



**Sussan J. Salas, M.D.**

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**EMPLOYMENT**

Wayne State University School of Medicine, Detroit MI  
Assistant Professor, Department of Neurological Surgery, July 2016 - present

Hofstra Northwell School of Medicine, Manhasset NY  
Neurosurgical Oncology Fellowship, Michael Schulder, M.D., 2015-2016

Thomas Jefferson University Hospital, Philadelphia PA  
Neurological Surgery Residency, 2007-2015

The Johns Hopkins Hospital, Baltimore MD  
Neurological Surgery Research Fellowship, Alfredo Quinones-Hinojosa, M.D., 2011-2012

UCLA School of Medicine, Los Angeles CA  
Research Assistant, Michael Carey, Ph.D., Department of Biological Chemistry, 2002-2003

**EDUCATION**

New Jersey Medical School, Newark NJ  
Doctor of Medicine, 2003-2007

Duquesne University, Pittsburgh PA  
Post Baccalaureate Pre Medical Program, 2000-2002

Duke University, Durham NC  
Bachelor of Arts in Philosophy, Graduated with Distinction, Minor in Political Science, 1996-2000

**LEADERSHIP ACTIVITIES**

- Academic Programs and Policies Committee 2007 Class Representative, NJMS, 2004-2007
- C2000 (Community Service Organization) Co-Director, New Jersey Medical School, Spring 2004
- Student Interest Group in Neurology President, New Jersey Medical School Chapter, 2004-2005
- President Pro-Tempore, Duke Student Government, 1997-1998
- Legislator, Duke Student Government, 1996-1997

## PEER-REVIEWED PUBLICATIONS

Chalouhi N, Daou B, Kung D, Zanaty M, Phillips JL, Tjoumakaris S, Starke RM, Hasan D, Polifka A, Salas S, Rosenwasser RH, Jabbour PM. Fate of the ophthalmic artery after treatment with the pipeline embolization device. *Neurosurgery* 2015; 77(4):581-4.

Li Q, Wijesekera O, Salas SJ, Wang JY, Zhu M, Aprhys C, Chaichana KL, Chesler DA, Zhang H, Smith CL, Guerrero-Cazares H, Levchenko A, Quinones-Hinojosa A. Mesenchymal stem cells from human fat engineered to secrete BMP4 are nononcogenic, suppress brain cancer, and prolong survival. *Clin Cancer Res* 2014; 20(9):2375-87 (cover article).

Salas SJ, McFalls JM, Senders ZJ, Kenyon LC, Harrop JS. Intradural cervical nerve root traumatic neuroma without a history of direct trauma. *Clin Neurol Neurosurg* 2013; 115(9):1879-81.

Azmi H, Biswal B, Salas S, Schulder M. Functional imaging in a low-field, mobile intraoperative magnetic resonance scanner: expanded paradigms. *Neurosurgery* 2007; 60(1):143-8.

Salas S, Brimacombe M, Schulder M. Stereotactic accuracy of a compact intraoperative MRI system. *Stereotact Funct Neurosurg* 2006; 85(2-3):69-74.

Heary RF, Salas S, Bono CM, Kumar S. Complication avoidance: thoracolumbar and lumbar burst fractures. *Neurosurg Clin N Am* 2006; 17(3):377-88.

Schulder M, Salas S, Brimacombe M, Fine P, Catrambone J, Maniker AH, Carmel PW. Cranial surgery with an expanded compact intraoperative magnetic resonance imager. Technical Note. *J Neurosurg* 2006; 104(4):611-7.

Ilagan R, Zhang LJ, Pottratz J, Le K, Salas S, Iyer M, Wu L, Gambhir SS, Carey M. Imaging androgen receptor function during flutamide treatment in the LAPC9 xenograft model. *Mol Cancer Ther* 2005; 4(11):1662-9.

## PEER-REVIEWED ORAL PRESENTATIONS

Salas SJ, Racareanu R, Black KS, Knisely JP, Eisenberg M, Schulder M, Ghaly M. "Single fraction versus fractionated stereotactic radiosurgery for large vestibular schwannomas: tumor control and clinical outcomes." American Society for Stereotactic and Functional Neurosurgery Biennial Meeting, Chicago, IL, June 2016.

Duenas SM, Pun J, Radwan H, Akerman M, Salas SJ, Schulder M. "The efficacy of EMLA for pain reduction during gamma knife radiosurgery." American Society for Stereotactic and Functional Neurosurgery Biennial Meeting, Chicago, IL, June 2016.

Markowitz DJ, Lin D, Salas SJ, Kohn N, Schulder M. "Stereotactic accuracy of a compact, mobile intraoperative MRI." American Society for Stereotactic and Functional Neurosurgery Biennial Meeting, Chicago, IL, June 2016.

Kelley K, Racareanu R, Gogineni E, Salas SJ, Bloom B, Latefi A, Ghaly M. "Palliative management of metastatic spinal tumors with spine radiosurgery." Radiosurgery Society Annual SRS/SBRT Scientific Meeting, Orlando, FL, June 2016.

Salas SJ, Li Q, Wijesekera O, Wang JY, Aprhys C, Chesler DA, Quinones-Hinojosa A. "BMP4 delivery by mesenchymal stem cells as therapy for glioblastoma." Pan Philadelphia Neurosurgery Conference, Basic Science Research Presentation, Philadelphia, PA, December 2, 2011.

Schulder M, Salas S, Brimacombe M, Fine P, Catrambone J, Maniker AH, Carmel PW. "Cranial surgery with an expanded compact intraoperative magnetic resonance imaging system." World Society for Stereotactic and Functional Neurosurgery, Rome, Italy, June 2005.

### **PEER-REVIEWED POSTER PRESENTATIONS**

Salas SJ, Racareanu R, Black KS, Knisely JP, Eisenberg M, Schulder M, Ghaly M. "Single fraction versus fractionated stereotactic radiosurgery for large vestibular schwannomas: tumor control and clinical outcomes." Leksell Gamma Knife Society Meeting, Amsterdam, Netherlands, May 2016.

Molina FD, Cao Y, Knisely JP, Schulder M, Salas SJ, Gill G, Marrero M. "Residual distortion analysis for a 3T MRI unit using a 3D GRID phantom." Leksell Gamma Knife Society Meeting, Amsterdam, Netherlands, May 2016.

Salas SJ, Gamble AJ, Knisely JP, Schulder M. "Frame-based versus frameless stereotactic radiosurgery: patient perspective." American Association of Neurological Surgeons Annual Scientific Meeting, Chicago, IL, April 2016.

Li Q, Salas SJ, Pendleton C, Wijesekera O, Chesler D, Wang J, Smith CL, Guerrero-Cazares H, Levchenko A, Quinones-Hinojosa A. "Adipose-derived mesenchymal stem cells as potential delivery vehicles for glioblastoma treatment." Society for Neuro Oncology, Washington, DC, November 2012.

Li Q, Salas SJ, Wijesekera O, Chesler D, Guerrero-Cazares H, Wang J, Smith CL, Levchenko A, Quinones-Hinojosa A. "Adipose-derived mesenchymal stem cells as potential delivery vehicles for glioblastoma treatment." Sidney Kimmel Comprehensive Cancer Center Fellow Research Day, Johns Hopkins Hospital, Baltimore, MD, May 2012.

Salas SJ, Brimacombe M, Schulder M. "Stereotactic accuracy of a compact intraoperative MRI system." American Association of Neurological Surgeons Annual Scientific Meeting, New Orleans, LA, April 2005.

Salas SJ, Brimacombe M, Schulder M. "Stereotactic accuracy of a compact intraoperative MRI system." New Jersey Medical School Summer Biomedical Research Program, August 2004 (first place award).

## **ORAL PRESENTATIONS**

Salas SJ. "Adipose-derived mesenchymal stem cells as potential delivery vehicles for glioblastoma treatment." Department of Neurosurgery Grand Rounds, Thomas Jefferson University Hospital, Philadelphia, PA, May 2012.

Salas SJ. "BMP4 delivery by mesenchymal stem cells as therapy for glioblastoma." Quinones Laboratory Presentation, Johns Hopkins Hospital, Baltimore, MD, February 2012.

Salas SJ. "Blunt cerebrovascular injury." Department of Neurosurgery Grand Rounds, Thomas Jefferson University Hospital, Philadelphia, PA, October 2010.

Salas SJ. "Infantile hydrocephalus: etiology and management." Department of Neurosurgery Grand Rounds, Thomas Jefferson University Hospital, Philadelphia, PA, January 2010.

Salas SJ. "Thoracolumbar and lumbar burst fractures: biomechanics, classification and management." Department of Neurosurgery Grand Rounds, Thomas Jefferson University Hospital, Philadelphia, PA, January 2009.

## **RESEARCH EXPERIENCE**

**The Johns Hopkins Hospital**, Department of Neurosurgery, Baltimore MD, 2011-2012

*Advisor: Alfredo Quinones-Hinojosa, M.D., Professor of Neurosurgery*

Investigated the application of human adipose-derived mesenchymal stem cells (hAMSCs) as delivery vehicles of a differentiating agent against brain tumor initiating cells (BTICs). The goal was to engineer hAMSCs that effectively delivered this agent to BTICs and evaluate their therapeutic potential on GBM. Stereotactic injections of BTICs and intracardiac injections of our engineered hAMSCs in mice demonstrated that hAMSCs have a tropism towards BTICs and significantly prolonged survival. These results make hAMSCs a promising cell-based treatment option for GBM. The endogenous tropism that hAMSCs have towards cancer cells render them potential vehicles for antitumor agents against other primary and secondary brain cancers.

**UCLA School of Medicine**, Department of Biological Chemistry, Los Angeles CA, 2002-2003

*Advisor: Michael Carey, Ph.D., Professor of Biological Chemistry*

Investigated the use of a novel androgen receptor-specific molecular imaging system in elucidating the mechanism of prostate cancer progression. Injection of our engineered androgen-specific vector with a bioluminescence reporter gene in mice bearing prostate cancer xenografts demonstrated that it was more sensitive and robust than serum prostate-specific antigen (PSA) levels. Molecular analysis of androgen-dependent versus androgen-independent tumors revealed different molecular pathways. The application of imaging technology to study an animal model of cancer provided mechanistic insight into cancer progression and shows promise as an effective preclinical model.

**Duke University Medical Center**, Department of Psychiatry, Durham NC, 1998-2000

*Advisor: Susan Schiffman, Ph.D., Professor of Medical Psychology*

Organized study testing the effect of elderly drugs on the sense of taste of ideal subjects. The goal was to find ways of preventing weight loss and nutritional deficits in cancer patients, who often experience taste and smell loss as a result of their disease and treatment. Recruited subjects, scheduled sessions, prepared sampling solutions following study guidelines and tested all subjects on a weekly basis.

## **AWARDS**

- American College of Physicians New Jersey Chapter Medical Knowledge Bowl: First place, 2007
- Abdol H. Islami Foundation Scholarship Recipient, New Jersey Medical School, 2006
- Gold Humanism Honor Society, New Jersey Medical School, inducted 2006
- Alpha Omega Alpha Honor Medical Society, New Jersey Medical School, 2006
- New Jersey Medical School Alumni Association Endowed Scholarship Recipient, 2006
- New Jersey Medical Women's Association Krans Henle Memorial Scholarship Recipient, 2006
- American Medical Association Foundation Minority Scholars Award Recipient, 2005 (awarded to 10 medical students in the United States annually)
- New Jersey Medical School Alumni Scholarship Recipient, 2005
- New Jersey Medical School Alumni Scholarship Recipient, 2004
- New Jersey Medical School Summer Biomedical Research Program: First place, 2004
- American Academy of Neurology Medical Student Scholarship Recipient, 2004

## **SOCIETY MEMBERSHIPS**

American Association of Neurological Surgeons  
Congress of Neurological Surgeons

## **LICENSURE/CERTIFICATION**

Michigan Medical License, 2016  
New York Medical License, 2015  
Board Eligible, American Board of Neurological Surgeons, 2012

## **LANGUAGES**

Fluent in Spanish, both written and oral.