

## CURRICULUM VITAE

### **Prof (Dr). RAVINDRAN ANKATHIL**

(Former Prof. of Genetics, Universiti Sains Malaysia)

Scientist G

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Jubilee Mission Medical College & Research Institute

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### **EDUCATIONAL QUALIFICATIONS**

✚ M.Sc. Post-graduate degree (Major: Genetics) in First Class from University of Kerala, INDIA in 1977.

✚ Ph.D degree from University of Kerala, INDIA in March 1992.

Topic: Chromosome abnormalities in human malignant neoplasms and their clinical significance

### **EMPLOYMENT DETAILS**

✚ Working as Senior Research Scientist G, Jubilee Centre for Medical Research, Jubilee Mission Medical College and Research Institute, Thrissur, Kerala, India from 01-09-2021 onwards-continuing.

✚ Worked as Professor of Genetics, Cytogenetics Consultant and Laboratory Director of ISO 15189 certified and ASDG accredited Genetics Laboratory in Human Genome Centre, School of Medical Sciences, Health Campus, Universiti Sains Malaysia (USM), Kelantan, Malaysia from 24-1-2006 until 30-06-2021.

✚ Worked as Additional Professor in the Division of Cancer Research, Regional Cancer Centre, Trivandrum, India, from 01-07-2003 to 22-1-2006.

✚ Worked as Associate Professor in the Division of Cancer Research, Regional Cancer Centre, Trivandrum, India from 25-3-1998 to 30-06-2003.

✚ Worked as Assistant Professor in the Division of Cancer Research, Regional Cancer Centre, Trivandrum, India from 15-10-1993 to 24-3-1998.

✚ Worked as Scientific Officer in the Division of Cancer Research, Regional Cancer Centre,

Trivandrum, India from 23-3-1985 to 14-10-1993.

- ✚ Worked as Senior Research Fellow in a research project (funded by the Dept. of Atomic Energy, Govt. of India) entitled “Development of an immune diagnostic method for the early detection of oral cancer” at the Regional Cancer Centre, Trivandrum, India from 1982 to 1985.
- ✚ Worked as Junior Research Fellow in a research project (funded by the Dept. of Atomic Energy, Govt. of India) entitled “Detection, isolation and purification of a tumour associated antigen in human oral cancer” at the Regional Cancer Centre, Trivandrum, India from 1979 to 1982.

**AREA OF RESEARCH:** Genetics, Genomics and Epigenetics of human cancer

## **RESEARCH AND TEACHING EXPERIENCE**

1. Twenty-four (24) years of experience in cancer research, clinical cytogenetics teaching and services under various positions as Asst. Professor, Associate Professor, Additional Professor in the Research Division of Regional Cancer Centre, Trivandrum, India.
2. Fifteen (15) years of experience as Professor of Human Genetics, involved in teaching and research on Medical Genetics (mainly Cancer Genetics research) and as Laboratory Director and Consultant for Clinical Cytogenetics services in the Human Genome Centre, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, Kelantan, Malaysia.
3. Twenty one (21) months of experience in Human Genetics, Epigenetics, Genomics, Pharmacogenetics research especially on Cancer Genetics research at Jubilee Mission Medical College and Research Institute, Thrissur, Kerala, India.

No. of research publications in National/International Journals: **273**

No. of chapter contributions in books: **13**

No. of books published: **4**

No. of abstracts presented in National/International Conferences: **227**

No. of Invited guest lecturers in CME/ conferences/seminars /workshops: **65**

## **RESEARCHER ID DETAILS**

<http://orcid.org/0000-0003-3080-415X>

<http://www.researcherid.com/rid/E-5644-2011>

<https://scholar.google.com/citations?hl=en&user=ejoFXsMAAAAJ>

[https://www.researchgate.net/profile/Ravindran\\_Ankathil2](https://www.researchgate.net/profile/Ravindran_Ankathil2)

<http://www.scopus.com/authid/detail.url?authorId=7003992030>

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## AWARDS AND HONOURS

- Recipient of Indra Vasudevan Award of the Indian Association of Biomedical Scientists (IABMS) in 1993, for Cancer Research.
- Recipient of Raja Ravi Sher Singh Award of the Indian Council of Medical Research (ICMR) in 1996, for Cancer Research.
- Fellow of the Indian Association of Biomedical Scientists (FIABMS).
- Biographical profile included in International Directory of distinguished leadership, 8<sup>th</sup> edition, 1998 by American Biographical Institute Inc., USA.
- Recipient of UICCY amagiwa-Yoshida (YY) International Cancer Study Fellowship Award in 1999.
- Biographical profile included in Marquis Who's Who in the World (18<sup>th</sup> Edition New York, 2000).
- Fellow of the International Union against Cancer (UICC).
- Member, Academic Advisory Board, for Austral-Asian Journal of Cancer.
- Peer reviewer of UICC-ICRETT Fellowship applications from 2001 onwards.
- Citation in 2000 outstanding Scientists of the 21<sup>st</sup> Century by International Biographical Centre, Cambridge, UK, 2001.
- Biographical profile included in 2000 outstanding Intellectuals of the 21<sup>st</sup> century, First Edition 2001 International Biographical Centre, Cambridge, UK.
- Biographical profile included in 1000 World Leaders of Scientific Influence by American Biographical Institute Inc. USA, 2001.
- Recipient of UICC International Cancer Technology Transfer (ICRETT) fellowship Award in 2001.
- Recipient of Indian Council of Medical Research (ICMR) Award for Biomedical Research conducted in underdeveloped areas, in 2002.
- Recipient of WHO-IARC visiting scientist fellowship to work at International Agency for Research on Cancer, Lyon, France, in 2002.
- Recipient of Dr. Premnath Wahi Award for research work in Cytology and Preventive Oncology

from the Indian Council of Medical Research (ICMR) in 2003.

- Recipient of Dr.S.Vasudev award for the best project completed under Scientific Research Scheme from the Kerala State Council for Science, Technology and Environment, Govt.of Kerala, India, in2004.
- Recipient of Dr.S.Vasudev award for the best project completed under Scientific Research Scheme from the Kerala State Council for Science,Technology and Environment, Govt.of Kerala, India, in 2006.
- Recipient of UICC Yamagiwa-Yoshida (YY) International Cancer Study Grants Fellowship Award in 2006.
- Recipient of Rashtriya Rattan Award and Gold Medal along with certificate of Medical Excellence from the International Study Circle, New Delhi, India, in 2006
- Main supervisor for the Young Scientist Award work of the student Ms.SheejaV.R.,at the 18<sup>th</sup> Kerala Science Congress, organized by Kerala State Dept.of Science and Technology, India, in January2006.
- Main supervisor for the Young Scientist Award work of the student Ms.Vijayalekshmi at the International Conference on Zoology, organized by Academic Staff College and Dept. of Zoology, University of Bangalore, India, in November 2006.
- Main supervisor for the best Young Scientist Award work of Ms.SreejaL.,at the XXXII Annual Conference of Indian Society of Human Genetics and International Symposium on Deconstructing Human Diseases –The Genomic Advantage, organized by Indian Institute of Chemical Biology, Kolkata, India, in February 2007.
- Recipient of National Institute of Health (NIH) Fellowship award and Diploma by Division of Cancer Prevention, U. S.Dept.of Health and Human Services, to work at the National Cancer Institute (NCI). Bethesda, Maryland, USA in 2007.
- Main supervisor of the best Oral Presentation by Young Investigator Award wonby Mr.Nizam Zahary at the3<sup>rd</sup> Regional Conference on Molecular Medicine (RCMM), May2-4,2009, Kota Bharu, Malaysia.
- Main supervisor of the best Poster Presentation Award in Clinical Medical category won by Ms.Norhidayah, at the14<sup>th</sup> National Conference on Medical and Health Sciences (NCMS),May 21-22,2009, Kota Bharu, Malaysia.
- Main supervisor of the best Oral Presentation (first prize) won by Ms.Siti Nurfatimah, at the 8<sup>th</sup> Malaysian Genetic Congress, August 4-6, 2009, Pahang, Malaysia.
- Main supervisor of the best Oral Presentation (third prize) won by Mr.NizamZahary, at the 8<sup>th</sup>

Malaysian Genetic Congress, August 4-6, 2009, Pahang, Malaysia.

- Main supervisor for the best Young Scientist Award work of the student Mr. Praveen Kumar B.R., at the 22<sup>nd</sup> Kerala Science Congress, organized by Kerala State Dept. of Science and Technology, India, in January 2010.
- Main supervisor of the best Oral Presentation (first prize) won by Ms. Siti Nurfatimah, at the 2<sup>nd</sup> National Conference on Environment and Health 2010, March 17-18, 2010, Kota Bharu, Malaysia.
- Recipient of Anugerah Hadiah Sanjungan, Universiti Sains Malaysia, 2010.
- Peer reviewer for British Council's INSPIRE project, 2010.
- Reviewer of UICCY amagiwa-Yoshida (YY) International Cancer Study Grants Fellowship applications from 2010 onwards-continuing (review of an average of 5 fellowships per year).
- Main supervisor for the best Oral Presentation (first prize) won by Mr. Suzairi Mohd Shafi'i, at the 1<sup>st</sup> National Postgraduate Conference on Molecular Medicine (NPCMM), April 13 – 14, 2011, Kota Bharu, Malaysia.
- Main supervisor for the best Poster Presentation (third prize) won by Mr. Aminudin Mustapha, at the 16<sup>th</sup> National Conference on Medicine and Health Sciences (NCMHS), June 22-23, 2011, Universiti Sains Malaysia, Kota Bharu.
- Panel Member of Research Review Board of School of Medical Sciences, USM
- Recipient of Anugerah Sanggar Sanjung, Universiti Sains Malaysia, in 2011 (for Kategori Penerbitan Jurnal in year 2010).
- Recipient of Anugerah Perkhidmatan Cemerlang (Excellent Service) Universiti Sains Malaysia, in 2011 (for year 2010).
- Recipient of Anugerah Sanggar Sanjung, Universiti Sains Malaysia, in 2012 (for Kategori Penerbitan Jurnal in year 2011).
- Main supervisor for the best Poster Presentation (second prize) won by Ms. Marjanu Hukmah, at the 17<sup>th</sup> National Conference on Medicine and Health Sciences (NCMHS), May 27 – 28, 2012, Universiti Sains Malaysia, Kota Bharu.
- Recipient of Hadiah Sanjungan, Universiti Sains Malaysia, in 2012 [for Kategori Penerbitan Jurnal in year 2011 (co-author: Siti Nurfatimah Mohd Shahpudin)].
- Recipient of Hadiah Sanjungan, Universiti Sains Malaysia, in 2012 [for Kategori Penerbitan Jurnal in year 2011 (main author: Gan Siew Hua)].

- Recipient of Hadiah Sanjungan, Universiti Sains Malaysia, in 2012 [for Kategori Penerbitan Jurnal in year 2011 (main author: Zilfalil bin Alwi)].
- Recipient of Travel Grant Award to attend 12<sup>th</sup> Asian Society of Clinical Pathology and Laboratory Medicine (ASCPaLM 2012) at Kyoto, Japan, Nov-Dec 2012.
- Main supervisor for a recipient of Travel Grant Award (Mr. Mohd. Nizam Zahary) to attend and present a paper in the 12<sup>th</sup> Asian Society of Clinical Pathology and Laboratory Medicine (ASCPaLM2012) Meeting held at Kyoto International Conference Centre, Kyoto, Japan, Nov 29 to Dec 1, 2012.
- Reviewer for USM RU grants final project reports
- Main supervisor for a recipient of Travel Grant Award (Mr Anthony Au Zian Liang) to attend and present a paper at 11<sup>th</sup> Annual Meeting of Japanese Society of Medical Oncology. Sendai, Japan, 29-31 August 2013.
- Main supervisor for a recipient of Travel Grant Award (Ms. Marjanu Hikmah Elias) to attend and present a paper at 11<sup>th</sup> Annual Meeting of Japanese Society of Medical Oncology. Sendai, Japan, 29-31 August 2013.
- Main supervisor of Young Investigator Encouragement Award won by Ms. Marjanu Hikmah Elias for the paper presented at 11<sup>th</sup> Annual Meeting of Japanese Society of Medical Oncology. Sendai, Japan, 29-31 August 2013.
- Main supervisor for the best Oral Presentation award (third prize) won by Mr Tan Shing Cheng, at the 19<sup>th</sup> National Conference on Medical and Health Sciences (NCMHS), 7 – 8<sup>th</sup> September, 2014, PPSG, University Sains Malaysia.
- Main supervisor for a recipient of Travel Grant Award based on scholastic merit won by Mr. Tan Shing Cheng, to attend and present a paper at 11<sup>th</sup> Malaysian Genetics Congress 2015, Aug 12-13, Perdana University Serdang, Malaysia.
- Main supervisor of the best Ph D thesis award 2014 of Universiti Sains Malaysia, won by Dr Mohd Nizam Zahary.
- Main supervisor of the best MSc thesis award 2014 of Universiti Sains Malaysia, won by Mr Anthony Au Zian Liang.
- Recipient of VIFRA 2015 Lifetime Achievement Award for the contribution and achievement in the field of Genetics from Venus International Foundation, India (Research Awards – VIFRA 2015)
- Main supervisor for a recipient of Travel Grant Award (Ms Marjanu Hikmah Elias) to attend

and present a paper at the 14<sup>th</sup> Annual Meeting of Japanese Society of Medical Oncology. Kobe, Japan, July 29-31, 2016.

- Main supervisor for the best Oral Presentation award ( third prize ) won by Mr. Ahmad Aizat Abdul Aziz at the 21<sup>st</sup> National Conference on Medical and Health Sciences (NCMHS ),17-18 October, 2016, PPSG, University Sains Malaysia.
- Recipient of Travel Grant Award in recognition of the outstanding quality, originality and significance of the paper submitted to the 24<sup>th</sup> Asia Pacific Cancer Conference in Seoul, South Korea, June 22- 24, 2017
- Main supervisor for a recipient of Travel Grant Award (Mr Ahmad Aizat Abdul Aziz ) to attend and present a paper at the 2017 Japanese Society of Medical Oncology Annual Meeting in Kobe, Japan, July 27- 29, 2017.
- Recipient of Travel Grant Award in recognition of the outstanding quality and originality of the Paper submitted to the 2017 Japanese Society of Medical Oncology Annual Meeting in Kobe, Japan, July 27- 29, 2017.
- Selected as Associate Member of World Academy of Sciences, 2018
- Main supervisor of the best M Sc thesis award 2018 of Universiti Sains Malaysia , won by Ms. Maziras Makhttar
- Main supervisor for a recipient of Travel Grant Award (Ms. Siti Mariam Ismail) to attend and present a paper at the 2019 Japanese Society of Medical Oncology Annual Meeting in Kyoto, Japan, July 18-20, 2019.
- Main supervisor for a recipient of Travel Grant Award (Dr. Ahmad Aizat AA ) to attend and present a paper at the 12<sup>th</sup> Meeting of Korean Society of Medical Oncology and 2019 International conference at Seoul, South Korea November 7 – 8, 2019.
- External Assessor for evaluating the quality, impact and standing of the research portfolio of Dr.Plackal Adimuriyil George, under south Africa's National Research Foundation
- External reviewer for two CSUR research proposals under the National Research foundation (NRF) of the Department of Science and Technology, Government of South Africa
- Recipient of Best Poster Award at the 46<sup>th</sup> Annual Meeting of Korean Cancer Association and the 6<sup>th</sup> International Cancer Conference held on Nov 12- 13, 2020. Seoul, South Korea.
- Recipient of the QIAGEN dPCR Learn and Earn Series Research Grant Competition Award, 2020

**Peer reviewer of research manuscripts for the following international scientific journals**







- British Journal of Cancer
- British Journal of Haematology
- International Journal of Cancer
- Singapore Medical Journal
- Journal Biotechniques
- Journal Carcinogenesis
- Journal Anticancer Therapy
- Journal Molecular Diagnostics
- Journal Future Oncology
- Journal Archives of Orofacial Sciences
- International Journal of Tobacco Use Insights
- International Journal of Genetics and Molecular Biology
- International Journal of Oncology
- Journal of Biomedicine and Biotechnology
- Journal of Molecular Biology Reports
- International Journal of Medicine and Medical Sciences
- African Journal of Biotechnology
- BMC cancer
- Journal of Clinical and Experimental Gastroenterology
- Indian Journal of Medical Research
- European Journal of Cancer
- Tumor Biology
- Journal of Gastroenterology and Hepatology Research
- BMC Genomics
- International Journal of Biochemistry Research and Review
- Basic Research Journal of Medicine and Clinical Sciences
- African Journal of Traditional, Complementary and Alternative Medicine.
- African Journal of Health Sciences
- Clinical Medicinal Chemistry
- Leukemia Research
- Cancer Cell International
- Advances in Genomics and Genetics
- Journal of Human Genetics
- British Medical Journal Open ( BMJ open)
- Journal of Leukemia
- The Applications of Clinical Genetics
- Journal of Cancer Biomarkers
- Current Synthetic and Systems Biology



- Journal Diagnostic Cytopathology
- Journal of Pharmacogenomics and Pharmacoproteomics
- Journal Cancer Medicine
- Journal Medicine
- Molecular Medicine
- Journal of Current Molecular Medicine
- Molecular Medicine and Genomics Medicine
- Molecular and Clinical Oncology
- Cancer chemotherapy and Pharmacology
- Journal of Genetic Syndromes and Gene therapy
- Journal Scientific Reports
- Cancer Genetics
- Digestive Diseases and Sciences
- Journal of Clinical Laboratory Analysis
- Journal Oncotargets and Therapy
- Asian Pacific Journal of Cancer Prevention
- Asian Haematology Research Journal
- Journal of Experimental and Clinical Cancer Research
- Malaysian Journal of Pathology
- Journal of Medical Science Monitoring
- Journal of Biomedical and Clinical Sciences
- Oncotargets
- Pharmacogenomics and Personalized Medicine
- Pharmacogenomics
- Personalized Medicine
- Turkish Journal of Gastroenterology
- Gene Medicine
- Journal of Bioscience Reports
- Journal of Targeted Oncology
- Journal Biomarkers in Medicine
- Journal Current Drug Targets
- Current Women's Health Reviews
- BMS- CCTR
- Current Cancer Drug Targets
- Current Drug Metabolism
- Journal of Current Pharmacogenetics and Personalized Medicine
- Precision Clinical Medicine
- Journal of Clinical Oncology and Cancer Research
- Journal Clinical Laboratory Analysis
- journal Molecular Medicine Reports

- Journal of Cancer Research and Therapeutics
- Journal Technology in Cancer Research and Treatment
- Genetic Testing Molecular Biomarkers
- Malaysian Journal of Human Genetics
- Oncology Reports
- Oncology Letters
- Aging
- Journal Archives of Medical research
- Journal of BioMedical Reports
- Journal of Biotechnic and Histochemistry
- World Journal of Clinical Cases
- World Journal of Hepatology
- World journal of Gastroenterology
- PLOS One
- Journal BMC Infectious Diseases
- International Journal of Molecular Medicine
- Journal BioMed Research International
- Meta Gene
- International Journal of Immuno Pathology and Pharmacology
- European Journal of Gynaecological Oncology
- Journal of Biomarkers in Medicine
- International journal of Clinical Practice.

#### **Editorial board member**

-  International Journal of Tobacco Use Insights
-  Journal of Gastroenterology and Hepatology Research
-  World Journal of Medical Genetics
-  American Journal of Current Genetics
-  Journal of Human and Clinical Genetics
-  European Journal of Gynaecological Oncology

#### **Scientific Peer reviewer of research project proposals for**

- Indian Council of Medical Research (ICMR)
- Govt of India Dept. of Science and Technology
- Kerala State Dept. of Science and Technology, India
- Gujarat Council on Science and Technology, India
- Govt. of India. Dept. of Biotechnology
- Dept of Biotechnology, Government of West Bengal, India

- Universiti Sains Malaysia, ( Short term and RUI grants )
- Government of Malaysia (FRGS grants, ERGS, PRGS grants etc)
- The Wellcome Trust / Dept of Biotechnology India Alliance Fellowship
- Council of Science and Technology, Biotechnology Scheme, Govt of Uttarpradesh, India.
- National Research foundation, Dept of Science and Technology, Govt of South Africa

## **PROFESSIONAL TRAINING**

- Training on Human Cytogenetics Techniques at the Cytology Research Centre (Institute of Cytology and Preventive Oncology), NewDelhi, 1981.
- Participated in the Workshop on Monoclonals in Experimental and Clinical Oncology at Cancer Institute, Madras, 1985.
- Participated in the Indo US workshop on Viruses and Human Cancers at Amala Cancer Research Centre, Thrissur, 1986.
- Short term course on Computer Applications at the Institute of Human Resources Development for Electronics, Trivandrum, 1988.
- Higher training in Radiation Biology and Radiation Cytogenetics at Kasturba Medical College, Manipal, 1989.
- Participated in the Indo US workshop on Molecular Cytogenetics at Kidwai Memorial Institute of Oncology, Bangalore, 1990.
- Participated in the DAE & DST Sponsored National Workshop on Applications of Biotechnology in Medicine at Medical College, Thrissur, 1992.
- Participated in the National Workshop on Molecular Genetics at BJ Medical College, Pune, 1993.
- Participated in the National Workshop on Recent Trends in Immunohistochemistry at Tata Memorial Hospital, Bombay, 1994.
- Participated in the Third National Workshop on Prenatal Diagnosis and Therapy at Assisted Reproductive Centre, Bangalore, 1994.
- Training on Molecular Biomarkers in the WHO & IARC sponsored International Course on Molecular Biomarkers in Environmental Cancer Epidemiology at Shanghai (PRChina), 1996.
- Training on Molecular Genetic Techniques at the Laboratory of Radiation & LifeSciences, Nagasaki University, Japan, 1997.

- Participated in International Workshop on Human Chromosome 21 at MaxPlanck Institute Berlin, Germany, 1997.
- Participated in the Govt. of India Dept. of Biotechnology sponsored Winter School on Human Genetics: Concepts, Paradigms and Methods, at Indian Institute of Chemical Biology, Calcutta, India, 1998.
- Participated in the Hands on workshop on Fluorescence *In Situ* Hybridization (FISH) sponsored by Durbara Singh & Sons, India in collaboration with Vysis Inc. USA, in 1998.
- UICCYamagiwa-Yoshida International Cancer Study Fellowship training at Department of Medical Genetics, St. Mary's Hospital, University of Manchester, Manchester, U.K., 1999.
- Higher training on modern techniques in Radiation Cytogenetics and Molecular Cytogenetics at National Institute of Radiological Sciences (NIRS), Chiba, Japan, 2000.
- Participated in the DNA Microarray Technology workshop at Indian Institute of Science, Bangalore, 2001.
- UICC International Cancer Technology Transfer (ICRETT) Fellowship training at Unit of Genetic Epidemiology, International Agency for Research on Cancer IARC), Lyon, France, 2002.
- Participated in the British Council sponsored Workshop on Human Population Genetics at Universiti Sains Malaysia, Malaysia, in February 2006.
- Participated in the Demonstration training on Comparative Genomic Hybridization by Leica at Human Genome Center, USM, in October, 2006
- Participated in the 11<sup>th</sup> workshop on Problem-based learning-Tutor skills development at School of Medical Sciences, USM, in November 2006.
- Participated in NCI Summer Curriculum in Cancer Prevention and Molecular Prevention course, sponsored by the U. S. Dept. of Health and Human Services, National Institutes of Health/ National Cancer Institute, Bethesda, Maryland, USA, from July to August, 2007.
- Participated in the 7<sup>th</sup> Dr Ranjeet Bhagwan Singh Technical workshop on RNAi and Human Diseases, University of Malaya, Kuala Lumpur, Dec 11-14, 2007.
- Participated in the workshop/ meeting on “Hereditary Breast and Ovarian Cancer in Asia– Executing the Challenge ”and “Asian Breast Cancer Research meeting” at Prince court Medical Centre and University of Malaya, Kuala Lumpur, Nov 14-15, 2008.
- Participated in the “Asia Pacific Cytogenetics Use Summit 2009 – The new Cytogenetics Era and Molecular Karyotyping” at Singapore, May 6-8, 2009.

- Participated in the INFOQUEST workshop (OVID and OCLC Net library) at USM Health Campus, July 13-15, 2009.
- Participated in the Malaysian Genomics Research Centre (MGRC) in collaboration with SYNAMATIX workshop on Bioinformatics and Genomics for Medical Applications, at School of Medical Sciences, USM, June 3, 2010.
- Participated in HUSM in collaboration with Research Instruments Inc sponsored workshop on Application of Microarray Technology in Diagnostics, at Universiti Sains Malaysia, Malaysia on October 25-26, 2010.
- Participated in the 5<sup>th</sup> workshop on Medical student selection for PPSP, USM, 14<sup>th</sup> April, 2011.
- Participated in Next Generation Sequencing Asia Congress Workshop, 2011, at Singapore, October 3-4, 2011.
- Participated in the Scientific Writing workshop, at Universiti Sains Malaysia, Malaysia, October 9-10, 2011.
- Participated in the 6<sup>th</sup> workshop on Medical student selection for PPSP, USM, 23<sup>rd</sup> April, 2012
- Participated in the MGRC premium workshop on RNA – Seq , at MGRC training center, Kuala Lumpur, June 18 - 19, 2012.
- Participated in the 7<sup>th</sup> workshop on Medical student selection for PPSP, USM, May 7, 2013
- Participated in the Cytogenetics FISH workshop at Regional Cancer Center, Triandrum, India, from Nov 28 – Nov 30, 2013.
- Participated in the workshop/ seminar on “ Terranova in Cytogenetics – Haematology and Pathology applications” , at IMMB, UiTM, Kuala Lumpur, from March 17 – 19, 2014.
- Participated in the Bengkel Persediaan Pelaksanaan Dokumentasi & keperluan Dalam MS ISO 15189 version 2012. at School of Medical Sciences, University Sains Malaysia, on 26-3-2014.
- Participated in the 4<sup>th</sup> School of Medical Sciences Interviewer training Update , PPSP, USM, May 4, 2014
- Participated in MS ISO 15189 Workshop version 2012 – Gap Analysis on. 07-05- 2014., USM
- Participated in Workshop /Seminar on Genetic Medicine 101 – Genetics and Your Life, at USM, May 26-27, 2014.
- Bengkel Pemurnian and dokumen MS ISO 15189, at Hotel Perdana, Kota Bharu , June 26, 2014.

- Participated in the Tissue FISH Workshop organized by Human Genome Centre, in collaboration with Metasystems / Research Instruments , 9<sup>th</sup> March 2015.
- Participated in the 5<sup>th</sup> School of Medical Sciences Interviewer training Update , PPSP, USM, 23<sup>rd</sup> April, 2015
- Participated in 5<sup>th</sup> Asian Chromosome Colloquium (ACC5) held at Kasetsart University, Bangkok from 29<sup>th</sup> April to 1<sup>st</sup> May, 2015.
- Participated in the Workshop on Writing Genetics book for the Public, as part of knowledge Transfer Program (of Community development program) of USM, from 11<sup>th</sup> to 13<sup>th</sup> June, 2015.
- Participated in Manuscript Writing Workshop conducted by Human Genome Center, USM, from 29<sup>th</sup> to 30<sup>th</sup> October , 2015
- Participated in Metasystems XL ERB2 Tissue FISH probe Workshop organised by Research Instruments and Metasystems, at Human Genome Centre, PPSP USM KK from 6-7 November, 2017.
- Participated in the International Workshop on Human Chromosomes at Dept of Biochemistry, Govt University College, Trivandrum, India from 9 –10, January 2018.
- Participated in the International Seminar cum Workshop on Diagnostic Cytogenetics at Dept of Zoology, Govt Women's College, University of Kerala, Trivandrum, India from 4 – 5 September 2018
- Participated in the Workshop on Methods in Molecular Biology, at Universiti Sains Malaysia from 14 - 15, October, 2018
- Participated in Scientific Writing Workshop at Human Genome Centre, Universiti Sains Malaysia, 1-2, April, 2019
- Participated in the Workshop on Genomic Medicine , organized by Human Genome Centre, in collaboration with College of Paediatrics, Academy of Medicine, Malaysia from 14-15, October, 2019
- Participated in the workshop on SMART Financial Service delivery – Improving services an impacting change, at Universiti Sains Malaysia Main campus, Pulau Penang, 21- 22 October, 2019
- Participated in the Workshop on Crash Course on Scientific Writing and Publication for Young lecturers, at School of Medical Sciences, Universiti Sains Malaysia, 03 - 04 March 2020

## **Student's supervision of PhD and other Post Graduate degrees**

Approved supervisor for Ph D and M Sc degrees of

- ✚ University of Kerala (Kerala), India
- ✚ Annamalai University (Tamilnadu), India
- ✚ Universiti Sains Malaysia, Malaysia

No. of students registered for PhD : **25**

No. of students awarded PhD : **24**

## **EXAMINERSHIP**

- External examiner for Ph.D and M.Phil theses of
- Calicut University, (Kerala State, India)
- Mahatma Gandhi University (Kerala State, India)
- Bangalore University (Karnataka State, India)
- Osmania University, Hyderabad (Andhra Pradesh State, India)
- Rajiv Gandhi University of Health Sciences, Bangalore (Karnataka State, India)
- University of Mumbai, (Maharashtra State, India)
- Gujarat University (Gujarat State, India)
- Bharathiar University (Tamilnadu State, India)
- Amritha Viswa Vidyapeetham University, Kochi, Kerala State, India.
- Universiti Sains Malaysia, Malaysia
- University Malaya, Malaysia

No. of Ph.D theses evaluated (as external examiner and Chairman) : **27**

No. of M.Phil theses evaluated (as external examiner and Chairman) : **5**

No of theses examined as Internal Examiner for M Sc, M Med and Ph D students in USM: **17**

## **Supervising teacher for**

- MD/MS/MDS theses works of post graduate students of Trivandrum Medical College, Trivandrum Dental College etc. under Kerala University of Health Sciences, Kerala, India
- M.Sc dissertation project works of MSc. post graduate Biotechnology students of several Universities within and outside Kerala., India
- Master of Pathology Medical Genetics of USM, Malaysia - Dissertation supervisor - **3**  
Master of Pathology Medical Genetics of USM, Malaysia - Academic supervisor - **3**  
No. of Dissertation /M.Sc./ B Sc student project works supervised in India - **51**

## **MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS**

- Indian Association for Cancer Research (Life Member)
- Indian Society of Human Genetics (Life Member)
- Indian Association of Biomedical Scientists (Life Member)
- Society for Biotechnologists, India (Life Member)
- Genetics Society of Malaysia (Member)
- Human Genome Organization (HUGO) International Limited
- Malaysian Society of Human Genetics (Life member)
- World Academy of Sciences (Associate Member)
- Asian Society of Oncology ( Life Member )

## **INVESTIGATORSHIP OF RESEARCH PROJECTS (TOTAL: 52)**

### **List of investigator ship of successfully completed research projects**

1. Serum and tissue immunoglobulin levels as biological markers in solid tumours.  
(Dept. of Science & Technology, Kerala State, 1985-88).
2. Cytogenetic studies in haematological malignancies.  
(Dept. of Science & Technology, Kerala State, 1987-89).
3. Cytogenetic studies in children with congenital abnormalities.  
(SAT Hospital Endowment Fund, 1987-89).
4. Search for biological markers in premalignant and malignant lesions of oral cavity.  
(Indian Council of Medical Research, 1991-94).
5. Clinical significance of chromosome studies in multiple myeloma patients.  
(Dept. of Science and Technology, Kerala State, 1991-93).
6. Search for oncogenic viruses associated with human premalignant and malignant conditions of uterine cervix.  
(Indian Council of Medical Research, 1991-94).
7. Prognostic evaluation of nucleolar organizer region associated proteins (AgNORs) in premalignant and malignant oral lesions.  
(Dept. of Science and Technology, Kerala State, 1993-96).
8. Cytogenetic studies on Manic depressive psychoses patients.  
(Dept. of Science and Technology, Kerala State, 1992-94).
9. Reversion of Ph' chromosome positivity in chronic myeloid leukaemia by interferon treatment.



(Fulford Foundation India Ltd, 1994-99).

- 10.** Chromosome sensitivity studies in colon cancer families.  
(Dept.of Science & Technology, Kerala State, 1994-97).
- 11.** Chromosomal fragile sites and mutagen sensitivity studies in familial colorectal cancers.  
(Indian Council of Medical Research, 1995-98).
- 12.** Etiopathological studies in Hodgkin's disease with special emphasis to the role of Epstein - Barr virus.  
(Dept. of Science & Technology, Kerala State, 1996-99).
- 13.** Genetic susceptibility studies in breast/ovarian cancer families.  
(Dept.of Science and Technology, Govt.of India,1997-2000).
- 14.** Cytogenetic evaluation of genomic instability in Down syndrome patients with and without malignancies.  
(Dept.of Science & Technology, Kerala State, 1999-2002)
- 15.** Congenital anomalies of fetuses associated with high risk pregnancies-Methods of early detection.  
(Dept.of Science & Technology, Kerala State, 1999-2002).
- 16.** Cytogenetic studies on the effects of chronic low level radiation in the residents of high back ground radiation areas (HBRA) in Kerala, India.  
(Health Research Foundation, Japan).
- 17.** Cytogenetic and haematologic response studies of alpha interferon therapy in chronic myeloid leukemia patients.  
(Dept.of Science and Technology, Govt of KeralaState, 2002-05).
- 18.** Genetic polymorphism of glutathione S-transferase allele in myelodysplastic syndrome.  
(Indian Council of Medical Research, 2002-04).
- 19.** Prognostic evaluation of karyotypic changes and telomerase activity in preleukemic and leukemic conditions.  
(Indian Council of Medical Research, 2002-05).
- 20.** Cytogenetic effects of radio therapy in patients with carcinoma of uterine cervix.  
(Kerala State Committee on Science, Technology, Environment, Govt. of Kerala, 2004-07).
- 21.** Germline mutation analysis of BRCA2 gene in hereditary breast/ovarian cancer families in Kerala.  
(Indian Council of Medical Research, 2004-07).
- 22.** Role of xenobiotic metabolizing gene polymorphisms in lung cancer susceptibility.  
(Indian Council of Medical Research, 2005-08).

- 23.** Genetic susceptibility studies in lung cancer.  
(Dept.of Science and Technology, Govt.of India, 2005-08).
- 24.** Exploration of real-time PCR as a new diagnostic method for fragile X syndrome  
(Short Term Grant of Universiti Sains Malaysia, 2206-09).
- 25.** Influence of genetic variation of NFkB1A genotype in sporadic colorectal cancer susceptibility risk among 3 ethnic population subgroups of Malaysia.  
(Research University (RU) Grants,Universiti Sains Malaysia, 2008-11).
- 26.** A genome-wide study of allelic imbalance in sporadic colorectal carcinomas (CRC) among Malaysians (part of Cancer Research cluster on colorectal cancer).  
(Research University (RU) Grants,Universiti Sains Malaysia,2008-10).
- 27.** Molecular mechanisms of primary and secondary resistance to imatinib mesylate treatment in chronic myeloid leukaemia patients.  
(Fundamental Research Grants Scheme, Govt.of Malaysia,2008-11).
- 28.** Analysis of germline mutation spectra and abnormal protein expression profile of DNA mismatch repair genes in clinically diagnosed hereditary nonpolyposis colorectal cancer (HNPCC) patients in Malaysia–A multi centric study.  
(Research University (RU) Grants,Universiti Sains Malaysia,2008-10).
- 29.** Identification of predisposition genotypes that contribute to colorectal cancer susceptibility in Malaysia.  
(Fundamental Research Grants Scheme, Govt.of Malaysia, 2008-11).
- 30.** Genetic polymorphisms of inflammation response genes and their influence on colorectal cancer predisposition risk in Malaysian population.  
(Research University (RU) Grants,Universiti Sains Malaysia, 2009-11).
- 31.** Relevance of genetic polymorphism of thiopurine methyltransferase (TPMT) among the patients treated with 6-mercaptopurine (6-MP).  
(Collaborative research investigator in UiTM-funded project,2009-11).
- 32.** A randomized, multicenter, open-label, phase 3 study to compare the efficacy and safety of panitumumab and cetuximab in subjects with previously treated wild type K-ras metastatic colorectal cancer.  
(Amgen,2009)
- 33.** Influence of the TERT gene copy number status and its mRNA level in association with telomerase activity in chronic myeloid leukemia patients resistant to imatinib.  
(Research University (RU) Grants, Universiti Sains Malaysia,2010-13).
- 34.** Influence of multi drug resistance ATP binding cassette B1 (ABCB1) polymorphism in

mediating resistance to imatinib mesylate in chronic myeloid leukemia patients  
( Research University (RU) Grants, Universiti Sains Malaysia,2010-13).

35. Role of DNA hypermethylation-induced HOX gene silencing in the mediation of resistance to imatinib mesylate in chronic myeloid leukemia patients.  
( Research University (RU) Grants, Universiti Sains Malaysia,2010-13).
36. Germline epimutation analysis of MLH1 and MSH2 genes in Malaysian Lynch syndrome patients  
(USM short term grants,2012-14)
37. Imatinib mesylate treatment in Chronic myeloid leukemia ( CML ) patients -  
Understanding the fundamental pharmacokinetic and pharmacogenetic mechanisms for variation in response  
(Research Universit (RU) Grants, Universiti Sains Malaysia,2012-16)
38. Identification of MYH3 mutations and 22q11.2 deletion syndrome in patients with Atrial Septal Defects  
(Research University (RU) Grants, Universiti Sains Malaysia,2012-15)
39. Clinical relevance of efflux , influx and metabolizing enzymes in intra-extracellular Disposition of Imaitinibmesylate in Chronic Myeloid Leukemia patients  
( USM Grant APEX Delivering Excellence 2012 ( DE 2012 ),2012-15).
40. Understanding the causal relation between host genetic susceptibility factors and human papillomavirus infection in modulating cervical carcinogenesis.  
( Research University Grant, USM ,2013-16].
41. Novel approaches to detection of disease recurrence, risk reduction and improved management of Breast Cancer .  
(Research University Team ( RUT ) grant, Universiti Sains Malaysia,2013-17)
42. A genome-wide analysis of allelic imbalance in human papilloma virus ( HPV ) – mediated cancerous lesions of uterine cervix in Malaysian population.  
(Fundamental Research Grant Scheme ( FRGS ), Govt of Malaysia,2014-17)
43. Cytogenetic risk stratification for evaluating prognosis in multiple myeloma patients.  
(Grant under Science cluster, Universiti Sains Malaysia,2018-19).
44. Identification of genetic aberration in normal cytogenetic AML and correlation with clinico-biological parameters  
(Research University Grant funded by Universiti Sains Malaysia, 2016-20)
45. Associations of aerobic and anaerobic capacities, muscular performance and bone with peroxisome proliferator-activated receptor alpha( PPARα) intron 7 G/C polymorphism and vitamin D receptor (VDR) gene Bsm1 polymorphism in Malay

female athletes and non-athletes

(Research University Grant funded by Universiti Sains Malaysia, 2017-20)

46. Understanding the impact of VEGFR gene polymorphisms in modulating clinical response to imatinib mesylate treatment in Malaysian chronic myeloid leukemia patients.  
(Research University Grant funded by Universiti Sains Malaysia, 2018-21)
47. Molecular mechanism of synthetic plant microRNA in inhibiting chronic myeloid leukemia cells proliferation by targeting BCR-ABL gene  
(Fundamental Research Grants Scheme, Government of Malaysia, 2019-21)
48. Analysis of D-type Cyclin expression in colorectal cancer tissues in Malaysian population  
(Short term grant of Universiti Sains Malaysia, 2019-22)
49. Characterization of the MicroRNA expression signature associated with chemotherapy response, resistance and recurrence risk in Malaysian triple negative breast cancer (TNBC) patients.  
(Research University Grant funded by Universiti Sains Malaysia, 2019-22)

#### **List of investigatorship of ongoing research projects**

50. Determination of the MicroRNA expression dysregulation profile associated with HPV-mediated cervical cancer pathogenesis.  
(Fundamental Research Grants Scheme, Government of Malaysia, 2020-2023).
51. Elucidating the association of serum protein levels and genetic polymorphisms of *FABP4* with obesity and breast cancer risk in post-menopausal obese women.  
(Indian Council of Medical Research, 2023-26).
52. Elucidating the contribution of aberrant mRNAs and differentially expressed microRNAs of sperm RNA transcriptome to the etiopathogenesis of idiopathic male infertility and evaluating their potentials as novel diagnostic biomarkers.  
(Approved for funding by Dept of Health Research (DHR), Govt of India).

#### **LIST OF PUBLICATIONS (Last 5 Yrs)**

1. **Ravindran Ankathil**, Vinod S Nair, Anjana Ravindran, Ranjana Ravindran. Conspectus on nanotechnology in oral cancer diagnosis and treatment . Book chapter in “Multifunctional Systems for Combined Delivery, Biosensing and Diagnostics ( Ed by Alex Grumezescu, Elsevier Publishers). ISBN: 978-0-323-52725-5, pp 31- 49, 2017 .
2. Tan SC, Ismail MP, Duski DR, Othman NH, **Ravindran Ankathil**. Identification of optimal reference genes for normalization of qRT-PCR data in cancerous and non-cancerous tissues of uterine

cervix. *Cancer Investigation*; Vol 35 ( 3 ): 163- 173; 2017.

3. Tan SC, Ismail MP, Duski DR, Othman NH, **Ravindran Ankathil**. *Fas c.-671A>G* polymorphism and cervical cancer risk: a case-control study and meta-analysis. *Cancer Genetics*; 211: 18-25, 2017.
4. Mohd Nizam Zahary, **Ravindran Ankathil**, Maya Mazuwin Y, Sharifa Emilila T S, Gurjeet kaur. Protein expression profiles of DNA mismatch repair genes : Association with clinicopathological characteristics of Mmalaysian Lynch syndrome patients. *J Histotechnology* Vol 40 ( 1 ) : 13- 20;; 2017 .
5. Siti Maziras M, Azlan H, Aziz Baba A, **Ravindran Ankathil**. Association of *GSTM1*, *GSTT1*, and *GSTP1* Ile 105 Val polymorphisms with clinical response to imatinib mesylate treatment among Malaysian chronic myeloid leukemia patients. *Journal of Genetics* . Vol 96 ( 4 ) : 633- 639, 2017
6. AziatiAzwari A, Nik Mohd Zulfikri M Z, Siti Mariam I, Nurul Alia M N, Nazihzh M Y, Iluni Hayati I, Sarian S, Zilfalil B A, **Ravindran Ankathil** . Complex chromosomal rearrangement der(5) ins(5;3)(q31;q25q29), t(3;12)(q24;p12.2) in a dysmorphic child – A case report. *J Biomed & Clin Sciences* Vol 2: (1): special issue . Pp 49, 2017.
7. **Ravindran Ankathil** .*ABCB1* genetic variants in leukemias: Current insights into treatment outcomes. *Pharmacogenomics and Personalized Medicine*. Vol 10: 169- 181, 2017.
8. Foong Eva, Hasliani H, Azizah O, Ilunihayati I, Naziha M Y, Siti Mariam I, Nk Mohd Zulfikri MZ, Asraihan AM, Nurul Alia, N, **Ravindran Ankathil**, Zilfalil B A. Down syndrome and Patau syndrome in the same sibship: Random or not? *Malay J of Paediatrics and Child Health*. Vol 23(2): 2017
9. Ahmad Aizat AA, Md Salzihan MS, Ibtisam M, Bhavaraju VMK, Gan S H, **Ravindran Ankathil**. MicroRNA expression and recurrence risk prediction in triple negative breast cancer patients. *Annals of Oncology* Vol 28, (Issue suppl 9) 2017.
10. **Ravindran Ankathil**, Shing Cheng Tan, MohdPazudin, I, Daniel Roza Dasuki, Nor Hayati Othman. Genome wide allelic imbalance in cervical cancer tissues- an inter-ethnic comparison in Malaysian population. *Annals of Oncology* Vol 28, (Issue suppl 9) 2017.
11. Ahmad Aizat AA, Md Salzihan M D, Ibtisam Mohamad, Bhavaraju VMK, Maya Mazuwin Y, Andee DZulkarnaean Z. Gan S H, **Ravindran Ankathil**. Genotypes and haplotypes of *ABCB1* contribute to chemotherapy response in Malaysian Triple negative breast cancer pateints. *Meta Gene* Vol 16, 21- 27, 2018.
12. **Ravindran Ankathil**, Azlan Husin, Abu Dzaar Abdullah, Abdul Aziz Baba. Pharmacogenetics and the treatment of chronic myeloid leukemia - how relevant clinically? An Update. *Pharmacogenomics* (2018).
13. Tan S C, Mohd Pazudin I, Daniel Roza Dasuki, Nor Hayati Othman. **Ravindran Ankathil**. Prevalence and type distribution of human papillomavirus ( HPV ) in Malaysian women with and without cervical cancer.: an updated estimate. *Bioscience Reports*.( 2018) 38 BSR 20171268.

14. Siti Maziras M, Azlan Husin, Aziz Baba, A, **Ravindran Ankathil** . Genetic variation in influx transporter gene *SLC22A1* are associated with clinical response to imatinib mesylate among Malaysian chronic myeloid leukemia patients. *Journal of Genetics*. Vol 97 (4): 835- 842, 2018.
15. Marjanu Hikmah Elias, Husin Azlan, Abdul Aziz Baba, **Ravindran Ankathil**. Aberrant DNA Methylation of *SOCS1* Gene is Not Associated with Resistance to Imatinib Mesylate among Chronic Myeloid Leukemia Patients. *Cardiovascular & Hematological Disorders-Drug Targets* (2018). Vol 18 (3) 234-238, 2018.
16. Ahmad Aizat AA, Salzihan Md Salleh, Ibtisam Mohamad, Bhavaraju VMK, Maya Mazuwin, Andee DZulkarnaen Z, Gan S H, **Ravindran Ankathil** . Single nucleotide polymorphisms and mRNA expression of *CYP1B1* influence treatment response in triple negative breast cancer ( TNBC ) patients undergoing chemotherapy. *J of Genetics* 2018.
17. Marjanu Hikmah Elias, Husin Azlan, Sarina Sulong, Abdul Aziz Baba, **Ravindran Ankathil**. Aberrant DNA Methylation at *HOXA4* and *HOXA5* Genes are Associated with Resistance to Imatinib Mesylate among Chronic Myeloid Leukemia Patients. *Cancer Reports* ( 2018 ).
18. **Ravindran Ankathil**, Ahmad Aizat Abdul Aziz, Salzihan Mohd Salleh. MicorRNA expression profiling in Malaysian Triple negative breast cancer patients: Impact on recurrence prediction. *Journal of Global Oncology* 2018. Vol 4 ( Suppl 2 )
19. **Ravindran Ankathil**, Mohd Aminudin Mustapha, Ahmad Aizat Abdul Aziz, Siti Nurfatimah Mohd Shahpudin, Zakaria Z, Shanwani AMS, Mohd Radzi AH, Kamarul Imran Musa. Genetic polymorphisms of inflammatory response genes and their influence on Malaysian sporadic colorectal cancer patients- a case - control study. *Asian Pacific Journal of Cancer Prevention* , Vol 20 (6): 1621-1632. 2019
20. **Ravindran Ankathil**. The mechanisms and challenges of cancer chemotherapy resistance. A current overview. *European Journal of Molecular and Clinical Medicine* Vol 6 (1); 26-34, 2019.
21. Siti Mariam I, Ahmad Aizat A A, Mohd Zaki H, Mohd Qais A B, Mohd Ismail I, Roosline H, Sarian S, **Ravindran Ankathil**. Vascular endothelial growth factor receptor polymorphisms and Imatinib treatment response in chronic myeloid leukemia patients . *Annals of Oncology* Vol 30 ( Suppl 6 ), Oct 2019.
22. Gigi Thomas, Santhosh Kumar T R, Preethi S G, Thara S, Santhi S, Nandakumar K, Hariharan S, **Ravindran Ankathil**. Prognostic implications of DNA repair, ploidy and telomerase in the malignant transformation risk assessment of leukoplakia. *Asian Pacific Journal of Cancer Prevention* 2020; 21(2):309 – 316.
23. Amalina Z, Siti Mariam I, Zulaikha AB, Nik Mohd Zulfikri MZ, Nurul Alia MN, Nazihah MY, Sarina S, Zilfalil BA, **Ravindran Ankathil**. “A Liveborn Double Aneuploidy with Simultaneous Occurrence of Edwards and Klinefelter Syndromes - A Rare Case Report”. *Malays J Med Sci*, Mar-Apr 2020. (Special issue : 1-71), pp28.
24. Roshaidie R , Nur Fatin Syahirah R , Siti Mariam I ,Nik Mohd Zulfikri MZ, Nazihah MY, Van

Rostenberghe H, **Ravindran Ankathil**. “A Rare Case of Chromosome 22 Interstitial Duplication at q12.1- q13.1”. *Malays J Med Sci*, Mar-Apr 2020. (Special issue : 1-71), pp33.

25. Cheng YT, Nik Mohd Zulfikri MZ, Nurul Alia MN, Siti Mariam I, Nazihah MY, Sarina S, Zilfalil BA, Khanisa MK, **Ravindran Ankathil**. “An Infrequent Gonosome-Autosome Mosaicism Co-existent with Constitutional Telomeric Association”. *Malays J Med Sci*, Mar-Apr 2020. (Special issue : 1-71), pp35.

26. Siti Mariam I, Norhidayah R, Zulaikha AB, Nazihah MY, Rosline H, Noraini AG, Sarina S, Azlan H, **Ravindran Ankathil**. “The Prevalence, Type and Subsequent Evolution of Chronic Myeloid Leukemia With Variant Ph Chromosome Translocation”. *Malays J Med Sci*, Mar-Apr 2020. (Special issue : 1-71), pp45.

27. Foong Eva, Siti Mariam I, Norhidayah R, Zulaikha A B, Nik Mohd Zulfikri, Nurul Alia N, Aziati Anuar, Fatimah Azman, Nazihah M Y, Nik Ahmad Hilmi, Azlan Husin, **Ravindran Ankathil** “Genomic Abnormalities And Prognosis In Multiple Myeloma – The Experience At HUSM”. *Malays J Med Sci*, Mar-Apr 2020. (Special issue: 1-71), pp 46.

28. Ahmad Aizat A A, Md Salzihan Md Salleh, **Ravindran Ankathil**. Clinicopathological and prognostic characteristics of Malaysian triple negative breast cancer patients undergoing TAC chemotherapy response. *Int J Breast Cancer*. 2020.

29. Rashaidee Rashid, **Ravindran Ankathil**. Gene therapy : An updated overview on the promising success stories. *Malaysian J of Pathology*. Vol 42 (2): 171 – 185, 2020.

30. Sathya Maran, M., Siti Aisyah F., Erim Lim S H., Lai Kok S., Wan Pauzi W I., **Ravindran Ankathil**, Gan S H., Tan H L. Screening of 22q11.2 DS using multiplex ligation dependent probe amplification as an alternative diagnostic method. *Bio Med Research International* Vol 2020

31. Vinod Nair S, Madhulaxmi, Gigi Thomas, **Ravindran Ankathil**. Next Generation Sequencing in Cancer. *J Maxillofac. Oral Surg*. 2020.

32. **Ravindran Ankathil**, Siti Mariam Ismail, Nazihah Mohd Yunus, Sarina Sulong, Azlan Husin, Abu Dzaar A, Rosline Hassan. Clinical implications of Conventional Cytogenetics, FISH and Molecular testing in chronic myeloid leukemia patients in the tyrosine kinase inhibitor era - A review. *Malaysian J of Pathology* Vol 42(3):307-321; 2020.

33. Foong Eva., Siti Mariam I., Norhidayah R., Zulaikha A B., Nik Zulfikri M Z., Nurul Alia M N., Aziati A., Fatimah A., Nazihah M Y., Hilmi N A., Azlan H., Siti Azrin A H., **Ravindran Ankathil**. Cytogenetic abnormalities at diagnosis and during follow up in multiple myeloma patients and their prognostic implications. *Malaysian Journal of Medicine and Health Sciences* Vol 16(4):108-117, 2020.

34. Wan Nur Amalina Z, Siti Mariam I, Nazihah MY, Sarina S, **Ravindran Ankathil**. Down syndrome associated with acute erythroid leukemia with acquired ring chromosome 7 – A rare case report. *International Med Journal* Vol 27 ( 6 ): 703 – 704, 2020.

- 35. Ravindran Ankathil**, Foong Eva, Zulaikha Abu Bakar, Nazihah Mohd Yunus, Nurul alia Nawi, Aziati Annuar, Cheng Yi Ting, Sarina Sulong. A dual gender rare case with 47,XY,+18 / 46, XX karyotype: chimera or Mosaic? *Journal of Child Science* Vol 11 (1/2021) e41- e44.
- 36.** AziatiAzwari Annuar, **Ravindran Ankathil**, Nazihah Mohd Yunus, Azlan Husin, Nur Shafawati Ab rajab, Ahmad Aizat Abdul Aziz, Mohd Ismail Ibrahim, Sarina sulong. Impact of Fas/Fasl gene polymorphisms on susceptibility risk and Imatinib mesylate treatment response in chronic Myeloid Leukemia patients . *Asian Pacific Journal of Cancer Prevention* Vol 22; 565 – 571, 2021.
- 37.** Ahmad Aizat AA, Salzihan Md Salleh, Maya Mazuwin, Andee DZulkarnaen Z, **Ravindran Ankathil**. Genetic association of *CYPB1* 4326 C>G polymorphism with disease-free survival in Triple Negative Breast Cancer patients undergoing TAC chemotherapy regimen. *Asian Pacific Journal of Cancer Prevention* Vol 22 ( 4); 1319-1324, 2021.
- 38. Ravindran Ankathil**, Foong Eva, Siti Mariam I, Norhidayah R, Nazihah Y, Sangeetha V, Hariharan S, AzlanH. Hyperdiploid multiple myeloma with novel complex structural chromosome abnormalities associated with poor prognosis – a rare case report. *International Journal of Hematology-Oncology and Stem Cell Research*, 2021, Vol 15(3), DOI. 10. 18502/ijhoscr.V15i3.6852.
- 39.** Ooi F K, Siti Azizah S, Chen C K, **Ravindran Ankathil**, AhmadAizat A A, Jamaayah M S, Fathma A, Hazwani A Y. PPAR $\alpha$  intron 7 G/C polymorphism, physical strength phenotypes and bone health status in Malay female athletes. *J Physical Education and Sports*. 2021. Vol 21(4): 2254 – 2263. DOI. 10. 7752/jpes.2021.S4301.
- 40.** Zamri WNWM, Nik Mohd Zulfikri M Z, Nurul Alia M N, AziatiAswari A, Nazihah M Y, Sarina S, Zilfalil B A, **Ravindran Ankathil**. . Mosaic 47,XYY/45,X presenting with male infertility: A rare case report. *GynecolReprod Health*. 2021; 5(5): 1-4.
- 41.** Win A K, Dowty J G, Reece J C, Lee G, Templeton A S, Plazzer J P, Buchman D D, Akagi K, Aksoy S, Alonso A, Alvarez K, Amor D J, **Ravindran Ankathil**, Aretz S, Arnold J L et al of The International Mismatch Repair Consortium . Variation in the risk of Colorectal Cancer for Lynch syndrome. **Lancet Oncology** June 2021.
- 42.** Ranjana R, Roopesh R, Deepu L, Madhav M, **Ravindran Ankathil**. Precision Orthodontics: How much can genomics and gene therapy help? *Saudi Journal of Oral and Dental Research*. 2022, Vol 7(2): 61 - 71.
- 43.** Vinod Nair S, Madhulaxmi M, **Ravindran Ankathil**, Paramasivam A, Mohana Priya. Assessment of miRNA dysregulation in Head and Neck Squamous Cell Carcinomas and to find out its role in anti neoplastic resistance: A Systematic resistance protocol and meta-Analysis. *SSRN Electronic Journal* 2022.
- 44.** Ahmad Aizat AA, Salzihan Md Salleh, Maya Mazuwin, Andee DZulkarnaen Z, **Ravindran Ankathil**. Down regulated expression levels of miRNA-276 and miR-451 as a potential biomarker for triple negative breast cancer patients undergoing YAC chemotherapy. *Asian Pac J Cancer Prev*. 2022.Vol23(3): 103 – 1059.



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46. **Ravindran Ankathil**, Wan Nur Amalina Z, Hans Van Rosterberghe, Nor Rosidah I, Noraida R, Siti Mariam I, Nurul Alia M N, Nik Mohd Zulfikri M Z, Norhidayah R, Zulaikha A B, Nur Fatin Syahirah R, Chia B H, Nor Atifah M A, Nazihah M Y, AziatiAzwari A, Sarina S, Zilfalil B A. Karyotype patterns, clinical features, and parental ages of three predominant live born autosomaltrisomies of Northeast Malaysia.. *Malay J Pathol* . 2022; Vol 44 (2 ): 235 – 244.

47. Vinod Nair S, Madhulaxmi M, **Ravindran Ankathil**, Arumugham P. A systematic review on a comprehensive evaluation of clinical prognostic variables and new biomarkers for Head and Neck cancer outcome ( 2022 ). *J Pharmaceut Neg Results* Vol; 13 (8): 3026 – 3049.

48. Moller P, Seppala T, Dowty J G *et al* including **Ravindran Ankathil** as one of the co-authors from International Mismatch Repair Consortium (IMRC) (2022). Colorectal cancer incidences in Lynch syndrome: a comparison of results from the prospective lynch syndrome database and the international mismatch repair consortium. *Hereditary Cancer in Clinical Practice*2022; Vol 20(1):36.

49. Vinod Nair S, Madhulaxmi M, **Ravindran Ankathil**, Murugan S. Recurrence in surgically resected oral squamous cell carcinoma: A case series. *J of Clinical Otorhinolaryngology, Head and Neck Surgery*. 2022; Vol 26 : ( 2 ) 347 – 362.

50. Vinod Nair S, Madhulaxmi M, **Ravindran Ankathil**, Arumugham P. Dysregulated noncoding microRNAs as potential biomarkers in oral potentially malignant disorders and oral squamous cell carcinoma: An updated review. *European Journal of Molecular and Clinical Medicine*, 2023; Vol 9 (08 ) 1600 – 1636.