

## **BIOGRAPHICAL SKETCH**

**Nicki Tiffin, Ph.D.**

Email: nickitiffin@imaginet.co.za

### **QUALIFICATIONS:**

**Ph.D. Molecular Oncology (2000)** -University of London, United Kingdom

**B Sc. (Honours) Medical Biochemistry (First Class) (1994)** - University of Cape Town, South Africa

**B Sc. Biochemistry and Molecular Eukaryotic Genetics (Distinction in Biochemistry) (1993)** - University of Cape Town, South Africa

### **POSITIONS**

**2010 - Present:** Senior Lecturer, South African National Bioinformatics Institute (SANBI), University of the Western Cape, Cape Town, South Africa

**2008 - 2010:** Self-employed: freelance research (part-time)

- Research associate, SANBI (SysCo project – host genetics of leishmaniasis)
- Contracted researcher, Dept of Nephrology, University of Cape Town (Project: Genetics of Salt Sensitive Hypertension)

**2006 - 2008:** Postdoctoral Fellow, Dept of Human Genetics, University of Cape Town. Institute of Infectious Diseases and Molecular Medicine, Anzio Road, Observatory, Cape Town (part-time).

**2003 – 2006:** Wellcome Trust Post-doctoral Fellow, South African National Bioinformatics Institute, University of the Western Cape, Belville, South Africa

**2001 - 2003:** Staff Research Associate, Department of Pediatrics, Division of Endocrinology, University of California, San Francisco, CA

**1997-2000:** Post-graduate Student, Department of Paediatric Oncology, Institute of Cancer Research, UK

**1996:** Technical Assistant, Department of Infectious Diseases, RPMS, Hammersmith Hospital, London, UK

**1995:** Technical Assistant, Department of Medical Microbiology, University of Zimbabwe, Harare, Zimbabwe

### **HONOURS AND AWARDS**

**1997-00:** Grant Award, Association of International Cancer Research, UK

**1997-00:** Grant Award, Overseas Research Studentship, UK

### **PEER-REVIEWED PUBLICATIONS**

Tiffin, N. 2011 (In Press). Book Chapter: Methods in Molecular Biology: In Silico Tools for Gene Discovery. Chapter title: Conceptual thinking for prioritization of candidate disease genes.

Tiffin N, Meintjes A, Ramesar R, Bajic VB, Rayner B. Computational Analysis of Candidate Disease Genes and Variants for Salt-Sensitive Hypertension in Indigenous Southern Africans. PLoS ONE 2010 5(9): e12989. doi:10.1371/journal.pone.0012989 (link to: [Tiffin et al. PLoS ONE 2010](#) )

Okpechi I, Rayner BL, van der Merwe L, Mayosi BM, Adebawale A, Tiffin N, Ramesar R. Genetic variation at selected SNPs in the Leptin gene and association of alleles with markers of kidney disease in a Xhosa population of South Africa. <http://dx.plos.org/10.1371/journal.pone.0009086> (available online 4 February 2010)

Tiffin N, Andrade-Navarro M A, Perez-Iratxeta C. Linking genes to diseases: it's all in the data. *Genome Medicine* 2009, 1:77 (link to: [Tiffin et al.2009, Genome Medicine](#))

Tiffin N, Okpechi I, Perez-Iratxeta C, Andrade-Navarro MA, Ramesar R. Prioritisation of candidate disease genes for metabolic syndrome by computational analysis of its defining phenotypes. *Physiol Genomics*. 2008 Jul 8. (link to: [Tiffin et al. 2008, Physiological Genomics](#))

Yamasaki C, Murakami K, Fujii Y, Sato Y, Harada E et al. 2008. Genome Information Integration Project and H-Invitational 2 Consortium\* (2008) The H-Invitational Database (H-InvDB), a comprehensive annotation resource for human genes and transcripts. *Nucleic Acids Research*. 2008 January; 36 (Database issue): D793–D799 (link to: [Yamasaki et al. 2007, Nucleic Acids Research](#)).

Lombard Z, Tiffin N, Hofmann O, Bajic VB, Hide W, Ramsay M. 2007. Computational selection and prioritization of candidate genes for Fetal Alcohol Syndrome. *BMC Genomics*. 2007 Oct 25;8(1):389 (Link to: [Lombard et al. 2007, BMC Genomics.](#))

Dias da Silva, M.R., Tiffin N., Mima T., Mikawa, T. Hyer, J.D. 2007. FGF-mediated induction of ciliary body tissue in the chick eye. *Developmental Biology*, available online 21 December 2006. (Link to: [Hyer et al. 2007, Developmental Biology](#))

Tiffin N., Adie E., Turner F., Brunner H.G., van Driel M.A., Oti M., Lopez-Bigas N., Ouzonis C., Perez-Iratxeta C., Andrade M.A., Adeyemo A., Patti M.E., Semple C.A.M., Hide W. 2005. Computational disease gene identification: a concert of methods prioritises type 2 diabetes and obesity candidate genes. *Nucleic Acids Research* 2006 34(10):3067-3081. Link to: [Tiffin et al. 2006, Nucleic Acids Research](#)

*Journal Cover image at [Nucleic Acids Research 34 \(10\) Cover image \(2006\)](#)*

Tiffin, N., Kelso, J.F., Powell, A.R., Pan, H., Bajic, V.B., Hide, W.A. 2005. Integration of text- and data-mining using ontologies successfully selects disease gene candidates. *Nucleic Acids Research* 33 (5): 1544 – 1552. Link to: [Tiffin et al. 2005. Nucleic Acids Research](#)

*This paper has been additionally selected for publication in the AMA 2006 IMIA Yearbook of Medical Informatics, in Section 7: Bioinformatics/Best Paper Selection (link to: [IMIA Yearbook of Medical Informatics, Bioinformatics Best Paper Selection 2006](#) )*

Tiffin, N., Adi, S., Stokoe, D., Wu, N.Y., and Rosenthal, S.M. Akt phosphorylation is not sufficient for insulin-like growth factor-stimulated myogenin expression but must be accompanied by down-regulation of mitogen-activated protein kinase/extracellular signal-regulated kinase phosphorylation. *Endocrinology* **145**: 4991-4996. 2004.

Tiffin N, Williams R D, Robertson D, Hill S, Shipley J, Pritchard-Jones K : WT1 expression does not disrupt myogenic differentiation in C2C12 murine myoblasts or in human rhabdomyosarcoma. *Experimental Cell Research*, July 1;287(1):155-65. 2003

Tiffin N, Williams R D, Shipley J, Pritchard-Jones, K: PAX7 expression in embryonal rhabdomyosarcoma suggests an origin in muscle satellite cells. *British Journal of Cancer*, July 21;89(2):327-332. 2003

Lu Y-J, Williamson D, Clark J, Wang R, Tiffin N, Skelton L, Gordon T, Williams R, Allan B, Jackman A, Cooper C, Pritchard-Jones K, Shipley J.: Comparative expressed sequence hybridization to chromosomes for tumor classification and identification of genomic regions of differential gene expression. *PNAS* 98(16):9197-9202, 2001.

Cocker HA, Tiffin N, Pritchard-Jones K, Ross Pinkerton C, Kelland LR: *In vitro* prevention of the emergence of multidrug resistance in a pediatric rhabdomyosarcoma cell line. *Clin Can Res* 7:3193-3198, 2001.

Cocker HA, Hobbs SM, Tiffin N, Pritchard-Jones K, Pinkerton CR, Kelland LR: High levels of the MDM2 Oncogene in paediatric rhabdomyosarcoma cell lines may confer multidrug resistance. *British Journal of Cancer* 85(11), 1746-1752, 2001.

## **Meetings and Seminars:**

*Tiffin, N. Computational approaches to disease gene identification. Invited talk, ICGEB/CIGB 3<sup>rd</sup> International Workshop on Genomics Research, Varadero, Cuba. November 2006.*

*Tiffin, N., Integrating of text- and data-mining using ontologies successfully selects disease gene candidates. Oral presentation, Combined Congress of the Southern African Society of Human Genetics and the African Society of Human Genetics, Gauteng, South Africa, March 2005.*

*Tiffin, N. H-Invitational Disease Edition, Prostate Cancer and Rheumatoid Arthritis Edition Gene Expression Working Group, JBIRC, Tokyo, Japan, September 2004.*

*Tiffin, N., Kelso, J.F., Powell, A.R., Pan, H., Bajic, V.B., Hide, W.A., A-22: Identification of candidate disease genes using text mining with controlled vocabularies. Poster, The 12<sup>th</sup> International Conference for Intelligent Systems for Molecular Biology /The 3<sup>rd</sup> European Conference on Computational Biology (ISMB/ECCB 2004), Glasgow, UK. 2004*

*Tiffin N, Akt phosphorylation is insufficient and ERK1/2 dephosphorylation is necessary for IGF-induced myogenesis. Oral presentation, The Growth Hormone Research Society and The International Society for Insulin-like Growth Factor Research First Joint Symposium: GH-IGF 2002.*

*Tiffin N, Rosenthal SM: Upregulation of serum response factor expression by IGF-I is mediated by Erk1/2 phosphorylation in skeletal myoblasts. Poster, The Endocrine Society's 83<sup>rd</sup> Annual Meeting, Denver, USA. 2001.*

*Tiffin N, Williams RD, Pritchard-Jones K: Analysis of WT1 in normal myogenesis and rhabdomyosarcoma. Poster, The American Association of Cancer Research 91<sup>st</sup> Annual Meeting, San Francisco, USA. 2000.*

*Brown, J. S., A. Aufauvre-Brown, N. Tiffin, and D. W. Holden. Identification of virulence determinants of A. fumigatus using REMI/STM approach, p. 27. 19th Fungal Genetics Conference, Pacific Grove, California. 1997.*

**Invited Talks:**

I2R Institute, Singapore. April 2005. Presentation: Selection of candidate disease genes by expression profile using text- and data-mining with controlled vocabularies

Edinburgh University, United Kingdom. July 2005. Presentation: Selection of candidate disease genes by expression profile using text- and data-mining with controlled vocabularies.