CURRICULUM VITAE

PERSONAL INFORMATION

Name: Zahra (Yucca) Salehi

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EDUCATION

BA (Biochemistry), Mount Holyoke College, South Hadley, Massachusetts (May 1982)

MS (Pharmacology), Duke University, Durham, North Carolina (January 1985)

Ph.D (Pharmacology), Duke University, Durham, North Carolina (December 1988)

RECENT EXPERIENCE

- Establishment of a non-profit organization (named Mehr Foundation) in the United States, dedicated to assisting with and ultimately providing special education services to children with Autism and other learning disabilities in Iran.
    - Formal registration completed. Currently awaiting final approval of Federal 501C(3) Designation application, and issuance of Federal Employer Identification Number (EIN), as well as approval of the Office of Foreign Assets Control (OFAC)
    - Also awaiting the official registration and issuance of operations license of a corresponding organization with the government of Iran
- Mother of a 18-year old son with Autism: Extensive Experience with biological treatment for 15+ years (2000-present), as well as home-based ABA therapy for 8 years (2000 to 2007)
- Home schooling (special education) of son with autism from 2005 to 2012, entailing execution and/or management a full-time program of: Speech Therapy, Occupational Therapy, Physical Exercises (gym training), reading & comprehension, writing, spelling, vocabulary, math
- Attended Autism Research Institute's Annual ***Defeat Autism Now*** Conference for 10 consecutive years, 2001-2010.
- Attended ICDL Annual meetings in Tysons Corner, VA, for 10 consecutive years, 2001-2010.
- Attended two separate verbal Behavior workshops, one by Dr. Vince Carbone, and another by Holly Kibby.
- Attended Dr. Stanley Greenspan's "Floor Time" training session

FORMAL EMPLOYMENT HISTORY

3/92-10/94 Assistant Professor, Department of Biochemistry, Shahid Beheshti University of Medical Sciences, Tehran, Iran (Full-time position, with an approximate salary of 300,000 Rials per month)

Duties and Accomplishments:

Teaching Duties:

Participation in teaching of courses offered by the department, which included:

1. General Biology – A review of major topics in general biology (sole instructor). This course was offered to medical students requiring special assistance.
2. General Biochemistry: Covered topics on DNA and RNA structure and replication, gene expression and protein synthesis. This course was offered to freshmen in Medical, Dental, and Pharmacy Schools.
3. Human Genetics: Covered topics on molecular mechanisms of tumorigenesis: role of cellular proto-oncogenes and tumor suppressor genes.
4. Laboratory Methods in Molecular Biology (Graduate level course) – Covered commonly used laboratory methods for the analysis of RNA and DNA. This course was offered to students seeking the MS Degree in Biochemistry.

Research Activities:

Faculty members were expected to design and conduct original scientific research projects. To this end, I decided to focus on esophageal carcinogenesis, because this disease has one of the highest incidences among populations living along the Caspian Sea coast in Iran. I also assisted the department in the procurement of appropriate facilities for performance of modern techniques in molecular biology.

9/88-10/91 Postdoctoral Fellow, Department of Radiation Medicine, Lombardi Cancer Center, Georgetown University Medical Center, Washington D. C. (Full-time position, with an approximate annual salary of $33,000)

Duties and Accomplishments:

During my postdoctoral appointment at Georgetown University, I was primarily involved with research on the characterization of genetic alterations that accompany carcinogenesis. I attempted to employ different strategies for the identification of human transforming genes. Ultimately, I also contributed to the research on identification of the gene conferring radiosensitivity to ataxia telangiectasia fibroblasts. During this fellowship, I significantly increased my level of expertise in numerous laboratory techniques that are routinely employed in molecular biology experiments.

AWARDS AND HONORS

- Received Sigma Xi Travel Grant Award, Duke University, 1988
- Graduated Magna Cum Laude in Biochemistry, Mount Holyoke College, 1982

- Elected to Sigma Xi Society (Associate Membership), Mount Holyoke College, 1982
- Received Kathryn F. Stein Award in Biochemistry, Mount Holyoke College, 1982
- Received Bernice Mclean Award in Biology, Mount Holyoke College, 1979
- Received full Scholarship at Duke University for Graduate Studies, 1982

RESEARCH EXPERIENCES & INTERESTS

1. Duke University (6/83-12/84)

   Screened chemically induced rat hepatocellular carcinomas for cellular proto-oncogene activation.

2. Duke University (1/85-12/88)

   Characterized cellular signal transduction pathways involved in regulation of c-myc proto-oncogene expression during induced differentiation of a human promyelocytic leukemia cell, HL-60.

3. Georgetown University (9/88-7/91)

   Studied the molecular mechanisms of x-ray radiation induced cellular transformation in immortalized human epidermal keratinocyte cell lines.

4. Georgetown University (7/89-10/91)

   Searched for identification and characterization of human genes in the absence of knowledge for their corresponding proteins. The general strategy of this research involved transfection of unidirectional cDNA libraries from cells that expressed a specific phenotype into cells that lacked the phenotype in question.

5. Shahid Beheshti University (4/92-10/94)

   Conducted a comprehensive study on the epidemiology and etiology of esophageal tumorigenesis. Submitted a grant proposal for investigation of genetic alterations of certain specific cellular proto-oncogenes and tumor suppressor genes during the genesis of esophageal cancer among populations at high and low risk for this disease. Although I obtained partial funding for this project, I never proceeded with the actual research, due to unforeseen circumstances compelling me to leave the country.

LABORATORY EXPERIENCE

- cDNA Library Construction
- Expression Cloning
- Gene Transfer: Transfection of a variety of mammalian cells in culture and transformation of bacterial cells.
- RNA Analysis: Extraction of RNA from mammalian cells and tissues, selection of poly A+ mRNA, Northern and dot analysis of mRNA, measurement of rate of mRNA transcription by the nuclear runoff transcription assay.

- DNA Analysis: Extraction of DNA from mammalian cells and tissues, isolation of plasmid and chromosomal DNA from bacteria, DNA sequencing, Southern and dot analysis of DNA and restriction fragment length polymorphism analysis (RFLP).
- Cell culture of a variety of adherent and nonadherent cells, including: HL-60 and U937 monocytic leukemia cell lines, murine NIH3T3 fibroblasts, rat primary hepatocytes and hepatoma cell lines and human primary and transformed keratinocytes and fibroblasts

PUBLICATIONS

1. Jung, M. O., Zhang, Y., Salehi, Z., Kern, F., Dritschilo, A. (1995) "Modification of Ataxia Telangiectasia Cellular Radiation Sensitivity and Resistant DNA Synthesis by Transformation with Episomally Maintained Vectors" *Radiation Oncology Investigations* 2: 257-263.
2. Salehi, Z., Ramos, S., Pearson, G., Jung, M., Dritschilo, A. and Kern, F. : Construction of Unidirectional cDNA Library from a Radioresistant Laryngeal Squamous Cell Carcinoma Cell Line in an Epstein Barr Virus Shuttle Vector. In Rhim, J. S. and Dritschilo, A. (eds): *Neoplastic Transformation in Human Cell Culture: Mechanisms of Carcinogenesis*. Clifton, NJ: Humana Press, pp. 377-386, 1991
3. Thraves, P., Reynolds, S., Salehi, Z., Kim, W. K., Yang, J. H., Rhim, J. S. and Dritschilo, A. "Detection of Transforming Genes from Radiation Transformed Human Epidermal Keratinocytes by a Tumorigenicity Assay. In Rhim, J. S. and Dritschilo, A. (eds): *Neoplastic Transformation in Human Cell Culture: Mechanisms of Carcinogenesis*. Clifton, NJ: Humana Press, pp. 93-101, 1991
4. Rhim, J. S., Yoo, J. H., Park, J. H., Thraves, P., Salehi, Z. and Dritschilo, A. (1990) "Evidence for the Multistep Nature of In Vitro Human Epithelial Cell Carcinogenesis" *Cancer Research 50*: 5653-5657.
5. Thraves, P., Salehi, Z., Dritschilo, A. and Rhim, J. S. (1990) "Neoplastic Transformation of Immortalized Human Epidermal Keratinocytes by Ionizing Radiation" *PNAS* 87: 1174-1177.
6. Salehi, Z. and Niedel, J. E. (1990) "Multiple Calcium Mediated Mechanisms Regulate c-myc Expression in HL-60 Cells" *The Journal of Immunology 145*: 276-282.
7. Mccachren, S. S., Salehi, Z., Weinberg, J. B. and Niedel, J. E. (1988) "Transcription Interruption may be a Common Mechanism of c-myc Regulation During HL-60 Differentiation" *BBRC 151*: 574-582.
8. Salehi, Z., Taylor, J. D. and Niedel, J. E. (1988) "Dioctanoylglycerol and Phorbol Esters Regulate Transcription of c-myc in Human Promyelocytic Leukemia Cells" *JBC* 263: 1898-1903.

ABSTRACTS:

1. Thraves, P., Reynolds, S., Salehi, Z., Yang, J. H., Rhim, J. S., and Dritschilo, A., "Detection of Transforming Genes from Radiation Transformed Human Epidermal Keratinocytes Using the NIH3T3 Tumorigenicity Assay", *9th International Congress of Radiation Research*, Toronto, Canada, 1991.
2. Salehi, Z., Thraves, P., Dritschilo, A., Jay, G. and Rhim, J. S., "Malignant Transformation of Human Keratinocytes by a Transfected v-fos Oncogene", *Oncogene Meetings*, Frederick, Maryland, 1990.

3. Salehi, Z., Taylor, J. D. and Niedel, J. E., "Dioctanoylglycerol and Phorbol Esters Regulate Expression of c-myc in HL-60 Cells", *FASEB*, Las Vegas, Nevada, 1988.

Research experience at Lombardi:

Searched for identification and characterization of human genes in the absence of knowledge for their corresponding proteins. The general strategy of this research involved transfection of unidirectional cDNA libraries from cells that expressed a specific phenotype into cells that lacked the phenotype in question. (7/89-10/91)