

Reza Alaeddini

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Summary

- PhD in Molecular Biology, plus more than a decade of concrete knowledge and experience in the pursuit and practice of basic and applied Biological Sciences.
- Committed to maintain confidentiality at all times and adherence to a high ethical standard.

Education

The University of Sydney <i>PhD in Molecular biology,</i>	Australia 2004–2009
Tehran University <i>Masters in Forensic Science,</i> Thesis: Technical inconsistencies with profiling DNA from human Bones Focused on DNA purification from skeletal tissue.	Iran 1999–2003
Melli University <i>Bachelor of Medicine,</i> Cumulative GPA: 3.40 / 4.00	Iran 1987–1995

PhD thesis

Title: Analysis of postmortem DNA degradation patterns in human bone

Supervisors: Associate Professor Ali Abbas & Dr Simon Walsh

Description: This thesis explored the influence of environmental conditions and time on DNA fragments. I used several molecular methods to evaluate the quality and the quantity of DNA.

Work Experience

Vocational.....	
UNT Dallas <i>Adjunct Instructor</i>	Dallas, Tx Jan 2020–Ongoing
○ I teach Laboratory Biology for Science Majors (Biol 1730 and Biol 1740), which includes Cell divisions, principles of inheritance, molecular genetics, evolution and a survey of biological diversity.	
UNT Frisco <i>Adjunct Instructor</i>	Frisco, Tx Aug 2020–Dec 2020
○ I teach Genetics: A Conceptual Approach, by Benjamin Pierce to students in Science (remote teaching).	
Texas Wesleyan University <i>Adjunct Instructor</i>	Fort Worth, Tx Aug 2019–Dec 2019
○ I taught Laboratory Molecular Genetics course including molecular aspects of gene transmission, interaction, expression, and regulation.	
Tarrant County Medical Examiner's Office <i>Senior Forensic Biologist</i>	Fort Worth, Tx 2016–2018
○ Based on the current Laboratory Standards, I designed, validated and implemented the framework for statistical interpretation of human DNA profiles.	

Forensic Biology Laboratory

DNA Data basing and Matching Software Supervisor

Tehran

2012–2015

- I supervised the implementation and validation of DNA Data basing software.

Biology Laboratory

Research Fellow

Tehran

2010–2012

I designed a PCR based quantification methodology of mitochondrial DNA by using LUX fluorescent primers on ABI™ 7500 Real-time PCR machine.

- Results were presented at the 6th European Academy Conference; EAFS2012.

Flinders University

Visiting Scholar

Australia

2001–2002

Work was focused on PCR inhibition.

- Results were presented in 2006 in an International Symposium in Perth, Australia.

Biology Laboratory

Laboratory Caseworker

Tehran

1999–2001, 2002–2004

Biological testing on human samples.

Skills

Technical Skills: DNA genotyping, DNA extraction/ purification protocols, DNA modifications and labeling methods, DNA amplification by Multiplex PCR, Quantitative PCR, Fluorescent based quantification of DNA, Real time PCR chemistry and methodologies, Capillary Electrophoresis, DNA hybridization methods, Southern hybridization, ESEM microscopy, Fourier transform infrared spectroscopy (FTIR).

Computer Skills: R program Basic Packages, Microsoft Office applications, Visual Basic Macros, Statistical interpretation of DNA profiles, T_EX, L^AT_EX typesetting.

Publications

Journals.....

7. [R. Alaeddini](#), M. Yang and B. Puza 1 citation
"Bayesian Regression Analysis of Stutter in DNA Mixtures," *Communications in Statistics - Theory and Methods*, vol. 4, no. 12, pp. 1–15, 2020.
6. N. Mehrafshan, M. Ahmadi, [R. Alaeddini](#)
"Development of a Pentanucleotide STR Marker for Human Identity Testing," *Journal of Biology and Today's World*, vol. 4, no. 12, pp. 204–208, 2015.
5. [R. Alaeddini](#) 141 citations
"Forensic implications of PCR inhibition - a review," *Forensic Science International Genetics*, vol. 6, no. 3, pp. 297–305, 2012.
4. [R. Alaeddini](#), M. Ahmadi, S.J. Walsh, and A. Abbas 4 citations
"Semi-quantitative PCR Analysis of DNA Degradation," *Australian Journal of Forensic Sciences*, vol. 43, no. 1, pp. 53–64, 2011.
3. [R. Alaeddini](#), M. Ahmadi
"Inhibitory effects of bone extracellular matrix components on PCR progression," *Clinical Biochemistry Supplement*, vol. 44, no. 13, pp. 259, 2011.
2. [R. Alaeddini](#), S.J. Walsh, and A. Abbas 132 citations
"Forensic implications of genetic analysis from degraded DNA - a review," *Forensic Science International Genetics*, vol. 4, no. 3, pp. 148–157, 2010.
1. [R. Alaeddini](#), S.J. Walsh, and A. Abbas 6 citations
"Molecular studies of time and environment dependent effects on bone DNA survival," *Forensic Science International Genetics*, vol. 42, no. 3, pp. 211–220, 2010.

Conferences.....

8. [R. Alaeddini](#), "Introduction to MCMC methods for resolving DNA mixtures," in *2017 Southwestern Association of Forensic Scientists*, Fort Worth, Texas, 2017.
7. [R. Alaeddini](#), and A. Abbas, "Development of a mitochondrial DNA based qPCR assay for the assessment

of DNA degradation in forensic samples," in *The 6th European Academy of Forensic Science Conference*, The Hague, Netherlands, 2012.

6. [R. Alaeddini](#), "Water purification essentials in forensic genetics laboratory," in *The 6th European Academy of Forensic Science Conference*, The Hague, Netherlands, 2012.

5. M. Ahmadi and [R. Alaeddini](#), "Micro-ATR infrared spectroscopic screening of bone samples for the assessment of DNA survival," in *The 6th European Academy of Forensic Science Conference*, The Hague, Netherlands, 2012.

4. [R. Alaeddini](#), "The role of National DNA Data Bank in Mass Disaster Identification," in *The 5th International Congress of Mass Disaster Management*, Tehran, Iran, 2012.

3. [R. Alaeddini](#), S.J. Walsh and A. Abbas, "Complications of PCR based genotyping in forensic context," in *The 19th International Symposium on the Forensic Sciences*, Melbourne, Australia, 2008.

2. [R. Alaeddini](#), R. Zhong, S.J. Walsh, F. Dehghani, S. Kazarian, and A. Abbas, "Applications of infrared spectroscopic analysis in forensic bone samples," in *The 19th International Symposium on the Forensic Sciences*, Melbourne, Australia, 2008.

1. [R. Alaeddini](#), and L.R. Burgoyne, "Endogenous inhibition of DNA amplification from human skeletal remains," in *The 18th International Symposium of the Forensic Sciences*, Perth, Australia, 2006.

References

1. Assistant Professor Muhammed Yousufuddin

Assistant Professor of Chemistry

My current Supervisor

Life & Health Sciences

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2. Professor Bruce Benz

Professor of Biology

My former Supervisor

Texas Wesleyan University

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3. Dr Susan R. Howe

Crime Laboratory Director

My former Supervisor

Tarrant County Medical Examiner

200 Feliks Gwozdz Pl.

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4. Associate Professor Ali Abbas

Director of the Laboratory for Multiscale Systems

My PhD Supervisor

The University of Sydney

School of Chemical and Biomolecular Engineering

University of Sydney NSW 2006

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He gave me a Reference Letter at the end of my work.

Plus 6 independent reference letters regarding my works

from highly recognized scientists (available upon request).