CURRICULUM VITAE

Name: Claudia Petritsch, PhD

Position: Associate Professor
Neurological Surgery
Stanford University
School of Medicine

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EDUCATION

1985 - 1991	University of Vienna, BioCenter, Vienna, Austria	Dipl. Biol. Cum Laude	Molecular Biology	Dr. Gustav Ammerer
1991 - 1996	Institute of Molecular Pathology (IMP) Vienna, Austria	Ph.D.	Cancer Biology Molecular Biology	Dr. Lisa M. Ballou; Dr. Kim Nasmyth
1993 - 1994	Cancer Research UK, London Research Institute	Fellow	Protein Phosphorylation Lab	Prof. Peter Parker

PRINCIPAL POSITIONS HELD

07/1996 - 06/1997	Institute of Molecular Pathology (IMP); Vienna, Austria	Postdoctoral Fellow	Cancer Biology
07/1997 – 06/2002	Howard Hughes Medical Institute; University of California San Francisco; San Francisco, USA	Postdoctoral Fellow	Physiology; Biochemistry
07/2002 – 05/2003	University of California San Francisco; San Francisco, USA	Postgraduate Researcher	Biochemistry
06/2003 – 10/2005	Ludwig Maximilian University (LMU); Munich, Germany	Principal Investigator	Biochemistry
11/2005 – 06/2008	University of California San Francisco; San Francisco, USA	Associate Researcher	Neurosurgery
07/2009 – 06/2014	University of California San Francisco; San Francisco, USA	Assistant Professor	Neurosurgery

07/2014 – 10/2019	University of California San Francisco; San Francisco, USA	Associate Professor	Neurosurgery
11/2019 – present	Stanford University, School of Medicine	Associate Professor	Neurosurgery

OTHER POSITIONS HELD CONCURRENTLY

2013 - 2019	Helen Diller Comprehensive Cancer Center	Full Member	Cancer Research
2007 - 2019	Eli and Edythe Broad Institute of Regeneration Medicine	Faculty	Stem Cell Institute
2009 - 2019	Brain Tumor Center	Faculty	UCSF
2019 - present	Brain Tumor Center	Faculty	Stanford University
2019 - present	Bio-X	Faculty	Stanford University
2019 - present	Wu-Tsai Neuroscience Institute	Faculty	Stanford University

HONORS AND AWARDS

1996	EMBO Long-term Fellowship Award	European Molecular Biology Organization; Heidelberg, Germany
1997	HFSP Postdoctoral Long-term Fellowship Award	Human Frontiers Science Program Organization; Strasbourg, France
1997	Schroedinger Fellowship Awarded/Declined	Austrian Science Foundation, Austria
2004	Award for Outstanding Female Faculty in Life Sciences	Ludwig Maximilian University (LMU); Munich, Germany
2005	Bavarian California Technology Award (BaCaTec)	Bavarian-Californian Higher Education Center; Munich, Germany
2006	IDEA Award	California Breast Cancer Research Program (CBCRP); San Francisco, CA, USA
2007	Oligodendroglioma Research Award	National Brain Tumor Society; San Francisco, CA, USA
2007	Career Development Award; Brain Tumor Specialized Program of Research Excellence (SPORE)	University of California San Francisco; San Francisco, CA, USA
2008	Academic Senate Individual Investigator Award	University of California San Francisco; San Francisco, CA, USA

2008	Research Allocation Program (RAP) Pilot Research Award	University of California San Francisco; San Francisco, CA, USA
2009	American Cancer Society Individual Research Award	American Cancer Society and University of California San Francisco; San Francisco, CA, USA
2009	Cancer Research Award	Stewart Trust; San Francisco, CA, USA
2010	Discovery Award	American Brain Tumor Association; Des Plaines, IL, USA
2011	SOS Award	Clinical and Translational Sciences Institute; University of California San Francisco; San Francisco, CA, USA; National Institute of Health, Bethesda, MD, USA
2012	Academic Senate Pilot Award for Junior Investigators	University of California San Francisco; San Francisco, CA, USA
2012	Voices Against Brain Cancer Investigator Grant	Voices Against Brain Cancer; New York, NY, USA
2013	Astrocytoma Award	Childhood Brain Tumor Foundation
2014	Pilot Research Award	Research Allocation Program, UCSF
2016	Basic Research Award for Established Investigators	Research Allocation Program, UCSF
2016	Preclinical Investigator Award	Cancer Research Coordination Committee

SCHOLARLY PUBLICATIONS

Peer-reviewed journal articles (original research)

1. **Petritsch, C.K.,** Woscholski, R., Edelmann, H.M., Ballou, L.M. (1995). Activation of p70 S6 Kinase and erk-encoded mitogen-activated kinases is resistant to high cyclic nucleotide levels in Siss 3T3 fibroblasts. J Biol Chem 270, 26619-25.
2. **Petritsch, C.K.,** Woscholski, R., Edelmann, H.M., Parker, P.J., Ballou, L.M. (1995). Selective inhibition of p70 S6 kinase activation by phosphatidylinositol 3-kinase inhibitors. Eur J Biochem (230), 431-8.
3. Edelmann, H.M., Kuehne, C., **Petritsch, C.K.,** Ballou, L.M. (1996). Cell cycle regulation of p70 S6 kinase and p42/p44 mitogen-activated protein kinases in Swiss mouse 3T3 fibroblasts. (1996). J Biol Chem (271), 963-71.
4. **Petritsch, C.K**., Beug, H., Balmain, A. and Oft, M. (2000). TGFbeta inhibits p70 S6 Kinase via Protein Phosphatase 2A to induce G1 arrest. Genes & Development 14, 3093. PMCID: PMC317138

5. **Petritsch, C.K**.,Tavosanis, G., Turck, C.W., Jan, L.Y. and Jan, Y.N. (2003). The Drosophila myosin VI Jaguar controls spindle orientation and basal determinant targeting in mitotic neuroblasts. Developmental Cell 4, 273.

6. Ye, B, **Petritsch, C.K.,** Clark, I. E., Gavis, E. R., Jan, L.Y. and Jan, Y.N. (2004). nanos and pumilio, two genes known for translational regulation of embryonic body patterning, are essential for proper dendrite morphogenesis in Drosophila peripheral neurons. Current Biology 14, 314.

7. Waldhuber, M., Emoto, K. and **Petritsch, C.K**. (2005). Drosophila caspase DRONC is required for metamorphosis and cell death in response to irradiation and developmental signals. Mechanisms in Development 122, 914.

8. Du, R., **Petritsch, C.K.,** Ganss, R., Song, H., Vandenberg, S., Bergers, G. (2008). Matrix metalloproteinase 2 regulates tumor cell survival, invasion and vascular branching in GBM. Neuro-oncology 3, 254. PMCID: PMC2563048.

9. Silber, J., Lim, D.A., **Petritsch, C.K**.*, Maunakea, A. K.*, Persson, A.*, Yu, M., Vandenberg, S., Ginzinger, D. G., James, C. D., Costello, J. F., Weiss, W. A., Bergers, G., Alvarez-Buylla, A., Hodgson, G. (2008). miR-124a and miR-137 inhibit proliferation of GBM cells and induce differentiation of tumor stem cells." *authors contributed equally, BioMedCentral Medicine 6, 14. PMCID: PMC2443372

10. Du, R.*, Lu, K.*, **Petritsch, C.K**., Liu, P., Ganss, R., Passague, E., Song, H., VandenBerg, S., Werb, Z., Bergers, G. (2008). Hif1a induces the recruitment of bone marrow-derived vascular modulatory cells to regulate tumor angiogenesis and invasion. *authors contributed equally, Cancer Cell 3, 206. PMCID: PMC2643426

11. Erben, V., Waldhuber, M, Langer, D., Fetka, I, Jansen, R. P., **Petritsch, C.K**. (2008). Asymmetric localization of the adaptor protein Miranda is achieved by diffusion and sequential interaction of Myosin II and VI. Journal of Cell Science 121, 1401.

12. Persson, A., **Petritsch, C.K.**, Itsara, M., Swartling, F., Goldenberg, D., Vandenberg, S., Ngyuen, K., Yakovenko, S., Thorne, C.A., Lee, E., Nishiyama, A., Stallcup, W., Berger, M.S., Goldman, S., Bergers, G., Weiss, W.A. (2010). Non-stem cell origin of oligodendondrogliomas. Cancer Cell 6, 669. PMICD:PMC3031116

13. Ouyang, Y., **Petritsch, C.K**., Jan, L.Y., Jan, Y.N., Lu, B. (2010). Dronc caspase exerts a non-apoptotic function to restrain phospho-Numb induced ectopic neuroblast formation in Drosophila. Development 11, 2185. PMICD:PMC3091490

14. Sugiarto, S., Persson, A., Gonzalez-Munoz, E., Waldhuber, M., Lamagna, C., Hanecker, P., Philips, J., Vandenberg, S., Berger, M. S., Stallcup, W., Bergers, G., Weiss, W. A., **Petritsch, C.K.** (2011) Asymmetry-defective oligodendrocyte progenitors as glioma precursors. Cancer Cell 20, 328. PMCID: PMC3297490

15. Huillard, E.*, Hashizume, R.*, Phillips, J.J. Griveau, A., Ihrie, R. I., Aoki, Y., Nicolaides T., Perry, A., Waldman, T., McMahon, M., Weiss, W. A., **Petritsch, C.K.,** James, C. D., Rowitch, D. (2012). Cooperative interactions of BRAFV600E and CDKN2A deficiency in pediatric malignant astrocytoma as a basis for rational therapy. PNAS 22, 8710. *authors contributed equally. PMCID:PMC3365162

16. Andor N, Harness JV, Müller S, Mewes HW, **Petritsch C.K.** (2014). EXPANDS: expanding ploidy and allele frequency on nested subpopulations. Bioinformatics. Jan 1; 30(1):50-60. PMID: 24177718. PMCID: PMC3866558

17. Berberoglu MA, Dong Z, Li G, Zheng J, Trejo Martinez Ldel C, Peng J, Wagle M, Reichholf B, **Petritsch C.K.**, Li H, Pleasure SJ, Guo S. (2014). Heterogeneously Expressed fezf2 Patterns Gradient Notch Activity in Balancing the Quiescence, Proliferation, and Differentiation of Adult Neural Stem Cells. J Neurosci. Oct 15; 34(42):13911-23. PMID: 25319688. PMCID: PMC4198537

18. Hashizume R, Andor N, Ihara Y, Lerner R, Gan H, Chen X, Fang D, Huang X, Tom MW, Ngo V, Solomon D, Mueller S, Paris PL, Zhang Z, **Petritsch C.K.**, Gupta N, Waldman TA, James CD. (2014). Pharmacologic inhibition of histone demethylation as a therapy for pediatric brainstem glioma. Nat Med. Nov 17. PMID: 25401693. PMCID: PMC4257862

19. Bakhoum S.F., Kabeche L., Wood M.D., Laucius C.D., Qu D., Laughney A.M., Reynolds G.E., Louie R.J., Phillips J., Chan D.A., Zaki B.I., Murnane J.P., **Petritsch C.K**.*, Compton D.A.* (2015). Numerical chromosomal instability mediates susceptibility to radiation treatment. Nature Communication 6, 5990. *equal contribution. PMID25606712. PMCID:PMC4516720

20. Lerner R.G.*, Grossauer S.*, Kadkhodaei B., Meyers I., Sidorov M., Koeck K., Hashizume R., Ozawa T., Phillips J.J., Berger M.S., Nicolaides T., James C.D., **Petritsch C.K.** (2015).Targeting a Plk1-controlled polarity checkpoint in therapy-resistant glioblastoma-propagating cells. Cancer Research 75, 5355. *equal contribution. PMCID:PMC4698003 AACR Journal Editor's pick 2015.

21. Andor, N, Graham, T.A., Jansen, M., Xia, L.C., Aktipis, C.A., **Petritsch, C.K.,** Ji, H.P.*, Maley, C.C.* (2016). Pan-cancer analysis of the extent and consequences of intra-tumor heterogeneity. Nature Medicine 22, 105. *equal contribution. PMCID:PMC4830693

22. Grossauer, S.*, Koeck, K.*, Meyers, I., Carrera, D., Berger, M.S., Okada, H., James, C.D., **Petritsch, C.K**. (2016). A novel immunocompetent mouse model of malignant astrocytoma is responsive to pharmacologic BRAFV600E inhibition. Oncotarget 15, 75839. *equal contribution. PMCID:PMC5342782.

23. Olow, A., Mueller, S., Yang, X., Hashizume, R., Meyerowitz, J., Weiss, W., Resnick, A.C., Waanders, A.J., Stalpers, L.J., Berger, M.S., Gupta, N., James, C.D., **Petritsch, C.K.,** Haas-Kogan, D.A. (2016). BRAF status in personalizing treatment approaches for pediatric gliomas. Clin Cancer Res 22, 5312-5321. PMCID: PMC5093033

24. Robson JP, Wagner B, Glitzner E, Heppner FL, Steinkellner T, Khan D, **Petritsch C.K.**, Pollak DD, Sitte HH, Sibilia M. (2018). Impaired neural stem cell expansion and hypersensitivity to epileptic seizures in mice lacking the EGFR in the brain. FEBS J. 2018 Jul 20. PMID:30028091

25. Daynac, M., Chouchane, M., Collins, H.Y., Murphy, N.E., Andor, N., Niu, J., Fancy, S.P., Stallcup, W., **Petritsch, C.K**. (2018). Lgl1 controls endocytosis to establish asymmetric cell division of oligodendrocyte progenitor cells and to suppress tumorigenesis. Nature Communications 9, 2862. PMCID:PMC6104045

26. Mueller, S., Jain, P., Liang, W.S., Kilburn, L., Kline, C., Gupta, N., Panditharatna, E., Magge, S.N., Zhang, B., Zhy, Y., Crawford, J.R., Banerjee, A., Nazemi, K., Packer, R.J., **Petritsch, C.K.,** Truffaux, N., Roos, A., Nasser, S., Phillips, J.J., Solomon, D., Molinaro, A., Prados, M., Resnick., A.C. (2019). A pilot precision medicine trial for children with diffuse intrinsic pontine glioma – PNOC003: a report from the Pacific Pediatric Neuro-oncology Consortium. Int J Cancer [Epub ahead of print]

27. Grossauer, S., Wang, W., Koeck, K., Kumar, A., Ihara, Y., Lerner, R.G., Reichholf B., Sugiarto, S., McMahon, M., James, C.D., Bergers, G., Phillips, J.J., **Petritsch, C.K.** (2019). Activated BRAF promotes oligodendrocyte progenitor cells expansion and plasticity in murine glioma and associates with an elevated anti-human glioma immune response. Cancer Cell (submitted).

Peer-reviewed publications other

1. Lerner RG, **Petritsch C.** A microRNA-operated switch of asymmetric-to-symmetric cancer stem cell divisions. (2014). Nat Cell Biol. Feb 28; 16(3):212-4. PMID: 24576899. Comment on MicroRNA-146a directs the symmetric division of Snail-dominant colorectal cancer stem cells. [Nat Cell Biol. 2014]
2. Gómez-López S, Lerner RG, **Petritsch C.K.**. (2014). Asymmetric cell division of stem and progenitor cells during homeostasis and cancer. Cell Mol Life Sci. Feb; 71(4):575-97. PMID: 23771628. PMCID: PMC3901929.
3. Wade, A., Robinson, A.E., Engler, J.R., **Petritsch, C**., James, C.D., Phillips, J.J. (2013). Proteoglycans and their role in brain cancer. FEBS J 280, 2399. PMCID:PMC3644380

Non peer-reviewed journal articles

1. Lewis, K.M., **Petritsch, C.K.** (2013). Asymmetric Cell Division: Implications for glioma development and treatment. Translational Neuroscience 4, 484. PMCID:PMC4269374

Book chapters

1. **Petritsch, C.K.** & Vandenberg, S. R.: „Stem and Progenitor Cell Lineages as Targets for Neoplastic Transformation in the Central Nervous System." Chapter 2, "Brain Tumors: An encyclopedic approach." Edited by Kay A.H. & Laws, E.R., 3rd edition.
2. **Petritsch, C.K.** and Shen, X. (2015). Asymmetric Cell Division of Cancer Stem Cells. Book Chapter. Elsevier Press. Cancer Stem Cells.
3. Daynac M., **Petritsch, C.K.** (2017). Regulation of Asymmetric Cell Division in Mammalian Neural Stem and Cancer Precursor Cells. Springer Press. Results Probl Cell Diff 61, 375-399/

CONFERENCE ABSTRACTS (since 2011)

1. Sugiarto, S., Hashizume, R., Ozawa, T., Gonzalez-Munoz, E., James, C.D., McMahon, M., Petritsch C. (2011) NEURO-ONCOLOGY, (13) 115 #0060
2. Kolkowitz, I., Andor, N., Jensen., T., Banerjee, A., Gupta, N., **Petritsch, C.K**., Taylor, M., Hashizume, R., Tom. M., Haas-Kogan, D., Mueller, S. (2012) NEURO-ONCOLOGY (14) 119
3. Lerner, R., Harness, J., Yoshida, Y., Santos, R., De La Torre, J., Nicolaides, T., James, C.D**., Petritsch.C.K.** (2013) NEURO-ONCOLOGY (15) 14-15.
4. Griveau, A., Lerner, R., Ihrie, R., Sugiarto, S., Ihara, Y., Reichholf, B., Huillard, E., McMahon, M., James, C.D., Philips, J.J., Buylla, A.A., Rowitch, D., **Petritsch, C.K.** (2013) NEURO-ONCOLOGY (15) 19 #0073
5. Gupta, Nalin; Hashizume, Rintaro; Andor, Noemi; et al. BIOLOGICALLY-BASED THERAPEUTICS FOR THE TREATMENT OF DIFFUSE

INTRINSIC PONTINE GLIOMAS
Conference: 20th International Conference on Brain Tumor Research and Therapy Location: CA Date: JUL 20-22, 2014 NEURO-ONCOLOGY Volume: 16 Supplement: 3 Published: JUL 2014

6. Grossauer S, Koeck, K and **Petritsch C.K.** "BRAFV600E-mutant immunocompetent glioma model exhibits typical histopathological features of human glioblastoma multiforme" Society of Neuro-oncology 2015

7. Lerner, R.G., Ihara, Y., Lewis, K.M., Griveau, A., Reichholf, B., Qu, D., McMahon, M., Rowitch, D., James, C.D**., Petritsch C.K.** (2014). Divergent effects of Braf activation in neural stem and progenitor-like glioblastoma cells. Cancer Research 74. Conference: 105th Annual Meeting of the American-Association-for-Cancer-Research (AACR) Location: San Diego, CA Date: APR 05-09, 2014. Meeting Abstract 1944.

8. **Petritsch, C.K..,** Lerner, R.G., Lewis, K.M., Andor, N., Ozawa, T., Yoshida, Y., McMahon, M., Nicolaides, T., James, C.D., Petritsch C. (2014). Stem- and progenitor-like cell contribution to malignant astrocytoma heterogeneity. Neuro-oncology 16. Supplement 3. Abstract SC-14. Annual Meeting for Society of Neurooncology, Ft. Lauderdale

9. Kadkhodaei, B., Lerner, R.G., Sidorov, M., Gomez-Lopez, S., McMahon, M., James C.D., **Petritsch C.K.** (2014). Asymmetry-defective oligodendrocyte progenitors as potential cell-of-origin of hyperactivated Raf-induced malignant astrocytoma. Neuro-oncology 16. Meeting Abstract SC-14. Annual Meeting for Society of Neurooncology, Ft. Lauderdale (selected for short presentation)

10. Andor, N., Graham, T.A., **Petritsch, C.K..,** Ji, H.P., Maley, C.C. (2015). Pan-cancer analysis of the etiology and consequences of intra-tumor heterogeneity. Cancer Research 75. Meeting Abstract PR03. Conference: Annual Meeting of the American-Association-for-Cancer-Research (AACR). Location Philadelphia, Date Apr 18-22, 2015

11. Andor, N., Graham, T.A., Jansen, M., **Petritsch, C.K.**., Ji, H.P., Maley, C.C. (2016). Pan-cancer analysis of clonal evolution reveals the costs and adaptive benefits of genomic instability. Cancer Research 76. Meeting Abstract 2387. Conference: Annual Meeting on Bioinformatics and Systems Biology of the American-Association-for-Cancer-Research (AACR). Location New Orleans, Date Apr 16-20, 2016

12. Daynac, M., **Petritsch, C.K.** (2016) Regulation of asymmetric cell division by tumor suppressor Lgl1. Conference: International Society for Stem Cell Research (ISSCR). Annual Meeting. Location: San Francisco, Date June 2016 (selected for presentation)

13. Grossauer, S., Koeck, K., Murphy, N.E., Daynac, M., Phillips, J.J., Wainwright, D.A., Okada, H., Mueller, S., Nicolaides, T., James, C.D., **Petritsch, C.K.** (2016) Concurrent MAPK pathway blockade might prime BRAFV600E mutant glioma for immunotherapy. Neuro-oncology. Conference: 21st Annual Scientific Meeting and Education Day of the Society for Neurooncology, Location: Scottsdale, IMST-20.

14. Daynac, M., **Petritsch, C.K.** (2017). Function for Lgl1 as tumor suppressor in gliomagenesis. Conference: Annual Meeting of the American-Association-for-Cancer-Research (AACR). Location Washington D.C., Date Apr 1-5, 2017

15. Daynac, M., **Petritsch, C.K.** (2017). Function for Lgl1 as cell fate regulator in OPC. Conference: International Society for Stem Cell Research (ISSCR). Annual Meeting. Location: Boston, Date June 14-17, 2017

16. Daynac, M., **Petritsch, C.K.** (2017). The conserved tumor suppressor Lgl1 regulates adult oligodendrocyte progenitor cell division mode and prevents premalignant phenotypes. Conference: 22st Annual Scientific Meeting and Education Day of the Society for Neurooncology, Location: San Francisco. Neuro-oncology Vol 19, Supplement 6, p227-227. STEM-01
17. Chouchane, M., **Petritsch, C.K.** (2017). Investigating ASPM function in regulation of cell division model of oligodendrocyte progenitor cells. Conference: 22st Annual Scientific Meeting and Education Day of the Society for Neurooncology, Location: San Francisco. Neuro-oncology Vol 19, Supplement 6, p226-226. STEM-01
18. Mueller, S., Liang, W., Gupta, N. et al (2017). PNOC-003: Precision Medicine Trial for children with diffuse intrinsic pontine glioma. Conference: 4th Biennial Conference on Pediatric Neuro-oncology. Location: New York. Neuro-oncology Vol 19, Supplement 4, P 14-14, DIPG-40
19. Rabiller, G., Kanoke, A., Daynac, M.A.P., **Petritsch, C.K..,** Liu, J. (2018). Type II Diabetes Induces an Early Decline of Neurogenesis with Increased Morphological Alterations in Neuroblasts. American-Heart-Association/American-Stroke-Association; Location: Los Angeles, CA. Jan 24-26, Stroke 49, TMP29.
20. Wang, W., Grossauer, S., Koeck, K., Simmonds, E., Lu, E., Nicolaides, T., Bergers, G., Weiss, W.A., **Petritsch, C.K**. (2019). Gaining an understanding of mechanism of therapy evasion from dual MAPK pathway inhibition in a syngeneic BRAFV600E mutant CDKN2A deleted mouse model to preempt resistance in patients with BRAFV600E mutant pediatric glioma. Pediatric Neuro-oncology Basic and Translational Research Conference. Location: San Francisco; May 4-5, 2019, TMOD-03
21. Sugiarto, S., Lerner, R.G., Reichholf, B., McMahon, M., James, C.D., **Petritsch, C.K.** (2019). Determining the neuroanatomical and cellular origin of BRAFV600E mutant CDKN2A deleted gliomas and mechanisms of transformation by BRAFV600E expression in transgenic mice. Pediatric Neuro-oncology Basic and Translational Research Conference. Location: San Francisco; May 4-5, 2019, TMOD-04

GRANTS

Prior Funding (selected)

NIH/National Cancer Institute (PI: Gabriele Bergers) 08/01/2016-10/30/2019
R01CA201537
Interregulatory function of immune-modulation and angiogenesis in cancer
The goal of this study is to gain mechanistic insights into synergy of anti-angiogenesis and immunosuppression therapy for the purpose of overcoming therapy resistance.
Role: Co-Investigator

Loglio (Low-grade glioma) Initiative (PI: Mitchel S. Berger) 09/01/2016-10/30/2019
Targeting IDH1 mutant oligodendroglioma
As part of this collaborative effort to find novel therapies against low-grade gliomas, our team focused on understanding the mechanism by which the IDH1R132H mutation drives initiation and progression in low-grade gliomas.
Role: Team Member Team 3b

NIH/NINDS (PI: Claudia Petritsch) 12/01/2017-11/30/2019

1R21NS099836-01
Investigating ASPM regulation of asymmetric division for therapeutic opportunities
The goal of this study is to investigate spindle-dependent functions of ASPM in proneural glioblastoma to overcome therapy resistance.
Role: PI

NIH/National Cancer Institute 12/13/2011-11/30/2017
R01CA164746 (PI: Claudia Petritsch)
A causal role for asymmetric cell division in glioma initiation.
The goal of this study was to investigate causality between loss of the gene lethal giant larvae, defective asymmetric cell division and transformation of oligodendrocyte progenitors.
Role: Principal Investigator

NIH/NINDS (Co-PI: C. David James & Claudia Petritsch) 09/01/2012-08/31/2018
R01NS080619
BRAF Mutation in Malignant Astrocytoma Origin, Evolution, and Response to Therapy
The goal of the study was to improve targeted therapy of malignant astrocytoma by defining the mechanisms of cellular transformation and recurrence in relation to BRAFV600E expression.
Role: Co-PI

NIH/National Cancer Institute (PI: Russell Pieper) 02/01/2013-01/31/2019
R01CA171610
Understanding the role of altered metabolism in gliomagenesis
The goal of the study is to improve therapy of gliomas by better understanding the role altered metabolism plays in gliomagenesis.
Role: Co-Investigator

The Childhood Brain Tumor Foundation (PI:Petritsch) 09/01/2012 – 08/31/2014
Investigator Award
BRAF Mutation Effects on Malignant Astrocytoma Development and Therapy Response
The goal of the study was to investigate targeted therapy effects on malignant astrocytoma with BRAFV600E expression.
Role: PI

Voices against Brain Cancer (PI:Petritsch) 08/01/2012 – 02/28/2014
Individual Investigator Award
Interrogating the Glioblastoma Exome to Overcome Therapy Resistance
The goal of the study was to develop an algorithm that uses exome seq data to calculate clonal frequency and size and test it for its ability to predict clonal evolution in glioblastoma with recurrence.
Role: PI

CRCC 38890 7504335 (PI:Petritsch) 01/01/2017 – 12/31/2017
UC Cancer Research Coordinating Committee
Harnessing the immune system to eliminate glioma stem cells
The goal of the study was to investigate mechanisms to eliminate the most malignant cell subpopulations and to develop better anti-glioblastoma treatment.
Role: PI

UCSF Resource Allocation Program Award (PI:Petritsch) 06/01/16 – 05/31/17
Simon Memorial Fund

Investigating ASPM regulation of asymmetric division for therapeutic opportunities
The goal of the study was to gain a better understanding of mechanisms of cell division in glioma cells to investigate novel therapeutic vulnerabilities
Role: PI

KEYWORDS/AREAS OF INTEREST

- Modeling of pediatric and adult gliomas in mice for preclinical testing and to unravel their pathobiology and tumor- microenvironment interactions, esp. with the immune system
- Delineate the mechanisms for differentiation of progenitor cells and investigate the extent to which defective differentiation favors expansive growth and neoplastic transformation
- Deciphering intratumoral heterogeneity through bioinformatic and cell biology approaches to overcome evasion and prevent resistance to molecularly targeted therapy

MEMBERSHIPS

2006 - present Ascina/Austrian Scientists and Scholars in North America

2007 - present Society for Neuro-Oncology (SNO)

2008 - present American Association for Cancer Research (AACR)

2010 - present International Society for Stem Cell Research (ISSCR)

SERVICE TO PROFESSIONAL ORGANIZATIONS

GRANT REVIEW:

2009 - present	National Institute of Health, Bethesda, MD, USA	Ad Hoc ARRA grant reviewer
2010 - present	Ministry of Health, Italy	Research grant reviewer (annual call)
2010 - present	Medical Research Council, UK	Ad hoc research grant reviewer
2012 - present	University of Hong Kong	Research grant pre-reviewer and consultant
2013	Society for Neuro-oncology; World Federation of Neuro-Oncology; 4th Quadrennial Meeting; San Francisco, USA	Chair of Sunrise Session
2013 - present	Human Frontiers Science Program (HFSP); Strasbourg, France	Research grant reviewer
2013 - present	Paris Institute of Translational Neurosciences	Research project reviewer

2014	NCF (Neurogenesis and Cell Fate) study section NIH March 13, 2014, San Francisco	Ad Hoc Reviewer
2014	CNBT (Clinical Neuroimmunology and Brain Tumors) study section NIH/NINDS June 19th - 20th, 2014, Washington DC	Ad Hoc Reviewer
2014	Voices against Brain Cancer	Research grant reviewer
2015 - present	Foundation pour La Recherche Médicale, Individual Investigator Grant	Research grant reviewer
2015 - present	V foundation Translational and Scholar Award	UCSF internal grant evaluator
2015 – present	Israel Science Foundation, Individual Investigator Grant	Research grant reviewer
2019	National Cancer Institute, Provocative Questions Workshop	Discussant

EDITORIAL SERVICES TO PROFESSIONAL PUBLICATIONS

Reviewer for the following journals in alphabetical order

Acta Neuro-pathologica
Annals of Neurology
Brain Pathology
Cancer Research
Cell Reports
Cell Stem Cell
Clinical Cancer Research
DNA
Development
International Journal of Cancer
Journal of Cell Sciences
Journal of Neuro-oncology
Journal of Visualized Experiments (JOVE)
Nature Cell Biology
Neuro-oncology
Molecular Cancer Research
PLoSOne
Scientific reports

INVITED PRESENTATIONS

2004	Max Planck Institute of Biochemistry; Martinsried, Bavaria, Germany	Invited lecturer
2004	Technical University Munich; Garching, Bavaria, Germany Stem Cell Symposium	Keynote speaker

2005	Institute of Stem Cell Biology; Helmholtz Society, Neuherberg, Bavaria, Germany	Invited lecturer
2006	Buck Institute of Aging; Novato, CA, USA	Lecturer
2009	Helen Diller Comprehensive Cancer Center Symposium; UCSF, San Francisco, CA, USA	Speaker
2011	Vienna Comprehensive Cancer Center; Vienna, Austria	Invited lecturer
2012	Humboldt State University; Arcata, CA, USA	Lecturer for California Institute for Regenerative Medicine Bridges to Stem Cell Program
2012	Humboldt State University; Arcata, CA, USA	GRAND ROUNDS
2013	Medical University Vienna; Oncology Professorship, Vienna, Austria	Invited lecturer
2015	Spanish National Cancer Research Center CNIO, Madrid	Speaker invitation

MEETINGS - INTERNATIONAL & NATIONAL & REGIONAL

2007	Society of Neuro-oncology Annual Meeting; Dallas, TX, USA	Selected speaker
2008	External Advisory Board Meeting, UCSF Brain Tumor SPORE; San Francisco, CA, USA	Career development award presenter
2009	American Association for Cancer Research Annual Meeting; Denver, CO, USA	Invited minisymposium speaker
2010	Broad Institute Tri-University Symposium; Asilomar, CA, USA	Session chair
2010	Society of Neuro-oncology Annual Meeting; New Orleans, LA, USA	Poster presenter
2010	International Stem Cell Research Society Annual Meeting; San Francisco, CA, USA	Poster presenter
2011	Pediatric Neuro-oncology Basic and Translational Research Conference; New Orleans, LA, USA	Invited speaker
2011	Society of Neuro-oncology Annual Meeting; Orange County, CA, USA	Invited speaker
2012	Cell Press Symposium; Neural Stem Cells Lab Links, UCSF, San Francisco, CA, USA	Speaker
2012	Helen Diller Comprehensive Cancer Center Retreat; Santa Cruz, CA, USA	Speaker

2012	American Association for Cancer Research Annual Conference; Chicago, IL, USA	Invited minisymposium speaker
2013	American Association for Cancer Research Annual Conference; Washington, D.C., USA	Invited speaker; organ site session
2013	World Federation of Neuro-Oncology (WFNO) 4th Quadrennial Meeting; November 22nd-24th, 2013, San Francisco, CA, USA	Chair and invited speaker
2014	Memorial Sloan Kettering Brain Tumor Center Seminar Series; May 19th, 2014, New York, NY, USA	Invited Speaker
2014	20th International Conference on Brain Tumor Research and Therapy; July 20th -24th, 2014, Lake Tahoe, CA, USA	Invited Speaker
2014	Pediatric Malignancies Symposium, January 8th, Mission Bay, UCSF	Invited presenter
2014	Cancer Stem Cell Conference, Case Western Reserve University; August 17th - 20th, 2014, Cleveland, OH, USA	Invited Speaker
2015	Brain Tumor Meeting, Berlin, Germany May 28-29th	Invited speaker
2015	Arizona Cancer Center, The Cancer Biology Seminar Series, Tucson, AZ, USA, May 2015	Invited Speaker
2015	Rejuvenation + Stem Cells, Institute for the Biology of Stem Cells, UC Santa Cruz, Santa Cruz, USA, September 29th, 2015	Invited Speaker
2015	Society for Neuro-oncology, Annual Conference, San Antonio, TX, USA, November 2017	Speaker
2017	American Association for Cancer Research, Annual Conference, Washington D.C., USA April 1-5, 2017	Poster
2017	International Society for Stem Cell Research, Annual Meeting, Boston, MA, USA, June 14-17, 2017	Poster
2017	Society for Neuroscience, Annual Meeting, Washington DC, November 14-17, 2017	Talk
2017	Society for Neuro-oncology, Annual Conference, San Francisco, USA, November 16-19, 2017	Talk
2018	Cancer Stem Cell Conference, Cleveland Clinic and Case Western University, OH, August 6-8, 2018	Talk
2019	Pediatric Neuro-oncology Basic and Translational Research Conference, San Francisco, CA, May 4-5, 2019	Talk

2019	Annual Meeting for the Society for Neuro-oncology, Scottsdale, AZ, November 20-23, 2019	Talk
2019	Annual Meeting for the Society for Neuro-oncology, Scottsdale, AZ, November 20-23, 2019	Chair and Organizer of the Lunchtime Educational Session

SERVICE ACTIVITIES SUMMARY

2011-2019, Dr. Petritsch has been a permanent reviewer on the Neuroscience study section at UCSF, which allocates intramural funding to investigators. The panel met twice/year and discusses on average 20 grants/cycle. Dr. Petritsch was director of the BMS graduate program elective Mini-course “Neuro-oncology" from 2016-2019. This is a three-week long intensive course taught by faculty in the Neurosurgery department and covers a wide-range of topics in the field of neuro-oncology. Dr. Petritsch participated in academic recruitment (1 panel/yr.), peer-reviews manuscripts (1-2/months) for scientific journals, and participates in extramural grant review for several national and international agencies.

UNIVERSITY SERVICE

UC SYSTEM AND MULTI-CAMPUS SERVICE

2010 - 2012	Eli and Edythe Broad Center for Regeneration Medicine and Stem Cell Research, Tri-institutional Retreat, Asilomar, CA, USA	Organizer
2015 - 2019	Administrative Initiatives Committee	Member
2016 - 2019	Standing Panel for Faculty Conduct, Dean's Office, UCSF	Member

UCSF CAMPUSWIDE

2010 - 2019	Female Faculty Professional Problem Solving Group	Member
2011 - 2019	Research Allocation Program, Office of Sponsored Research	Grant Reviewer
2012 - 2019	Helen Diller Cancer Research Building Annual Scientific Retreat	Co-organizer
2010 - 2012	PhD Committee for Renee Vanderlaan Hebrok Lab	Consultant
2016 - 2019	Biomedical Sciences Graduate Program Minicourse Neurooncology	Director

SCHOOL OF MEDICINE

2013 - 2014	Academic Recruitment M-3698; Faculty Neuro-epidemiology; Recruited Dr. Kyle Walsh	Member of the academic search committee
2014 - 2016	Academic Recruitment JPF00185; Faculty Pediatrics and Neurosurgery; Recruited Dr. Bjoern Schwer	Member of the academic search committee

DEPARTMENTAL SERVICE

2009 - 2019	Brain tumor research center tissue core	Advisory committee member
2011 - 2019	CNS site committee	Ad hoc scientific reviewer
2012 - 2016	Neuroscience resident course	Co-organizer
2016	Showcase Department of Neurosurgery Brain Tumor Research Center Laboratory Tours	Host Donors

COMMUNITY AND PUBLIC SERVICE

2005 -2018	Honors biology course; Palo Alto Unified School District, Palo Alto, CA, USA	Volunteer
2013 - present	Palo Alto Unified School District, Palo Alto, CA, USA	Science fair judge
2013 - present	College and Career Center, Palo Alto High School, Palo Alto, CA, USA	Volunteer

CONTRIBUTIONS TO DIVERSITY

As a first-generation college student myself, I am committed to support diversity through mentoring. Over the past years, I hosted several diversity students funded by the UC LEADS program. Last year, I hosted a UCSF medical student, Angel Ordaz, in the summer to conduct translational cancer research. Angel was funded by the “Deans Summer Explore Research Fellowship”, which I helped him to obtain, through the Resource Allocation Program for trainees (RAP’tr). In 2018, I employed Alex Valenzuela, who was funded through the UCSF/Post-baccalaureate work-study program. Angel is back in medical school and Alex is applying to medical school this year.

FORMAL TEACHING

Academic Yr.	Course No. & Title	Teaching Contribution	School	Class Size
2016 - 2018	BMS Minicourse Neuro-oncology	Course Director	Grad	20
2013 - 2018	School of Medicine course; Prologue 2013-14; Histo Lab 1-6;	Instructor	Medicine	160
2013 - 2015	California Institute of Regenerative Medicine (CIRM) funded hESC training course	Lecturer	Grad	15

Academic Yr.	Course No. & Title	Teaching Contribution	School	Class Size
2013 - 2015	Developmental and Stem Cell Biology Graduate Program; DSCB 257; Course" "Developmental & Stem Cell Biology"	Paper Discussion Leader	Grad	6
2012 - 2015	Department of Neurosurgery; UCSF; Residents Research Talk	Lecturer, Organizer	Medicine	
2012 - 2014	Developmental and Stem Cell Biology; DSCB 270; Mini-Course: "Stemness in Cancer"	Lecturer	Grad	15
2008 - 2009	Mini-course: Neuro-oncology	Lecture	Grad	20
2009 - present	Helen Diller Comprehensive Cancer Center; Research-In-Progress Weekly Series	Attendee; Contributor		
2010 - 2011	Mini-course: Neuro-oncology	Lecture	Medicine	20