

**CURRICULUM VITAE
OF
VIDHYA ANISH NAIR**



Environmental and Cancer Biology.
Sharjah Institute for Medical Research,

University of Sharjah

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PERSONAL DATA

Name: VIDHYA ANISH NAIR

Gender: Female

Age & Date of Birth: 38 years, 31-01-1982

Nationality: Indian

Marital Status: Married

Profession: Laboratory Officer

EDUCATIONAL QUALIFICATIONS:

- Master of Science in Biotechnology from Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India, (2002-2004) (Merit: 3.3/4 2nd rank) Project title: Investigation on antiviral plant extracts against Indian Cassava Mosaic Virus in Central tuber Crops Research Institute (Indian Council of Agricultural Research), India. 12/2003-04/2004.
- Bachelor of Science in Biotechnology from Govt. College, University of Kerala, Karyavattom, Trivandrum, India.(1999-2002) (Merit:3.1/4) Project title: In vitro propagation in Kampheria galanga, a rare medicinal herb in Government College Kariavattom, Kerala University, India12/2001-06/2002
- Bachelor of Science in Advanced Level 4 Food Safety in Catering (HABC)

Research Experience:

1. **Laboratory Officer (Aug 2014 till date):** Working as Laboratory Officer in Environment and Cancer Research Group , Sharjah Institute for Medical Research, University of Sharjah, from August 2014 till date)

Main responsibilities include: Helping all of the 8 research group members through maintaining our laboratory facility, fulfilling safety requirements, maintaining common lab stocks, preparing common purchasing, maintaining the laboratory equipment and taking care of purchasing items of many group members, performing specific experiments related to many projects of various researchers, training new part time RAs, helped with some designated tasks related to SIMR. Major role in training and mentoring students both undergraduate and postgraduate under the supervision of many group members and practically oversees the daily work of these students in our lab.

Possess the following Laboratory skills

- Tissue culture and cell line manipulation (transfection, drug treatment, irradiation experiments) maintaining cancer cell lines and normal cell lines, suspension culture etc.
- MTT and SRB assays
- DNA , RNA
- Kinase assay,
- Real time PCR
- SDS-PAGE, protein expression by Western Blotting,
- Gel doc imaging system
- Tissue bank
- Immunohistochemistry
- Immuno Fluorescence
- Facs
- Caspase assay(3-8-9)
- Annexin (Elisa Method)
- Halo Assay
- Comet assay
- PBMC isolation
- Immunofluorescence (double colour)
- Routine Histological Processing , Embedding, Cutting (Microtome and Cryostat) and Staining (H & E)
- In situ Hybridization techniques on Paraffin Sections for Papilloma virus
- Immunohistochemistry
- Tetrad dissection

- Microscopy Techniques(fluorescence Microscope)
- Human Karyotyping
- ELISA (manual and automated)
- Dot blot Immuno Binding Assay (DIBA)
- Agarose Gel Electrophoresis
- Recombinant DNA Techniques like cloning in various Plasmid vectors (pDrive)
- Expression Studies (pMal, QiagenExp Vector's pQE 30, 31, 32).
- Transformation
- Electro Blotting
- Colony Hybridization techniques
- Nucleic Acid spot Hybridization
- Plant Tissue Culture

2. **Research Assistant (Dec 2013-August 2014):** Worked as Research Assistant in Department of Microbiology and Immunology, Faculty of Medicine and Health Sciences, UAE University, Al Ain for a project entitled "Investigations in to the role and function of Immunosuppressive cells in colorectal and breast cancers".

Techniques included:

- PBMC isolation from Tumour patients
- Histological Processing , Embedding, Cutting (Microtome) and Staining
- Immunofluorescence (Paraffin)(double colour)
- Cell culture
- FACS

3. **Junior Research Fellow (March 2013-May 2013):** Worked as Project Assistant in Genome Stability Department, Indian Institute of Science Education and Research, Thiruvananthapuram, India for a project entitled "Genetic analysis of crossover assurance mechanisms facilitating meiotic chromosome segregation".

4. **Research Assistant (July 2010 –August 2012):** Worked as Research Assistant in Department of Pathology, Faculty of Medicine and Health Sciences, UAE University, UAE for Sheikh Hamdan grant: "Prevalence of HPV in Cervical Cancer among United Arab Population".

- DNA Extraction
- Real time PCR
- Fluorescent and Biotin In situ hybridisation

- Immunohistochemistry/Immunofluorescence

5. **Research Assistant (April 2010-July 2010):** Worked as Volunteer, in Department of Pharmacology, Faculty of Medicine and Health Sciences, UAE University, UAE for a period of 3 months.
6. **Research Associate in Plant Virology (Nov2005- Aug2007):** Worked in Indian council of Agricultural research-APCESS FUND scheme entitled "Development of molecular diagnostic techniques for the early detection of Indian Cassava Mosaic disease" from Nov 2005 to Aug 2007 in Central Tuber Crops Research Institute (C T C RI), Trivandrum, Kerala, India.
7. **Clinical Laboratory Analyst, Vivek Laboratories, Nagercoil, India (June 2004- Nov2005)**
 - Diagnosis of Diseases like HIV, MTb, Dengue ,Hepatitis, using REAL TIME PCR
 - Serology(Fully Automated ELISA Processor, manual all ELISA techniques)
 - Cytogenetics (Human Karyotyping)

Conferences, Seminar and Workshops attended:

1. Has successfully completed the training program in online lab safety training developed by central labs, university of Sharjah, , 29.04.2019
2. Participated in the training in Confocal microscope , SIMR ,
3. Participated in the operator training for ABI -QUANT STUDIO –Flex 7 Real Time PCR
4. Attended the tissue engineering Symposium, Feb 6, 2017 at University of Sharjah.
5. Participated in the Abcam seminar held at university of Sharjah – Sharjah institute for medical research on 6thFeb 2019
6. Participated in the operator training for Rotor Gene-3000 Real time PCR Machine (National Distributors of Corbett Research Australia
7. Attended the Neuroscience Conference held in UAE University on 7-9th February 2012.
8. Attended the educational Activity titled Current Trends in Pharmaceuticals and Biotechnology provided by Arab health held in Dubai, UAE on 20 – 22nd April 2009

9. Attended International Seminar on 2nd Pan Arab Genetic Conference held in Dubai from 22 November - 24th November 2007
10. Attended National Seminar on Marine Biodiversity as a source of food and medicine. One day State level Seminar on Ethics of Biotechnology.
11. National Conference on frontiers in Biotechnology and Molecular Medicine Indian Society of Blood Transfusion and Immunohaematology 27th-29th National Conference 2004.
12. Participated in workshop attended at Sri Ram Chandra Medical College in Nucleic acid Testing Fluorescent In situ Hybridization
13. Participated in the job training programme in Biotechnology

Professional Membership

- Journal of Root Crops of Society, Trivandrum.

Awards and Achievements:

- Indian Council of Agricultural Research (I C A R) fellowship for Research and Development Nov 2005

Computer skills:

1. MS Office Suite
2. Adobe software suite
3. Internet tools and Communication

PUBLICATIONS (Peer- reviewed):

1. LaraBou Malhab, Maha saber- yad , Ranyah Al Hakam, **Vidhya A Nair** , Gian Franco Pintus and Wael M Abdel – Rahman. The role of vascular inflammation in cancer development and metastasis, 'Current Pharmaceutical Design" , IF 2.5;, Manuscript Type : Review article ;" Current Pharmaceutical Design, 2020

2. **Vidhya A Nair**, Satu Valo, Paivi Peltomaki, Khuloud Bajbouj and Wael M. Abdel-Rahman. Oncogenic Potential of Bisphenol A and Common Environmental contaminants in Human Mammary epithelial cells *Int J.Mol. Sci.* 2020.
3. **Vidhya A Nair**, Noura A Al-khayyal, Sivaramakrishnan sivaperumal and Wael M Abdel-Rahman. Calponin 3 promotes invasion and drug resistance of colon cancer cells. *World J Gastrointestinal Oncology*, 2019 Nov 15; 11(11): 971–982. 2019 Nov 15. doi: 10.4251/wjgo.v11.i11.971
4. Alam F, Mezhal F, El Hasasna H, Nair VA, Aravind SR, Saber Ayad M, El-Serafi A, Abdel-Rahman WM. The role of p53-microRNA 200-Moesin axis in invasion and drug resistance of breast cancer cells. *Tumour Biol.* 2017 Sep;39(9):1 -11. 1010428317714634. doi: 10.1177/1010428317714634
5. Wael M Abdel-Rahman, Noura A. Al-khayyal, **Vidhya A Nair**, Aravind S.R., Maha Saber-Ayad. Role of AXL in invasion and drug resistance of colon and breast cancer cells and its association with p53 alterations. *World J Gastroenterology.* 2017, 23(19):3440-3448.
6. Amr AM, Takruri HR, Shomaf MS, Alhaj OA, Faris MA-IE, Abdel-Rahman WM. (**Ms Vidhya acknowledged**) Fermented Camel (*Camelus dromedarius*) and Bovine Milk Attenuate Azoxymethane-induced Colonic Aberrant Crypt Foci in Fischer 344 Rats. *Pakistan J Nutrition*, 15 March, 2018, 17:4, Pages 179-189.

PUBLICATIONS (communicated):

1. Maha Mohamed Saber-Ayad, Amina Laham, Fatema Omar, Dana Zaher, Arya Vinod, **Vidhya Nair**, Maha Guimei, Lara J Bou Mahlab, Shaista Manzoor, Hany Omar, Wael M Abdel-Rahman. The Anti – diabetic Glucagon -like peptide 1 receptor agonist inhibits the proliferation of breast cancer cells by suppressing the AKT/NFKB and MAPK Pathways. Paper submitted April 24th April 2020
2. Almarzooq, Farah; Hamad, Mohamad; Srinivasulu, Vunnam; Omar, Hany; Zaher, Dana; Hersi, Fatema; Khanfar, Monther; Elawady, Rafat; **Nair, Vidhya**; hunnikannan, Hema. Discovery of First-in-Class Molecules Which Rapidly Eradicate Methicillin-Resistant *Staphylococcus aureus* (MRSA) and Persister Cells without Detectable Resistance or Toxicity; Al-Tel, Paper submitted April 2019.

Abstract publications in Conferences Proceedings:

1. Wael M Abdel-Rahman, **Vidhya A Nair**, Noura A. Al-khayyal. Calponin 3 (CNN3) promotes epithelial to mesenchymal transition and drug resistance of colon cancer cells. 25th biennial European Association for Cancer Research Congress, Amsterdam, The Netherlands, 30 June-3 July, 2018 (Accepted).
2. Wael M. Abdel-Rahman, Aravind S.R., **Vidhya A Nair**, Khuloud Bajbouj, Satu Valo, Päivi Peltomäki. Environmental toxins can transform mammary cells and induce chemo-resistance in breast cancer via multiple mechanisms. 25th biennial European Association for Cancer Research Congress, Amsterdam, The Netherlands, 30 June-3 July, 2018 (Accepted).
3. Salam Dakalbab, Safa Hussein, Sharifa Almannaei, Abdel-Rahman Wael M. HLM006474, a novel molecule for targeting apoptosis in colorectal cancer cells. 6th United Arab Emirates Undergraduate Research Conference. 30 April 2018, Abu Dhabi University, UAE. Winner of the best presentation. Also Winner in the CHS, UoS Research Forum. (**Vidhya A Nair acknowledged**)
4. Dissecting the mechanisms of anticancer activity HLM006474 against colorectal cancer cells using global genomic approach. Winner in the CHS, UoS Research Forum. (Vidhya A Nair acknowledged)
5. Nesreen Alkhofash, Abdel-Rahman WM and Mawieh Hamad, The Role of Iron Regulatory Proteins in Colorectal Cancer Development and Progression Fourth UAE Graduate Students Research Conference (GSRC 2018). April 21, 2018, American University of Sharjah, UAE. (**Vidhya A Nair acknowledged**)
6. Bodoor Naser Yaseen, Muhammad Sayah Kalla, Nour Abdul Rahman Aljabi, Sabrina Hesas, Aravind S.R., Abdel-Rahman WM, (**Vidhya A Nair acknowledged**)
7. Elucidation of cell death mechanisms of novel molecule MPT-0B014 in colorectal and breast cancer. 5th United Arab Emirates Undergraduate Research Conference. 8th May 2017, Abu Dhabi University, UAE. Winner in the UoS Research Forum.
8. Abdel-Rahman WM, Aravind S.R., **Nair VA**, Caroline AT, Ahmed S, Analysis of the Pathways to Colorectal Carcinogenesis by Bisphenol A. The 9th Dubai International Conference for Medical Sciences. Dubai, UAE. 14-16 December 2016. Winner of the Best Poster Prize.

9. Abdel-Rahman WM, Al-khayyal NA, **Nair VA**, Ayad MS. Role of AXL in invasion and drug resistance of breast and colon cancer cells. 24th biennial European Association for Cancer Research Congress, Manchester-UK, 9 -12 July, 2016
10. Abdel-Rahman WM and **Nair VA**. Study of the Role of Common Environment Toxins in Induction of Breast and Colon Cancer and the Underlying Molecular Mechanisms. International Conference on Biodiversity and Biotechnology, Bharathidasan University & Periyar Maniammai University, Tamilnadu, India. 25 – 27 Feb, 2016.
11. Significance of galanin expression in Caspase-8 mediated apoptosis. Ghanim MJ, ElMekrsh AM, AlDulaimy BN, Al-Rawi HB, **Nair VA**, Manzoor S, Abdel-Rahman Wm, Saber Ayad M. College of Medicine Research week, 2016. Sharjah, UAE.

Acknowledged in MSc Thesis:

1. Alya Rashid Dughaish Al Nuaimi, Insights into the Role of L-Caldesmon, DDR1 and DDR2 in Colorectal and Breast Carcinomas (supervisor Dr Wael Hassan), June 2018.
2. Nesreen Al Khofash, The Role of Iron Metabolism Markers in Colon Cancer Development and Progression, Supervisor: Dr Wael Abdel-Rahman Hassan, co-supervisor: Dr Mawieh Hamad, Jan 2018.
3. Shirin Ali ,Study of the Expression and Function of HSP60 in Colon Cancer, Supervisor: Dr. Wael Abdel-Rahman Hassan
4. Fatema Omar Ahmed Rashed Al Nuaimi , Effect of Glucagon –like Peptide – 1 receptor agonist Exendin -4 on Proliferation of breast cancer cells . Supervisor: Dr. Maha Mohamed Saber Ayad.

References:

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