996	Dean's Grant Award for Research, The Johns Hopkins University School of Medicine
1998-1999	Howard Hughes Medical Student Fellowship, Johns Hopkins University School of Medicine
2008	Richard Otenasek Jr. Faculty Teaching Award, Johns Hopkins University School of Medicine
2010-2011	Department of Surgery Outstanding Faculty Teacher Award for the Basic Surgery Clerkship, Johns Hopkins University School of Medicine
2016	Service Excellence Award, Health Network Foundation
2018	Alpha Omega Alpha (AOA)
2018	Chairman's Award for Excellence in Teaching, Johns Hopkins University School of Medicine
2020	Chairman's Award for Excellence in Teaching, Johns Hopkins University School of Medicine

Invited Talks, Panels

10/06	Speaker, University of Utah Grand Rounds, "Blood Vessel Pathologies in CNS Diseases," Salt Lake City, UT
11/06	Speaker, Dartmouth College Grand Rounds, "Blood Vessel Pathologies in CNS Diseases," Hanover, NH
11/06	Speaker, Mayo Clinic Grand Rounds, "Blood Vessel Pathologies in CNS Diseases," Rochester, MN
11/06	Speaker, JHU Neurosurgery Grand Rounds, "Blood Vessel Pathologies in CNS Diseases," Baltimore, MD
10/07	Speaker, JHU Neurosurgery Grand Rounds, "1p19q Deletion in Oligodendrogliomas," Baltimore, MD
12/07	Speaker, JHU Neurosurgery Grand Rounds, "Radiosurgery for Trigeminal Neuralgia," Baltimore, MD
03/08	Speaker, JHU Neurosurgery Grand Rounds, "Radiosurgery for Glomus Jugulare Tumors," Baltimore, MD
05/08	Speaker, Blaustein Pain Conference, "Radiosurgery for Trigeminal Neuralgia," Baltimore, MD
06/08	Speaker, JHU Oncology Grand Rounds, "Radiosurgery for Metastatic Brain Tumors," Baltimore, MD
07/08	Speaker, JHU Neurosurgery Grand Rounds, "Stereotactic Spinal Radiosurgery," Baltimore, MD
07/08	Speaker, JHU Neurosurgery Grand Rounds, "Management of Cerebral Brain Metastases," Baltimore, MD
09/08	Speaker, 3 rd Annual International Updates in Neuro-Oncology, "Immunotherapy for Brain Tumors," Baltimore, MD
10/08	Speaker, Southern Maryland Hospital Grand Rounds, "Pituitary Tumors," Clinton, MD
10/08	Speaker, Thomas Jefferson Hospital Grand Rounds, "Management of Cerebral Brain Metastases," Philadelphia, PA
12/08	Speaker, York Wellspan Hospital Grand Rounds, "Head Trauma," York PA

- 01/09 Speaker, Wilmington VA Medical Center Grand Rounds, "Management of Brain Metastases,"
Wilmington, DE
- 01/09 Honored Guest Speaker, Caribbean Neurosciences Symposium, "Image Guided Surgery,"
Montego Bay, Jamaica
- 03/09 Speaker, JHU Medicine Grand Rounds, "Management of Cerebral Brain Metastases,"
Baltimore, MD
- 03/09 Speaker, JHU Radiation Oncology Resident Teaching Rounds, "Management of Cerebral Brain
Metastases," Baltimore, MD
- 04/09 Speaker, Johns Hopkins Undergraduate Research Conference, "Technology in Neurosurgery,"
Baltimore, MD
- 06/09 Speaker, The Johns Hopkins Hospital Otolaryngology Grand Rounds, "Radiosurgery for Skull
Based Tumors," Baltimore, MD
- 07/09 Speaker, St. Matthews School of Medicine, "Technology in Neurosurgery," Grand Cayman
Islands
- 07/09 Speaker, Korean American Spine Society (KASS), "Stereotactic Spinal Radiosurgery,"
San Diego, CA
- 07/09 Speaker, JHU Neurosurgery Grand Rounds, "Evaluation of Head Trauma," Baltimore, MD
- 07/09 Speaker, JHU Neurosurgery Grand Rounds, "Integration of Functional Imaging with Image
Guidance," Baltimore, MD
- 09/09 Speaker, Neuro-Oncology Congress, "Open versus Endoscopic Resection of Pituitary Tumors,"
Santiago, Chile
- 09/09 Speaker, Neuro-Oncology Congress, "Management of Cerebral Brain Metastases,"
Santiago, Chile
- 09/09 Speaker, Neuro-Oncology Congress, "Cerebral Brain Mapping," Santiago, Chile
- 09/09 Speaker, Neuro-Oncology Congress, "Immunotherapy for Gliomas," Santiago, Chile
- 09/09 Speaker, Baltimore Life Sciences Association, "Immunotherapy for GBMs," Baltimore, MD
- 10/09 Speaker, MedTronics Annual Meeting, "Skull Base Surgery Techniques," Denver, CO
- 11/09 Speaker, Suburban Hospital, "Management of Cerebral Brain Metastases," Bethesda, MD
- 12/09 Speaker, University of California at San Francisco, "Immunotherapy for Gliomas,"
San Francisco, CA
- 12/09 Speaker, Sinai Hospital, "Management of Cerebral Brain Metastases," Baltimore, MD
- 05/10 Speaker, 3rd Annual European Workshop on Whole Body Radiosurgery and Stereotactic
Radiation Therapy, "Radiosurgery for Glomus Jugulare Tumors," Universite Catholique de
Louvain, Brussels, Belgium
- 05/10 Speaker, JHU Oncology Grand Rounds, "Stereotactic Radiosurgery for the Spine,"
Baltimore, MD
- 06/10 Speaker, JHU Oncology Fellows Lecture, "Management of Cerebral Brain Metastases,"
Baltimore, MD

- 07/10 Speaker, JHU Neurosurgery Grand Rounds, “Postoperative Management of GBMs,” Baltimore, MD
- 07/10 Speaker, Korean American Spine Society (KASS), “Local Delivery Vehicles for Spine Tumors,” Washington, DC
- 09/10 Speaker, Inha University, “Management of Cerebral and Spine Metastases,” Seoul, South Korea
- 09/10 Speaker, Seoul National University, “Management of Cerebral and Spine Metastases,” Seoul, South Korea
- 09/10 Speaker, ASIA Spine Meeting, “Stereotactic Radiosurgery for Spinal Tumors,” Incheon, South Korea
- 10/10 Speaker, JHU Neurosurgery Grand Rounds, “Immunotherapy for GBMs,” Baltimore, MD
- 11/10 Speaker, JHU Neurosurgery Grand Rounds, “Management of Brain Metastases,” Baltimore, MD
- 11/10 Speaker, University of New Hampshire, “Surgical and Molecular Therapies against GBM,” Durham, NH
- 03/11 Speaker, 1st Annual Joint Symposium on the Progress of Neurosurgery, “Stereotactic Radiosurgery for Spinal Tumors,” Seoul, South Korea
- 03/11 Speaker, 1st Annual Joint Symposium on the Progress of Neurosurgery, “Stereotactic Radiosurgery for Skull Base Tumors,” Seoul, South Korea
- 03/11 Speaker, 1st Annual Joint Symposium on the Progress of Neurosurgery, “Immunotherapy for Brain Tumors,” Seoul, South Korea
- 05/11 Speaker, St. Matthews School of Medicine, “Low Back Pain,” Grand Cayman Islands
- 05/11 Speaker, Neuro Nursing Workshop, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 05/11 Speaker, Neurology Grand Rounds, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 06/11 Speaker, International Brain Mapping and Intraoperative Surgical Planning Society (IBMISPS), “Immunotherapy for Brain Tumors,” San Francisco, CA
- 06/11 Speaker, Stanford University Grand Rounds, “Immunotherapy for Brain Tumors,” Palo Alto, CA
- 08/11 Speaker, JHU Neurosurgery Grand Rounds, “Radiosurgery for Skull Base Tumors,” Baltimore, MD
- 08/11 Speaker, JHU Neurosurgery Grand Rounds, “Radiosurgery for Meningiomas,” Baltimore, MD
- 12/11 Speaker, JHU Neurosurgery Grand Rounds, “Immunotherapy for GBMs,” Baltimore, MD
- 12/11 Speaker, JHU Neurosurgery Grand Rounds, “Radiosurgery for Pituitary Adenomas,” Baltimore, MD
- 03/12 Speaker, Top of America Meets the Top of China Conference, “Immunotherapy for Brain Tumors,” Xi’An, China
- 04/12 Speaker, JHU Neurosurgery Grand Rounds, “Trigeminal Neuralgia,” Baltimore, MD
- 05/12 Speaker, Brain Mapping Day – United States Congress, “Augmenting Immunotherapy Strategies with Focused Radiation,” Washington, DC
- 06/12 Speaker, Society for Brain Mapping and Therapeutics Annual Meeting (SBMT), “Immunotherapy for Brain Tumors,” Toronto, Canada
- 10/12 Speaker, FasterCures Foundation, “Immunotherapy for Brain Tumors,” Los Angeles, CA

- 10/12 Speaker, Multidisciplinary Meeting for “Impact of MRI Imaging for Neurosurgical Planning and Treatment of Patients with Brain Metastases: Neurosurgeon’s Perspective,” Vienna, Austria.
- 12/12 Speaker, Molecular Image-Guided Interventions Symposium, “Nanomedicine for Neurosurgery,” Baltimore, MD
- 01/13 Speaker, Trigeminal Neuralgia/Facial Pain Support Group Meeting, “Surgical Treatments for Trigeminal Neuralgia,” Columbia, MD
- 02/13 Speaker, Radiation Oncology Resident Conference, “Management of Cerebral Brain Metastases,” Baltimore, MD
- 05/13 Speaker, AANS Tumor Satellite Meeting, “Heat Shock Protein: Technology,” New Orleans, LA
- 05/13 Speaker, Society for Brain Mapping and Therapeutics Annual Meeting (SBMT), “Combining Anti-PD-1 Therapy with SRS for the Treatment of GBM,” Baltimore, MD
- 06/13 Speaker, ISRS (International Stereotactic Radiosurgery Society) Annual Meeting, “Linac Based Stereotactic Radiosurgery for the Treatment of Trigeminal Neuralgia,” Toronto, Canada
- 06/13 Speaker, Harbor Hospital Medicine Grand Rounds, “Surgical Treatments of Trigeminal Neuralgia,” Baltimore, MD
- 09/13 Speaker, Neuroradiology Fellows Conference, “Trigeminal Neuralgia,” Baltimore, MD
- 09/13 Speaker, World Federation of Neurological Societies. 15th World Congress of Neurosurgery, “Role of Anti-PD-1 Therapy for Immunotherapy in the Treatment of Glioblastoma,” Seoul, Korea
- 09/13 Speaker, World Federation of Neurological Societies. 15th World Congress of Neurosurgery, “Role Immunotherapy for the Treatment of High Grade Gliomas,” Seoul, Korea
- 09/13 Speaker, World Federation of Neurological Societies. 15th World Congress of Neurosurgery, “Treating Metastatic Spine Tumors with Stereotactic Radiosurgery,” Seoul, Korea
- 09/13 Speaker, World Federation of Neurological Societies. 15th World Congress of Neurosurgery, “Role of Radiation in the Treatment of Brain Metastases,” Seoul, Korea
- 10/13 Speaker, Radiation Oncology Resident Conference, “Surgical Considerations for the Management Brain Metastases,” Baltimore, MD
- 10/13 Speaker, Neurosurgery Grand Rounds, “Immunology of Metastatic Melanoma Brain Metastases,” Baltimore, MD
- 11/13 Speaker, EANS (European Association of Neurosurgical Societies) Annual Meeting, “Combining Anti-PD-1 with SRS as a Novel Therapy Against Glioblastoma,” Tel Aviv, Israel
- 12/13 Speaker, The Future of Neuroscience: Novel Research Avenues for the Treatment of Epilepsy, Pain, and Brain Tumors, Milan, Italy.
- 01/14 Speaker, Investigators Meeting for BMS Cohort I, “Preclinical Results of anti-CTLA-4 and anti-PD-1 therapy against GBM,” New York, NY
- 03/14 Speaker, Neurosurgery Grand Rounds, “Flavors of Radiation for the Brain,” Baltimore, MD
- 03/14 Speaker, Updates in Stereotactic Radiosurgery, “Using Local Therapy to Treat Systemic Melanoma,” Spokane, WA
- 04/14 Speaker, American Society of Neuroradiology (ASNR), “Value of Presurgical Functional Mapping in Neurosurgery,” Montreal, Canada

- 06/14 Speaker, Invited Lecture at the National Hospital, “Immunotherapy for Brain Tumors, and Surgical Management of Trigeminal Neuralgia” Oslo, Norway
- 07/14 Speaker, Radiation Oncology Grand Rounds, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 08/14 Speaker, Invited Lecture, “Management of Recurrent GBM,” Current Trends in the Management of Malignant Glioma Meeting, Tokyo, Japan
- 08/14 Speaker, Invited Lecture, “Vaccines Treatments for Brain Tumors,” Current Trends in the Management of Malignant Glioma Meeting, Tokyo, Japan
- 09/14 Speaker, Invited Lecture, “Immunotherapy,” 13th Annual International Neuro-Oncology Updates, Boston, MA
- 09/14 Speaker, Radiology Fellows Conference, “Trigeminal Neuralgia,” Baltimore, MD
- 09/14 Speaker, Invited Lecture, BMS Investigator Meeting, “Rationale for Checkpoint Inhibitors Against GBM, Preclinical Studies,” Philadelphia, PA
- 10/14 Speaker, Invited Lecture, BMS Investigator Meeting, “Rationale for Checkpoint Inhibitors Against GBM, Preclinical Studies,” Turin, Italy
- 10/14 Speaker, Invited Lecture, Japan Neurosurgical Society, “Management of Brain Metastases and Implications Towards Immunotherapy,” Tokyo, Japan
- 11/14 Speaker, Neurosurgery Grand Rounds, “Immunotherapy for CNS Tumors,” Baltimore, MD
- 11/14 Invited Panel Speaker, Society for Neuro-Oncology Immunotherapy Symposium, “Preclinical Data for the Use of Checkpoint Molecules in GBM,” Miami, FL
- 12/14 Invited Speaker for Translational Research Conference, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 02/15 Speaker, Invited Lecture, Neurosurgery Grand Rounds, “Immunotherapy for Brain Tumors,” Hong Kong, China
- 03/15 Speaker, Society for Brain Mapping and Therapeutics Annual Meeting (SBMT), “Immunotherapy for Brain Tumors,” Los Angeles, CA
- 05/15 Invited Speaker, Neuro-Oncology Clinical Trials Symposium, “Immunotherapy for Brain Tumors,” Greenvale, NY
- 05/15 Keynote Speaker, Biotech Summit, “PD-1 and CTLA-4 for GBM,” New York, NY
- 07/15 Invited Speaker, BMS Advisory Board Meeting, “Preclinical Data for Checkpoint Inhibitors in GBM,” Vienna, Austria
- 07/15 Invited Speaker, 14th International Updates in Neuro-Oncology, “Checkpoint Inhibitors for Glioblastoma,” Cortona, Italy
- 07/15 Invited Speaker, Center for Bioengineering, Innovation, and Design (CBID), “Opportunities for Innovation in Neurosurgery,” Baltimore, MD
- 08/15 Invited Speaker, 41st Annual Hanbery Meeting, “Checkpoint Inhibitors for Glioblastoma,” Cape Cod, MA
- 08/15 Speaker, Neurosurgery Grand Rounds, “Checkpoint Inhibitors for Glioblastoma,” Baltimore, MD
- 09/15 Invited Speaker, Selected Topics in Craniomaxillofacial Surgery Conference, “Single Stage

- Cranioplasty Skull Tumors,” Boston, MA
- 10/15 Invited Speaker, Neuroradiology Fellows Conference, “Management of Brain Metastases,” Baltimore, MD
- 10/15 Invited Speaker, University of Maryland Grand Rounds, “Management of Trigeminal Neuralgia,” Baltimore, MD
- 11/15 Invited Speaker, Immune Checkpoint Inhibitors Conference (ICI), “Combining Radiation with Checkpoint Inhibitors for the Treatment of GBM,” Frankfurt, Germany
- 11/15 Invited Speaker, Society for Neuro-Oncology Education Day, “Checkpoint Inhibitors for Gliomas,” San Antonio, TX
- 12/15 Invited Speaker, Blaustein Pain Conference, “Management of Trigeminal Neuralgia,” Baltimore, MD
- 02/16 Invited Speaker, NCCU Conference, “Brain Tumor Immunotherapy in an Inpatient Setting,” Baltimore, MD
- 02/16 Invited Speaker, Regeneron Speaker Series, “Checkpoint Inhibitors for Gliomas,” Tarrytown, NY
- 03/16 Speaker, Neurosurgery Grand Rounds, “Basics of Radiation for Brain Tumors,” Baltimore, MD
- 03/16 Invited Speaker, BMS Investigators Meeting, “Preclinical Data on Checkpoint Inhibitors for Radiation and Immunotherapy Leadership Summit, “Effective Combinations of Gliomas,” Atlanta, GA
- 03/16 Invited Speaker, 22nd Annual Blood-Brain Barrier Consortium Meeting, “Pseudoprogession After Immunotherapy,” Stevenson, OR
- 03/16 Invited Speaker, Radiation and Immunotherapy Leadership Summit, “Effective Combinations of Radiation and Immunotherapy,” Bethesda MD
- 04/16 Invited Speaker, American Academy of Neurology (AAN), “Initial Treatment, Including Scenarios Requiring Urgent and Multidisciplinary Management for Primary Brain Tumors,” Vancouver, Canada
- 04/16 Invited Speaker, American Academy of Neurology, “Modern Surgical Approaches, Including Efficacy, Toxicity, and Emerging Roles from the Perspective of Meningiomas and Gliomas,” Vancouver, Canada
- 05/16 Invited Speaker, Stryker Innovation Dinner, “Single Stage Skull Reconstruction for Skull Tumors,” Chicago, IL
- 05/16 Invited Speaker, Neuroradiology Fellows Conference, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 06/16 Invited Speaker, American Society for Clinical Oncology (ASCO), “Vaccines and Checkpoint Inhibitors for GBM,” Chicago, IL
- 06/16 Invited Speaker, First International Summit on Biomarkers and Therapeutic Advances in Radiation Oncology and International Summit in Radiation Oncology (ISRO), “Combining Focused Radiation with Checkpoint Inhibitors in GBM,” Montreal, Canada
- 07/16 Invited Speaker, Fifth Annual Chordoma Research Workshop, “Checkpoint Inhibitors for Chordomas,” Boston, MA
- 07/16 Invited Speaker, Fifth Annual Chordoma Research Workshop, “A Phase I Combination SRS plus

- Nivolumab Clinical Trial for Recurrent Chordomas,” Boston MA
- 08/16 Invited Speaker, Current Trends in Malignant Gliomas, “Advances in Surgery for Gliomas,” Tokyo, Japan
- 08/16 Invited Speaker, Current Trends in Malignant Gliomas, “Understanding Immunotherapy in Gliomas,” Tokyo Japan
- 09/16 Invited Speaker, 4th Annual Immuno-Oncology Summit, “Checkpoint Inhibitors for Gliomas,” Boston, MA
- 09/16 Invited Speaker, Neurology Grand Rounds, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 09/16 Invited Speaker, Oncology Grand Rounds, “Checkpoint Inhibitors for Brain Tumors,” Baltimore, MD
- 09/16 Invited Speaker, Asia Spine, “Immunotherapy for Spinal Tumors,” Seoul, Korea
- 09/16 Invited Speaker, American Association of Neurological Surgeon/Congress of Neurological Surgeons Tumor Satellite Section, “Clinical Trials for Neurological Surgeons,” San Diego, CA
- 09/16 Invited Speaker, Congress of Neurological Surgeons, “Checkpoint Inhibitors for Gliomas,” San Diego, CA
- 10/16 Distinguished Speaker, Samuel C. Smith Visiting Professor, “Immunotherapy for Brain Tumors,” University of New Hampshire, Durham, NH
- 10/16 Distinguished Speaker, Research Seminar, “Trigeminal Neuralgia,” University of New Hampshire, Durham, NH
- 11/16 Invited Speaker, Selected Topics in Craniomaxillofacial Surgery/ An International Cranioplasty Symposium, “Single Stage Cranioplasty for Skull Tumors,” Baltimore, MD
- 11/16 Invited Speaker, 34th Annual Chemotherapy Foundation Symposium, “Targeting the Tumor Microenvironment and Immune Pathways for GBM,” New York, NY
- 11/16 Invited Speaker, Neurosurgery Updates CME, “Trigeminal Neuralgia,” Suburban Hospital, Baltimore, MD
- 11/16 Invited Speaker, SNO: Neuro-Oncology Review Course, “Neurosurgical Management of Brain Tumors,” Scottsdale, AZ
- 11/16 Chair and Invited Speaker, New Considerations for the Management of Glioblastoma, “Future Directions for Immunotherapy,” SNO meeting, Scottsdale, AZ
- 02/17 Invited Roundtable Speaker, American Society of Clinical Oncology, Society for Immunotherapy of Cancer (ASCO-SITC) Meeting “Immunotherapy in Clinical Practice – GBM,” Orlando, FL
- 03/17 Invited Speaker, American College of Radiation Oncology Meeting “Radiation to Kickstart an Immune Response to Metastases,” Orlando, FL
- 03/17 Invited Speaker, Seoul National University Grand Rounds, “Management of Brain Metastases,” Seoul, Korea
- 03/17 Invited Plenary Speaker, Korean Society for Neuro-Oncology “Immunotherapy for Brain Tumors,” Seoul, Korea
- 04/17 Speaker, JHU Neurosurgery Grand Rounds, “State of Immunotherapy in Brain Tumors,” Baltimore, MD
- 04/17 Invited Speaker, Advanced Clinical Topics in Neuroscience Nursing, “Practical Aspects of

- Immunotherapy for Brain Tumors,” Baltimore, MD
- 05/17 Invited Speaker, World Federation of Neuro-Oncology Societies, “Preclinical Rationale for I-O Based Treatment Strategies,” Zurich, Switzerland
- 05/17 Invited Speaker, 3rd Annual Neurospine Summit, “Immunotherapy for Brain Tumors,” Beirut, Lebanon
- 05/17 Invited Speaker, 3rd Annual Neurospine Summit, “Radiosurgery for Brain Metastases,” Beirut, Lebanon
- 05/17 Invited Speaker, 3rd Annual Neurospine Summit, “Nuances of Vestibular Schwannoma Resection,” Beirut, Lebanon
- 05/17 Invited Speaker, Molecular and Clinical Radiobiology Workshop 3rd Edition, “Creating a Systemic Immune Response with Local Therapies,” Montreal, Canada
- 05/17 Invited Speaker, Nursing Inservice, “Trigeminal Neuralgia,” Baltimore, MD
- 06/17 Invited Speaker, Brain Tumor Biotech Summit, “Kindling an Immune Response for Brain Tumors,” New York, NY
- 06/17 Invited Speaker, Neurology Resident Lecturer, “Trigeminal Neuralgia,” Baltimore, MD
- 06/17 Invited Speaker, SITC-ASTRO Immunotherapy Workshop, “Kindling a Systemic Immune Response with Local Therapies,” Bethesda, MD
- 06/17 Invited Speaker, International Gamma Knife Radiosurgery Foundation, “Immune Checkpoints and Radiosurgery,” Philadelphia, PA
- 07/17 Speaker, JHU Neurosurgery Grand Rounds, “Trigeminal Neuralgia,” Baltimore, MD
- 07/17 Speaker, Hanbery Society Meeting, “Immunotherapy for Brain Tumors,” Park City, UT
- 09/17 Invited Speaker, Stanford Neurosurgery Grand Rounds, “Trigeminal Neuralgia,” Stanford, CA
- 09/17 Invited Speaker, LINK Symposium, “Surgical Management of Brain Tumors,” Beijing, China
- 10/17 Invited Speaker, BMS II-ON Symposium, “Combination Immunotherapy Approaches for GBM,” Redwood City, CA
- 10/17 Speaker, Neurosurgery Grand Rounds, “Low Grade Gliomas,” Baltimore, MD
- 10/17 Invited Speaker, National Brain Tumor Society (NBTS) Scientific Meeting, “Novel Immunotherapy Combination Approaches for GBM,” Boston, MA
- 10/17 Invited Speaker, American Society for Plastic Surgery (ASPS), “Single Stage Cranioplasty for Skull Tumors,” Orlando, FL
- 10/17 Invited Speaker, Christopher Davidson Forum, “Removing the Handcuffs for Brain Tumor Immunotherapy,” St. Louis, MO
- 11/17 Invited Speaker, Selected Topics in Craniomaxillofacial Surgery/ An International Cranioplasty Symposium, “Kindling a Systemic Immune Response Against GBM,” Boston, MA
- 11/17 Invited Speaker, Memorial Sloan Kettering Brain Tumor Series, “Kindling a Systemic Antitumor Immune Response for Brain Tumors,” New York, NY
- 11/17 Invited Speaker, Korean Association of Immunologists, “Reassessing the Role of Chemotherapy for Brain Tumor Immunotherapy,” Seoul, Korea
- 11/17 Invited Speaker, SNO: Neuro-Oncology Review Course, “Neurosurgical Management of Brain

- Tumors,” San Francisco, CA
- 11/17 Invited Speaker, SNO Sunrise Session, “Checkpoint Inhibitors for GBM,” San Francisco, CA
- 11/17 Invited Speaker, Novalis Circle Symposium, “Combining Focused Radiation with Immunotherapy,” San Francisco, CA
- 12/17 Invited Speaker, Translational Research Conference, “Immunotherapy for Brain Tumors,” Baltimore, MD
- 12/17 Invited Speaker, Brigham & Women’s Hospital Neurosurgery Grand Rounds, “Rationale Immunotherapy Strategies for GBM,” Boston, MA
- 03/18 Invited Speaker, International Leksell Gamma Knife Society Meeting, “Background on Immunotherapy,” Dubai, UAE
- 03/18 Invited Speaker, Chinese Society for Neuro-Oncology Meeting, “Immunotherapy for Brain Tumors,” Guangzhou, China
- 03/18 Invited Speaker, Chinese Society for Neuro-Oncology Meeting, “Tailoring Immunotherapy for GBM,” Guangzhou, China
- 03/18 Invited Speaker, Sixth Annual Chordoma Research Workshop, “Checkpoint Inhibitors for Chordomas,” Boston, MA
- 03/18 Invited Speaker, San Francisco Neurological Society Meeting, “Immunotherapy for Brain Tumors,” Napa, CA
- 04/18 Invited Speaker, JHI Neurosurgery Breakfast Seminar, “Novel Surgical Approaches for Brain Tumors,” Mexico City, Mexico
- 04/18 Invited Speaker, JHI Joint Symposium with Punta Pacifica, “Novel Techniques for Brain Tumor Surgery,” Panama City, Panama
- 05/18 Invited Speaker, 4th Annual Neurospine Summit, “Novel Techniques for Brain Tumor Resection,” Beirut, Lebanon
- 05/18 Invited Speaker, 4th Annual Neurospine Summit, “Immunotherapy for Brain Tumors,” Beirut, Lebanon
- 05/18 Invited Speaker, 4th Annual Neurospine Summit, “Management of Brain Metastases,” Beirut, Lebanon
- 05/18 Invited Speaker, 4th Annual Neurospine Summit, “Trigeminal Neuralgia,” Beirut, Lebanon
- 05/18 Invited Speaker, Chesapeake Bay Society of Perianesthesia Nursing (CBSPAN) Meeting, “Trigeminal Neuralgia,” Baltimore, MD
- 05/18 Speaker, Neurosurgery Grand Rounds, “Advances in Immunotherapy for Brain Tumors,” Baltimore, MD
- 06/18 Invited Speaker, XXVII Congreso Internacional De Neurologia Y Neurocirugia Meeting, “Novel Surgical Approaches to Brain Tumors,” Punta Cana, Dominican Republic
- 06/18 Invited Speaker, Neurology and Neurosurgery Research Retreat, “Immunotherapy for Gliomas,” Baltimore, MD
- 06/18 Invited Speaker, International Symposium on Pediatric Neuro-Oncology, “Strategies to Overcome Pediatric Brain Tumor Induced Systemic and Local Immunosuppression,” Denver, CO
- 07/18 Speaker, Hanbery Society Meeting, “New Techniques for Removing Brain Tumors,” Maui, HI

- 08/18 Invited Speaker, National Patient and Family Conference (ABTA), “Immunotherapy for Brain Tumors,” Chicago, IL
- 08/18 Invited Speaker, National Patient and Family Conference (ABTA), “Tumor Board Panel,” Chicago, IL
- 09/18 Invited Speaker, Trigeminal Neuralgia and Facial Pain Support Group Meeting, “Trigeminal Neuralgia,” Columbia, MD
- 09/18 Invited Speaker, Western Neurosurgical Society Meeting, “Recent Relevant Clinical Trials for Brain Tumors,” Big Island, HI
- 09/18 Invited Speaker, 8th Annual Taiwan Society for Neuro-Oncology (TSNO) Meeting, “Recent Clinical Trials for Brain Tumors,” Taichung, Taiwan
- 09/18 Invited Speaker, 8th Annual Taiwan Society for Neuro-Oncology (TSNO) Meeting, “State of Immunotherapy for Brain Tumors,” Taichung, Taiwan
- 09/18 Invited Speaker, 8th Annual Taiwan Society for Neuro-Oncology (TSNO) Meeting, “Personalized Immunotherapy for Brain Tumors,” Taichung, Taiwan
- 10/18 Invited Speaker, Tumor Section Satellite Symposium, “Taking a Closer Look at the Effector Immune Cell Population for GBM Immunotherapy,” Houston, TX
- 10/18 Invited Speaker, Beirut Cancer Care Forum, “Assessing the Effector Immune Cells for GBM,” Beirut, Lebanon
- 10/18 Invited Speaker, Beirut Cancer Care Forum, “Treating Relapsing Meningiomas,” Beirut, Lebanon
- 10/18 Invited Plenary Speaker for 6th Annual Steve Sabol Lecture for Surgical Neuro-Oncology, “Identifying Effector Immune Cell Populations for GBM,” Jefferson University, Philadelphia, PA
- 10/18 Invited Plenary Speaker for Foro Internacional De Liderazgo En Salud (FILS), “Building a Brain Tumor Immunotherapy Program,” Guadalajara, Mexico
- 11/18 Invited Speaker, 4th Annual International Cranioplasty Symposium, “Single Stage Cranioplasty,” Baltimore, MD
- 11/18 Invited Speaker, SNO: Neuro-Oncology Review Course, “Neurosurgical Management of Brain Tumors,” New Orleans, LA
- 12/18 Invited Speaker, Neuroscience Grand Rounds, “Immunotherapy for GBM,” Tianjin, China
- 12/18 Invited Plenary Speaker, International Brain Tumor Conference, “State of Immunotherapy for GBM,” Nanjing China
- 12/18 Invited Plenary Speaker, 3rd Annual Immunotherapy for Brain Tumors, “Advances in Immunotherapy for GBM,” Shanghai, China
- 02/19 Invited Plenary Speaker, 1st Annual International Meeting for Gliomas, “State of GBM Immunotherapy,” Mexico City, Mexico
- 03/19 Invited Plenary Speaker, 2nd Annual Korean Immuno-Oncology Symposium, “GBM Immunotherapy,” Seoul, Korea
- 03/19 Invited Speaker, Bristol Meyers Squibb Research Conference, “GBM Immunotherapy,” Redwood City, CA
- 04/19 Invited Speaker, Precision Medicine in Cancer Therapeutics Conference, “Local and Global

- Immunosuppression in GBM,” Seoul, Korea
- 05/19 Invited Speaker, American Health Care Journalists Conference, “Immunotherapy for GBM,” Baltimore, MD
- 05/19 Invited Speaker, University of Saskatchewan Neurosciences Grand Rounds, “Immunotherapy for GBM,” Saskatoon, Canada
- 06/19 Invited Speaker, International Stereotactic Radiosurgery Society Meeting, “Immunotherapy for Brain Tumors in the Setting of Radiation,” Rio de Janeiro, Brazil
- 06/19 Invited Speaker, CNIMC Symposium, “Precision Medicine for GBM Immunotherapy,” Xi’An, China
- 06/19 Invited Speaker, 13th Annual National Cancer Center Symposium, “Identifying Tumor Antigens for GBM,” Seoul, Korea
- 06/19 Invited Speaker, 29th Annual Korean Brain Tumor Society Meeting, “Personalizing GBM Immunotherapy,” Seoul, Korea
- 07/19 Speaker, Hanbery Society Meeting, “Trigeminal Neuralgia,” Park City, UT
- 09/19 Invited Speaker, International Society of Craniofacial Surgery Meeting, “Single Stage Cranioplasty for Skull Tumors,” Paris, France
- 09/19 Invited Speaker, European Association of Neuro-Oncology (EANO), “Immunotherapy for GBM,” Lyon, France
- 09/19 Invited Speaker, American Society of Plastic Surgeons (ASPS), “Single Stage Cranioplasty for Skull Tumors,” San Diego, CA
- 09/19 Invited Speaker, Chang-Gung Neuro-oncology Forum, “Immunotherapy for Brain Tumors,” Taipei, Taiwan
- 09/19 Keynote Speaker, Asian Society of Neuro-Oncology (ASNO), “Personalized Immunotherapy for GBM,” Taipei, Taiwan
- 09/19 Plenary Speaker, Asian Society of Neuro-Oncology (ASNO), “Current State of Immunotherapy for GBM,” Taipei, Taiwan
- 10/19 Invited Speaker, Congress of Neurological Surgeons (CNS), “State of Checkpoint Inhibitors for Brain Tumors,” San Francisco, CA
- 10/19 Invited Speaker, McGill Brain Tumor Symposium, “Overcoming a Cold Tumor,” Montreal, Canada
- 10/19 Invited Speaker, McGill Brain Tumor Public Awareness Day, “State of Immunotherapy for GBM,” Montreal Canada
- 11/19 Invited Speaker, Korean Association of Immunologists (KAI), “Overcoming Myeloid Cells in GBM,” Seoul, Korea
- 11/19 Invited Speaker, 21st Annual Brain Tumor Update and 10th Annual Symposium on Brain and Spine Metastases, “Immunotherapy for Brain Tumors,” Las Vegas, NV
- 11/19 Invited Speaker, SNO: Neuro-Oncology Review Course, “Neurosurgical Management of Brain Tumors,” Phoenix, AZ
- 11/19 Invited Speaker, SNO: Immunotherapy Think Tank, “Location Specific Immunosuppression of Brain Tumors in the Setting of Metastases and Gliomas,” Phoenix, AZ

- 11/19 Invited Speaker, SNO Elekta Luncheon, “Push and Pull of Radiation for Immunotherapy,” Phoenix, AZ
- 11/19 Invited Speaker, SNO Sunrise Session, “Phase 0 Immunotherapy Clinical Trials,” Phoenix, AZ
- 12/19 Invited Speaker, Radiological Society of North America, “Immunotherapy for Brain Tumors,” Chicago, IL
- 12/19 Invited Speaker, Glioblastoma Drug Development Summit, “Immunotherapy for Brain Tumors,” Boston, MA
- 12/19 Grand Rounds Speaker, “Management of Cerebral Brain Mets,” Baltimore, MD
- 12/19 Invited Speaker, Johnston-Willis Hospital, “Immunotherapy for Brain Tumors,” Richmond, VA
- 12/19 Invited Speaker, Trigeminal Neuralgia Association Local Chapter Meeting, “Trigeminal Neuralgia,” Ellicott City, MD
- 01/20 Invited Grand Rounds Speaker, “Immunotherapy for Brain Tumors,” Massachusetts General Hospital, Boston, MA
- 02/20 Invited Speaker, Brain Tumor Center Seminar Speaker Series, “Immunotherapy for Brain Tumors,” Duke University Hospital, Durham, NC
- 02/20 Invited Speaker, “Immunotherapy for Brain Tumors,” Focused Ultrasound Society, Charlottesville, VA
- 04/20 Invited Plenary Speaker, China Society for Neuro-Oncology Meeting (CSNO) “Immunotherapy for Brain Tumors,” China (Zoom)
- 05/20 Invited Speaker, Surgical Oncology Working Group, “Immunotherapy for Brain Tumors,” Boston, MA (Zoom)
- 05/20 Invited Speaker, Miami Global Brain Tumor Symposium, “Immunotherapy for Brain Tumors,” Miami, FL (Zoom)
- 07/20 Invited Speaker, GBM Discovery Roundtable, “Exhausted T-Cells in GBM,” (Zoom)
- 07/20 Invited Speaker, International Chordoma Research Workshop, “Considerations for the Phase I Safety Study of Stereotactic Radiosurgery with Concurrent and Adjuvant PD-1 Antibody Nivolumab (CA209-003) in Patients with Recurrent or Advanced Chordoma,” Boston, MA
- 07/20 Invited Speaker, Ivy Foundation Speaker Series, “Immunotherapy for Brain Tumors,” Phoenix, AZ (Zoom)
- 08/20 Invited Speaker, ZAP Surgical SRS Webinar Series, “Using Radiation to Augment Immunotherapy,” Palo Alto, CA
- 09/20 Invited Speaker, Frontiers in Clinical Oncology Series, “Immunotherapy for Brain Tumors,” Palo Alto, CA
- 10/20 Invited Speaker, Tigit Therapies Digital Summit, “TIGIT and Checkpoints for GBM,” London, England (Zoom)
- 11/20 Invited Speaker, Society for Neuro-Oncology Think Tank on Clinical Trials, “Strategies for Combination Immunotherapies,” Houston, TX (Zoom)
- 11/20 Invited Speaker, Facial Pain Association Education Day, “Diagnosis and Overview for Trigeminal Neuralgia,” Zoom
- 11/20 Invited Speaker, 2nd Annual Neuro-Oncology Fellow and Early Clinician/Investigator Career

- Retreat, “How Much Am I Worth/Negotiations,” Houston, TX (Zoom)
- 11/20 Invited Panelist and Speaker, 7th International Symposium on Focused Ultrasound, “Combining Immunotherapy with Focused Ultrasound for Brain Tumors,” Virtual (Zoom)
- 12/20 Invited Speaker, 9th Annual Huashan Course on the Diagnosis and Treatment of GBM,” Shanghai, China (Zoom)
- 12/20 Invited Speaker, 2nd Annual Glioblastoma Drug Development Summit, “Exhaustion in GBM,” Boston, MA (Zoom)
- 12/20 Invited Plenary Speaker, INC Glioblastoma Symposium, “Overcoming Exhaustion in GBM,” Curitiba, Brazil (Zoom)
- 02/21 Invited Speaker, California Neurology Society Connections Meeting, “Overview of Trigeminal Neuralgia,” San Francisco, CA
- 03/21 Invited Speaker, Loma Linda University Health Care Neurosurgery Symposium, “Immunotherapy for Brain Tumors,” Loma Linda, CA
- 03/21 Invited Speaker, UCSF Neuro-Oncology Seminar, “Overcoming T-Cell Exhaustion in GBM,” San Francisco, CA
- 04/21 Invited Speaker, Stanford Immunology Symposium, “Overcoming Exhaustion of Immune Cells in GBM,” Stanford, CA
- 04/21 Invited Speaker, UMP Lunchtime Series, “Trigeminal Neuralgia,” Stanford CA
- 05/21 Invited Speaker, Front Row Series (AANS), “Current State of Immunotherapies for Brain Tumors,” Webinar
- 05/21 Invited Speaker, Stony Brook Cancer Center Oncology Grand Rounds, “Overcoming Exhausted T-cells in GBM,” Stony Brook, NY – Virtual
- 05/21 Invited Discussant, Focused Ultrasound for GBM Workshop, “Clinical Unmet Needs,” Virtual
- 06/21 Invited Speaker, National Institutes of Health Surgical Branch, “Overcoming Exhausted T-cells in GBM,” Virtual
- 07/21 Invited Speaker, Society for Brain Mapping and Therapeutics (SBMT), “Advances in Immunotherapy for Brain Tumors,” Virtual
- 09/21 Invited Speaker, Kaweah Health Resident Teaching Session, “Trigeminal Neuralgia,” Visalia, CA
- 09/21 Invited Speaker, K12 Webinar, “Road to Becoming a Physician Scientist,” Webinar
- 09/21 Invited Speaker, Swiss Society of Neurosurgery, “Overcoming Immune Cell Exhaustion in GBM,” Virtual, Basel Switzerland
- 10/21 Invited Speaker, Tumor Satellite Symposium, “Tumor Microenvironment and Heterogeneity for Immunotherapy,” Austin, TX
- 10/21 Invited Speaker, Congress of Neurological Surgeons (CNS) Education Day, “Immune Cell Exhaustion in GBM,” Austin, TX
- 11/21 Invited Speaker, 5th Annual Chinese Forum on Immunotherapy and Targeted Therapy in Neuro Oncology, “Tumor Immune Microenvironment and Immunotherapy for GBM,” Shanghai, China
- 11/21 Invited Speaker, UC Davis Grand Rounds, “Overcoming Exhaustion in GBM with Multimodal

- Approachs,” Davis, CA
- 11/21 Invited Speaker, Facial Pain Association webinar, “Surgical Treatment of TN: What to Choose and When,” Virtual webinar
- 11/21 Invited Speaker, Society of NeuroOncology 2021 Annual Meeting, “How much am I worth?/Start up packages,” Boston, MA
- 12/21 Invited Speaker, 1st Annual South Florida Neuroplastic and Reconstructive Surgery Course, “Overcoming Immune Cell Exhaustion in GBM,” Miami FL
- 01/22 Invited Speaker, 3rd Annual Glioblastoma Drug Development Summit, “Obstacles to Generating an Effective Anti Tumor Immune Response,” Boston, MA
- 01/22 Invited Speaker, Facial Pain Association Conference, “Choosing the Right Procedure for Your Trigeminal Neuralgia,” Virtual webinar
- 02/22 Invited Speaker, 7th Annual Innovative Approaches to Brain Tumor Management. Seattle Science Foundation, “Immunotherapy for Brain Tumors,” Seattle, WA
- 02/22 Invited Panelist, North American Skull Base Society Annual Meeting. “Controversies in the Management of Meningiomas”, Phoenix, AZ.
- 03/22 Invited Speaker, Radiosurgery Society Scientific Meeting. “Car T-Cells for Brain Tumors”, Carlsbad, CA.
- 03/22 Invited Speaker, Radiosurgery Society Scientific Meeting. “Radiosurgery for Benign Lesions”, Carlsbad, CA.
- 03/22 Invited Speaker, Society for Brain Mapping and Therapeutics (SBMT) 19th Annual Congress Scientific Meeting. “Overcoming Exhausted Immune Cells in GBM”, Los Angeles, CA.
- 03/22 Invited Speaker, Society for Brain Mapping and Therapeutics (SBMT) 19th Annual Congress Scientific Meeting. “Combining Focused Ultrasound with Immunotherapy”, Los Angeles, CA.
- 03/22 Invited Speaker, San Francisco Neurological Society 2022 Annual Meeting. “Immunotherapy for GBM”, Monterey, CA.
- 03/22 Invited Speaker, World Federation of Neuro-Oncology Societies (WFNOS). “Overcoming Immune Cell Exhaustion in GBM”, Seoul, Korea.
- 03/22 Invited Speaker, World Federation of Neuro-Oncology Societies (WFNOS). “Focal Therapy and Immunotherapy for GBM”, Seoul, Korea.
- 03/22 Moderator, World Federation of Neuro-Oncology Societies (WFNOS). “BBB Modulation for the Treatment of Brain Tumors”, Seoul, Korea.
- 04/22 Invited Speaker, American Academy of Neurology (AAN). “mRNA Vaccines and Immunotherapy for Brain Tumors”. Seattle, WA.
- 05/22 Invited Speaker, American Association of Neurological Surgeons (AANS) Annual Meeting, “Immune Microenvironment of Brain Metastases”. Philadelphia, PA.

- 05/22 Invited Speaker, Society of Neurological Surgeons Meeting, “The Match Rank List: What are the Characteristics of the Ideal Neurosurgery Applicant?”. Detroit, MI.
- 05/22 Invited Speaker, University of California Irvine School of Medicine MSTP 37th Annual Distinguished Lecture Series 2021-2022, “Overcoming Immune Cell Exhaustion in Glioblastoma”. Irvine, CA.
- 06/22 Invited Speaker, American Society of Clinical Oncology (ASCO) Annual Meeting, “Optimizing Immunotherapy in Central Nervous System Malignancies”. Chicago, IL.
- 06/22 Speaker, Stanford – National Brain Tumor Society (NBTS) Brain Tumor Symposium, “Translational Immunotherapy”, Stanford, CA.
- 07/22 Speaker, Hanbery Society Meeting, “Microvascular Decompression,” North Shore, HI.
- 08/22 Invited Speaker, Stanford University School of Medicine Neurology Grand Rounds, “Immunotherapy in Brain Tumors,” Stanford, CA.
- 08/22 Invited Speaker, National Cancer Institute, “Immunotherapy – Bench to Bedside”, Washington DC, virtual.
- 08/22 Invited Speaker, Society for Image-Guided Neurointerventions (SIGN), “Immunotherapy for Brain Tumors”, Warwick, England.

OTHER PROFESSIONAL ACCOMPLISHMENTS

Oral Presentations

- 05/99 Howard Hughes Medical Institute, Washington DC; **Lim M**, Carducci MA, Mikhak B, Biedrzycki B, Borrellini F, Clift SM, Hege KM, Ando DG, Piantadosi S, Mulligan R, Nelson WG, Simons JW,. Characterization of the Human Th-2 Effector Response with *ex vivo* GM-CSF Gene Transduced Prostate Cancer Vaccines.
- 08/04 Hanbery Society, Palo Alto, CA; **Lim M**, Guccione S, Sims L, Azok J, King L, Bednarski M, Harsh G. Serum Markers for Glioblastoma Multiforme.
- 08/06 Hanbery Society, Whistler, Canada; **Lim M**, Bower R, Choi S, Sims L, Wang Y, Yang Y, Cheshier S, Haddix T, Vogel H, Tse V, Harsh G, Guccione S. An Antiangiogenic Approach to Treating Glioblastoma Multiforme.
- 09/07 Western Neurosurgical Society – 53rd Annual Meeting, Kohala Coast, HI; **Lim M**, Villavicencio A, Burneikiene S, Romanelli P, Chang SD, McNeely L, Fariselli L, McIntyre M, Bower R, Broggi G, Thramann JJ, Adler JR. Multicenter Experience of Treating Trigeminal Neuralgia with the CyberKnife.
- 06/09 Neurosurgical Society of America (NSA), Homestead, VA; Albesiano E, Han J, See A, Frazier J, Parker S, Cheng J, Pardoll D, **Lim M**. Role of STAT3 activation in the GBM Microenvironment.
- 10/11 Congress of Neurological Surgeons, Washington, DC; Bender M, Pradilla G, Batra S, See A, James C, Carson B, **Lim M**. Effectiveness of Repeat Glycerol Rhizotomy in Treating Trigeminal Neuralgia.

- 10/11 Congress of Neurological Surgeons, Washington, DC; Bender M, Pradilla G, Batra S, See A, Bhutani N, James C, Carson B, **Lim M**. Effectiveness of Repeat Radiofrequency Thermocoagulation in the Treatment of Recurrent Trigeminal Neuralgia.
- 10/11 Congress of Neurological Surgeons, Washington, DC; Pradilla G, Bhutani N, Batra S, Bender M, See A, Garzon-Muvdi T, James C, Carson B, **Lim M**. Safety and Efficacy of Secondary Microvascular Decompression as Treatment for Recurrent Trigeminal Neuralgia.
- 10/11 Congress of Neurological Surgeons, Washington, DC; Bender M, Pradilla G, Batra S, See A, Bhutani N, James C, **Lim M**, Carson B. Surgical treatment of Trigeminal Neuralgia in Patients with Multiple Sclerosis.
- 10/11 American Society for Therapeutic Radiology and Oncology (ASTRO), Miami, FL; Zeng J, See A, Phallen J, Jackson C, Belcaid Z, Hammers H, Meyer C, Tyler B, Ford E, Wong J, Brem H, Pardoll DM, Drake C, **Lim M**. Combining Anti-PD-1 (B7-H1) Immunotherapy with Stereotactic Radiosurgery in a Mouse Orthotopic Glioblastoma Model.
- 11/11 Society for Neuro-Oncology (SNO), Orange County, CA; Zeng J, See A, Phallen J, Jackson C, Belcaid Z, Hammers H, Meyer C, Tyler B, Ford E, Wong J, Brem H, Pardoll DM, Drake C, **Lim M**. Combining Anti-PD-1 (B7-H1) Immunotherapy with Stereotactic Radiosurgery in a Mouse Orthotopic Glioblastoma Model.
- 03/12 International Conference on Translational Research in Radiation Oncology-Physics for Health in Europe (ICTR-PHE), Geneva, Switzerland; Zeng J, See A, Phallen J, Jackson C, Belcaid Z, Hammers H, Meyer C, Tyler B, Ford E, Wong J, Brem H, Pardoll DM, Drake C, **Lim M**. Combining Anti-PD-1 (B7-H1) Immunotherapy with Stereotactic Radiosurgery in a Mouse Orthotopic Glioblastoma Model.
- 10/12 Congress of Neurological Surgeons, Chicago, IL; Chaichana K, Weingart JD, Olivi A, Gallia GL, **Lim M**, Brem H, Quinones-Hinojosa A. Multiple Surgical Resections for Patients with Glioblastoma: Prolonging Survival.
- 10/12 American Neurological Association, Boston MA. Soma S, Weeraratne SD, Sun H, Phallen J, Kosaras B, Mathios D, Lechpammer M, Amani V, Cook JM, Rallapalli S, Teider N, Francois JP, Archer T, **Lim M**, Pomeroy SL, Jensen F, Cho YJ. Leveraging α 5-GABA-A receptor subunit (GABRA5) expression in clinically aggressive medulloblastomas as a novel therapeutic approach.
- 09/13 Jusue-Torres I, Recinos PF, Quinones-Hinojosa, **Lim M**, World Federation of Neurological Societies. 15th World Congress of Neurosurgery, “Technical Nuances of Microvascular Decompression of the Posterior Fossa Cranial Nerves,” Seoul, Korea
- 09/14 American Society for Therapeutic Radiology and Oncology (ASTRO), San Francisco, CA; Belcaid Z, Phallen JA, Zeng J, See AP, Mathios D, Gottschalk C, Nicholas S, Kellet M, Ruzevick J, Jackson C, Albesiano E, Durham NM, Tyler B, Wong J, Brem H, Pardoll DM, Drake CG, **Lim M**, Stereotactic Radiation Combined with 4-1BB Activation and CTLA-4 Blockade Yields Long-Term Survival and a Protective Antigen-Specific Memory Response in a Murine Glioma Model.
- 05/15 American Association of Neurological Surgeons (AANS), Washington, DC; Mathios D, Phallen JA, Tyler B, Jackson C, Brem H, Pardoll DM, **Lim M**. Local and Not Systemic Chemotherapy

Synergizes with PD-1 Blockade Enhancing Antigen Specific Tumor Immune Response, Survival and Long-term Memory in a Murine Glioblastoma Model.

- 09/15 Congress of Neurological Surgeons, New Orleans, LA; Kim JE, Patel MA, Mangraviti A, Velarde E, Theodros D, Mathios D, Jackson CM, Tyler B, Ye X, Brem H, Pardoll D, **Lim M**. The Combination of anti-TIM-3 and anti-PD-1 Checkpoint Inhibitors with Focused Radiation Resulted in a Synergistic Anti-Tumor Immune Response in a Preclinical Glioma Model.
- 10/15 American Society for Therapeutic Radiology and Oncology (ASTRO), San Antonio, TX; Maxwell R, Ye X, Bettegowda C, Sharfman W, Redmond K, Kleinberg L, **Lim M**. *BRAF*-V600 Mutational Status is a Significant Associate of Brain Metastases Recurrence in Patients with Melanoma: A Retrospective Study
- 09/17 European Society for Medical Oncology (ESMO), Madrid Spain; **Lim M***, Omuro A*, Vlahovic G, Reardon DA, Sahebjam S, Cloughsey T, Baehring J, Butowski NA, Potter V, Zwiertes R, Paliwal P, Carleton M, Sampson J, Brandes AA. Nivolumab in Combination with Radiotherapy ± Temozolomide: Updated Safety Results from CheckMate 143 in Patients with Methylated or Unmethylated Newly Diagnosed Glioblastoma
- 09/17 American Academy of Neurological Surgeons, Santa Barbara CA, **Lim M**, Mathios D, Kim J, Kim E, Tyler B, Brem H, Pardoll D. Kindling a Systemic Immune Response.