

PROFESSIONAL EXPERIENCE AND ACADEMIC APPOINTMENTS:

- 1992-present Professor of Veterinary Integrative Biosciences, College of Veterinary Medicine & Biomedical Sciences, Texas A&M University, College Station, Texas.
- 1987-1992 Associate Professor of Veterinary Anatomy, Texas A&M University, College Station, Texas.
- 1980-1987 Assistant Professor of Cell Biology, The University of Texas Health Science Center at Dallas Southwestern Medical School.
- 1979 Assistant Instructor of Cell Biology, The University of Texas Health Science Center at Dallas Southwestern Medical School.
- 1978-1979 Postdoctoral Research Fellow in Reproductive Biology, The University of Texas Health Science Center at Dallas Southwestern Medical School.
- 1974-1978 Graduate Research Assistant as Ph.D. Candidate, Colorado State University.
- 1971-1974 Graduate Research Assistant as M.S. Candidate, Virginia Polytechnic Institute and State University.

CLINICAL SPECIALTY/BOARD CERTIFICATION: N/A

AWARDS AND HONORS:

NIH New Investigator Research Award, 1983-1986; 1988 Young Andrologist Award, from the American Society of Andrology; Invited speaker (Spermatogenesis, Animal Species and Humans) at 1988 International Symposium on Gamete Physiology, Serono Symposia, USA; Invited speaker (Spermatogenesis in humans and animal species), 1990 Japan Society of Andrology; Invited speaker (Spermatogenesis in domestic animals and approaches to its enhancement) at the XI Brazilian Congress of Animal Reproduction 1995; Invited speaker (Efficiency of Spermatogenesis in Humans), College of Medicine, University of Utrecht, The Netherlands, 1996; Invited speaker (Transplantation on Spermatogenesis: Sperm Decline in Humans), La Federation Francaise Pour L'etude de la Reproduction, 1997; Research Career Development Award 1991-1996; Editorial Boards of Biology of Reproduction (1989-1995), of AGE (1992-1995), and Journal of Andrology (1997-present); University-level teaching award from TAMU Honors Undergraduate Program, 1996; College-level Teaching Award in Biomedical Science Undergraduate Program, 1999; The KINDER Award (Kids in Need of Drug Evaluation and Rx Treatment Clinic in Houston, TX) for contributions to the well being of children at risk, 2001, through our Partnership for Environmental Education and Rural Health Program (<http://peer.tamu.edu>); Local Texas A&M University Chapter of Sigma Xi Science Communication Award, 2001.

PROFESSIONAL ORGANIZATIONS AND SERVICE:

American Association for the Advancement of Science, American Society of Andrology, American Society of Animal Science, Society for Study of Fertility, Society for Study of Reproduction

Honorary Society: Sigma Xi; Past President of TAMU Chapter, 1999-2000;
Chair of the Award Committee, 1997; Member of Science
Promotion Committee, 2001-present

EDITORIAL BOARDS:

Member of the Editorial Board of Journal of Andrology (1997-Present)
Member of the Editorial Board of Biology of Reproduction (1989-1995)
Member of the Editorial Board of the Journal of the American Aging Association (1989-1995)

MAJOR COMMITTEE ASSIGNMENTS:

1. Served on the Advisory Panel to the Office of Technology Assessment of the Congress of the United States for the assessment of "Reproductive Hazards in the Workplace" 1983-1984.
2. Served on NIA grant review panel for a program of projects, 1992, 1993, 1994.
3. Speaker at the EPA workshop on "Sperm Measures and Reproductive Success," 1988.
4. Served on USDA panel for Competitive Research in Reproduction of Animals.
5. Served on NIH grant review panel for biochemical endocrinology, 1993.
6. Member of Education Committee for Society for the Study of Reproduction.
7. Served on NIH review panel - member of NIEHS panel to review educational materials for middle schools produced by Biological Sciences Curriculum Study (BSCS) of Colorado on a contract from NIEHS, 2000.
8. National review panel - member of the FETAX Expert Panel for NIEHS to evaluate the value of frog eggs for toxicology screening assay, 2000.
9. National Review Panel - NIOSH Study Section for Agricultural Disease and Injury Research, Education, and Prevention, 2001.
10. Served on NIH Grant Review Panel - Member of National Institute of Alcohol and Abuse Review Panel for K-12 Alcohol Grants, 2004.
11. Served on National Science Foundation GK-12 Grant Review Panel, 2004.

MANUSCRIPT REVIEW FOR JOURNALS:

Ad hoc reviewer: American Journal of Anatomy, Animal Science, Anatomical Record, Biology of Reproduction, Endocrinology, Journal of Andrology, Journal of Experimental Zoology, Journal of Reproduction and Fertility, New England Journal of Medicine, Reproductive Toxicology, Human Reproduction, Life Sciences, Journal of Applied Physiology, and Journal of Cell Physiology

GRANT REVIEW COMMITTEES:

1. Ad hoc reviewer for U.S. Department of Agriculture, Competitive Research Grants Program in the area of Reproductive Efficiency, 1985, 1988, 1993.
2. Ad hoc reviewer of grants for the March of Dimes, 1989, 1990, 1991.
3. Ad hoc reviewer of grants for the Veterans' Administration, 1990, 1991, 1993, 1994, 1995.
4. Ad hoc reviewer of grants for the National Institutes of Health, 1991.
5. Reviewer for NIEHS (Department of Health and Human Services Public Health Service) final reports, 1998.
6. National Review Panel - NIOSH Study Section for Agricultural Disease and Injury Research, Education, and Prevention, 2001.
7. NIH National Institute for Alcohol and Abuse Review Panel for K-12 Alcohol Grants, 2004.
8. NSF Review Panel for Graduate K-12 (training-like) Grants, 2004-present.

TEACHING EXPERIENCE:

Undergraduate:

<u>Course Title</u>	<u>Institution</u>	<u>Credit Hr</u>	<u>% of Course</u>	<u>Formal Contact Hr</u>	<u>Dates</u>
VAPH 443 Biology of Mammalian Cells & Tissues	TAMU	4	80%	90	1998- Present
VAPH 343 Histology	TAMU	4	80%	90	1998- 2004
VAPH 489 Special Study	TAMU	3/4	80%	30/student	1998- Present

Professional:

<u>Course Title</u>	<u>Institution</u>	<u>Credit Hr</u>	<u>% of Course</u>	<u>Formal Contact Hr</u>	<u>Dates</u>
None					

Graduate:

<u>Course Title</u>	<u>Institution</u>	<u>Credit Hr</u>	<u>% of Course</u>	<u>Formal Contact Hr</u>	<u>Dates</u>
VAPH 602	TAMU	4	80%	90	1998-

Histology

						Present
VMID 686	TAMU	1	20%	1		1998- Present
Scientific Ethics (Taught every other year)						

Graduate Students:

<u>Name</u>	<u>Degree</u>	<u>Advisor or Institution</u>	<u>Committee Member</u>	<u>Dates</u>
Andrew J. McDougal	PhD		Member	1998- 2000
Gabby Foxworth	PhD		Member	1998- 2000
Betty Pauline Carrell	MS		Member	1998- 2000
Kelcey Baker	PhD		Member	2000-2003
Indira Kuriocham, ENDO	PhD		Member	2001- 2005
Monica Raquel Trevino-Anderson, AGED	MS		Member	2003-2004
Noah Heningen, ANSC	PhD		Member	2000-2005
Heather (Shannan) Degenhart, AGED	MS		Member	2004- Pres.
Diane Mowen, AGED	MS		Member	2004- Pres.

Residents/Interns/Postdoctoral Fellows:

<u>Name</u>	<u>Institution</u>	<u>Advisor or</u>	<u>Committee Member</u>	<u>Dates</u>
Dr. Christopher Staub	TAMU		Post-Doc	Advisor 9/1/00 - 2002

Predocctoral Fellows:

<u>Name</u>	<u>Institution</u>	<u>Dates</u>
None		

TEACHING PROGRAMS

- Prepared elaborate set of notes and slides for histology class.
- Developed a study interactive program used in the AT laboratory for students in histology on all tissues/EMs covered in my undergraduate, honors undergraduate, and graduate histology classes.
- Produced a CD of that program for students to study at home.
- Coordinated a scientific ethics course.
- Provided students via VAPH 485 courses the opportunity to learn how to teach histology.

RESEARCH ACTIVITIES:

NIH. AG02260 "Biology of the aging human testis" \$333,000 for 9-1-1983 to 12-31-1988. William B. Neaves, Principal Investigator; Larry Johnson, Co-Principal Investigator.

NIH. HD16773 "Modulation of spermatogenesis" \$263,000 for 4-1-1983 to 3-31-1992. Larry Johnson, Principal Investigator.

NIH. Institutional Grant. RR07175 "Post-mitotic attrition of germinal cells during spermatogenesis in humans" \$4,000 for 8-1-1980 to 7-31-1981. Larry Johnson, Principal Investigator.

U.S. Air Force Contract C-0616. "Testicular function and the effects of microwave radiation" \$50,607 for 4-1-1983 to 3-31-1985. Robert Lebovitz, Principal Investigator; Larry Johnson Co-Principal Investigator.

IBT-ERA. Cellular Regulation of stage-specific Sertoli cell gene expression & cyclic AMP production. \$18,000/year for 1989-1991. Larry Johnson, Principal Investigator.

TAES-ERA. Effects of gossypol-containing cotton products on bovine reproduction. \$40,000 1989-1991 (\$5,000 for Dr. Johnson's part). Ron Randel, Principal Investigator; Gary Williams and Larry Johnson, Co-Principal Investigators.

College Research Enhancement Grant. "Establishment of a laboratory for stallion reproduction studies" \$26,833 for 1989-1991. Larry Johnson, Principal Investigator.

TAES Research Enhancement Program Grant. (a) Signaling in the control of reproductive processes." \$174,000 for 1991-1993. Larry Johnson, Principal Investigator and coordinator of this program of projects (\$9,000/yr. to Johnson laboratory). (b) "Further development of the equine Sertoli model for male reproductive studies." \$20,000 for 1992-1993. Larry Johnson, Principal Investigator.

NIH AG00465-01 (RCDA) "Biology of the aging human testis" \$320,000 direct for 6/01/1991-11/30/98. Larry Johnson, Principal Investigator.

NIH AG11093-10 (R01) "Control of Sertoli cell number and testicular size" \$240,000 direct for 6/01/1992-11/30/1998. Larry Johnson, Principal Investigator.

NIH T32-ES07273 "Toxicology of Environmental Contaminants" \$140,000 (Project Direct Cost) 07/01/97 - 06/30/02. Stephen Safe, Principal Investigator.

- NIH P30-ES09106 "Center for Environmental and Rural Health" \$400,000 (Project Direct Cost) 04/01/98-03/31/02. Stephen Safe, Principal Investigator.
- NIH N01-HD-8-3281 "Declining Sperm Counts: Autopsy Study" \$172,561 (Project Annual Direct Cost) 09/01/98 - 12/31/02 Larry Johnson, Principal Investigator.
- NIH R25-ES10443-01 "Environmental and Rural Health Education Partnership (Phase 1)" \$600,000 (Direct for 1999-2002) Larry Johnson, Principal Investigator.
- NIH R25-ES10735-01 "Integrating Environmental Health Science in Rural Schools" \$1,750,000 (Project Direct Cost) 09/01/00 - 08/31/2007 Larry Johnson, Principal Investigator.
- NIH R25-ES10735-01 Supplement. "Preservice and Novice teacher training and mentoring" \$99,000 (09/01/04 - 08/30/06).
- NSF GK-12 0-338310 "Fellows Integrate Science/Math in Rural Middle Schools" \$1,590,000 (Direct Cost) 01/01/04 - 12/31/06) Larry Johnson, Principal Investigator.
- NSF GK-12 03-338310. Supplement. "Fellows Integrate Science/Math in Rural Middle Schools" \$60,000. (01/01/04 - 12/31/06).

BIBLIOGRAPHY:

Publications in Refereed Journals: (journals only)

1. Johnson, L., W.E. Berndtson, and B.W. Pickett. 1976. An improved method for evaluating acrosomes of bovine spermatozoa. *J. Animal Sci.* 49:951-956.
2. Amann, R.P., L. Johnson, D.L. Thompson, Jr., and B.W. Pickett. 1976. Daily spermatozoal production, epididymal spermatozoal reserves and transit time of spermatozoa through the epididymis of the Rhesus monkey. *J. Androl.* 15:586-2.
3. Amann, R.P., L. Johnson, and B.W. Pickett. 1977. Connection between the seminiferous tubules and the efferent ducts in the stallion. *Am. J. Vet. Res.* 38:1571-1579.
4. Johnson, L., R.P. Amann, and B.W. Pickett. 1978. Scanning electron and light microscopy of the equine seminiferous tubule. *Fertil. Steril.* 29:208- 215.
5. Johnson, L., R.P. Amann, and B.W. Pickett. 1978. Scanning electron microscopy of the epithelium and spermatozoa in the equine excurrent duct system. *Am. J. Vet. Res.* 39:1428-1434.
6. Johnson, L., R.P. Amann, and B.W. Pickett. 1980. Maturation of equine epididymal spermatozoa. *Am. J. Vet. Res.* 41:1190-1196.
7. Johnson, L., C.S. Petty, and W.B. Neaves. 1980. A comparative study of daily sperm production and testicular composition in humans and rats. *Biol. Reprod.* 22:1233-1243.
8. Johnson, L., C.S. Petty, and W.B. Neaves. 1980. The relationship of biopsy evaluations and testicular measurements to overall daily sperm production in human testes. *Fertil. Steril.* 34:36-40.
9. Johnson, L. and W.B. Neaves. 1981. Age-related changes in the Leydig cell population, seminiferous tubules, and sperm production in stallions. *Biol. Reprod.* 24:703-712.

10. Johnson, L., C.S. Petty, and W.B. Neaves. 1981. A new approach to quantification of spermatogenesis and its application to germinal cell attrition during human spermiogenesis. *Biol. Reprod.* 25:217-226.
11. Johnson, L. 1982. A re-evaluation of daily sperm output of men. *Fertil. Steril.* 37:811-816.
12. Johnson, L. and W.B. Neaves. 1983. Enhanced daily sperm production in the remaining testis of aged rats following hemicastration. *J. Androl.* 4:162-166.
13. Lebovitz, R.M. and L. Johnson. 1983. Testicular function of rats following exposure to microwave radiation. *Bioelectromagnetics.* 4:107-114.
14. Johnson, L., C.S. Petty, and W.B. Neaves. 1983. Further quantification of human spermatogenesis. Germ cell loss during post-prophase of meiosis and its relationship to daily sperm production. *Biol. Reprod.* 29:207-215.
15. Johnson, L. and D.L. Thompson, Jr. 1983. Age-related and seasonal variation in the Sertoli cell population, daily sperm production, and serum concentrations of follicle stimulating hormone, luteinizing hormone, and testosterone in stallions. *Biol. Reprod.* 29:777-789.
16. Johnson, L., C.S. Petty, and W.B. Neaves. 1984. Influence of age on sperm production and testicular weights in men. *J. Reprod. Fertil.* 70:211-218.
17. Johnson, L., R.M. Lebovitz, and W.K. Samson. 1984. Germ cell degeneration in normal and microwave irradiated rats: Potential sperm production rates at different developmental steps in spermatogenesis. *Anat. Rec.* 209:501-507.
18. Neaves, W.B., L. Johnson, J.C. Porter, C.R. Parker, and C.S. Petty. 1984. Leydig cell numbers, daily sperm production and serum gonadotropin levels in aging men. *J. Clin. Endocrin. and Metab.* 55:756-763.
19. Johnson, L., C.S. Petty, J.C. Porter, and W.B. Neaves. 1984. Germ cell degeneration during postprophase of meiosis and serum concentrations of gonadotropins in young adult and older adult men. *Biol. Reprod.* 31:779-784.
20. Johnson, L., R.S. Zane, C.S. Petty, and W.B. Neaves. 1984. Quantification of the human Sertoli cell population: Its distribution, relation to germ cell numbers, and age-related decline. *Biol. Reprod.* 31:785-795.
21. Johnson, L. 1985. Increased daily sperm production in the breeding season of stallions is explained by an elevated population of spermatogonia. *Biol. Reprod.* 32:1181-1190.
22. Neaves, W.R., L. Johnson, and C.S. Petty. 1985. Age-related change in numbers of other interstitial cells in the human testis: Evidence bearing on the fate of Leydig cells lost with increasing age. *Biol. Reprod.* 33:259-269.
23. Bartke, A., C.A. Sweeney, L. Johnson, D.V. Castracane, and P.C. Doherty. 1985. Hyperprolactinemia inhibits development of Leydig cell tumors in aging Fischer rats. *Exp. Aging Res.* 11:123-128.
24. Johnson, L. and H.B. Nguyen. 1986. The annual cycle of the Sertoli cell population in adult stallions. *J. Reprod. Fertil.* 76:311-316.
25. Thompson, D.L., Jr., L. Johnson, R.L. St. George, and F. Garza, Jr. 1986. Concentrations of prolactin, luteinizing hormone and follicle stimulating hormone in pituitary and

- serum of horses: Effect of sex, season and reproductive state. *J. Animal Sci.* 63:854-860.
26. Johnson, L. 1986. A new approach to quantification of Sertoli cells that avoids problems associated with the irregular nuclear surface. *Anat. Rec.* 214:231-237.
 27. Johnson, L., C.S. Petty, and W.B. Neaves. 1986. Age-related variation in seminiferous tubules in men: A stereologic evaluation. *J. Androl.* 7:316-322.
 28. Johnson, L. and D.L. Thompson, Jr. 1986. Seasonal variation in Leydig cell volume in stallions is explained by variation in cell number rather than cell size. *Biol. Reprod.* 35:971-979.
 29. Johnson, L., F.W. George, W.B. Neaves, I.M. Rosenthal, R.A. Christensen, A. Decristoforo, H.U. Schweikert, M.V. Sauer, M. Leshin, J.E. Griffin, and J.D. Wilson. 1986. Characterization of the testicular abnormality in 5 alpha-reductase deficiency. *J. Clinical Endocrin. and Metab.* 63:1091-1099.
 30. Lebovitz, R.M., L. Johnson, and W.K. Samson. 1987. Effects of pulse modulated microwave radiation and conventional heating on sperm production in the rat. *J. Appl. Physiol.* 62:245-252.
 31. Lebovitz, R.M. and L. Johnson. 1987. Acute, whole body microwave exposure and testicular function of rats. *Bioelectromagnetics.* 8:37-43.
 32. Neaves, W.B., L. Johnson, and C.S. Petty. 1987. Seminiferous tubules and daily sperm production in older adult men with varied numbers of Leydig cells. *Biol. Reprod.* 36:301-308.
 33. Thompson, D.L., Jr. and L. Johnson. 1987. Effects of age, season and active immunization against estrogen on serum prolactin concentrations in stallions. *Domestic Animal Endocrinol.* 4:17-22.
 34. McConnell, J.D., D.K. Stone, L. Johnson, and J.D. Wilson. 1987. Partial purification and characterization of dynein ATPase from bovine sperm. *Biol. Reprod.* 37:385-393.
 35. Johnson, L., H.B. Nguyen, C.S. Petty, and W.B. Neaves. 1987. Quantification of human spermatogenesis: Effect of age on germ cell degeneration during spermatocytogenesis and meiosis. *Biol. Reprod.* 37:739-749.
 36. Johnson, L., K.S. Matt, A. Bartke, H.B. Nguyen, and H.T. Le. 1987. Effect of photoperiod on the size of the Leydig cell population and the rate of recruitment of Leydig cells in adult Syrian hamsters. *Biol. Reprod.* 37:727-738.
 37. Johnson, L. and D.L. Thompson, Jr. 1987. Effect of seasonal changes in Leydig cell number on the volume of smooth endoplasmic reticulum in Leydig cells and intratesticular testosterone content in stallions. *J. Reprod. Fertil.* 81:227-232.
 38. Johnson, L., J.G. Abdo, C.S. Petty, and W.B. Neaves. 1988. Effect of age on the composition of seminiferous tubular boundary tissue and on the volume of each component in humans. *Fertil. Steril.* 49:1045-1051.
 39. Johnson, L. and D. Varner. 1988. Effect of daily spermatozoan production but not age on transit time of spermatozoa through the human epididymis. *Biol. Reprod.* 39:812-817.

40. Johnson, L. and M.E. Tatum. 1989. Temporal appearance of seasonal changes in numbers of Sertoli cells, Leydig cells, and germ cells in stallions. *Biol. Reprod.* 40:994-999.
41. Blanchard, T.L., D.D. Varner, S.P. Brinsko, S.A. Meyers, and L. Johnson. 1989. Effects of postparturient uterine lavage on uterine involution in the mare. *Theriogenology.* 32:527-535.
42. George, F.W., L. Johnson, J.D. Wilson. 1989. The effect of a 5 alpha- reductase inhibitor on androgen physiology in the immature male rat. *Endocrinology.* 125:2434-2438.
43. Johnson, L., J.S. Grumbles, S. Chastain, H.F. Goss, Jr., and C.S. Petty. 1990. Leydig cell cytoplasmic content is related to daily sperm production in men. *J. Androl.* 11:155-160.
44. Johnson, L., V.B. Hardy, and M.T. Martin. 1990. Staging equine seminiferous tubules by Nomarski optics in unstained histologic sections and in tubules mounted *in toto* to reveal the spermatogenic wave. *Anat. Rec.* 227:167-174.
45. Johnson, L., J.S. Grumbles, A. Bagheri, and C.S. Petty. 1990. Increased germ cell degeneration during postprophase of meiosis is related to increased serum FSH concentrations and reduced daily sperm production in aged men. *Biol. Reprod.* 42:281-287.
46. Johnson, L., A.F. Kattan-Said, V.B. Hardy, and W.L. Scrutchfield. 1990. Isolation and staging equine seminiferous tubules by transillumination. *J. Reprod. Fertil.* 89:689-696.
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48. Johnson, L. and A. Bartke. 1991. Effects of photoperiod on the rate of *in vivo* recruitment of epididymal principal cells in adult Syrian hamsters. *J. Exptl. Zool.* 258:89-94.
49. Johnson, L. 1991. Seasonal differences in equine spermatogenesis. *Biol. Reprod.* 44:284-291.
50. Johnson, L., D.D. Varner, and D.L. Thompson, Jr. 1991. Effect of age and season on the establishment of spermatogenesis in the horse. *J. Reprod. Fert. Supp.* 44:87-97.
51. Bartke, A., E.M. Narr, L. Johnson, M.R. May, M. Cecim, J.S. Yun, and T.E. Wagner. 1992. Effects of expression of human or bovine growth hormone genes on sperm production and male reproductive performance in four lines of transgenic mice. *J. Reprod. Fert.* 95:109-118.
52. Johnson, L., D.D. Varner, M.E. Tatum, and W.L. Scrutchfield. 1991. Season but not age affects Sertoli cell number in adult stallions. *Biol. Reprod.* 45:404-410.
53. Johnson, L., M.R. May, D.L. Busbee, and J.D. Williams. 1992. Effect of age and dietary restriction on daily sperm production and number and transit time of epididymal spermatozoa in the mouse. *AGE.* 15:65-71.
54. Varner, D.D., J.A. Bowen, and L. Johnson. 1992. Capacitation and acrosome reaction of equine spermatozoa by heparin. *Molecular Androl.* 4:81-99.
55. Johnson, L., P.K. Chaturvedi, and J.D. Williams. 1992. Missing generations of spermatocytes and spermatids in seminiferous epithelium contribute to low efficiency of spermatogenesis in humans. *Biol. Reprod.* 47:1091-1098.
56. Johnson, L., S.H. Safe, and R. Dickerson. 1992. Effect of 2,3,7,8-tetrachlorodibenzo-p-dioxin on spermatogenesis and Leydig cell volume in adult rats. Chemosphere Dioxin '91 proceedings.

57. Silva, P.J., L. Johnson, and B.P. Fitzgerald. 1992. Immediate changes in the hypothalamic-hypophyseal axis of the mare relative to the winter solstice. *J. Reprod. Fert.* 96:195-202.
58. Johnson, L., R. Dickerson, S.H. Safe, C.L. Nyberg, R.P. Lewis and T.H. Welsh, Jr. 1992. Reduced Leydig cell volume and function in adult rats exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin without a significant effect on spermatogenesis. *Toxicology.* 76:102-118.
59. Chaturvedi, P.K. and L. Johnson. 1993. Architectural arrangement of stages within human seminiferous tubules is related to efficiency of spermatogenesis. *Cell and Tissue Res.* 273:65-70.
60. Johnson, L., G.K. Carter, D.D. Varner, T.S. Taylor, T.L. Blanchard, and M.S. Rembert. 1994. The relationship of daily sperm production with Sertoli cell number or testicular size begins with primitive spermatogonia in adult horses. *J. Reprod. Fertil.* 100:315-321.
61. Johnson, L., C.E. Wilker, S.H. Safe, B.Scott, D.D. Dean, and P. White. 1994. 2,3,7,8-Tetrachlorodibenzo-p-dioxin reduces the number, size, and organelle content of Leydig cells in adult rat testes. *Toxicology.* 89:49-65.
62. Johnson, L. 1994. A new approach to study the architectural arrangement of spermatogenic stages revealed little evidence of a wave along the length of human seminiferous tubules. *J. Androl.* 15:435-441.
63. Wilker, C.E., T.H. Welsh Jr., S.H. Safe, T.R. Narasimhan, and L. Johnson. 1995. Human chorionic gonadotropin protects Leydig cell function against 2,3,7,8-tetrachlorodibenzo-p-dioxin in adult rats: role of Leydig cell cytoplasmic volume. *Toxicology.* 95:93-102.
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65. Johnson, L., L.C. Suggs, Y.M. Norton, and W.C. Zeh. 1996. Effect of developmental age or time after transplantation on Sertoli cell number and testicular size in inbred Fischer rats. *Biol. Reprod.* 54:948-959.
66. Johnson, L., L.C. Suggs, Y.M. Norton, T.H. Welsh Jr., and C.E. Wilker. 1996. Effect of hypophysectomy, sex of host, and/or number of transplanted testes on Sertoli cell number and testicular size of syngeneic testicular grafts in Fischer rats. *Biol. Reprod.* 54:960-969.
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68. Okwun, O.E., G. Igboeli, D.D. Lunstra, J.J. Ford, and L. Johnson. 1996. Testicular composition, number of A spermatogonia, germ cell ratios, and number of spermatids in three different breeds of boars. *J. Androl.* 17:301-309.
69. Johnson, L., K.S. McKenzie, and J.R. Snell. 1996. The partial wave in human seminiferous tubules appears to be a random occurrence. *Tissue & Cell.* 28:127-136.

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71. Wilker, C.E., L. Johnson, and S. Safe. 1996. Effects of developmental exposure to indole-3-carbinol or 2, 3, 7, 8 - TCDD on reproductive potential of male rat offspring. *Tox. and Appl. Pharm.* 141:68-75.
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74. Blanchard, T.L. and L. Johnson. 1997. Determination of daily sperm production in stallions by enumeration of germ cells in homogenates. *Theriogenology* 47:655-664.
75. Blanchard, T.L. and L. Johnson. 1997. Increased germ cell degeneration and reduced germ cell:Sertoli cell ratio in stallions with low sperm production. *Theriogenology* 47:665-678.
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Non-Refereed Publications: (optional)

PATENTS AND RELATED DISCOVERY ACTIVITIES: None

OTHER SCHOLARLY ACTIVITY:

Conferences, Symposia: Organized/Chaired (examples)

1. Johnson, L. 1986. Spermatogenesis and aging in the human. Post-graduate course on impotence, diagnosis and management: the aging testis and its consequences. American Society of Andrology.
2. Johnson, L. 1988. Evaluation of human testis and its age-related dysfunction. Workshop on the "Relationship between sperm measures and reproductive success" sponsored by Institute for Health Policy Analysis and the Environmental Protection Agency. Aspen Institute at Wye Plantation in Queenstown, MD.
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7. Johnson, L. 1990. The Blood Vascular System (informal presentation) Azabu University School of Veterinary Medicine, Kanagawa, Japan.
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