

Curriculum vitae
Elham Kalantari
Oncopathology Research Center,
Faculty of Medicine,
Iran University of Medical Sciences (IUMS) Tehran, Iran
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EDUCATION

PhD (2016 – 2022)

Molecular medicine, Iran University of Medical Sciences (IUMS), Tehran, Iran. **Dissertation:** Evaluation of specificity and function of polyclonal antibody against DCLK1 short isoforms (DCLK1-S) in colorectal cancer tissues and cell lines.

Master of Science (2006-2009)

Medical Parasitology, Institute of Parasitology and Mycology, Shaheed Beheshti University of Medical Sciences (SBUM), Tehran, Iran.

Thesis: The survey of Echinococcus granulosus AgB recombinant protein using in ELISA test.

Bachelor (2001-2004)

Clinical laboratory Sciences, Kerman University of Medical Sciences, Kerman, Iran.

Associate's degree (1998-2001)

Associated of Medical Laboratory of Science, Islamic Azad University of Tehran Medicine Branch, Tehran, Iran.

HONORS AND AWARDS

- Rank 8 among 450 students of Laboratory sciences in Master of Sciences of Medical Parasitology entrance exam, 2006.
- Officially appreciated as a good lecturer, Faculty of Allied Medicine, Shaheed Beheshti University of Medical Sciences, Tehran, Iran, 2009.

RESEARCH EXPERIENCE

Oncopathology Research Center, IUMS, Tehran, Iran. 2009 – Present

Graduate Research Assistant:

2018-2022:

- Clinical significance of transcription factor, SALL4, in relation with cancer stem cell marker ALDH1 in different subtypes of ovarian carcinoma.
- Evaluation of expression and clinical significance of DCLK1-S isoform as the promising marker of GI cancer stem cells, a TMA study of 400 colorectal and gastric carcinomas.

- Evaluation of MAGEA2 and MAGEA3 protein expression on histological subtypes of testicular cancer and association between the expression of these markers and prognosis as well as clinicopathological characteristics.
- Producing monoclonal antibody against DCLK1 short isoform (DCLK1-S) as a novel cancer stem cell and evaluation of its specificity and function in gastric cancer.
- Expression of DCLK1 as a new proposed cancer stem cells marker in Transitional bladder tumors.
- Investigation of TLR-9 and MMP-13 expression by tissue microarray in prostatic benign hyperplasia, HPIN, and prostate cancer patients.
- Study of long interspersed elements ORF1 protein (Line-1ORF1p) expression in skin neoplasms development.

2016-2018:

- Evaluation of specificity and function of antibodies against DCLK1 (DCLK1-L and DCLK1-S) in colorectal cancer tissues and cell lines.
- The frequency of the proposed markers of cancer stem cells (CD166, EpCAM) in colorectal carcinoma in Rasool, Firoozgar, and Hasheminejad hospitals from 1388 to 1394.
- Evaluating the heterogeneity in histologic grade of bladder urothelial carcinomas using the combined scoring system and its association with FGFR3 and P53 expression.
- The association of RB1 and p21 expression status with heterogeneity in histologic grade of bladder urothelial carcinoma using the combined scoring system.

2014-2016:

- Immunohistochemical expression of chemo resistant markers SMUG1, RhoA, and E2F6 in subtypes of Gastric cancer.
- Expression of DCLK1, Lgr5 and Dll4 as distinguished markers of cancer stem cell from normal stem cell of gastric cancer.

2012-2014:

- Immunohistochemistry study of ALDH1A1 (cancer stem cell marker) in prostate tumor cells and Correlation of these with clinicopathological parameters in PCa patients at Hashemi Nejad hospital by Tissue Microarray.
- Expression of CD44 cancer stem cell marker in prostate cancer tissues and correlated with high grade prostate cancer at Hashemi Nejad hospital by Tissue Microarray.
- Analysis of CD133 protein expression in prostate carcinomas in patient referring to Hashemi Nejad hospital by using Tissue Microarray.

2009-2012:

- Determination of CD133 and CD44 (cancer stem cell markers) in pediatric solid tumor cells and Correlation of these with clinicopathological parameters in pediatrics at Aliasghar hospital by Tissue Microarray.
- Analysis of EMSY protein expression in primary breast tumors and its prognostic significance.
- Immunohistochemical expression of c-MET in Gastric Adenoma carcinomas in patients referring to Rasool- Akram and Firozgar hospitals between years 1387-1388 using Tissue Microarray.

Cellular and Molecular Biology Research Center, SBUM, Tehran, Iran.2006-2009

Graduate Research Assistant

2007-2009:

- The survey of Echinococcus granulosus AgB recombinant protein using in ELISA test.

Lab manager and Researcher

- Supervised lab works to ensure timely completion of service requests. I assisted staff, students or others by providing lab equipment instructions or procedural guidance and help staff to resolve the anticipated problems as they occur to get back on schedule.
- Analyzed EMSY protein expression in primary breast tumors and its prognostic significance. I helped to establish tissue microarray (TMA) in our center for the first time in Iran.

PUBLICATIONS

Published:

- **Elham Kalantari**, Roya Ghods, Leili Saeednejad Zanjani, Mandana Rahimi, Leila Eini, Mahdieh Razmi, Mohsen Asadi-Lari, Zahra Madjd. Cytoplasmic Expression of DCLK1-S, a Novel DCLK1 Isoform, Is Associated with Tumor Aggressiveness and Worse Disease-Specific Survival in Colorectal Cancer. **Cancer biomarkers**, 2022. <https://pubmed.ncbi.nlm.nih.gov/34958000/>
- **Elham Kalantari**, Tahereh Taheri, Saba Fata, Maryam Abolhasani, Mitra Mehrazma, Zahra Madjd, Mojgan Asgari. Significant co-expression of putative cancer stem cell markers, EpCAM and CD166, correlate with tumor stage and invasive behavior in colorectal cancer. **World J. Surg. Oncol**, 2022. <https://pubmed.ncbi.nlm.nih.gov/35016698/>
- **Elham Kalantari**, Mahdieh Razmi, Fatemeh Tajik, Roya Ghods, Zahra Madjd. Oncogenic functions and clinical significances Of DCLK1 isoforms in colorectal Cancer: A systematic review. **Cancer Cell Int**, 2022. <https://pubmed.ncbi.nlm.nih.gov/35717205/>
- Yasaman Rezaie, Fahimeh Fattahi, Baharnaz Mashinchi, Kambiz kamyab Hesari, **Elham Kalantari**, Zahra Madjd. High expression of Talin-1 is associated with tumor progression and recurrence in melanoma skin cancer patients. **BMC Cancer**. 2023. <https://pubmed.ncbi.nlm.nih.gov/37013489/>
- Leili Saeednejad Zanjani, Mahdieh Razmi, **Elham Kalantari**, Maryam Abolhasani, Sima Saki, Zahra Mjdj, Monireh Mohsenzadegan. Overexpression of melanoma-associated antigen A2 has a clinically significant and is associated with tumor progression in embryonal carcinomas. **J Cancer Res Clin Oncol**. 2022. <https://pubmed.ncbi.nlm.nih.gov/34837545/>
- Mina Sharbatoghli, Leili Saeednejad Zanjani, **Elham Kalantari**, Zohre Habibi Shams, Mahshid Panahi; Mehdi Totonchi; Mohsen Asadi-Lari; Zahra Madjd. Co-expression of cancer stem cell markers, SALL4/ALDH1A1, is associated with tumor aggressiveness and poor survival in patients with serous ovarian carcinoma. **World J. Surg. Oncol**. 2021
- Mohammad Ali Zolfaghari, Abbas Karimi, **Elham Kalantari**, Alireza Korourian, Alireza Ghanadan, Kambiz Kamyab, Nafiseh Esmaili, Amir Nader Emami Razavi and Zahra Madjd. A comparative study of long interspersed element-1 protein immunoreactivity in cutaneous malignancies. **BMC Cancer**, 2020. <https://pubmed.ncbi.nlm.nih.gov/32552892/>
- **Elham Kalantari**, Maryam Abolhasani, Raheleh Roudi, Mohammad M Farajollahi, Zahra Madjd, Mojgan Asgari, Shaghyegh Asgariyan, Monireh Mohsenzadegan Increased expression of TLR-9

and MMP-13 is associated with progression from benign to advanced prostate cancer. **Int J Exp Pathol**, 2018. <https://www.ncbi.nlm.nih.gov/pubmed/24641409>

- Somayeh Shafiei, **Elham Kalantari**, Leili Saeednejad Zanjani, Maryam Abolhasani, Mohammad Hossein Asadi Lari, Zahra Madjd. Increased expression of DCLK1, a novel putative CSC maker, is associated with tumor aggressiveness and worse disease-specific survival in patients with bladder carcinomas. **Exp Mol Pathol**. 2019; doi: 10.1016/j. <https://www.ncbi.nlm.nih.gov/pubmed/31028726>
- Khorasani M, Teimoori-Toolabi L, Farivar TN, Asgari M, Abolhasani M, Shahrokh H, Afzar A, **Kalantari E**, Peymani A, Mahdian R. Aberrant expression of miR-141 and nuclear receptor small heterodimer partner in clinical samples of prostate cancer. **Cancer Biomark**, 2018. <https://www.ncbi.nlm.nih.gov/pubmed/29562494>
- **Kalantari E**, Asadi Lari MH, Roudi R, Korourian A, Madjd Z. Lgr5High/DCLK1High phenotype is more common in early stage and intestinal subtypes of gastric carcinomas. **Cancer Biomark**. 2017 Dec. <https://www.ncbi.nlm.nih.gov/pubmed/28946555>
- **Kalantari E**, Asgari M, Nikpanah S, Salarieh N, Asadi Lari MH, Madjd Z. Co-Expression of Putative Cancer Stem Cell Markers CD44 and CD133 in Prostate Carcinomas. **PatholOncolRes**. 2017 Oct. <https://www.ncbi.nlm.nih.gov/pubmed/28083789>
- Korourian A, Roudi R, Shariftabrizi A, **Kalantari E**, Sotoodeh K, Madjd Z. Differential role of Wnt signaling and base excision repair pathways in gastric adenocarcinoma aggressiveness. **Clin Exp Med**. 2017 Nov. doi: 10.1007/s10238-016-0443-0. <https://www.ncbi.nlm.nih.gov/pubmed/27909884>
- **Kalantari E**, Saadi FH, Asgari M, Shariftabrizi A, Roudi R, Madjd Z. Increased Expression of ALDH1A1 in Prostate Cancer is Correlated With Tumor Aggressiveness: A Tissue Microarray Study of Iranian Patients. **Appl Immunohistochem Mol Morphol**. 2017 Sep. doi:10.1097/PAI.0000000000000343. <https://www.ncbi.nlm.nih.gov/pubmed/26894647>
- Razavi Tousi SM, Faghihi M, Nobakht M, Molazem M, **Kalantari E**, Darbandi Azar A, Aboutaleb N. Improvement of Heart Failure by Human Amniotic Mesenchymal Stromal Cell Transplantation in Rats. **JTeheranHeartCent**. 2016 Jul. <https://www.ncbi.nlm.nih.gov/pubmed/27956912>
- Motaghinejad M, Motevalian M, Falak R, Heidari M, Sharzad M, **Kalantari E**. Neuroprotective effects of various doses of topiramate against methylphenidate-induced oxidative stress and inflammation in isolated rat amygdala: the possible role of CREB/BDNF signaling pathway. **J Neural Transm (Vienna)**. 2016 Dec. <https://www.ncbi.nlm.nih.gov/pubmed/27665547>
- Roudi R, **Kalantari E**, Keshtkar A, Madjd Z. Accuracy of c-KIT in Lung Cancer Prognosis; a Systematic Review Protocol. **Asian Pac J Cancer Prev**. 2016. <https://www.ncbi.nlm.nih.gov/pubmed/26925693>
- Zahra Madjd, Sami Khalaf, Seta Sarkis, **Elham Kalantari**, Penelope Shihab, Khaled Al-Qaoud, Luay Abu-Qatouseh. Prevalence of high-risk HPV 16 in oral squamous cell carcinoma and its association with SHH, GLI-1, and GLI-2 overexpression: a genotyping study. **Basrah Journal of Surgery**, 2016.

- Mehrazma M, **Kalantari E**, Rezvani H, Bahar B, Basi A, Razavi SM, Rakhshani N. Chromogenic In Situ Hybridisation Test for Breast Cancer Patients with Equivocal IHC Results--a Study from Iran. **Asian Pac J Cancer Prev**. 2015. <https://www.ncbi.nlm.nih.gov/pubmed/26625783>
- Rakhshani N, **Kalantari E**, Bakhti H, Sohrabi MR, Mehrazma M. Evaluation of HER-2/neu overexpression in gastric carcinoma using a tissue microarray. **Asian Pac J Cancer Prev**. 2014. <https://www.ncbi.nlm.nih.gov/pubmed/25292034>
- Madjd Z, Akbari ME, Zarnani AH, Khayamzadeh M, **Kalantari E**, Mojtabavi N. Expression of EMSY, a novel BRCA2-link protein, is associated with lymph node metastasis and increased tumor size in breast carcinomas. **Asian Pac J Cancer Prev**. 2014.
- Mehrazma M, Madjd Z, **Kalantari E**, Panahi M, Hendi A, Sharifabrizi A. Expression of stem cell markers, CD133 and CD44, in pediatric solid tumors: a study using tissue microarray. **Fetal Pediatr Pathol**. 2013 Jun. doi: 10.3109/15513815.2012.701266. <https://www.ncbi.nlm.nih.gov/pubmed/22830353>
- **Elham Kalantari**, Zahra Madjd. Tissue microarrays, a revolution in pathology research". **Basic & Clinical Cancer Research**, 2014. <http://bccr.tums.ac.ir/index.php/bccrj/article/view/64>
- Sami Jaber, Seta Sarkis, Zahra Madjd, **Elham Kalantari**. The expression of P53 and MDM4 in oral, laryngeal and cutaneous squamous cell carcinoma; a comparative study by tissue microarray. **European Scientific Journal**, Dec 2013.
- Kambiz Sotoudeh, ForoughHashemi, Zahra Madjd, Alireza Sadeghipour, Saadat Molanaei, **Elham Kalantari**. The clinicopathologic association of c-MET overexpression in Iranian gastric carcinomas; an immunohistochemical study of tissue microarrays. **Diagnostic Pathology**. 2012. <https://diagnosticpathology.biomedcentral.com/articles/10.1186/1746-1596-7-57>
- **Kalantari E**, Bandehpour M, Pazoki R, Taghipoor-Lailabadi N, Khazan H, Mosaffa N, Nazaripouya MR, Kazemi B. Application of recombinant Echinococcus granulosus antigen B to ELISA kits for diagnosing hydatidosis. **Parasitol Res**. 2010 Mar. doi:10.1007/s00436-010-1726-0. <https://www.ncbi.nlm.nih.gov/pubmed/20143>

Ongoing:

- Mahdieh Razmi, **Elham Kalantari**, Roya Ghods, Alireza Bayat, Zahra Madjd. Clinical significance of DCLK1-S expression in different gastric cancer subtypes using newly produced monoclonal antibody. 2022, ongoing.
- Niknam Lakpour, Roya Ghods, Maryam Abolhasani, Leily Saeednejad zanjani, Kiomars Saliminejad, **Elham Kalantari**, Sima Saki, Mohammad Mehdi Ranjbar, Leila Balay-Goli, Mohammad Reza Sadeghi, Zahra Madjd. Higher expression of SALL4-A is correlated with worse outcomes and disease progression in seminomas. 2022, Ongoing

- Masoud Hassanzadeh Makoui; Maryam Mobini; Shiva Fekri; Lobat Geranpayeh; Hedieh Moradi Tabriz; Zahra Madjd; **Elham Kalantari**; Mostafa Hosseini; Forough Golsaz-Shirazi; Mahmood Jeddi-Tehrani; Amir-Hassan Zarnani; Mohammad Mehdi Amiri; Fazel Shokri. Clinico-pathological and prognostic significance of a combination of tumor biomarkers in Iranian patients with breast cancer. 2022, ongoing
- Leili Saeednejad Zanjani, **Elham Kalantari**, Maryam Abolhasani, Zahra Mdjd, Monireh Mohsenzadegan. Overexpression of MAGE-A2 is related to the malignant degree and progression of disease in patients with clear cell renal cell carcinoma. 2022, ongoing.

PAPER PRESENTATIONS

- **Elham Kalantari**, Mojgan Asgari, Mojan Nikpanah, Naghmeh Salarieh, Zahra Madjd. Co-expression of putative cancer stem cell markers CD44 and CD133 in Iranian prostate carcinomas: a tissue microarray analysis. 8th APOCP Regional Conference. Tehran, Iran, 2015.
- **Elham Kalantari**, Faezeh Hasani Saadi, Mojgan Asgari, Ahmad Shariftabrizi, Raheleh Roudi, Zahra Madjd. Tissue microarray analysis of cancer stem cell marker ALDH1A1 in Iranian prostate carcinomas. 8th APOCP Regional Conference. Tehran, Iran, 2015.

POSTER PRESENTATIONS

- **Elham Kalantari**, Ali Haghighy, Mehri Mahmoudi, Mitra Farnoodian, Mohsen Khazaeii. Investigation of prevalence of *Amebiasis Entropathogenic* infections in the patients referring to the Mofid, Loghman and Emam Hossein hospitals in Tehran. 6th Congress and the First Regional Congress of Parasitology and Parasitic Diseases. Karaj, Iran, 2008.
- **Elham Kalantari**, Mitra Farnoodian. The survey on antigen of *Hydatid cyst* and application of it in diagnosis of hydatidose. 9th Congress of Asthma & Allergy. Tehran, Iran, 2008.
- Mitra Farnoodian, S.Amir Yazdanparast, Rohallah Fateh, **Elham Kalantari**, Somaye sharifinia. Investigation of prevalence of fungal and bacterial urinary tract infection (UTI) and determination the most common species in patients referring to Modarres and Firuzgar hospitals in Tehran in 2006-2007. The first Iranian Congress of clinical Microbiology. Kerman, Iran, 2007.
- Spoutin Adel, Mokhtari Amir Majdi M, Endollah AR, Eftekhazadeh I, Hakemi Y, Eftekhazadeh A, **Elham Kalantari**. Comparison of drug effects of pyrivinum Pamoat and Piprazine Citrate in Oxyuriasis. The second Iranian Congress of Clinical Microbiology. Tehran, Iran, 2008.
- Mitra Mehrazma, Zahra Madjd, **Elham Kalantari**, Mahshid Panahi, Alireza Hendi. Expression of cancer stem cell marker (ALDH1A1) in pediatric solid tumors and its correlation with pathologic parameters in Aliasghar hospital, a study using Tissue microarray. 23th European congress of Pathology. Helinki, Finland, 2011.
- **Elham Kalantari**, Faezeh Hasani, Zahra Madjd, Mojgan Asgari. Expression of cancer stem cell marker ALDH1, correlated with high grade prostate cancer. 15th annual congress of Iranian society of Pathology. Tehran, Iran, 2015.

RESEARCH INTERESTS

- Oncology, Cancer Biology, Cell Biology, Immunology, Pharmacology, Molecular medicine, Neuro sciences animal models and patient oriented researches molecular and cellular mechanism of microbial pathogens, Microbiology.

SPECIALIZED TECHNIQUES

Laboratory techniques:

- Cellular biology (Cell culture, sphere forming, Cell cycle, Apoptosis, Proliferation assays MTT/XTT)
- Molecular biology (PCR: RT-PCR and Real Time PCR)
- Monoclonal/polyclonal (recombinant/synthetic) antibody production, purification, and characterization
- Western Blotting
- Flow Cytometry
- ELISA
- HPLC
- Double Diffusion
- IHC (Immunohistochemistry)
- CISH (Chromogenic In Situ Hybridization)
- FISH (Fluorescence in-situ Hybridization)
- Work experience with Tissue Micro Array system (TMA)
- Work experience in preparation of tissue samples for Immunopathology studies
- Microbial culture and isolation
- Work experience with common laboratory animals
- Confocal Fluorescent microscopy

Software and Web Based Knowledge:

- All standard Microsoft office software
- Reference Manager
- SPSS Analysis
- Stata analysis
- RevMan analysis
- Endnote
- Scientific and General Database Search
- Adobe Photoshop
- Flow Jo analysis

TEACHING EXPERIENCE

(March 2009 - present): Research assistant in Oncopathology Research Center, Iran University of Medical Sciences, Tehran, Iran.

My responsibilities include:

- Applying methods and techniques such as microscopy and histochemistry
- Conducting biological tests and laboratory analysis.
- Conducting research into the functioning of human cancer tissue and cells.
- Cooperation in different oncopathology researches and graduate student's projects as a research technician in this center.
- Preparation of tissue sections for microscopic examinations using techniques to demonstrate special cellular tissue elements or other characteristics.
- Knowledge and skills in different pathology techniques such as Immunohistochemistry, Chromogenic in situ hybridization, and Hematoxylin & Eosin staining.
- Conduct quality control assessment of testing techniques.
- May supervise and train other laboratory technical staff, technicians and post graduate students.

CONGRESS PARTICIPATION:

- The 24th International Conference on Pathology and Laboratory Medicine. Tehran, Iran, 2022.
- The 6th national Congress and the First Regional Congress of Parasitology and Parasitic Diseases. Karaj, Iran, 2008.
- The 9th Congress of Asthma & Allergy. Tehran, Iran, 2008.
- The first Iranian Congress of Clinical Microbiology. Kerman, Iran, 2007.
- The second Iranian Congress of Clinical Microbiology. Tehran, Iran, 2008.
- The one-day conference on nanotechnology and 5th international congress of Asian Pacific Anatomy. Tehran, Iran, 2008.
- The one-day conference on molecular basis of cancer. Tehran, Iran, 2010.
- The 23th European congress of Pathology. Helsinki, Finland, 2011.
- The 15th annual congress of Iranian society of Pathology. Tehran, Iran, 2013.
- International congress of clinic and laboratory. Tehran, Iran, 2014.
- The 16th National Conference of Medical Education. Tehran, Iran, 2015.
- The 2nd Iranian congress on progress in tissue engineering and regenerative medicine. Tehran, Iran, 2015.
- The 17th annual congress of pathology & laboratory medicine. Tehran, Iran, 2015.
- The 8th APOCP Regional Conference. Tehran, Iran, 2015.
- Knowledge Translation Exchange & commercialization (KTE). Tehran, Iran, 2016.
- The 8th international congress of laboratory and clinic. Tehran, Iran, 2016.
- The first national congress of basic medical sciences and the knowledge-based production. Tehran, Iran, 2016.
- The 1st cancer stem cell symposium, Tehran, Iran, 2017.
- The 20th annual and 3rd international Conference on Pathology and Laboratory Medicine, Tehran, Iran, 2018.
- The 21th annual congress of pathology & laboratory medicine. Tehran, Iran, 2019.
- The 24th International Conference on Pathology and Laboratory Medicine

WORKSHOP, WEBINAR, AND OTHER ACTIVITIES:

- (2020-2021): Primer design and RT-PCR webinar
- (2020-2021): Systematic review and metaanalysis webinar
- (2017-2018): 1st cancer and stem cells summer school, Tehran, Iran.
- (2015-2016): Flow Cytometry, Tehran, Iran
- (2014-2015): Systematic review and stata analysis
- (2011- 2012): SPSS analysis workshop for post graduate students Tehran, Iran.
- (2011-2012): Participate in EndNote workshop, Tehran, Iran.
- (2010-2011): Participate in manual Immunohistochemistry workshop, Tehran, Iran.
- (2007- 2010): Member of Parasitology Association
- (2002-2004): Member of Laboratory sciences Association of Kerman University of Medical Sciences.
- (2008-2009): Molecular research in gene expressing in failure of treatment and relapse of infection, pathogenesis, toxicology and molecular biology research of parasite Genetic and epidemiology of parasite infections.
- (2015-2016): Participated as an executive committee member of 8th international congress of laboratory & clinic, 1st national congress of basic medical sciences and the knowledge-based production.
- (2015-2016): Participated as a referee committee member of 8th international congress of laboratory & clinic, 1st national congress of basic medical sciences and the knowledge-based production.