

CURRICULUM VITAE

NAME: Ahmed Salim Kadhim Al-Khafaji
DATE OF BIRTH 10/10/1972
MARTIAL STATUES: Married
SPECIALIZATION: Microbiology/ Molecular Biology
POSITION: Lecturer
SCIENTIFIC DEGREE: PhD
WORK ADDRESS: University of Baghdad/College of Science/Department of Biology
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EDUCATIONAL AND RESEARCH QUALIFICATION

1993-1998 B.Sc. in Biology/Microbiology. College of Science, University of Baghdad, Iraq.
1998-2002 M.Sc. in Biotechnology, College of Science, University of Baghdad, Iraq.
2011-2015 Ph.D. in molecular and clinical cancer medicine, Institutes of Translational Medicine, Faculty of Health & Life Science, University of Liverpool, UK.
2016-2017 Post-Doctoral position, Roy Castle Lung Cancer Research Programme, Institutes of Translational Medicine, Faculty of Health & Life Science, University of Liverpool, UK.

EMPLOYMENT

2016-present Lecturer at the department of Biology, College of Science, University of Baghdad, Iraq.
2004 - 2011 Lecturer assistant at the department of Biology, College of Science, University of Baghdad, alongside my research work at the Iraqi Centre for Cancer & Medical Genetics Research (ICCMGR), Baghdad, Iraq.
2002 - 2004 Visiting lecturer assistant at the department of Biology, College of Science, University of Baghdad, Iraq.

RESEARCH AND ACADEMIC ASSOCIATION

2016-2017 Honorary Research and Academic Associate.
1. Dept. Of Molecular and Clinical Cancer Medicine, Institutes of Translational Medicine, Faculty of Health & Life Science, University of Liverpool, UK.
2. The Liverpool Lung Project (LLP)/ Roy Castle Lung Cancer Research Programme/ University of Liverpool/ Institute of Translational medicine.

PUBLICATIONS

1. Al-Khafaji A.S., Davies M.P., Risk J.M., Marcus M.W., Shaw R.J., Field J.K., Liloglou T. (2017). AURKA mRNA expression is an independent predictor of poor prognosis in patients with non-small cell lung cancer. *Oncology Letters*. DOI: 10.3892/ol.2017.6012.
2. Al-Khafaji A.S., Davies M.P., Risk J.M., Marcus M.W., Koffa M., Gosney J.R., Shaw R.J., Field J.K., Liloglou T. (2017). Aurora B expression modulates paclitaxel response in non-small cell lung cancer. *British Journal of Cancer*, 116(5), 592-599.
3. Al-Shamery A.M., Al-Khafaji A.S., Yaseen N. Y. (2013). Photoimmunotherapy by Cortactin monoclonal antibody conjugated with Hematoporphyrin derivative of a subcutaneous murine mammary adenocarcinoma using low power He-Ne laser. *Iraqi J Cancer Med. Genet.* 6(2):115-119.
4. Al-Khafaji A.S., Al-Shamery A.M. (2012). Photodynamic therapy of subcutaneous murine mammary adenocarcinoma. *Iraqi J. Biotech.* 11 (1):109-120.
5. Al-Khafaji A.S. (2012) Photodynamic Effect on Photosensitized *Candida albicans* with Hematoporphyrin Derivative Using Low Power Diode Laser In Vitro. *Raf. J. Sci.*, 23 (1): 1-10.
6. Al-Khafaji A.S., Al-Shamery A.M., Subhi, S. (2010). Photodynamic action of low power He-Ne laser on photosensitized human Hep-2 and AMN3 cell lines with hematoporphyrin derivative in vitro. *Iraqi J Cancer Med. Genet.*, 3(1):54-60.

CONFERENCING RESEARCH

1. Ahmed Al-Khafaji, Janet Risk, Richard Shaw, John Field, Triantafillos Liloglou. *p53* involvement in valproate-mediated epigenetic sensitization to paclitaxel and mRNA expression of mitotic spindle associated genes in immortalized Human Bronchial Epithelial Cells. 1. Basic Epigenetic Mechanisms in Cancer conference, 8-11 Nov 2015, **Berlin, Germany**.
2. Israa Al-Humairi, Ahmed Al-Khafaji, Beth Barnes, Paraskevi Dimou, Paschalia Pantazi, Janet Risk, John Field, Triantafillos Liloglou. Interaction of folate metabolism and DNA methylation machinery in respiratory tract cancer. B249. NCRI Cancer Conference, 1 - 4 Nov 2015, **Liverpool, UK**.
3. Ahmed Al-Khafaji, Janet Risk, Richard Shaw, John Field, Triantafillos Liloglou. Epigenetic sensitization of respiratory tract cancer cells to paclitaxel. 627. EAS2015 conference, 20-23 Jun 2015, **Florence, Italy**.
4. Ahmed Al-Khafaji, Syeda Ali, John Field, Triantafillos Liloglou. AURKA involvement in paclitaxel resistance in non-small cell lung cancer. B54. NCRI Cancer Conference, 2 - 5 Nov 2014, **Liverpool, UK**.
5. Paschalia Pantazi, Ahmed Al-Khafaji, Amelia Acha Sagredo, Andrew Schache, Triantafillos Liloglou. Upregulation of HURP gene expression in Head and Neck cancer and its clinical impact. v international symposium "advances in oral cancer", 10-11 Jul 2014, **Bilbao, Spain**.

6. Ahmed Al-Khafaji, Paschalia Pantazi, Janet Risk, Richard Shaw, John Field, Triantafillos Liloglou. mRNA signature of the mitotic spindle gene members in predicting taxane response for non-small cell lung carcinomas. B14. NCRI Cancer Conference, 3-6 Nov 2013, **Liverpool, UK**.

RESEARCH PROFILE

Having worked on investigation of the photodynamic effect on cancer cells *in vitro* in my time at ICCMGR [Al-Khafaji *et al.* & (2010), Al-Khafaji & Al-Shamery (2012), and *in vivo*, Al-Shamery *et al.*, (2013)], my more recent interests have been in the molecular biology of cancer. My PhD study was a studentship granted from the University of Baghdad. Through my doctoral research, I have sought to identify genes involved in the mitotic spindle checkpoint process (AURKA, AURKB, AURKC, CKAP5, DLGAP5, KIF11, TPX2, TTK, TUBB and TUBB3) that may modulate taxane resistance in the human airways carcinomas.

Specific objectives included:

1. Exploring the association between the gene expression profiling and clinicopathological characteristics in human Non-Small Cell Lung Cancer (NSCLC).
2. Investigation of the sensitization of cancer cells to taxanes by modifying the expression/activity of certain targets.
3. Examining the potential sensitisation of lung and oral cancer cells to paclitaxel by epigenetic modifiers.

Through my doctoral research, I have sought to investigate how taxane efficacy might be improved for the treatment of respiratory tract cancer with a focus on its most prevalent form Non-Small Cell Lung Cancer (NSCLC). In this way, I found that *AURKA* mRNA over-expression could prognosticate the clinical outcome in NSCLC patients suggesting that patients bearing tumours with high *AURKA* expression may benefit from combined use of *AURKA* inhibitors. My PhD study has also clearly uncovered a role for *AURKB* in the response of NSCLC cells to paclitaxel and provided unique evidence for a dose-dependent association. Given the large extent of *AURKB* deregulation in NSCLC, my findings suggest that assessing the levels of *AURKB* protein in surgical samples could become a determinant in the clinical decision tree for managing patients and have potential for development as a predictive biomarker. Although preliminary, the data suggest that pre-treatment (but not concurrent treatment) of NSCLC cells with the HDAC inhibitor, valproic acid (VPA) generates a super-additive cytotoxicity when combined with paclitaxel. The effect of VPA appeared to be influenced by p53 mutational status. No cooperation was detected for the methylase inhibitor decitabin.

This work has been performed as part of collaboration between two of the main research groups in the Department of Molecular & Clinical Cancer Medicine; the Roy Castle Lung Cancer Research Programme and the Mersey Head & Neck Oncology Group, co-located in the University of Liverpool Cancer Research Centre.

Based on the novelty of this research work, I was able to publish my research work in two peer reviewed journals; British Journal of Cancer and Oncology letters Journal. In addition, one more manuscript is currently in preparation with intention to submit in July 2017.

MEMBERSHIP

1. Member in the International Association for the Study of Lung Cancer (IASLC), USA.
2. Member in European Association for Cancer Research (EACR), European Union.

SYMPOSIUM & WORKSHOPS

1. Genome Editing: CRISPR Design & Strategy (21-22 November 2016) at Homerton College, University of Cambridge, Cambridge, UK
2. Applications of RNAscope® and BaseScope™ ISH technology Visualize Gene Expression & Genetic Variations in Tissue (8 December 2016) At the North West Cancer Research (NWCR) Centre, University of Liverpool.
3. Running webinars and online classrooms with Adobe Connect (11/01/2017) at Educational Development Division, center for Lifelong Learning, University of Liverpool.
4. The Turnitin Assignment Tool For e-submission (Part 1) And GradeMark For Feedback (Part 2) 18/01/2017 at Educational Development Division, center for Lifelong Learning, University of Liverpool.
5. An editor's view of how to get published in a high impact journal 19/01/2017 at Educational Development Division, center for Lifelong Learning, University of Liverpool.
6. Module Design: An introduction 15/02/2017 at Educational Development Division, center for Lifelong Learning, University of Liverpool.
2. Innovative Trial Designs with Scientifically Rich Products in Cancer Research (Friday 17th February 2017), Foresight Centre, University of Liverpool.

WEBSITES

1. ResearchGate
https://www.researchgate.net/profile/Ahmed_Al-Khafaji/publications
2. Google Scholar
https://scholar.google.com/citations?hl=en&user=1B_e6jUAAAAJ&view_op=list_works&sortby=pubdate
3. University of Liverpool
<https://www.liverpool.ac.uk/translational-medicine/staff/ahmed-al-khafaji/>
4. The Liverpool Lung Project (LLP)
<http://www.liverpoollungproject.co.uk/about-us>