

Curriculum Vitae

Name: Yassin M. Elhassan.

Current Address: 19331 Dawntreader Dr.
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USA

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Career Goal: Teaching and/or research in the field of biology and biotechnology related sciences at high academic institutes.

Fields of Experiences:

Biology and Physiology	Cell Culture
Gamete & Embryo Physiology	Cultured Cells Cryopreservation
In Vitro Maturation	Assisted Reproduction (humans)
In vitro Fertilization	Micro-Tool Preparation
In Vitro Embryo Culture	Embryo Micromanipulation
Embryo Cryopreservation	Applied Nutrition
Semen Analysis & Evaluation	Molecular Biology Techniques
Semen Processing & Freezing	DNA Paternity Testing (<i>Short</i>
Flowcytometry Sperm Sexing	<i>Tandem Repeat Analysis & Genotyping</i>)

Work Experience:

A) Teaching Experience:

Aug 2014- Prairie View-Texas A&M University
Current: Department of Biology
Prairie View, Texas, USA.

Taught classes:

- 1) BIOL1064 (Human Anatomy & Physiology II-Lecture)
- 2) BIOL1064 (Human Anatomy & Physiology II-Lab)
- 1) BIOL1054 (Human Anatomy & Physiology I-Lecture)
- 2) BIOL1054 (Human Anatomy & Physiology I-Lab)

Jan 2007- Lone-Star Cy-Fair College
Dec 2018: Department of Biology
Cy-Fair College, Cypress, Texas, USA.

Taught classes (lecture & laboratory):

- 1) BIOL2401 (Human Anatomy and Physiology I)
- 2) BIOL2402 (Human Anatomy and Physiology II)
- 3) BIOL2404 (Intro Human Anatomy and Physiology; Substitute)
- 4) BIOL1406 (Biology 1)
- 5) BIOL1408 (Intro Biology 1 for Non-majors)

Jan 2011- Houston Community College (HCC)
Dec 2016: Campuses:
Spring Branch Campus
Alief Hayes Campus
Katy Campus
Department of Biology
Houston, Texas, USA.
Taught:
1) BIOL1406 (Biology 1)
2) BIOL1407 (Biology II)
3) BIOL2401 (Human Anatomy and Physiology I)
4) BIOL2402 (Human Anatomy and Physiology II)

May 1995- Texas A & M University, College of Veterinary
Dec 2000: Medicine, Department of Veterinary Physiology and Pharmacology,
College Station, Texas, USA.
In addition to conducting research, participated in:
1) Teaching a lab unit module: "IVF & embryo culture" of a
class: "Gamete and Embryo Physiology".
2) Training graduate and undergraduate students: Laboratory
Techniques of IVM, IVF, and embryo culture.
3) Assisting and advising graduate students with their
research projects.
4) Training and assisting national and international visiting
scholars and scientists with various laboratory techniques
and procedures involving in vitro production of mammalian
embryos.

Nov. 1985- University of Khartoum (U of K)
June 1987: College of Veterinary Medicine
Department of Physiology and biochemistry,
Khartoum, Sudan.
Adjunct Faculty.
Taught pre-clinical classes:
1) Endocrinology and Reproductive Physiology (lecture).
2) Endocrinology and Reproductive Physiology (lab).
3) Tutorials and seminars.

June 1986- University of Juba (at U of K Campus),
June 1987: College of Veterinary Medicine
Department of Physiology and biochemistry,
Khartoum, Sudan.
Adjunct Faculty.
Taught:
1) Endocrinology and Reproductive Physiology (lecture).
2) Endocrinology and Reproductive Physiology (lab).
3) Tutorials and seminars.

Sep. 1984- University of Sudan
June 1987: College of Veterinary Medicine and Production
Department of Physiology & Biochemistry.
Khartoum North, Sudan.
Senior Faculty.
Taught:
1) Animal Nutrition (lecture)
2) Animal Nutrition (lab)
3) Animal Genetics & Breeding (lecture)
4) Animal Genetics & Breeding (lab)
Developed curricula for two proposed classes:

- 1) Introductory Reproductive Physiology.
- 2) Advanced Reproductive Physiology.
- 3) Physiology of Lactation.

July 1976- University of Sudan
 Aug. 1978: College Veterinary Medicine and Production
 Dept. of Physiology & Biochemistry
 Khartoum North, Sudan.
 Lecturer.
 Taught first and second-year students:

- 1) Animal Nutrition (lecture).
- 2) Applied Animal Nutrition (laboratory).
- 3) Animal Breeding (lec)
- 4) Applied Animal Breeding (laboratory)

B) Non Academic Work Experience:

June 2005 Genetic Resources International
 June 2006: Navasota, Texas, USA
 Reproductive Specialist and IVF Lab Director
 Established, operated and managed an In Vitro Embryo Production Unit for commercial production of bovine embryos using sexed semen.
 Provided training to the continuing and newly employed technical staff, and assisted with activities in the Embryo Transfer Unit.

May 2004- DNA Reference Lab.
 June 2005: San Antonio, TX, USA.
 DNA Analyst & Andrologyst
 Paternity Testing & Andrology Work.
 Performed paternity testing (STR analysis & Genotyping) using the ABI 310 Gene Analyzer.
 Performed contracted andrological laboratory work involving evaluation, assessment and analysis of human semen using both the standard WHO and the Strict Kruger testing criteria.

June 2002- Sexing Technologies
 Mar 2004: Navasota, Texas, USA
 Reproductive Specialist and Sexing Lab Director.
 Sorting bovine and equine semen into X and Y chromosome-bearing sperm using Flowcytometry and Cell Sorting technologies.
 Fresh-semen evaluation using microscopy, spectrophotometry and Computer Assisted Analysis utilizing The Hamilton Thorn Sperm Analyzer.
 Pre-freezing semen processing, automated straw printing, manual and automated straw filling, straw loading and freezing, post-thaw semen processing and evaluation.
 Providing training to the continuing and newly employed technical staff
 Assisting with activities in the Embryo Transfer Unit.

Jan 2001- Sher Institute for Reproductive Medicine (SIRM).
 July 2001: Las Vegas, Nevada & St Louis, Missouri; USA.
 Clinical Embryologist.
 Performing and maintaining laboratory quality control procedures
 Preparation of culture media and culture plates for Human in vitro fertilization (IVF)

Andrological work involving: Semen analysis & evaluation (Strict Kruger & WHO standard), sperm sample preparation (swim up, density gradient), semen cryopreservation
Egg retrieval and ICSI practices
Embryological work involving: Embryo culture, embryo-development evaluation using a Graduated Evaluation System (GES), embryo cryopreservation, embryo transfer (d3 & d5)
IVF data collection and recording.
Designing and establishing an independent research program and a laboratory to improve embryo development and outcome.

June 1996-
Dec 2000:

Texas A & M University
College of Veterinary Medicine
Department of Veterinary Physiology and Pharmacology
College Station, Texas, USA.
Research Associate.
Conducting research aimed at optimizing in vitro culture conditions for the developing mammalian embryo through identifying developmental requirements and understanding their interaction with gene expression.

May 1995-
May 1996:

Texas A & M University
College of Veterinary Medicine,
Department of Veterinary Physiology and Pharmacology, College Station, Texas, USA.
Tech II (Research Assistance)
Conducting research associated with embryo culture and development
Participating in ongoing research projects dealing with:
In vitro culture of pre-implantation mammalian embryos, sperm injection, parthenogenetic activation and pronuclear transfer.

Aug 1994-
Apr 1995:

Texas A & M University
College of Veterinary Medicine,
Department of Veterinary Physiology and Pharmacology, College Station, Texas, USA.
Visiting Scientist
Conducting research and assisting with ongoing research projects
Performing: Semen collection and semen processing (straw and pellet freezing); laparoscopic insemination; surgical and laparoscopic embryo transfer in small ruminants; in vitro maturation, In vitro fertilization and in vitro culture of bovine embryos; parthenogenic activation of bovine oocytes. Animal species included: bovine, deer, sheep (wild and domestic) and goat.

Jan 1994-
July 1994:

Washington State University
Department of Microbiology/Anim. Sci
Pullman, USA.
Visiting Scientist.
Attended a laboratory course in Molecular Biology Techniques in the Department of Microbiology.
Techniques learned included:
large scale plasmid preparation, genomic and plasmid DNA purification and isolation, Agarose Gel & spectrophotometric Assays of DNA concentration & purity, Restriction Enzyme Analysis and DNA fragments purification, genetic modification of plasmid vector for gene cloning, induction and measurement of

bacterial competence for genetic transformation, bacterial genetic transformation through plasmid gene transfer and gene ligation, identification of transformed bacteria using Southern Blot Analysis and chemical markers, in vitro amplification of DNA sequence using PCR, and DNA fingerprinting

Dec 1992-
Dec 1993:

Washington State University
Department of Animal Science,
Pullman, USA.

Visiting Scientist.

Conducting research and assisting with ongoing research projects.

Performing in vitro reproductive studies in mice involving: Breeding and managing a mouse colony, controlled breeding within the colony, identification of bred females, removal of oviducts and uteri of bred females, recovery of early (zygotes & 2-cell) and advanced (blastocyst) stages of embryos from oviducts and uteri, in vitro culture and assessment of recovered embryos, and cryopreservation of embryos.

Performing in vitro reproductive studies in bovine involving: in vitro recovery of immature bovine oocytes from slaughterhouse ovaries, in vitro maturation and fertilization of recovered bovine oocytes, in vitro culture and evaluation of developing bovine embryos, cryopreservation of bovine embryos

Performing splitting of bovine embryos using micromanipulation techniques.

July 1987-
Nov 1992:

KACST Institute for Science and Technology,
Directorate of Scientific Awareness and Publishing
Riyadh, S.A.

Scientific Specialist

Designed, implemented, and executed programs promoting public awareness of science and technology through:

Presentations, scientific articles, seminars, and workshops utilizing various media and publishing channels.

Performing editorial and publishing work. Editorial Board member for a periodical scientific magazine .Evaluating submitted research proposals and progress report of ongoing research projects.

Sep 1975-
June 1976:

Ministry of Agriculture and Animal Resources,
Khartoum and Kasala, Sudan.

Veterinarian.

Mobile and stationary clinical work, dairy and poultry farm management, meat inspection, and slaughterhouse management.

Supervision and management of regional vaccination campaigns co-sponsored by the UN & OAU for the eradication of Rinderpest and other epidemic diseases from Africa. Duties also included administrative work.

Publications:

Elhassan YM, G Wu, AC Lean'ez, RJ Tasca, AJ Watson and ME Westhusin. 2001. Amino Acid Concentrations in Fluids from the Bovine Oviduct and Uterus and in KSOM-Based Culture Media Theriogenology. 55:1907-1918

Elhassan YM, Shin T, Tasca RJ, Kraemer DC . 2001. In vitro culture of cloned and in vitro fertilized bovine embryos in a chemically defined culture medium. Theriogenology. 55: 266.

Shin T, Elhassan Y, Caveney A, Watson A, Looney C, Kraemer D, Westhusin M. 2001. Comparison of embryo survival rates and apoptotic levels in cloned bovine embryos cultured in semidefined medium (G1/G2) and chemically defined medium. *Theriogenology*. 55: 291.

Elhassan YM, X Zhang, DC Kraemer and ME Westhusin. 2000. Blastocyst development of in vitro produced morula-stage bovine embryos briefly exposed to Ultraviolet light following Hoechst staining. *J. Biol. Reprod.* 62: 253 (Suppl 1).

Elhassan YM and ME Westhusin. 1999. A Simple Salt Solution medium supplemented with Egg Yolk Plasma and Lactate (YPLM) Supports pre-implantation development of Bovine Embryos in vitro. *Anim. Reprod. Sci.* 57:153-166.

Elhassan YM, CP Lee, RJ Tasca and ME Westhusin. 1999. The Effect of NaCl-Associated Osmolarity changes on Bovine Embryo Development in a Completely Defined Culture Medium Supplemented with Amino Acids at Oviductal Fluid Levels. *J. Biol. Reprod.* 60: 248 (Suppl 1).

Elhassan YM, RJ Tasca and ME Westhusin. 1999. Levels of Amino Acids in Bovine Oviductal and Uterine Fluids in Comparison to Levels Available in a Culture Medium Supplemented with Commercial Stocks. *Theriogenology*. 51:237.

Lee CP, YM Elhassan and ME Westhusin. 1999. The Effect of β -Mercaptoethanol and N-Acetyl Cysteine on Development of Bovine Blastocysts Produced In Vitro. *J. Biol. Reprod.* 60:193 (Suppl 1).

Lee CP, YM Elhassan and DC Kraemer. 1999. The Effect of β -Mercaptoethanol and N-Acetyl Cysteine on Development and Hatching of Bovine Blastocysts Produced In Vitro. *Theriogenology*. 51:243.

Winger QW, Elhassan YM, Watson AJ and Westhusin ME. 1998. Expression of Lactate Dehydrogenase mRNAs in Bovine Pre-attachment Embryos. *J. Biol. Reprod.* 58: 95 (Suppl 1).

Elhassan YM and ME Westhusin. 1997. An Egg Yolk Fraction High in LDL Supports In Vitro Development of Bovine Embryos in a Cell-Free Basic Salt Solution Supplemented with Lactate. *J. Biol. Reprod.* 54: 138 (Suppl 1).

Elhassan YM and ME Westhusin. 1997. In Vitro Development of Preimplantation Bovine Embryos in a Co-Culture System Supplemented with Egg Yolk. *Theriogenology*. 47:288.

Elhassan YM and ME Westhusin. 1996. In Vitro Development of Bovine Embryos in a BRL Co-Culture System Supplemented with Egg Yolk in the Presence or Absence of Fetal Bovine Serum and Bovine Serum Albumin. *J. Biol. Reprod.* 54:81 (Suppl).

Elhassan YM and RW Wright Jr. 1995. The Effect of Selenium and Vitamin E Addition on Cleavage Rate of IVF/IVM Bovine Oocytes. *Theriogenology*. 43:206

Elhassan YM. 1984. Reproductive Response of Dairy Heifers to chronic Submaintenance Energy Rations. Ph.D. Dissertation, Univ. of Ariz., Tucson, Arizona.

Elhassan YM. 1981. The Effect of Adding Various Protein Supplements to Pelleted Cottonseed Hulls on Milk Production. M.S. Thesis, Univ. of Ariz., Tucson, Arizona.

Conference Presentations:

The 33rd Annual Meeting of the Society for the Study of Reproduction, Madison, Wisconsin, USA, July 2000. A poster presentation: "Blastocyst development of in vitro produced morula-stage bovine embryos briefly exposed to Ultraviolet light following Hoechst staining".

The 32nd Annual Meeting of the Society for the Study of Reproduction, Pullman Washington, USA, July 1999. A poster presentation: "The Effect of NaCl-Associated Osmolarity changes on Bovine Embryo Development in a Completely Defined Culture Medium Supplemented with Amino Acids at Oviductal Fluid Levels".

The IETS Annual Conference, Quebec city, Canada, January 1999. A poster presentation: " Levels of Amino Acids in Bovine Oviductal and Uterine Fluids in Comparison to Levels Available in a Culture Medium Supplemented with Commercial Stocks".

The 31st Annual Meeting of the Society for the Study of Reproduction, College Station Texas, USA, August 1998. A poster presentation: " Expression of Lactate Dehydrogenase mRNAs in Bovine Pre-attachment Embryos".

The IETS Annual Conference, Boston, MA, USA, January 1998; Attendant.

The 30th Annual Meeting of the Society for the Study of Reproduction, Portland Oregon, USA, August 1997. A poster presentation: " An Egg Fraction High in LDL Supports In Vitro Development of Bovine Embryos in a Cell-Free Basic Salt Solution Supplemented with Lactate".

Texas Forum on Female Reproduction, Houston, USA, May 1997. A poster presentation: " The Effect of Egg Yolk and Egg Yolk Fractions: Yolk Plasma and Yolk Granules, on Development of Mammalian Embryo".

The IETS Annual Conference, Nice, France, January 1997. A poster presentation: " In Vitro Development of Preimplantation Bovine Embryos in a Co-Culture System Supplemented with Egg Yolk".

The 29th Annual Meeting of the Society for the Study of Reproduction, London, Canada, July 1996; A poster presentation: " In Vitro Development of Bovine Embryos in a BRL Co-Culture System Supplemented with Egg Yolk in The Presence or Absence of Fetal Bovine Serum and Bovine Serum Albumin".

The IETS Annual Conference, Calgary Canada, January 1995. A poster presentation: " The Effect of Selenium and Vitamin E Addition on Cleavage Rate of IVM/IVF Bovine Oocytes".

Selected General Publications:

Elhassan YM 1988. Air Pollution. Aluloom Wattghnia 4:9-12. KACST, Riyadh, KSA.

Elhassan YM. 1988. Clarification of Some Medical Themes. Aluloom Wattaghnia, 5:6-9. KACST, Riyadh, KSA.

Elhassan YM. and A. Alkhalil. 1988. Microbes Fight Back. Aluloom Wattaghnia, 5:17-20. (Trans). KACST, Riyadh, KSA.

Elhassan YM. 1992. Utilization of Biomass for Biogass Production. Aluloom Wattghnia, 20:26-30. KACST, Riyadh, KSA.

Elhassan YM. 1992. The Bacteria. Aluloom Wattaghnia, 19:9-12.

Elhassan YM. 1990. A co-editor of a book " The Importance of the Exploitation of Biomass Resources in the Arab World", 1990, KACST, Riyadh, Saudi Arabia. KACST, Riyadh, KSA.

Education:

Ph.D. in Physiology.
University of Arizona, Department of Animal Physiology, Tucson, Arizona, USA.
Graduated in August 1984.
G.P.A: 3.9167.

Master in Animal Sciences.
University of Arizona, Department of Animal science, Tucson, Arizona, USA.
Graduated in May 1981, G.P.A: 3.9474.

DVM-equivalent B.V.Sc.
University of Khartoum, College of Veterinary Medicine, Khartoum, Sudan.
Graduated in August 1975.
Dean Evaluation: In the upper 10% of the class of 1975.

Certificates, Training, and Special Skills:

Certificates:

Nov 2007 eCollege: Vista - Designing Essentials

Nov 2009 Adjunct Teaching Certificate

Nov 2009 On-Line Teaching Certificate

Training:

Apr 2004- Paternity Testing (DNA Analysis & Genotyping)
May 2004 DNA Reference Lab
San Antonio TX, USA

Feb. 2003- Sexing of Bovine Semen (Flowcytometry).
March 2003 X,Y Corporation Laboratories,
Colorado State University,
Fort. Collin, Colorado, USA.

July 2003- Sexing of Equine Semen (Flowcytometry).
Aug. 2003 X,Y Corporation and Sexing Technologies,

Navasota, Texas, USA.

Dec 12-14, 2003 Techniques in Equine Reproduction.
The Annual Equine Reproduction Symposium,
College of Veterinary Medicine,
Texas A & M University,
College Station, Texas, USA.

Jan. 1994 Molecular Biology Techniques.
May 1994 Department of Microbiology.
Washington State University,
Pullman, USA.

Skills:

Computer: Word Processing (MS word), Spread Sheet (Excel), Power Point,
Fortran 77, Visual Basic (Introductory), Image Analysis
(Optimas), Computer-aided Semen Analysis (CASA), Statistical
Analysis (SAS).

Teaching: Use of audiovisual aids in teaching; such aids included overhead
and slide projectors, models, posters, project models, and media
software. Use of long distance learning techniques and
applications as supportive supplemental tools in classroom
instruction setting. Online teaching

Laboratory: Radioimmunoassay, Flowcytometry (sexing), In vitro Maturation,
In Vitro Fertilization, Embryo & Cell culture, Cytochemical
staining techniques (immuno, differential, fluorescent and
histochemical), Basic Molecular biology techniques (above),
Western Blot, RNA and ribosome extraction, Paternity Testing
(Short Tandem Repeat Analysis & Genotyping).

Equipment: Spectrophotometers; Fluorometers; Gel Documentation; PCR;
Regular and Water-jacketed Incubators; Mini, Macro and
Ultracentrifuges; Scintillation Counters; Dissection, Compound,
Inverted and Micromanipulation Microscopes; Alcohol & Liquid
Nitrogen Semen and Embryo Freezers; The Hamilton Thorne Semen
Auto-analyzer; Semen Straw printers, Straw Fillers, and Straw
Sealers; Ultra-purification Water Systems; pH-meters,
Osmometers, Autoclaves, Homogenizers & Sonicators; Gel
Electrophoresis Units; Auto-analyzers (protein, DNA etc), ABI
310 Gene Analyzer, and other equipment and apparatuses
associated with routine laboratory work.

Professional: Worked with various mammalian species including Bovine, Ovine,
Caprine, Equine, Mice, Rats, and Human.

Professional Societies Membership:

The International Embryo Transfer Society
The Society of the Study of Reproduction
The Sudanese Veterinary Association, Sudan

Language: Spoken English: Excellent
Written English: Excellent

Awards and Academic Recognitions:

Awards awarded on basis of superior academic records:

1982-1983 Graduate Tuition Scholarship, University of Arizona.
1981-1982 Graduate Tuition Scholarship, University of Arizona
1980-1981 Graduate Tuition Scholarship, University of Arizona.
1979-1980 Graduate Tuition Scholarship, University of Arizona

Volunteering &
Community Service:

2011-2012: Serving as a volunteer teacher at the Sunday School of Greater Houston Center, Houston, Texas, USA.

2010-2012: Serving as a President of the Board of the Sudanese Community in Houston, Texas, USA.

1996-2006: Assisting with coaching two soccer teams playing at different youth divisions (U-8 and U-14) in the city of College Station, Texas, USA.

1994-1995: Participation & support of the Community Child Care Center Head Start Program at College Hills Elementary School, College Station, Texas, USA.

1997-2000: Serving as a Principal and teacher at a local (Al-Huda) Sunday School, Bryan & College Station, Texas, USA.

1981-1982: Participating in a fund raising program for both the American Heart association and the American Cancer Associations in Tucson, Arizona including door-to-door distribution of donation and literature leaflets.

Service Recognitions:

Jan 2012: Community service recognition certificate for serving the Sudanese community in Houston, Texas

Jan 2012: Community service recognition certificate for serving the community congregation of Greater Houston, Texas

Sep 2000: Five Years of Service, College of Veterinary Medicine, Texas A & M University, College Station, Texas, USA.

Aug 1998: Group of the Month, College of Veterinary Medicine, Texas A & M University, College Station, Texas, USA.

Aug 1995: Certificate of Merit for Participation & support of the Community Child Care Center Head Start Program, College Station Independent School District, College Station, Texas, USA.

References: Available upon request.