

## CURRICULAM VITAE

### *Kiran K Velpula, Ph.D.*

#### I. Personal Information

Name: Kiran K Velpula  
Current Status: Permanent Resident (Green Card), USA  
Date of birth: June 22<sup>nd</sup>, 1978

Work address: University of Illinois College of Medicine at Peoria  
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#### II. Education

School: Osmania University, Hyderabad, India  
Degree: M.S. Biochemistry  
Dates: 1999-2001

School: Hyderabad Central University, Hyderabad, India  
Degree: Ph.D. Life Sciences  
Dates: 2002-2008

#### III. Postdoctoral Research Training

Institution: Dr. Reddy's Laboratories, Hyderabad, India  
Position: Industrial Postdoctoral Fellow  
Dates: 2007-2008

Institution: University of Central Florida, Orlando, FL  
Position: Postdoctoral Fellow  
Dates: 2008-2009

Institution: Case Western Reserve University, Cleveland, OH  
Position: Postdoctoral Fellow  
Dates: 2009-2009

Institution: University of Illinois College of Medicine at Peoria, Peoria, IL  
Position: Postdoctoral Research Associate  
Dates: 2009-2014

#### IV. Faculty Appointments and Positions (list from most recent to oldest)

Position/Rank: Assistant Professor (Tenure Track)  
Department/Institution: Department of Cancer Biology and Pharmacology, University of Illinois College of Medicine at Peoria, Peoria, IL  
Dates: 2014- present

Position/Rank: Assistant Professor (Tenure Track)  
 Department/Institution: Department of Neurosurgery, University of Illinois College of Medicine at Peoria, Peoria, IL  
 Dates: 2015- present

Position/Rank: Instructor  
 Department/Institution: Department of Cancer Biology and Pharmacology, University of Illinois College of Medicine at Peoria, Peoria, IL  
 Dates: 2014- 2014

## V. Service

### Institutional Committees:

2014-present: Member, The Senate of the University of Illinois at Chicago  
 2015-present: Member, Community Institutional Review Board (IRB), Peoria

### Editorial Boards:

Journal: Brain Disorders and Therapy (Executive Editor)  
 Dates of Service: 2012 – present  
 Journal: World Research Journal of Cell Biology (Associate Editor)  
 Dates of Service: 2013 – present

- Invited *peer-reviewer* for Cancer Research, Neoplasia, Molecular Cancer Therapeutics, Stem Cells and Development, Cancer Immunology Immunotherapy, Therapeutics and Clinical Risk Management, Journal of Stem Cells and Regenerative Medicine, Scientific Journals International, Journal of Cancer, Journal of Cell Science & Therapy, Journal of Cancer Science & Therapy, Journal of Stem Cell Research & Therapy, Oncotargets and Therapy, Neurological Research, Stem Cells Translational Medicine, Plos One

## VI. Membership in Professional Societies

2002-present: Member, Science Advisory Board  
 2010-present: Associate Member, American Association for Cancer Research  
 2010-present: Associate Member, American Society for Clinical Oncology  
 2011-present: Life Member, Association of Biotechnology and Pharmacology  
 2013-present: Associate Member, Society for Neuro-Oncology

## VII. Certification

“Introduction to the Principles and Practice of Clinical Research (IPPCR) by the National Institutes of Health Clinical Center (May 2009).

## VIII. Trainees/ Mentees

1. Diane Burberry, 2008-2009, Ph.D. student at the University of Central Florida, FL (mentored directly during their time in the laboratory of Dr. Henry Daniell)
2. Gregory Joseph, 2009, Under Graduate Student at the Case Western Reserve University, OH (mentored directly during their time in the laboratory of Dr. Lax Devireddy)

3. Christina Salazar, 2011, High School student at the University of Illinois College of Medicine at Peoria, IL (mentored directly during their time in the laboratory of Dr. Andrew Tsung)
4. Tobias Mattei, 2011, Neurosurgery Resident from Brazil at the University of Illinois College of Medicine at Peoria, IL (mentored directly during their time in the laboratory of Dr. Andrew Tsung)
5. Carlos Goulart, 2012, Neurosurgery Resident from Brazil at the University of Illinois College of Medicine at Peoria, IL (mentored directly during their time in the laboratory of Dr. Andrew Tsung)
6. Azeem Rehman, 2011-2012, Graduate Student at the University of Illinois College of Medicine at Peoria, IL (mentored directly during their time in the laboratory of Dr. Jasti Rao)
7. Arnima Bhasin, 2012-2013, Graduate Student at the University of Illinois College of Medicine at Peoria, IL (mentored directly during their time in the laboratory of Dr. Andrew Tsung)
8. Snigdha Chigurupati, 2013, High School student at the University of Illinois College of Medicine at Peoria, IL (mentored directly during their time in the laboratory of Dr. Andrew Tsung)
9. William Lee, 2013-2014, Neurosurgery Resident, at the University of Illinois College of Medicine at Peoria, IL (mentored directly during their time in the laboratory of Dr. Andrew Tsung)
10. Maheedhara R Guda, 2015 – present, Post-doctoral research associate, at the University of Illinois College of Medicine at Peoria, IL

## **IX. Research Support**

1. Supported from a startup package from the UICOMP.
2. Supported partly from Mark Linder Walk for the Mind, Peoria, IL
3. Supported from McElroy Charitable Foundation for Medulloblastoma

## **X. Oral Presentations**

1. Molecular targeting of EGFR signaling in Glioblastoma-Cedars Sinai Medical Center at Los Angeles. January 8<sup>th</sup> 2014
2. Combined targeting of EGFR-PDK1 signaling regulates cellular metabolism in glioblastoma-Mayo Clinic at Rochester. May 19<sup>th</sup> 2014.
3. Targeting EGFR-VIII with dichloroacetate in temozolomide resistant glioblastoma models”, 19<sup>th</sup> Annual scientific meeting of the Society for Neuro-Oncology (SNO), held on November 13-16, 2014, Miami, Florida.
4. Invited lecture: Metabolic targeting and antagonism of EGFRvIII/PDK1 axis in temozolomide resistant glioblastoma models. The Society for NeuroOncology Neuro Tumor Club Dinner Program at AACR. April 18<sup>th</sup> 2016.

## **XI. Bibliography**

Total publications: 31 (Research Articles-23; Review Articles-2; Editorials-2; Bookchapter-1)

### **Publications as a Corresponding author:**

1. Yuen, CA., Asuthkar, S., Guda, MR., Tsung AJ. And **Velpula, KK\***. Cancer stem cell molecular reprogramming of the Warburg effect in glioblastomas: A new target gleaned from an old concept. (under revision to CNS Oncology).
2. Asuthkar, S., Gogineni, V.R., Rao, J.S and **Velpula, KK\***. uPAR-regulated nuclear translocation of Hand-1 acts as a molecular switch to mediate vascular radiosensitivity in medulloblastoma tumors. *Molecular Cancer Therapeutics*. 2014 Mar 12.
3. Prabhakar, S., Asuthkar, S., Lee, W., Chigurupati, S., Zakharian, E., Tsung, A. J and **Velpula, KK\***. Targeting DUSPs in Glioblastomas – wielding a double-edged sword? *Cell Biology International*. 2013 Oct 23 ([Review Article](#)).
4. Chigurupati, S., Bhasin, A., Inampudi, K.K., Asuthkar, S., Madarampalli, B., Kammili, R., **Velpula, KK\***. Functional and structural analysis of mice TRPC6 with human analog through homology modeling. *International Journal of Bioinformatics and Research Applications*. *Int J Bioinform Res Appl*. 2014;10(1):206-16
5. **Velpula, KK\***. and Jasti S. Rao. Human umbilical cord stem cells regulate its surrounding microenvironment by active secretion of signaling molecules”. *Brain Disorders & Therapy* 2012; 1:e102 ([Editorial](#)).

**Publications as First Author:**

1. **Velpula, KK** and Tsung AJ. PDK1: a new therapeutic for glioblastoma. (Invited Editorial to CNS Oncology (Accepted- *In Press*; [Editorial](#)).
2. **Velpula, KK**, Bhasin, A., Asuthkar, S., Tsung, A.J. Combined targeting of PDK1 and EGFR triggers regression of glioblastoma by reversing the Warburg effect. *Cancer Research*. 2013 Dec 5
3. **Velpula, KK**, Gogineni, V.R., Nalla, A.K., Rao, J.S. Radiation-induced Hypomethylation Triggers Urokinase Plasminogen Activator (uPA) Transcription in Meningioma Cells. *Neoplasia*. 2013 Feb; 15(2):192-203.
4. **Velpula, KK**, Dasari, VR., Asuthkar, S., Gorantla, B., Tsung, AJ. EGFR and c-Met cross talk in Glioblastoma and its regulation by human cord blood stem cells. *Translational Oncology* 2012 Oct 5(5): 379-392.
5. **Velpula, KK**, Azeem Rehman, Rao JS and Veeravalli Krishna Kumar. “Cord Blood Stem Cell Represses Glioblastoma Invasion through Regulation of the Interconnected N-Cadherin, Extracellular Signal-Regulated Kinase and Integrin Alpha-6 Signaling Pathways”. *Cellular Signaling*. 2012 Jul 10; 24(11):2076-2084.
6. **Velpula, KK**, Dasari VR and Rao JS. Human cord blood stem cells homing to sites of inflammation: Unfolding mysteries to novel therapeutic paradigm. *Cell Cycle*. 11:12, 1-11; June 15, 2012 ([Faculty of 1000 selected paper](#)).
7. **Velpula, KK**, Azeem A Rehman, Sowmya Chigurupati, Ramadevi Sanam, Krishna Kishore Inampudi, Chandra Sekhar Akila. Bioinformatic Analysis of Human and Mouse CREB3L4 Protein. *Bioinformation* 8(12): 574-577 (2012).
8. **Velpula, KK**, Dasari, VR, Tsung, AJ, Dinh, DH., Rao, JS.”Cord Blood Stem Cells revert EMT to MET in glioma stem cells by down regulating synergistic transcriptional activation of Sox2 and Twist1”. *Oncotarget*. 2011 Dec;2(12):1028-42
9. **Velpula, KK**, Dasari VR, Tsung AJ, Dinh DH, Rao JS. Transcriptional Repression of Mad-Max Complex by Human Umbilical Cord Blood Stem Cells Downregulates ERK in Glioblastoma. *Stem Cells and Development*. 2011 Nov 21.

10. **Velpula, KK**, Dasari VR, Tsung AJ, Gondi CS, Klopfenstein JD, Mohanam S, Rao JS. Regulation of glioblastoma progression by cord blood stem cells is mediated by down regulation of cyclin D1. *PLoS One*. 2011 Mar 24; 6(3):e18017.

#### **Other contributions**

1. Alvarado AG, Turaga SM, Sathyan P, Hubert EEM, Otvos B, Silver DJ, Hale JS, Flavahan WA, Zinn PO, Sinyuk M, Li M, Guda MR, **Velpula KK**, Tsung AJ, Nakano I, Vogelbaum MA, Majumdar S, Rich JN, Lathia JD. Coordination of self-renewal in glioblastoma by integration of adhesion and microRNA signaling. *Neuro-Oncology* (*Accepted in press*).
2. Asuthkar S, **Velpula KK**, Elustondo P, Demirkhanyan L and Zakharian E. TRPM8 channel as a novel molecular target in androgen-regulated prostate cancer cells. *Oncotarget* 2015 Jul 10;6(19):17221-36.
3. Zhang A, Hitomi M, Bar-Shain N, Dalimov Z, Ellis L, **Velpula KK**, Fraizer GC, Gourdie RG and Lathia JD. Connexin 43 expression is associated with increased malignancy in prostate cancer cell lines and functions to promote migration. *Oncotarget* 2015 May 10;6(13):11640-51.
4. Asuthkar S, Demirkhanyan L, Sun X, Elustondo PA, Krishnan V, Baskaran P, **Velpula KK**, Thyagarajan B, Pavlov EV, Zakharian E. The TRPM8 protein is a testosterone receptor: II. Functional evidence for an ionotropic effect of testosterone on TRPM8. *J Biol Chem*. 2015 Jan 30;290(5):2670-88.
5. Asuthkar S, Elustondo PA, Demirkhanyan L, Sun X, Baskaran P, **Velpula KK**, Thyagarajan B, Pavlov EV, Zakharian E. The TRPM8 protein is a testosterone receptor: I. Biochemical evidence for direct TRPM8-testosterone interactions. *J Biol Chem*. 2015 Jan 30;290(5):2659-69.
6. Liu Z., **Velpula, KK** and Devireddy L. BDH2 (3-OH butyrate dehydrogenase-2) and H-ferritin synergistically regulate intracellular iron. *The FEBS Journal*. 2014 Mar 27.
7. Zhuang, T., Chelluboina, B., Ponnala, S., **Velpula, KK**, Rehman, A.A., Chetty, C., Zakharian, E., Rao, J.S., and Veeravalli, K.K. Involvement of nitric oxide synthase in matrix metalloproteinase-9- and/or Urokinase plasminogen activator receptor-mediated glioma cell migration. *BMC Cancer*. 2013 Dec 11;13(1):590
8. Asuthkar, S., **Velpula, KK**, Gondi, CS., Nalla, AK., Gogineni VR., Rao, JS. MMP-9 mediates Syndecan-1 shedding and angiogenesis via epigenetic silencing of miR-494 in medulloblastoma cells. *Oncogene*. June 3; doi:10.1038/Onc.2013.151.
9. Asuthkar, S., **Velpula, KK**, Chetty C, Gorantla B and Rao, JS. Epigenetic Regulation of miRNA-211 by MMP-9 Governs Glioma Cell Apoptosis, Chemosensitivity and Radiosensitivity. *Oncotarget*. 2012 Nov;3(11):1439-54.
10. Gogineni, V.R., Reshu Gupta, Nalla, A.K., **Velpula, KK**, Rao, J.S. uPAR and Cathepsin B shRNA Impedes TGF- $\beta$ 1-driven Proliferation and Invasion of Meningioma Cells in a XIAP-dependent Pathway. *Cell Death and Disease*. 2012 Dec 6; 3:e439.
11. G.S. Sailaja, Praveen Bhoopathi, Bharathi Gorantla, Chandramu Chetty, Venkateswara Rao Gogineni, **Velpula, KK**, Christopher S. Gondi, and Jasti S. Rao SPARC induces endoplasmic reticulum stress leading to autophagy-mediated apoptosis in Neuroblastoma. *International Journal of Oncology*. 2013 Jan; 42(1):188-96.

12. Asuthkar, S., Gondi, CS., Nalla, AK., **Velpula, KK**, Gorantla, B., Rao, JS. Irradiation-induced uPAR promotes stemness via Wnt/ $\beta$ -catenin signaling in medulloblastoma cells. *Journal of Biological Chemistry*. 2012 Jun 8; 287(24):20576-89.
13. Dasari, VR., **Velpula, KK**, Alapati, K, Gujrati, M, Tsung, AJ. Cord Blood Stem Cells Inhibit Epidermal Growth Factor Receptor Translocation to Mitochondria in Glioblastoma. *PLoS One* 2012;7(2):e31884
14. Dasari VR, Kaur K, **Velpula, KK**, Dinh DH, Tsung AJ, Mohanam S, Rao JS. Down regulation of Focal Adhesion Kinase (FAK) by cord blood stem cells inhibits angiogenesis in glioblastoma. *Aging (Albany NY)*. 2010 Nov; 2(11):791- 803.
15. Dasari, VR., **Velpula, KK**, Kaur, K., Fassett, D., Klopfenstein, J.D., Dinh, D.H., Gujrati, M., Rao, J.S. Cord blood stem cell-mediated induction of apoptosis in glioma down regulates X-linked inhibitor of apoptosis protein (XIAP). *PLoS One* 5(7):e11813, 2010.
16. Dasari, VR., Kaur, K., **Velpula, KK**, Gujrati, M., Fassett, D., Klopfenstein, J.D., Dinh, D.H., Rao, J.S. Upregulation of PTEN in glioma cells by cord blood mesenchymal stem cells inhibits migration via down regulation of the PI3K/Akt pathway. *PLoS One* 5(4):e10350, 2010.

#### **Book Chapter:**

- Dasari VR, **Velpula, KK**, Rao JS. Role of naïve cord blood stem cells in glioma therapy. *Stem Cell Therapeutics for Cancer* publishers, Published 2013 by John Wiley & Sons, Inc.75-86.

#### **XII. Academic Conference presentations (First author only)**

1. **Velpula, KK.**, Sahu, K., Tuszyński, J., Guda, MR., Asuthkar, S., Martin, S.E., Lathia J.D. and Tsung A.J. “DCA bind to EGFR/EGFRvIII/PDK1 and affect the proliferation and growth in TMZ resistant glioblastoma model”, American Association for Cancer Research (AACR) 107<sup>th</sup> Annual Meeting to be held at New Orleans, Louisiana from April 16-20, 2016.
2. **Velpula, KK**, Asuthkar S., Martin, S.E., Lathia J.D. and Tsung A.J. “Mitochondrial targeting EGFR-VIII in temozolomide resistant glioblastoma models”, American Association for Cancer Research (AACR) 106<sup>th</sup> Annual Meeting to be held at Philadelphia, Pennsylvania, from April 18-22, 2014.
3. **Velpula, KK**, Asuthkar S., Lathia J.D. and Tsung A.J. “Targeting EGFR-VIII with dichloroacetate in temozolomide resistant glioblastoma models”, 19<sup>th</sup> Annual scientific meeting of the Society for Neuro-Oncology (SNO), held on November 13-16, 2014, Miami, Florida.
4. **Velpula, KK**, Asuthkar, S., Lee,W., and Tsung, A.J. “HERP2 as a novel molecular marker and therapeutic target in glioblastoma”, American Association for Cancer Research (AACR) 105<sup>th</sup> Annual Meeting held at San Diego, California, from April 5-9, 2014.
5. **Velpula, KK**, Bhasin, A., Dasari, V.R., Asuthkar, S., Dinh, D.H., Rao, J.S., Tsung, A.J. “Targeting PDK-1 and EGFR by human umbilical cord blood stem cells reverses Warburg effect in glioblastoma multiforme,” American Association for Cancer Research (AACR) 104<sup>th</sup> Annual Meeting held at Washington, District of Columbia (D.C.) from April 6-10, 2013.

6. **Velpula, KK**, Gorantla, B., Asuthkar, S., Bhasin, A., Gogineni, V.R., Chetty, C., Rao, J.S. “**Overexpression of SPARC represses MMP-9-mediated metastasis in neuroblastoma**,” American Association for Cancer Research (AACR) 104<sup>th</sup> Annual Meeting held at Washington, District of Columbia (D.C.) from April 6-10, 2013.
7. **Velpula, KK**, Bhasin, A., Zhang, J.S., Tsung, A.J., Veeravalli, K.K., Rao, J.S., Dasari, V.R. “Galectin-1 modulates glioblastoma cell migration via interaction with FAK,” American Association for Cancer Research (AACR) 104<sup>th</sup> Annual Meeting held at Washington, District of Columbia (D.C.) from April 6-10, 2013.
8. **Velpula, KK**, Dasari V.R., Asuthkar S., Gorantla B., Tsung, A.J. “EGFR and c-Met Crosstalk in Glioblastoma and its Regulation by Human Cord Blood Stem Cells,” 2<sup>nd</sup> World Congress on Cell Science and Stem Cell Research Annual Meeting, San Antonio, Texas from November 12-14, 2012.
9. **Velpula, KK**, Rehman A., Chelluboina B., Gondi C.S., Dasari V.R., Rao J.S., Veeravalli K.K. “Invasiveness of human glioma stem cells controlled by cord blood stem cells via regulation of integrin  $\alpha 6$ , N-cadherin and ERK interactions,” American Society for Radiation Oncology (ASTRO) 54<sup>th</sup> Annual Meeting, Boston, Massachusetts, from October 28-31, 2012.
10. **Velpula, KK**, Dasari, V.R., Tsung, A.J., Dinh, D.H., Rao, J.S. “Cord Blood Stem Cells revert EMT to MET in glioma stem cells by down-regulating synergistic transcriptional activation of Sox2 and Twist1,” American Association for Cancer Research (AACR) 103<sup>rd</sup> Annual Meeting held at Chicago, Illinois, from March 31-April 4, 2012.
11. **Velpula, KK**, Gogineni, V.R., Nalla, A.K., Rao, J.S. “Radiation-induced Hypomethylation Triggers Urokinase Plasminogen Activator (uPA) Transcription in Meningioma Cells,” American Association for Cancer Research (AACR) 103<sup>rd</sup> Annual Meeting held at Chicago, Illinois, from March 31-April 4, 2012.
12. **Velpula, KK**, Dasari, V.R., Tsung, A.J., Gondi, C.S., Klopfenstein, J.D., Mohanam, S., Rao, J.S. “Cell cycle regulation of glioblastoma progression by cord blood stem cells is mediated by downregulation of cyclin D1,” American Association for Cancer Research (AACR) 102<sup>nd</sup> Annual Meeting held at Orlando, Florida, from April 2-6, 2011.

### **XIII. Academic Conference presentations (Last author only)**

1. Guda, MR., Asuthkar, S., Das, S., Seal S., Tsung, AJ, and **Velpula, KK**. “miR-211 directly targets pyruvate dehydrogenase kinase 4 to inhibit cellular growth and glucose metabolism in triple negative breast cancer”, American Association for Cancer Research (AACR) 107<sup>th</sup> Annual Meeting to be held at New Orleans, Louisiana from April 16-20, 2016.
2. Asuthkar, S., Guda, MR., Tsung, AJ., Reuben, A., Dinh, DH, and **Velpula, KK**. “Hand-1 overexpression inhibits medulloblastoma cell invasion and metastatic ability via Oct-3/4 /  $\beta$ -catenin interaction”, American Association for Cancer Research (AACR) 107<sup>th</sup> Annual Meeting to be held at New Orleans, Louisiana from April 16-20, 2016.