

I. PERSONAL DATA:

Name: Hasan Alhaddad
Date/Place of Birth: July 7th 1982/Kuwait
Nationality: Kuwaiti
Marital status: Married
Number of children: Two
Permanent address: Jabriya block 9 street 5 house 23
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II. ACADEMIC QUALIFICATIONS:

<i>Year</i>	<i>Type of diploma / field / Institution and location</i>
2009-2013	Ph.D., Genetics Graduate Group, University of California, Davis, USA.
2006-2008	M.S., Biology, California State University, Fresno, USA.
2002-2006	B.S., Biology: Molecular Cellular and Developmental Biology Option, and a Minor in Chemistry, California State University, Fresno, USA.

Ph.D. Dissertation Title: Linkage Disequilibrium and Recombination in the Domestic Cat (*Felis silvestris catus*): Applications to Genome-wide Association and Linkage Studies.

Msc. Thesis Title: Salivary secretions of *Homalodisca vitripennis* and their relation to *Xylella fastidiosa* inoculation.

III. PROFESSIONAL EXPERIENCE:

<i>Year</i>	<i>Position / brief description of responsibilities/ location / supervisor</i>
2013-Current	• Assistant Professor of Genetics, Department of Biological Sciences, Molecular Biology Program, College of Science, Kuwait University.
2014-Current	• Faculty member of School of Graduate Studies, Kuwait University.
2016-2017	• Associate editor for BMC Genomics.
2009-2013	• Ph.D. Student. Committee: Leslie Lyons, Bruce Rannala, Jeffrey Ross-Ibarra, UC, Davis.
2011	• Teaching Assistant, Department of Molecular and Cellular Biology, UC, Davis, USA
2008-2009	• Teaching Assistant, Department of Biological Sciences, Kuwait University, Kuwait.
2006-2008	• M.Sc. Student. Thesis Committee: Fred Schreiber, CSU, Fresno, and Elaine Backus, USDA.
2006	• Teaching Assistant, Department of Biology, California State University, Fresno, USA
2005	• Undergraduate researcher. Project: Testing the biological activity of ferrocenyl and phenyl chalcones on <i>Caenorhabditis elegans</i> . Supervisors: Saeed Attar, and A. Calderon-Urrea.
2004	• Undergraduate researcher. Project: Identifying homozygous transgenic tobacco plants for the programmed cell death gene, Ced3F. Supervisor: A. Calderon-Urrea.

IV. ADMINISTRATIVE EXPERIENCE:

<i>Level</i>	<i>Committees</i>
Departmental	Social – Accreditation - Student Affairs - Scientific Mission – Location Availability



V. TEACHING EXPERIENCE:

(a) Undergraduate Courses Taught:

Course (Level)

- Introduction to Molecular Biology (281)
- Introduction to Molecular Genetics (371)
- Introduction to Genomics (485)
- Forensic Analysis of Biological Evidence (301)
- Molecular Evolution (410)
- Independent studies (494)

(b) Theses Supervised/Co-Supervised:

<i>Year</i>	<i>Type</i>	<i>Student</i>	<i>Title/Program/Supervision</i>
2018-	M.Sc.	Zainab Dashti	Geographic variation in skull morphology of two monotypic species of gerbils (Gerbillinae, Rodentia). Zoology. Co-Supervised.
2018-	M.Sc.	Randa Alaqueely	Mitochondrial variation of camel breeds: polymorphisms, quantity, and direction of introgression. Molecular Biology. Supervised.
2018-	M.Sc.	Tasneem Maraqa	FGF5 as a candidate gene for long-hair phenotype in dromedary camels. Molecular Biology. Supervised.
2017-	M.Sc.	Huda Alaskar	Genetic diversity and population genetics of camel breeds. Molecular Biology. Supervised.
2016-2018	M.Sc.	Mona Abdi	Genomic landscape of of selection in domestic cat breeds. Molecular Biology. Supervised.

(c) Student Evaluations (Last 4):

<i>No.</i>	<i>Course</i>	<i>No. of students</i>		<i>Semester</i>	<i>Year</i>	<i>Score</i>
		<i>Response</i>	<i>Registered</i>			
1	281	5	18	Summer	2018/2017	98
2	281	12	35	Second	2018/2017	92
3	485	6	12	First	2018/2017	90
4	281	9	32	First	2018/2017	90

VI. RESEARCH EXPERIENCE:

(a) Projects and Grants:

<i>Year</i>	<i>Grant No.</i>	<i>Title/Principal Investigator/Co-Investigator/Funder</i>
2016	SL09/16	Camelus dromedarius (Cdom) bio-archive: an assessment of the quality and quantity of DNA collected via non-invasive sampling methods. PI: Hasan Alhaddad. Co-I: Bader H. Alhajeri. Funded by Research Sector, Kuwait University

(b) Conferences Attended:

<i>Year</i>	<i>Conference</i>
2016, 2017, 2019	Plant and Animal Genome Conference, San Diego, USA.

VII. SABBATICAL LEAVES:

<i>Year</i>	<i>Project/Location/Host</i>
2019	Exploring the genome of dromedary camels: an emphasis on annotating genes under selection. University of Florida, Gainesville. Dr. Samantha A. Brooks.

VIII. HONORS

<i>Year</i>	<i>Description of award</i>
2012	Ferrini award "To advance genetics research of the benefit of dogs and cats at the Center for Companion Animal Health of the UC Davis School of Veterinary Medicine.



IX. LIST OF PUBLICATIONS:**(a) Publications before Ph.D. Dissertation:**

- | <i>Year</i> | <i>Publication</i> |
|-------------|--|
| 2013 | Gandolfi, Barbara, Hasan Alhaddad , Shannon EK Joslin, Razib Khan, Serina Filler, Gottfried Brem, and Leslie A. Lyons. "A splice variant in KRT71 is associated with curly coat phenotype of Selkirk Rex cats." <i>Scientific reports</i> 3 (2013).

Gandolfi, Barbara, Hasan Alhaddad , Verena K. Affolter, Jeffrey Brockman, Jens Haggstrom, Shannon EK Joslin, Amanda L. Koehne et al. "To the Root of the Curl: A Signature of a Recent Selective Sweep Identifies a Mutation That Defines the Cornish Rex Cat Breed." <i>PloS one</i> 8, no. 6 (2013): e67105. |
| 2012 | Backus, Elaine A., Kim B. Andrews, Holly J. Shugart, L. Carl Greve, John M. Labavitch, and Hasan Alhaddad . "Salivary enzymes are injected into xylem by the glassy-winged sharpshooter, a vector of <i>Xylella fastidiosa</i> ." <i>Journal of Insect Physiology</i> 58, no. 7 (2012): 949-959.

Filler, Serina, Hasan Alhaddad , Barbara Gandolfi, Jennifer D. Kurushima, Alejandro Cortes, Christine Veit, Leslie A. Lyons, and Gottfried Brem. "Selkirk Rex: morphological and genetic characterization of a new cat breed." <i>Journal of Heredity</i> 103, no. 5 (2012): 727-733. |
| 2011 | Attar, Saeed, Zachary O'Brien, Hasan Alhaddad , Melissa L. Golden, and Alejandro Calderón-Urrea. "Ferrocenyl chalcones versus organic chalcones: A comparative study of their nematocidal activity." <i>Bioorganic & medicinal chemistry</i> 19, no. 6 (2011): 2055-2073.

Alhaddad, Hasan , Thomas A. Coudron, Elaine A. Backus, and Fred Schreiber. "Comparative behavioral and protein study of salivary secretions in Homalodisca spp. sharpshooters (Hemiptera: Cicadellidae: Cicadellinae)." <i>Annals of the Entomological Society of America</i> 104, no. 3 (2011): 543-552. |
| 2010 | Gandolfi, Barbara, Catherine A. Outerbridge, Leslie G. Beresford, Jeffrey A. Myers, Monica Pimentel, Hasan Alhaddad , Jennifer C. Grahn, Robert A. Grahn, and Leslie A. Lyons. "The naked truth: Sphynx and Devon Rex cat breed mutations in KRT71." <i>Mammalian Genome</i> 21, no. 9-10 (2010): 509-515. |

(b) Publications from Ph.D. Dissertation:

- | <i>Year</i> | <i>Publication</i> |
|-------------|--|
| 2016 | Alhaddad H. , Zhang C., Rannala B. & Lyons L.A. (2016) A Glance at Recombination Hotspots in the Domestic Cat. <i>Plos One</i> 11, e0148710. |
| 2014 | Alhaddad H. , Gandolfi B., Grahn R.A., Rah H.C., Peterson C.B., Maggs D.J., Good K.L., Pedersen N.C. & Lyons L.A. (2014) Genome-wide association and linkage analyses localize a progressive retinal atrophy locus in Persian cats. <i>Mammalian genome: official journal of the International Mammalian Genome Society</i> 25, 354-62. |
| 2013 | Alhaddad, Hasan , Razib Khan, Robert A. Grahn, Barbara Gandolfi, James C. Mullikin, Shelley A. Cole, Timothy J. Gruffydd-Jones et al. "Extent of linkage disequilibrium in the domestic cat, <i>Felis silvestris catus</i> , and its breeds." <i>PloS one</i> 8, no. 1 (2013): e53537. |

(c) Research Papers (Post Ph.D.):

- | <i>Year</i> | <i>Publication</i> |
|-------------|---|
| 2019 | Alhaddad H. , Maraqa T., Alabdulghafour S., Alaskar H., Alaqeely R., Almathen F. & Alhajeri B.H. (2019) Quality and quantity of dromedary camel DNA sampled from whole-blood, saliva, and tail-hair. <i>PLoS One</i> 14, e0211743. |
| 2018 | Alhaddad H. & Alhajeri B.H. (2018) SamplEase: a simple application for collection and organization of biological specimen data in the field. <i>Ecol Evol</i> 8, 10266-71. |

Gandolfi B., **Alhaddad H.**, Abdi M., Bach L.H., Creighton E.K., Davis B.W., Decker J.E., Dodman N.H., Grahn J.C., Grahn R.A., Haase B., Haggstrom J., Hamilton M.J., Helps C.R., Kurushima J.D., Lohi H., Longeri M., Malik R., Meurs K.M., Montague M.J., Mullikin J.C., Murphy W.J., Nilson S.M., Pedersen N.C., Peterson C.B., Rusbridge C., Saif R., Shelton G.D., Warren W.C., Wasim M. & Lyons L.A. (2018) Applications and efficiencies of the first cat 63K DNA array. *Sci Rep* 8, 7024.

- 2016 Nazir M., **Alhaddad H.**, Alenizi M., Alenizi H., Taqi Z., Sanqoor S., Alrazouqi A., Hassan A., Alfalasi R., Gaur S., Al Jaber J., Ziab J., Al-Harbi E., Moura-Neto R.S. & Budowle B. (2016) A genetic overview of 23Y-STR markers in UAE population. *Forensic Sci Int Genet* **23**, 150-2.
- Lyons L.A., Creighton E.K., **Alhaddad H.**, Beale H.C., Grahn R.A., Rah H., Maggs D.J., Helps C.R. & Gandolfi B. (2016) Whole genome sequencing in cats, identifies new models for blindness in AIPL1 and somite segmentation in HES7. *BMC Genomics* **17**, 265.
- Lyons L.A., Erdman C.A., Grahn R.A., Hamilton M.J., Carter M.J., Helps C.R., **Alhaddad H.** & Gandolfi B. (2016) Aristaless-Like Homeobox protein 1 (ALX1) variant associated with craniofacial structure and frontonasal dysplasia in Burmese cats. *Dev Biol* **409**, 451-8.
- 2014 Grahn R.A., **Alhaddad H.**, Alves P.C., Randi E., Waly N.E. & Lyons L.A. (2014) Feline mitochondrial DNA sampling for forensic analysis: When enough is enough! *Forensic Sci Int Genet* **16C**, 52-7.

(d) Review Articles:

- | <i>Year</i> | <i>Publication</i> |
|-------------|---|
| 2015 | Gandolfi B., & Alhaddad H. (2015) Investigation of inherited diseases in cats: genetic and genomic strategies over three decades. <i>Journal of Feline Medicine and Surgery</i> 17(5) :405-415. |
| 2019 | Alhaddad H. & Alhajeri B.H. (2019) Cdrom Archive: A Gateway to Study Camel Phenotypes. <i>Front Genet</i> 10, 48. |

(e) Number of citations in previous 5 years: 38

X. PUBLIC AND INVITED LECTURES & SCIENTIFIC TALKS:

- | <i>Year</i> | <i>Presentation</i> |
|-------------|---|
| 2019 | The genomic landscape of selection in domestic cat breeds. Plant and Animal Genome (PAG) Conference, San Diego.
A look at camels. A public talk at Shaikh Sabah Alahmed Cultural Village (in Arabic). |
| 2018 | Journey around the camel. A presentation for the weekly seminar of the Department of Biological Sciences (in Arabic). |
| 2016 | The Human Genome Project – 3 Lectures as part of Molecular Basis of Human Diseases course (invited by Dr. Suzan Albustan, Kuwait University).
Feline SNP Array: Features and Utility. Plant and Animal Genome (PAG) meeting, San Diego, USA.
Degree of Bengalness: A measure of the measure of genomic contribution of Asian Leopard Cats into Bengal breed cats. An invited talk at the University of Missouri, USA. |
| 2015 | A Brief Introduction to Population Genetics – A lecture at College of Allied Health Sciences: as part of Molecular Genetics (342) course (invited by Dr. Hamad Alyaseen, Kuwait University) |
| 2014 | The Human Genome Project – 3 Lectures as part of Molecular Basis of Human Diseases course (invited by Dr. Suzan Albustan, Kuwait University).
“Do You Know?” A lecture at Kuwait University for students from Ahmad Alrubie high school introducing the programs of the Department of Biological Sciences (in Arabic). |

Linkage disequilibrium and recombination in the domestic cat: applications to genome-wide association and linkage studies. Dissertation presentation for the weekly seminar of the Department of Biological Sciences.

Bird identification via genetics – A lecture for the Kuwait Bird Watching Team at Kuwait Environmental Protection Society (in Arabic).

2013 The Human Genome Project – 3 Lectures as part of Molecular Basis of Human Diseases course (invited by Dr. Suzan Albustan, Kuwait University).

XI. SCIENTIFIC POSTERS (POST PH.D.):

<i>Year</i>	<i>Description</i>
2019	<ul style="list-style-type: none"> • Zainab Dashti, H. Alhaddad, & B. H. Alhajeri. Geographic Variation in Skull Morphology of Two Monotypic Species of Gerbils (Gerbillinae, Rodentia). Scientific Poster Day, KU. • Tasneem Maraqa, B. H. Alhajeri, & H. Alhaddad. FGF5 as a Candidate Gene for Long-hair Phenotype in Dromedary Camels. Scientific Poster Day, KU. • Randa Alaqeely, B. H. Alhajeri, & H. Alhaddad. Mitochondrial Variation in Camel Breeds: Polymorphism Quantity and Direction of Introgression. Scientific Poster Day, KU. • Huda Alaskar, B. H. Alhajeri, F. Almathen, and H. Alhaddad. Quality Control and Selection of Dromedary Camel STR Data. Scientific Poster Day, KU.
2018	<ul style="list-style-type: none"> • Mona Abdi, L.A. Lyons, & H. Alhaddad. Genomic landscape of selection in domestic cat breeds. Scientific Poster Day, KU. • Huda Alaskar, H. Alhaddad, & B. H. Alhajeri. Are area ratios useful in distinguishing among camel types? A preliminary study indicates that they are. Scientific Poster Day, KU. • Randa Alaqeely, H. Alhaddad, & B. H. Alhajeri. Beauty and the beast: A comparison of torso shapes of beauty-contest camels vs. racing camels. Scientific Poster Day, KU. • Suha Alabdulghafoor, T. Maraqa, B. H. Alhajeri, & H. Alhaddad. Cdrom Archive: A gateway to study camel phenotypes. Scientific Poster Day, KU. • Tasneem Maraqa, H. Alhaddad, & B. H. Alhajeri. Is there sexual dimorphism in the limb morphology of camels? A morphology study. Scientific Poster Day, KU. • Zainab Dashti, T. Maraqa, H. Alhaddad, & B. H. Alhajeri. Phenotypic integration on limb and torso morphology of camels. Scientific Poster Day, KU.
2017	<ul style="list-style-type: none"> • Randa Alaqeely, H. Alhaddad, and Bader H. Alhajeri. Do camel types exhibit geometric variation in torso shape? Insights from social media. Undergraduate Poster Symposium, KU. • Tasneem Maraqa, H. Alhaddad, and Bader H. Alhajeri. Assessing limb variation across camel types using images from social media. Undergraduate Poster Symposium, KU. • Mona Abdi, B. Gandolfi, L. A. Lyons, and H. Alhaddad. Descriptive analysis and population structure of domestic cat breeds. Scientific Poster Day, KU. • Suha AlabdullGhafoor, T. Maraqa, H. Alhaddad, & B. H. Alhajeri. Comparison of camel DNA quantities extracted from blood, saliva, and hair. Scientific Poster Day, KU. • Tasneem Maraqa, S. AlabdullGhafoor, B. H. Alhajeri, & H. Alhaddad. Quality of three camel DNA sources examined in three different breeds. Scientific Poster Day, KU. • Bader H. Alhajeri & H. Alhaddad. Methods of quantifying morphological variation in Camelus dromedarius breeds. Scientific Poster Day, KU. • Hasan Alhaddad & B. H. Alhajeri. SamplEase: An iOS application for biological data collection and organization. Scientific Poster Day, KU. • Mona Abdi, B. Gandolfi, L. A. Lyons, & H. Alhaddad. Cat breed formation and the effect of selection on shaping the genome. Plant and Animal Genome (PAG). • Tasneem Maraqa, S. Alabdulghafoor, F. Almathen, B.H. Alhajeri, & H. Alhaddad. Camel DNA samples: sources, quality, and quantity. Plant and Animal Genome (PAG). • Hasan Alhaddad & Bader H. Alhajeri. SamplEase and Cdrom archive: Windows to study the dromedary Camelus dromedarius (Artiodactyla: Camelidae) and related camelids. Plant and Animal Genome (PAG).

- 2016
- Ali Alhaid, B. Gandolfi, L. A. Lyons, and **H. Alhaddad**. On the origin of the longhair mutation in cats. Undergraduate Poster Symposium, Kuwait University.
 - Huda Alaskar and **H. Alhaddad**. Laying a string NOT filling a vessel: Genome papers as an active teaching and learning tool. Scientific Poster Day, Kuwait University.
 - **Alhaddad H.**, B. Gandolfi, and L. A. Lyons. Successes and challenges of genome-wide association (GWA) analyses in cats. Scientific Poster Day, Kuwait University.
 - Mona Abdi, **H. Alhaddad**, B. Gandolfi, R. Grahn, and L. A. Lyons. Title: Degree of Bengalness: A measure of the measure of genomic contribution of Asian Leopard Cats into Bengal breed cats. Plant and Animal Genome (PAG).

XII. REFERENCES:

<i>No.</i>	<i>Name</i>	<i>Academic Rank</i>	<i>Institution</i>	<i>Email</i>
1.	Leslie A. Lyons	Professor	University of Missouri, Columbia	lyonsla@missouri.edu
2.	Samantha A. Brooks	Associate Professor	University of Florida, Gainesville	samantha.brooks@ufl.edu
3.	Wesley Warren	Professor	University of Missouri, Columbia	warrenwc@missouri.edu
4.	Niels Pederson	Professor Emeritus	University of California, Davis	ncpedersen@ucdavis.edu
5.	Bruce Rannala	Professor	University of California, Davis	brannala@ucdavis.edu
6.	William J Murphy	Professor	Texas A&M University	WMurphy@cvm.tamu.edu