

CURRICULUM VITAE

PERSONAL HISTORY:

Name: **Amiya P. Sinha Hikim**

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Date of Birth: 29th September, 1951
Place of Birth: Simlapal, India
Marital Status: Married
Children: Indranil Sinha, M.D.
Visa Status: US Citizen

EDUCATION AND TRAINING:

1986 Ph.D. in Zoology (Reproductive Physiology), University of Calcutta, India. Title of the Dissertation: Histophysiological Studies of Spermatogenesis and Accessory Organs of Reproduction in *Bandicota bengalensis* (Gray), a mammalian Pest.

1973 M.S. in Zoology (Endocrinology as major), University of Calcutta, India. Title of the Thesis: Effect of Norethisterone (a progesterone-only contraceptive) on the Endocrine Pancreas of the Albino Rat.

1971 B.S. in Zoology (Honors) with Botany and Physiology, University of Calcutta, India.

ACADEMIC AND PROFESSIONAL EXPERIENCE:

1985-87 The Rockefeller Foundation special Post-doctoral Fellow, Division of Urology (Surgery), Brigham & Women's Hospital, Harvard Medical School, Boston, MA.

1987-91 Post-doctoral Fellow, Department of Physiology, Southern Illinois University, School of Medicine, Carbondale, IL.

1991-94 NRSA-Senior Fellow, Division of Endocrinology, Harbor-UCLA Research and Education Institute, UCLA School of Medicine, Torrance, CA.

1994-96 Assistant Scientist -IV, Division of Endocrinology, Harbor-UCLA Research and Education Institute, UCLA School of Medicine, Torrance, CA.

1996-00 Assistant Professor (Research Series), Department of Medicine, David Geffen School of Medicine at UCLA, Harbor-UCLA Medical Center, Torrance, CA.

- 2000-2006 Associate Professor, Department of Medicine, David Geffen School of Medicine at UCLA, Harbor-UCLA Medical Center, Torrance, CA.
- 2006- Director Molecular Cytology Core, General Clinical Research Center, David Geffen School of Medicine at UCLA, Harbor UCLA Medical Center.
- 2007- Professor, Department of Medicine, David Geffen School of Medicine at UCLA, Harbor-UCLA Medical Center, Torrance, CA.

HONORS AND AWARDS:

The Rockefeller Foundation Post-doctoral Fellowship Award in population sciences (1985-1987); National Research Service Award (USPHS), Harbor-UCLA Medical Center (1991 to 1994); Richard E. Weitzman Memorial Endocrinology Award (1994), Harbor-UCLA Medical Center.

EDITOR FOR JOURNALS:

1. Assistant Editor, Reproductive Biology and Endocrinology (2003-2005)

REVIEWER FOR JOURNALS:

1. Apoptosis
2. Biology of Reproduction
3. Cell Death and Differentiation
4. Cell and Tissue Research
5. Contraception
6. Endocrinology
7. European Journal of Endocrinology
8. Fertility & Sterility
9. Human Reproduction
10. International Journal of Andrology
11. Journal of Andrology
12. Journal of Clinical Endocrinology and Metabolism
13. Tissue & Cell
14. Toxicology and Applied Pharmacology
15. European Journal of Endocrinology
16. Molecular and Cellular Endocrinology
17. Molecular Human Reproduction
18. Reproduction

TEACHING EXPERIENCE:

- 1976-79 During my tenure of service as an Assistant Professor (1976-79), Darjeeling Government College, I was teaching at both undergraduate and graduate levels. The areas I taught included Vertebrate Zoology, Comparative Anatomy, Basic Histology, Histo-chemistry and Vertebrate Endocrinology.

- 1979-83 During my tenure of Research Associateship at the University of Calcutta, I taught laboratory exercises in endocrinology (major) and gave lectures in the male reproductive physiology course for MS students.
- 1991- I joined Harbor-UCLA Medical Center, David Geffen School of Medicine at UCLA in 1991. Since then I am actively involved in research training of high school, undergraduate, and medical students and Ph.D. and M.D. postdoctoral fellows. My responsibilities include teaching: 1) 'staging' and histopathological evaluation of the testis of a great variety of mammalian species under various experimental conditions as a prerequisite for our research on germ cell development and apoptosis and 2) various laboratory techniques, including organ perfusion, fixation, tissue processing, high resolution light and electron microscopy, immunocytochemistry, in situ hybridization, confocal microscopy, ultramicrotomy, morphometry, subcellular fractionation and western blotting, and a battery of immunocytochemical and immunofluorescence procedures.
- 2004- Starting from the year 2004, I have also been involved in teaching gastroenterology, endocrinology, and reproductive biology in problem based learning session for 1st year medical students of David Geffen School of Medicine at UCLA. The specific goals of this program are to encourage students to: 1) acquire or consolidate information, 2) formulate concepts, 3) engender a motivation to learn, 4) develop skills in problem solving and reasoning, and 5) develop skills in communication and team work, and to embed basic learning in a clinical context.

MENTORSHIP (I have had a mentoring role for the following students or fellows:

1. Susana Rodriguez, BS (Supported by NIH U*STAR program; 2001-2003; Title of Research Project: Role of caspases in male germ cell apoptosis; currently enrolled in the PhD program, The Johns Hopkins University School of Medicine).
2. Rashid Elhag, MS (Supported by NIH under IMSD program; 2001-2003; Title of the Thesis: Mouse model of male germ cell apoptosis). He graduated successfully in the fall of 2003 from California State University, Dominguez Hills and enrolled in the PhD program of the University of California, Riverside).
3. Mark Castanares, BS (Supported by NIH U*STAR program; 2003-2005; Title of Research Project: Minocycline and testicular germ cell death; enrolled in PhD program, The Johns Hopkins University School of Medicine).
4. Yanira Vera, MS (Supported by NIH HD 39293-02S1; 2003-2006; Title of Research Project: Role of p38 MAPK and iNOS in male germ cell apoptosis). She is a teacher in LA Unified School District.
5. Concepcion Nunez, BS (Supported by NIH U*STAR Program; 2004-2005; Title of Research Project: Nitric oxide and male germ cell death). She is working in Quest Diagnostics
6. Krista Erkkila, MD., Ph.D., Visiting Scientist (2005-2007; Title of Research Project: Regulation of human male germ cell apoptosis. Dr. Erkkila is currently as Assistant Professor, University of Helsinki, Helsinki, Finland.

7. Jesse Castellanos, BS (Supported by NIH under IMSD program; 2005-2007; Title of the Thesis: Role of ERK and BCL-2 phosphorylation in male germ cell death). He graduated successfully in the fall of 2007 from California State University, Dominguez Hills and is currently enrolled in a PhD program at the University of Southern California.
8. Candace Johnson, BS (Supported by NIH under IMSD program; 2006-2007; Title of the Thesis: Role of caspase 2 in apoptotic signaling of primate male germ cells). She graduated successfully in the fall of 2007 from California State University, Dominguez Hills and is currently enrolled in a PhD program at the University of Southern California.
9. Yue Jia, MD., Ph.D., Post-doctoral Fellow (Supported by a Mellon Reproductive Biology Center Grant; 2005-present; Title of the Research Project: Upstream signaling pathways for testicular germ cell apoptosis in monkeys).

ADMINISTRATIVE RESPONSIBILITIES

2002-06 Member of the Research Committee and chair of Animal Care and Use Review Committee of the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center.

RESEARCH INTEREST:

- 1) **Metabolic and molecular regulation of testicular germ cell apoptosis.**
- 2) Structure-function relationships of Sertoli cells, Leydig cells, and myoid cells in the testis.
- 3) Male contraception.
- 4) Hypothalamo-pituitary and testicular dysfunction in aging.
- 5) Testicular patho-physiology in men with various testicular disorders.

PROFESSIONAL MEMBERSHIP:

- 1) Member of the American Society of Andrology.
- 2) Member of the Society for the Study of Reproduction.
- 3) Member of the Endocrine Society.

RESEARCH GRANTS RECEIVED:

- 1) World Health Organization : Effects of Triptolide on Histopathology of Testis and Epididymis in Adult Rats [P-95007; PI; 06/01/95 - 05/31/96; 25% (no salary support); \$50,953].

To determine the effects of triptolide (isolated from the Chinese plant, Tripterygium wilfordii) on histopathology of testis and epididymis of the adult rats.

- 2) World Health Organization: Post-testicular Antifertility Effects of Triptolide in Adult Rats [P-97118; PI; 03/01/97 - 02/28/98; 25%(no salary support); \$61,590].

The major goal of this project to examine the possible mechanism(s) of triptolide induced oligospermia and asthenospermia in rats.

- 3) World Health Organization: Underlying Mechanisms of Triptolide's Antispermatogenic and antifertility Effects in Rats [P-98108; PI; 07/01/98 - 06/30/99; 25% (no salary support); \$72,487].

The major goal of this project is to provide insight into the underlying mechanisms of triptolide induced male infertility.

- 4) NIH: Endocrine Regulation of Germ Cell Apoptosis in the Male (1RO1 HD 39293; PI; 04/01/01 - 03/31/07; 50%; \$ 875,000).

The major goal of this project is to understand the intratesticular regulatory mechanisms responsible for the programmed germ cell death (apoptosis) during normal and abnormal states of spermatogenesis.

- 5) NIH: Minority Postdoctoral Training Supplement - Endocrine Regulation of Germ Cell Apoptosis in the Male (RO1 HD 39293-02S1; PI; 05/01/02-04/30/03; \$ 58,000).

The major goal of this project is to determine the role of TIAP (a murine homologue of human IAP) and its newly identified antagonist, Smac/Diablo in germ cell death triggered by deprivation of hormonal support or by mildly increased scrotal temperature.

- 6) CONRAD: Combined Effect of Hormone and Heat Treatment on the Suppression of Spermatogenesis in Men: Proof of "Two-Hit" Concept (Swerdloff; 01/01/03-12/31/05; \$ 137,397)

The major goal of this study is to expand the "mechanism of action" studies in rodents and the non-human primates to men.

- 7) MO1 RR00425-38 (Anderson) 12/01/06-11/30/11
NIH/NCRR
General Clinical Research Center
This project provides support for an inpatient General Clinical Research Center unit, outpatient GCRC facilities, a Perinatal Clinical Research Center (PCRC) at Harbor-UCLA Medical Center, a satellite PCRC at Drew Medical Center and a satellite GCRC at Cedars-Sinai Medical Center.

LECTURES AND PRESENTATIONS: FROM 1996

- 1) Hormonal Regulation of Programmed Germ Cell Death- at the Seminar Series of the Center for Research in Reproductive Physiology, Department of Cell Biology and Physiology, University of Pittsburgh School of Medicine, Pittsburgh, May 16, 1996.
- 2) Germ Cell Homeostasis in the Male- at Basic Science Lecture, Department of Medicine, Harbor-UCLA Medical Center, Torrance, September 3, 1996.

- 3) Regulation of Programmed Germ Cell Death- at a Scientific Symposium of UCLA-affiliated Endocrine Programs, Cedars-Sinai Medical Center, Los Angeles, December 4, 1996.
- 2) Cell Apoptosis and its Clinical Implications, at Clinical Endocrinology Conference, Department of Medicine, Harbor-UCLA Medical Center, Torrance, September 10, 1997.
- 5) Genetic Manipulation of Germ Cell Homeostasis, Division of Endocrinology, Department of Medicine, King Drew Medical Center, Los Angeles, September 29, 1997.
- 6) Approaches to Study Programmed Cell Death, at Basic Science Conference, Division of Cardiology, Ceders-Sinai Medical Center, Los Angeles, April 24, 1998.
- 7) Apoptosis: The Most Fashionable Cell Death Process, Perinatal Biology Research Conference, Harbor-UCLA Medical Center, Torrance, August 24, 1998.
- 8) Spermatogenesis as an In Vivo Model System to Study the Regulation of Programmed Cell Death (Apoptosis). Department of Pathology, Harbor-UCLA Medical Center Grand Rounds (1999-2000), October 22, 1999.
- 9) Does Germ Cell Apoptosis Play a Role in Clinical Andrology? Invited speaker for 1999 ASA Post-Graduate Course, 24th Annual Meeting of American Society of Andrology, Louisville, April 10, Kentucky.
- 10) Apoptotic Pathways: A Testicular Perspective. Invited speaker for Cell Signal Transduction: Shall It Be Life or Death, 33rd Annual Meeting of Society for the Study of Reproduction, July 15-18, 2000, University of Wisconsin, Madison.
- 11) Apoptosis. Invited speaker for "Seminar in Biomedical Research", California State University at Dominguez Hills, October 4, 2001.
- 12) Cellular and Molecular Mechanisms of Germ Cell Apoptosis in the Testis. Invited speaker for National Institute of Child Health and Human Development Workshop on Apoptosis in the Male Reproductive System, March 21-22, 2002, Bethesda, Maryland.
- 13) Deciphering the Pathways of Germ Cell Apoptosis in the Testis. Invited speaker for 11th International Congress on Hormonal Steroids (ICHS)/7th International Congress on Hormones and Cancer (IHC), October 21-25, 2002, Fukuoka, Japan.
- 14) How Do Male Germ Cells Decide Between Life and Death? Basic Science Lecture, Department of Medicine, Harbor-UCLA Medical Center, Torrance, October 21, 2003.
- 15) Intrinsic Pathway Signaling in Male Germ Cell Apoptosis. In: Seminars in Reproductive Biology Series at the University of Texas Medical School, MD Anderson Cancer Center, October 12, 2004.

- 16) Combination of Hormonal and Physical Agents-Are They More Efficacious and Why? Program of the 30th Annual Meeting of the American Society of Andrology, April 5, 2005, Seattle, Washington.
- 17) How Male Germ Cells Interpret MAPK Signaling in the Context of Life or Death? Molecular Medicine Lecture, Charles R. Drew University of Medicine and Science, Los Angeles, March 6, 2006.
- 18) Role of Interacting Signaling Pathways in Determining the Ultimate Outcome of Male Germ Cell's Fate. National Institute of Immunology, New Delhi, India, April 13, 2006.
- 19) Role of Interacting Signaling Pathways Governing Cell Fate: Shall it be Life or Death? Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, Torrance, CA, July 11, 2006.
- 20) Male Contraception and Germ Cell Apoptosis. Endocrine Clinical Conference at Harbor-UCLA Medical Center, Torrance, CA, September 13, 2006.
- 21) Signaling Pathway Governing Cell Death is Tissue Specific. Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, Torrance, CA, July 17, 2007.
- 22) Apoptotic Signaling in Male Germ Cells. Banaras Hindu University, Center for Advanced Study in Zoology, Varanasi, India, December 19, 2007.

PUBLICATIONS / BIBLIOGRAPHY:

A. RESEARCH PAPERS - PEER REVIEWED

- 1) Maiti BR, **Sinha Hikim** AP (1976) Effect of norethisterone (a progesterone-only contraceptive) on the endocrine pancreas of the albino rat. *Mikroskopie* 32:275-281.
- 2) **Sinha Hikim** AP (1979) Islet cytology of the Himalayan newt (*Tylototriton verrucosus*). *Curr Sci* 48:744-745.
- 3) **Sinha Hikim** AP (1979) Pancreatic islet cytology of the Himalayan toad, *Bufo himalayanus*. *Folia Biol (Krakow)* 7:287-292.
- 4) **Sinha Hikim** AP (1979) Reserpine induced changes in the islet cytology of the Himalayan toad, *Bufo himalayanus*. *Mikroskopie* 35:138-141.
- 5) **Sinha Hikim** AP, Maiti BR (1982) Quantitative studies of the accessory reproductive organs of the male bandicoot rat - a common rodent pest. *Anat Anaz (Jena)* 151:483-495.
- 6) Kobayashi H, Okawara Y, Maitra S, **Sinha Hikim** AP, Ghosh A (1982) Further studies on angiotensin II-induced drinking in birds. *J Yamashina Inst Ornith (Golden Jubilee Celebration Issue)* 14:137-142.

- 7) **Sinha Hikim AP**, Verma R, Ghosh A (1983) Effects of streptozotocin on islet cytology and blood glucose levels in three avian species. *Arch Biol (Brussels)* 94:15-22.
- 8) Chakraborty J, **Sinha Hikim AP**, Budd, CA, Jhunjhunwala J (1983) Stereological analyses of Leydig cells and germ cells of the contralateral testis of guinea pigs with unilateral torsion of the spermatic cord. *Acta Stereol* 2 (Suppl I) 163-166.
- 9) Chakraborty J, **Sinha Hikim AP**, Jhunjhunwala J (1984) A simple method for quantitative analysis of human testicular biopsies from epon section. *Ann NY Acad. Sci* 438:481-484.
- 10) Mahata S, **Sinha Hikim AP**, Ghosh A (1984) An autoradiographic study on proliferative activity in the juvenile chick adrenal cortex. *Bas Appl Histochem (Italy)* 28:375-380.
- 11) **Sinha Hikim AP**, Chakraborty J (1984) Quantitative evaluation of guinea pig spermatogenesis: epon vs. paraffin embedding. *Arch Androl* 13:121-128.
- 12) Chakraborty J, **Sinha Hikim AP**, Jhunjhunwala J (1985) Quantitative evaluation of testicular biopsies from men with unilateral torsion of the spermatic cord. *Urology* 25:145-150
- 13) **Sinha Hikim AP**, Chakraborty J, Jhunjhunwala JS (1985) Germ cell quantitation in human testicular biopsy. *Urol Res* 13:111-115.
- 14) Chakraborty J, **Sinha Hikim AP**, Jhunjhunwala J (1985) Stagnation of blood in the microcirculatory vessels in the testes of men with varicocele. *J Androl* 6:117-126.
- 15) **Sinha Hikim AP**, Maiti BR, Ghosh A (1985) Spermatogenesis in the bandicoot rat. I. Duration of the cycle of the seminiferous epithelium. *Arch. Androl* 14:151-154.
- 16) **Sinha Hikim AP** (1985) Adrenergic innervation of testicular excurrent ducts and accessory male genital glands of the bandicoot rat (*Bandicota bengalensis*). *Arch Biol* 96:187-194.
- 17) Chakraborty J, **Sinha Hikim AP**, Jhunjhunwala J (1985) Stagnation of blood in the microvasculature of the affected and contralateral testes of men with short-term torsion. *J Androl* 6:291-299.
- 18) Chakraborty J, **Sinha Hikim AP**, Jhunjhunwala J (1985) Effect of experimental torsion on Sertoli cells in the guinea pig. *Acta Anat* 124:234-240.
- 19) **Sinha Hikim AP** (1985) Effect of DL-6-(N-a-pipecolinomethyl)-5-hydroxy-indane maleate (PMHI) on the reproductive system of a wild rat, *Bandicota bengalensis*. *Int J Androl* 8:393-402.

- 20) **Sinha Hikim** AP (1985) Spermatogenesis in the bandicoot rat. II. Germ cell quantitation. Arch Biol 96:441-452.
- 21) Jhunjhunwala J, **Sinha Hikim** AP, Budd CA, Chakraborty J (1986) Germ cell degeneration in the contralateral testis of the guinea pig with unilateral torsion of the spermatic cord: Quantitative and ultrastructural studies. J Androl 7:16-22.
- 22) **Sinha Hikim** AP, Chakraborty J, Jhunjhunwala JS (1986) Effects of experimental torsion of the spermatic cord on Leydig cell function in guinea pig testis: An ultrastructural stereological analyses. Urol Res 14:253-256.
- 23) Chakraborty J, **Sinha Hikim** AP, Jhunjhunwala JS (1986) Annulate lamellae of guinea pig Sertoli cell. Exp Mol Pathol 44:222-229.
- 24) **Sinha Hikim** AP (1986) Effect of DL-6-(N-a-pipecolinomethyl)-5-hydroxy-indane maleate (PMHI) on the reproductive system of a wild rat, *Bandicota bengalensis*. II. Epididymis and sex accessory glands. Exp Mol Pathol 44:190-196.
- 25) Chakraborty J, **Sinha Hikim** AP, Jhunjhunwala J (1986) Torsion of the spermatic cord - A long term study of the contralateral testis. Urol Res 14:257-260.
- 26) **Sinha Hikim** AP, Chakraborty J (1986) Effects of diazocholesterol dihydrochloride (SC-12937), an avian antifertility agent on rat testis. J Androl 7: 277-284.
- 27) **Sinha Hikim** AP (1986) Effects of a-chlorohydrin on the reproductive organs of the male bandicoot rats (*Bandicota bengalensis*). Acta Eur Fertil 17:301-306.
- 28) **Sinha Hikim** AP, Chakraborty J, Jhunjhunwala JS (1987) Unilateral torsion of the spermatic cord in men: Effect on Leydig cells. Urology 29:40-44.
- 29) **Sinha Hikim** AP, Hoffer AP (1987) Quantitative analysis of germ cells and Leydig cells in rats made infertile with gossypol. Contraception 35:395-408.
- 30) **Sinha Hikim** AP (1987) Effect of 22, 25, diazocholesterol dihydrochloride on the spermatogenesis of a wild rat, *Bandicota bengalensis*. Int J Fertil 32:320-323.
- 31) Chakraborty J, **Sinha Hikim** AP, Jhunjhunwala JS (1987) Changes in the affected testis after unilateral torsion of the spermatic cord in guinea pig. Ann NY Acad Sci 513:318-321.
- 32) **Sinha Hikim** AP, Hoffer AP (1988) Duration of epididymal sperm-transit in hamster: An autoradiographic study. Gamete Res 19:411-416.
- 33) **Sinha Hikim** AP, Bartke A, Russell LD (1988) The seasonal breeding hamster as a model to study structure-function relationships in the testis. Tissue & Cell 20:63-78.

- 34) **Sinha Hikim** AP, Bartke A, Russell LD (1988) Morphometric studies on hamster testes on gonadally active and inactive states: Light microscope findings. *Biol Reprod* 39:1225-1237.
- 35) Mayerhofer A, **Sinha Hikim** AP, Bartke A, Russell LD (1989) Changes in the testicular microvasculature during photoperiod-related seasonal transition from reproductive quiescence to reproductive activity in the adult golden hamster. *Anat Rec* 224:495-507.
- 36) **Sinha Hikim** AP, Amador AG, Klemcke HG, Bartke A, Russell LD (1989) Correlative morphology and endocrinology of Sertoli cells in hamster testes in active and inactive states of spermatogenesis. *Endocrinology* 125:1829-1843.
- 37) **Sinha Hikim** AP, Amador AG, Bartke A, Russell LD (1989) Structure/function relationships in active and inactive hamster Leydig cells: A correlative morphometric and endocrine study. *Endocrinology* 125:1844-1856.
- 38) Russell LD, Hong-Ping R, Sinha Hikim I, Schulze W, **Sinha Hikim** AP (1990) A comparative study in twelve mammalian species of volume densities, volumes and numerical densities of selected testis components, emphasizing those related to the Sertoli cells. *Am J Anat* 188:21-30.
- 39) Kurohmaru M, **Sinha Hikim** AP, Bartke A, Mayerhofer A, Russell LD (1990) Golden hamster myoid cells during active and inactive states of spermatogenesis: Correlation of testosterone levels with structural parameters. *Am J Anat* 188:319-327.
- 40) **Sinha Hikim** AP, Woolf A, Bartke A, Amador AG (1991) The estrous cycle of captive woodchucks (*Marmota monax*). *Biol Reprod* 44:733-738.
- 41) **Sinha Hikim** AP, Amador AG, Woolf A, Bartke A, Gremillion-Smith C (1991) Circannual changes in circulating levels of progesterone and estradiol in unmated adult female woodchucks (*Marmota monax*) in captivity. *Life Sci* 49: 353-359.
- 42) Russell LD, **Sinha Hikim** AP, Overbeek PA, MacGregor GR (1991) Testis structure in sys (symplastic spermatids) mouse. *Am J Anat* 192:169-182.
- 43) **Sinha Hikim** AP, Sinha Hikim I, Woolf A, Bartke, A., Amador AG, Russell LD (1991) Re initiation of spermatogenesis by exogenously administered gonadotropins in a seasonal breeder, the woodchuck (*Marmota monax*), during inactive state of gonadal activity. *Am J Anat* 192: 194-213.
- 44) Ghosh S, **Sinha Hikim** AP, Russell LD (1991) Further observations on stage specific effects seen after short-term hypophysectomy in the rat. *Tissue & Cell* 23: 613-630.
- 45) **Sinha Hikim** AP, Woolf A, Bartke A, Amador AG (1992) Further observations on estrus and ovulation in woodchucks (*Marmota monax*) in captivity. *Biol Reprod* 46:10-16.

- 46) Wang Y, Waller DP, **Sinha Hikim AP**, Russell LD (1992) Reproductive toxicity of theobromine and cocoa extract in male rats. *Reprod Toxicol* 6: 347-353.
- 47) **Sinha Hikim AP**, Swerdloff RS (1993) Temporal and stage-specific changes in spermatogenesis of rats following gonadotropin deprivation by a potent gonadotropin-releasing hormone (GnRH) antagonist treatment. *Endocrinology* 133: 2161-2170.
- 48) **Sinha Hikim AP**, Chandrashekar V, Bartke A, Russell LD (1993) Sentinels of Leydig cell structural and functional changes in golden hamster in early testicular regression and recrudescence. *Int J Androl* 16: 324-342.
- 49) Wang C, Leung A, **Sinha Hikim AP** (1993) Reproductive aging in the male Brown-Norway rat: A model for the human. *Endocrinology* 133: 2773-2781.
- 50) Russell LD, Chandrashekar V, Bartke A, **Sinha Hikim AP** (1994) The hamster Sertoli cell in early testicular regression and recrudescence : A stereological study. *Int J Androl* 17: 93-106.
- 51) **Sinha Hikim AP**, Swerdloff RS (1994) Time course of recovery of spermatogenesis and Leydig cell function after cessation of gonadotropin-releasing hormone antagonist treatment in the adult rats. *Endocrinology* 134: 1627-1634.
- 52) **Sinha Hikim AP**, Swerdloff RS (1995) Temporal and stage-specific effects of recombinant human follicle-stimulating hormone on the maintenance of spermatogenesis in gonadotropin-releasing hormone antagonist-treated rat. *Endocrinology* 136: 253-261.
- 53) **Sinha Hikim AP**, Wang C, Leung A, Swerdloff RS (1995) Involvement of apoptosis in the induction of germ cell degeneration in adult rats after gonadotropin-releasing hormone antagonist treatment. *Endocrinology* 136: 2770-2775.
- 54) Wang C, **Sinha Hikim AP**, Leung A (1995) The anti-progestin CDB 2914 has no antifertility effect in male rats. *Contraception* 51: 215-218.
- 55) Lugg JA, Penson DF, Sadeghi F, Petrie B, Freedman AL, Gonzalez-Cadavid NF, **Sinha Hikim AP**, Rajfer J (1996) Prevention of seminiferous tubular atrophy in a naturally cryptorchid rat model by early surgical intervention. *J Androl* 17: 726-732.
- 56) Lue YH, **Sinha Hikim AP**, Wang C, Bonavera JJ, Baravarian S, Leung A, Swerdloff RS (1997) Early effects of vasectomy on testicular structure, germ cell, and macrophage apoptosis. *J Androl* 18: 166-173.
- 57) Bonavera JJ, Swerdloff RS, Leung A, Baravarian S, Superlano L, **Sinha Hikim AP**, Wang C (1997) In the male Brown-Norway (BN) rat, reproductive aging is associated with decreased LH pulse amplitude and area. *J Androl* 18: 359-365.

- 58) **Sinha Hikim AP**, Lue, Y, Swerdloff RS (1997) Separation of germ cell apoptosis from toxin induced cell death by necrosis using *in situ* end- labeling histochemistry after glutaraldehyde fixation. *Tissue & Cell* 29:487-493.
- 59) **Sinha Hikim AP**, Rajavashisth TB, Sinha Hikim I, Lue YH, Bonavera JJ, Leung A, Wang C, Swerdloff RS (1997) Significance of apoptosis in the temporal and stage-specific loss of germ cells in the adult rat after gonadotropin deprivation. *Biol Reprod* 57: 1193-1201.
- 60) **Sinha Hikim AP**, Lue, Y, Swerdloff RS (1997) Separation of germ cell apoptosis from toxin induced cell death by necrosis using *in situ* end- labeling histochemistry after glutaraldehyde fixation. *Tissue & Cell* 29:487-493.
- 61) **Sinha Hikim AP**, Wang C, Lue Y, Johnson L, Wang X-H, Swerdloff RS (1998) Spontaneous germ cell apoptosis in human: evidence for ethnic differences in the susceptibility of germ cells to programmed cell death. *J Clin Endocrinol Metab* 83: 152-156.
- 62) Bonavera JJ, Swerdloff RS, **Sinha Hikim AP**, Lue Y, Wang C (1998) Aging results in attenuated GnRH-LH axis responsiveness to glutamate receptor agonist NMDA (N-Methyl-D Aspartate). *Neuroendocrinology* 10: 93-99.
- 63) Lue Y, **Sinha Hikim AP**, Swerdloff RS, Im P, Taing KS, Bui T, Leung A, Wang C (1999) Single exposure to heat induces stage-specific germ cell apoptosis in rats: role of intratesticular testosterone (T) on stage-specificity. *Endocrinology* 140: 1709-1717.
- 64) Lue Y, **Sinha Hikim AP**, Wang C, Leung A, Baravarian S, Reutrakul V, Sangsawan S, Chaichana S, Swerdloff RS (1998) Triptolide: A potential male contraceptive. *J Androl* 19: 479-486.
- 65) Wang C, **Sinha Hikim AP**, Lue YH, Leung A, Baravarian S, Swerdloff RS (1999) Reproductive aging in the Brown-Norway rat is characterized by accelerated germ cell apoptosis and is not altered by luteinizing hormone replacement. *J Andro* 20: 509-518.
- 66) Lue YH, **Sinha Hikim AP**, Wang C, Im M, Leung A, Swerdloff RS (2000) Testicular heat exposure enhances the suppression of spermatogenesis by testosterone in rats: The "two hit" approach to male contraceptive development. *Endocrinology* 141: 1414-1424.
- 67) **Sinha Hikim AP**, Lue YH, Wang C, Reutrakul V, Sangsuwan R, Swerdloff RS (2000) Post-testicular antifertility action of triptolide in the male rat: evidence for severe impairment of cauda epididymal sperm ultrastructure. *J Androl* 21: 431-437.
- 68) Huynh PN, **Sinha Hikim AP**, Wang C, Stefanovic K, Lue YH, Leung A, Atienza V, Baravarian S, Reutrakul V, Swerdloff RS (2000). Long-term effects of triptolide on spermatogenesis, epididymal sperm function, and fertility in male rats. *J Androl* 21: 689-699.

- 69) Yamamoto CM, **Sinha Hikim** AP, Huynh PN, Shapiro B, Lue Y, Salameh WA, Wang C, Swerdloff RS (2000). Redistribution of Bax is an early step in an apoptotic pathway leading to germ cell death triggered by mild testicular hyperthermia. *Biol Reprod* 63: 1693-1700.
- 70) Lue YH, Rao PN, **Sinha Hikim** AP, Im M, Salameh WA, Yen P, Wang C, Swerdloff RS (2001). XXY male mouse: an experimental model for Klinefelter syndrome. *Endocrinology* 142: 1461-1470.
- 71) Ferrini M, Wang C, Swerdloff RS, **Sinha Hikim** AP, Rajfer J, Gonzalez-Cadavid NF (2001). Aging-related expression of inducible nitric oxide synthase and cytotoxicity markers in rat hypothalamic regions associated with male reproductive function. *Neuroendocrinology* 74: 1-11.
- 72) Yamamoto CM, **Sinha Hikim** AP, Lue Y, Portugal AM, Guo TB, Hsu SY, Salameh WA, Wang C, Swerdloff RS (2001) Impairment of spermatogenesis in transgenic mice with selective overexpression of Bcl-2 in the somatic cells of the testis. *J Androl* 22: 981-991.
- 73) Vera Y, Dai T, **Sinha Hikim** AP, Lue YH, Salido EC, Swerdloff RS (2002). Deleted in Azoospermia Associated Protein 1 shuttles between nucleus and cytoplasm during normal germ cell maturation. *J Androl* 23: 622-628.
- 74) Lue YH, Lasley BL, Laughlin LS, Swerdloff RS, **Sinha Hikim** AP, Leung A, Overstreet JW, Wang C (2002). Mild testicular hyperthermia induces profound transitional spermatogenic suppression through increased germ cell apoptosis in adult cynomolgus monkeys (*Macaca fascicularis*). *J Androl* 23: 799-805.
- 75) Guo TB, Boros LG, Chan KC, **Sinha Hikim** AP, Hudson AP, Swerdloff RS, Mitchell AP, Salameh WA (2003). Spermatogenic expression of RNA binding motif protein 7, a protein that interacts with splicing factors. *J Androl* 24: 204-214.
- 76) Lue Y, **Sinha Hikim** AP, Wang C, Leung A, Swerdloff RS (2003) Functional role of inducible nitric oxide synthase in the induction of male germ cell apoptosis, regulation of sperm number, and determination of testis size: evidence from null mutant mice. *Endocrinology* 144: 3092-3100.
- 77) **Sinha Hikim** AP, Lue Y, Yamamoto CM, Vera Y, Rodriguez S, Yen PH, Soeng K, Wang C, Swerdloff RS (2003) Key apoptotic pathways for heat-induced programmed germ cell death in the testis. *Endocrinology* 144: 3159-3166.
- 78) **Sinha Hikim** AP, Lue Y, Diaz Romero M, Yen PH, Wang C, Swerdloff RS (2003) Deciphering the pathways of germ cell apoptosis in the testis. *J Steroid Mol Biol* 85: 175-182.
- 79) Vera Y, Diaz-Romero M, Rodriguez S, Lue Y, Wang C, Swerdloff RS, **Sinha Hikim** AP (2004) Mitochondria-dependent pathway is involved in heat-induced male germ cell death: Lessons from mutant mice. *Biol Reprod* 70: 1534-1540.

- 80) Vera Y, Rodriguez A, Castanares M, Lue Y, Atienza V, Wang C, Swerdloff RS, **Sinha Hikim AP** (2005) Functional role of caspases in heat-induced testicular germ cell apoptosis. *Biol Reprod* 72: 516-522.
- 81) Zhang X-S, Lue Y, Guo S-H, Yuan J-X, Hu Z-Y, Han C-S, **Sinha Hikim AP**, Swerdloff RS, Wang C, Liu Y-X (2005) Expression of Hsp 105 and Hsp 60 during germ cell apoptosis in heat-treated testes of adult cynomolgus monkeys (*Macaca fascicularis*). *Frot Biosci* 10: 3110-3121.
- 82) Mahapatra NR, O'Connor DT, Vaingankar SM, **Sinha Hikim AP**, Mahata M, Ray S, Staite E, Wu H, Gu Y, Dalton N, Kennedy BP, Ziegler MG, Ross Jr J, Mahata SK (2005). Targeted ablation of chromogranin A gene: elevated blood pressure rescued by human homolog. *J Clin Invest* 115: 1942-1952.
- 83) **Sinha Hikim AP**, Vera Y, Vernet D, Castanares M, Diaz-Romero, Ferrini M, Swerdloff RS, Gonzalez-Cadavid N, Wang C (2005) Involvement of nitric oxide (NO)-mediated intrinsic pathway signaling in age-related increase in germ cell apoptosis in male Brown-Norway rats. *J Gerontol Biol Sci* 60: 702-708.
- 84) Lue Y, Jentsch JD, Wang C, Rao PN, **Sinha Hikim AP**, Salameh W, Swerdloff RS (2005) XXY mice exhibit gonadal and behavioral phenotypes similar to Klinefelter syndrome. *Endocrinology* 146: 4148-4154.
- 85) Sinha I, **Sinha Hikim AP**, Hannawa KK, Henke PK, Eagleton MJ, Stanley JC, Upchurch GR (2005) Mitochondrial dependent apoptosis in experimental rodent abdominal aortic aneurysms. *Surgery* 138: 806-811.
- 86) **Sinha Hikim AP**, Vera Y, Elhag RI, Lue Y, Cui Y-G, Pope V, Leung A, Atienza V, Wang C, Swerdloff RS (2005) Mouse model of male germ cell apoptosis in response to a lack of hormonal stimulation. *Indian J Exp Biol* 43: 1048-1057.
- 87) Castanares M, Vera Y, Erkkila K, Kyttanen S, Lue Y, Dunkel L, Wang C, Swerdloff RS, **Sinha Hikim AP** (2005) Minocycline up-regulates BCL-2 levels in mitochondria and attenuates male germ cell apoptosis. *Biochem Biophys Res Commun* 337: 663-669.
- 88) Rao MK, Pham J, Imam S, MacLean J, Murali D, Furuta Y, **Sinha Hikim AP**, Wilkinson MF (2006) Tissue-specific RNAi reveals that WT1 expression in nurse cells controls germ-cell survival and spermatogenesis. *Genes & Dev* 20: 147-152.
- 89) Lue Y, Wang C, Liu Y-X, **Sinha Hikim AP**, Zhang X-S, Ng J, Hu Z-Y, Li Y-C, Leung A, Swerdloff RS (2006) Transient testicular warming enhances the suppressive effect of testosterone on spermatogenesis in adult cynomolgus monkeys. *J Clin Endocrinol Metab* 91: 539-545.
- 90) Zhang X-S, Zhang Z-H, Jin X, Wei P, Hu X-Q, Chen M, Lu C-L, Lue Y, Hu Z-Y, **Sinha Hikim AP**, Swerdloff RS, Wang C, Liu Y-X (2006) Dedifferentiation of adult monkey

Sertoli cells through activation of ERK1/2 kinase induced by heat treatment. *Endocrinology* 147: 1237-1245.

- 91) Zhang X-S, Lue YH, Yuan J-X, Tao S-X, Guo S-H, Jin X, Liu T, Hu Z-Y, Han C-S, **Sinha Hikim AP**, Swerdloff RS, Wang C, Liu Y-X (2006) Expression of orphan receptors TR2, TR3, TR4 and p53 in heat-treated testis of cynomolgus monkeys (*Macaca fascicularis*). *J Androl* 27: 405-413.
- 92) Erkkila K, Kytтанen S, Wikstrom M, Taari K, **Sinha Hikim AP**, Swerdloff RS, Dunkel L (2006) Regulation of human male germ cell death by modulators of ATP production. *Am J Physiol Endocrinol Metab* 290: E1145-E1154.
- 93) Vera Y, Erkkila K, Wang C, Nunez C, Kytтанen S, Lue Y, Dunkel L, Swerdloff RS, **Sinha Hikim AP** (2006) Involvement of p38 mitogen-activated protein kinase and inducible nitric oxide synthase in apoptotic signaling of murine and human male germ cells after hormone deprivation. *Mol Endocrinol* 20: 1597-1609.
- 94) Lue Y, Erkkila K, Liu PY, Ma K, Wang C, **Sinha Hikim AP**, Swerdloff RS (2007) Fate of bone marrow stem cells transplanted into the testis: Potential implication for men with testicular failure. *Am J Pathol* 170: 899-908.
- 95) Jia Y, **Sinha Hikim AP**, Swerdloff RS, Lue YH, Vera Y, Zhang X-S, Hu Z-Y, Li Y-C, Liu Y-X, Wang C (2007) Signaling pathways for germ cell death in adult Cynomolgus monkeys (*Macaca fascicularis*) induced by mild testicular hyperthermia and exogenous testosterone treatment. *Biol Reprod* 77: 83-92, 2007.
- 96) Wang C, Cui YG, Wang XH, Jia Y, **Sinha Hikim A**, Lue YH, Tong JS, Qian LX, Sha JH, Zhou ZM, Hull L, Leung A, Swerdloff RS (2007) Transient scrotal hyperthermia and levonorgestrel enhance testosterone induced spermatogenesis suppression in men through increased germ cell apoptosis. *J Clin Endocrinol Metab* 92: 3292-3304.
- 97) Sinha-Hikim I, Braga M, Shen R, **Sinha Hikim AP** (2007) Involvement of c-Jun NH₂-terminal kinase and nitric oxide-mediated mitochondria-dependent intrinsic pathway signaling in cardiotoxin-induced muscle cell death: Role of testosterone. *Apoptosis* 12: 1965-1978.
- 98) Braga M, **Sinha-Hikim AP**, Datta S, Ferrini M, Brown D, Kovacheva EL, Gonzalez-Cadavid NF, Sinha-Hikim I (2008) Involvement of oxidative stress and caspase 2-mediated intrinsic pathway signaling in age-related increase in muscle cell apoptosis in mice. *Apoptosis* 13: 822-832.

B. RESEARCH PAPERS - PEER REVIEWED (IN PRESS)

- 1) Johnson C, Jia Y, Wang C, Lue Y, Swerdloff RS, Zhang X-S, Hu Z-Y, Li Y-C, Liu Y-X, **Sinha Hikim AP**. Role of caspase 2 in apoptotic signaling of primate and murine germ cells. *Biol Reprod*.

- 2) Lue Y, Wang C, Cui YG, Wang X, Sha J, Zhou ZM, Xu J, Wang C, **Sinha Hikim AP**, Swerdloff RS (2008) Addition of levonorgestrel enhances testosterone-induced suppression of spermatogenesis in men through greater alteration of testicular gene expression. *Biol Reprod* (provisionally accepted).

C. RESEARCH PAPERS - PEER REVIEWED (SUBMITTED)

- 1) Tsui S, Naik V, Hoa N, Hwang CJ, Afifyan N, Sinha Hikim A, Gianoukakis AG, Douglas RS, Smith TJ. Evidence for an association between TSH and IGF-1 receptors: a tale of two antigens implicated in Graves's disease.

BOOKS / BOOK CHAPTERS / REVIEWS

A. BOOKS

- 1) Russell LD, Ettlin RA, **Sinha Hikim AP**, Clegg ED (1990) **Histological and Histopathological Evaluation of the Testis**. Cache River Press, Clearwater, Florida.

B. BOOK CHAPTERS / REVIEWS

- 1) Russell LD, Weber JE, Rashed RMA, **Sinha Hikim AP** (1988) The volume, shape, and stage-related configuration of Sertoli cell nuclei as determined from three dimensional models. In: *Carl Schirren Symposium: Advances in Andrology* (Holstein AF, Leidenberger F, Holzer KH, Bettendorf G, eds.) Diesbach Verlag Berlin, pp. 67-73.
- 2) Bartke A, **Sinha Hikim AP**, Russell LD (1993) Sertoli cell structure and function in seasonally breeding mammals. In: *The Sertoli Cell* (Russell LD, Griswold MD, eds) Cache River Press, Clearwater, FL, pp.349-364.
- 3) Russell LD, **Sinha Hikim AP**, Ghosh S, Bartke A (1994) Structure-function relationships in somatic cells of the testis and accessory reproductive glands. In: *Function of Somatic Cells in the Testis* (Bartke A, ed), Proceedings of the Serono Symposium, Springer-Verlag, NY, pp 55-84.
- 4) Bartke A, **Sinha Hikim AP**, Russell LD (1996) Leydig cell structure and function in seasonal breeders. In: *The Leydig Cell* (Payne AH, Hardy MP, Russell LD, eds) Cache River Press, Clearwater, Viena, IL, pp 431-450.
- 5) Swerdloff RS, Lue YH, Wang C, Rajavashisth T, **Sinha Hikim AP** (1998) Hormonal regulation of germ cell apoptosis. In: *Germ Cell Development, Division, Disruption and Death* (Zirkin BR, ed), Proceedings of the Serono Symposium, Springer-Verlag, New York, pp 150-164.
- 6) **Sinha Hikim AP**, Swerdloff RS (1999) Hormonal and genetic control of germ cell apoptosis. *Rev Reprod* 4: 38-47.

- 7) **Sinha Hikim AP**, Lue YH, Wang C, Swerdloff RS (1999) Spermatogenesis and germ cell death. In: *Male Reproductive Function* (Wang C, ed), Kluwer Academic Publishers, Boston, MA, pp 19-39.
- 8) Wang C, **Sinha Hikim AP**, Ferrini M, Bonavera JJ, Vernet D, Leung A, Lue, YH, Gonzalez-Cadavid NF, Swerdloff RS (2002) Male reproductive aging: using the brown Norway rat a model for man. In: *Norvatis Foundation Symposium NF 242 on Endocrine Facets of Aging in the Human and Experimental Animals* (Veldhuis J, Laron Z, Chadwick D, eds), John Wiley & Sons, Ltd., London, pp 82-95
- 9) Swerdloff RS, Wang C, Sinha Hikim AP (2002) Hypothalamic-pituitary-gonadal axis in men. In: *Hormones, Brain and Behavior* (Pfaff DW, Arnold AP, Etgen AM, Fahrbach SE, Rubun RT, eds), Academic Press, New York, pp 1-36.
- 10) Sinha Hikim AP, Bartke A (2005) Sertoli cell biology in seasonal breeders. In: *The Sertoli Cell* (Skinner MK, Griswold MD eds), Elsevier Academic Press, pp 81-92.
- 11) Sinha Hikim AP, Swerdloff RS, Wang C (2005). The Testis. In: *Endocrinology-Basic and Clinical Principles* (Melmed S and Conn M eds), Humana Press, Totowa, NJ, pp 405-418.

C. BOOK CHAPTERS / REVIEWS (IN PRESS)

D. BOOK CHAPTERS / REVIEWS (SUBMITTED)

- 1) Sinha Hikim AP, Jia Y, Lue Y, Wang C, Swerdloff RS (2008) Apoptotic signaling in male germ cells. In : *Apoptosis: Physiology and Pathology of Cell Death* (Reed JC and Green D eds), Cambridge University Press, New Work, NY.

ABSTRACTS

- 1) Sinha Hikim AP (1979) Spermatogenesis in the Himalayan flying squirrel (*Petaurista magnificus*, Hodgson). *Proceedings of the Symposium on Life and Environment*, Calcutta, p 18.
- 2) Sinha Hikim AP (1980) Studies on intermale fighting and dominant-subordinate relationship in the bandicoot rat following intratesticular administration of low amount of cadmium chloride. *Proceedings of the 67th Indian Science Congress, Part III*, p 207-208.
- 3) Sinha Hikim AP (1981) The antispermatogenic action of 3-chloro-1,2-propanediol (alpha-chlorohydrin) in a wild rodent, the bandicoot rat. *Proceedings of the 68th Indian Science Congress, Part III*, p 53-54.
- 4) Chakraborty J, Sinha Hikim AP, Jhunjhunwala J (1984) Annulate lamellae in the Sertoli cells of guinea pig testis after unilateral torsion of the spermatic cord. *Proceedings of the 42nd Annual Meeting of Electron Microscopic Society of America*, Detroit, Michigan, pp. 196-197.

- 5) Jhunjunwala JS, Chakraborty J, Sinha Hikim AP, Kropp AK (1984) Germ cell degeneration in the contralateral testis of the guinea pig with unilateral torsion of the spermatic cord. *J Urol* 131:162.
- 6) Chakraborty J, Sinha Hikim AP, Jhunjunwala J (1984) Alterations in the endothelial cells ultrastructure in the contralateral testes of men with unilateral torsion. *J Cell Biol* 99:257.
- 7) Sinha Hikim AP, Chakraborty J, Jhunjunwala J (1985) A reliable method for evaluation of human testicular biopsy. *J Androl* 6 (Suppl):101.
- 8) Chakraborty J, Sinha Hikim AP, Jhunjunwala JS (1985) Electron microscope studies of lymphocytes and mast cells infiltration in the contralateral testis of men with varicocele or unilateral torsion of the spermatic cord. The 6th Annual Symposium of the American Society for the Immunology of Reproduction, Ann Arbor, Michigan.
- 9) Jhunjunwala JS, Sinha Hikim AP, Chakraborty J, Kropp AK (1985) Effect of unilateral torsion of spermatic cord on the contralateral testis of guinea pig. *J Urol* 133:258.
- 10) Chakraborty J, Jhunjunwala JS, Nelson L, Sinha Hikim AP (1985) Pathophysiology of human testis - mechanism of germ cell degeneration. The Physiological Society, Cambridge, England.
- 11) Sinha Hikim AP, Chakraborty J, Jhunjunwala JS (1985) The effect of spermatic cord torsion on human Leydig cells. *J Cell Biol* 101:370.
- 12) Chakraborty J, Sinha Hikim AP, Jhunjunwala JS (1985) Nucleus associated microfilamentous "bars" in guinea pig Sertoli cells. *J Cell Biol* 101:367.
- 13) Sinha Hikim AP, Chakraborty J (1986) Effects of an antifertility agent, diazocholesterol dihydrochloride (SC-12937) on rat testis. *J Androl* 7:P-21.
- 14) Chakraborty J, Sinha Hikim AP, Jhunjunwala J, Dewri J (1986) Long term effect of torsion of the spermatic cord on the contralateral testis. *J Androl* 7:P-14.
- 15) Chakraborty J, Sinha Hikim AP, Jhunjunwala JS (1986) Changes in the affected testis after unilateral torsion of the spermatic cord in guinea pig. Testis Workshop, Vanderbilt University, Nashville, TN.
- 16) Jhunjunwala JS, Chakraborty J, Sinha Hikim AP, Kropp KA (1986) Long term effects of unilateral torsion of the spermatic cord on the contralateral testis in the guinea pig. *J Urol* 135:189.
- 17) Sinha Hikim AP, Bartke A, Russell LD (1988) Modeling structure-function relationships in the testis utilizing the photoperiodic golden hamster: A morphometric analysis. *Anat Rec* 220:90A.

- 18) Russell LD, Sinha Hikim AP (1988) Subcellular features which characterize active and inactive Leydig cells: A morphometric analysis using hamster in gonadally stimulated and regressed states. 10th Testis Workshop, Baltimore, Maryland.
- 19) Sinha Hikim AP, Russell LD (1988) Structural differences in active and inactive Sertoli cells of the golden hamster: A stereological study. 10th Testis Workshop, Baltimore, Maryland.
- 20) Sinha Hikim AP, Chandrashekar V, Klemcke, HG, Amador A, Bartke A, Russell LD (1989) Morphometric studies of Sertoli cells: Structure-function relationships as revealed in gonadally active and inactive hamsters. *Anat Rec* 223:107A.
- 21) Ghosh S, Sinha Hikim AP, Russell LD (1990) Observations of stage-related effects seen after short term hypophysectomy in the rat. 15th Annual Meeting of American Society of Andrology, Columbia, South Carolina.
- 22) Sinha Hikim AP, Swerdloff RS (1993) Temporal consequences of gonadotropin deprivation on spermatogenesis in GnRH antagonist-treated rats: identification of stage-specific effects. Western Section of American Federation for Clinical Research, February 17-20, Carmel, CA.
- 23) Leung A, Sinha Hikim AP, Wang C (1993) Changes in testicular function with aging in Brown-Norway rats. Western Section of American Federation for Clinical Research, February 17-20, Carmel, CA.
- 24) Russell LD, Sinha Hikim AP, Ghosh S, Bartke A (1993) Structure-function relationships in somatic cells of the testis and accessory sex glands. 12th North American Testis Workshop, April 13-16, Tempa, Florida.
- 25) Wang C, Leung A, Sinha Hikim AP (1993) Changes in gonadotropin secretions, testicular steroidogenesis and spermatogenesis in aging Brown-Norway rats. Program of the 75th Annual Meeting of Endocrine Society, Las Vegas, NV, p 506.
- 26) Sinha Hikim AP, Swerdloff RS (1993) Temporal and stage-specific changes in spermatogenesis in GnRH antagonist (GnRH)-treated rats. Program of the 75th Annual Meeting of Endocrine Society, Las Vegas, NV, p 506.
- 27) Sinha Hikim AP, Swerdloff RS (1994) Does FSH have a role in the maintenance of spermatogenesis in the adult rat ? Western Meeting of American Federation for Clinical Research, February 9-12, Carmel, California.
- 28) Leung A, Sinha Hikim AP, Wang C (1994) Comparison of testicular function after GnRH antagonist treatment in old versus young rats. Western Meeting of American Federation for Clinical Research, February 9-12, Carmel, California.

- 29) Sinha Hikim AP, Swerdloff RS (1994) Recovery of spermatogenesis after cessation of GnRH antagonist treatment in the adult rat follows the normal time schedule of germ cell development. 19th Annual Meeting of American Society of Andrology, March 4-7, Springfield, Illinois.
- 30) Wang C, Leung A, Sinha Hikim AP (1994) Effects of an antiprogestosterone on fertility in male rats. 19th Annual Meeting of American Society of Andrology, March 4-7, Springfield, Illinois.
- 31) Sinha Hikim AP, Swerdloff RS (1994) Temporal and stage-specific effects of recombinant human FSH on the maintenance of spermatogenesis in the adult rat. Program of the 76th Annual Meeting of Endocrine Society, June 15-18, Anaheim, CA, p 245.
- 32) Leung A, Sinha Hikim AP, Wang C (1994) Comparison of testicular function after GnRH-A treatment in old versus young rats. Program of the 76th Annual Meeting of Endocrine Society, June 15-18, Anaheim, CA, p 244.
- 33) Sinha Hikim AP, Wang C, Swerdloff RS (1995) *In situ* localization of apoptosis in testis: evidence for its involvement in germ cell degeneration in rats. Western Meeting of American Federation for Clinical Research, February 8-11, Carmel, California.
- 34) Sinha Hikim AP, Wang C, Swerdloff RS (1995) Involvement of apoptosis in the induction of germ cell degeneration in the adult rats after gonadotropin-releasing hormone antagonist treatment. 20th Annual Meeting of American Society of Andrology, March 31-April 4, Raleigh, NC.
- 35) Sinha Hikim AP, Swerdloff RS (1995) Stage-specific activation of germ cell apoptosis in the adult rat after gonadotropin deprivation by GnRH antagonist treatment. American Federation for Clinical Research Meeting, May 5-8, San Diego, CA.
- 36) Sinha Hikim AP, Bonavera JJ, Swerdloff RS (1995) Recombinant human LH prevents GnRH antagonist (GnRH-A)-induced stage-specific activation of germ cell apoptosis in the adult rat: evidence for differential regulation of spontaneous vs. induced apoptosis. Program of the 77th Annual Meeting of Endocrine Society, June 14-17, Washington, DC, p 562.
- 37) Bonavera JJ, Wang C, Sinha Hikim AP, Swerdloff RS (1995) Age-related changes in LH, FSH, and prolactin secretion after N-methyl-D-aspartate (NMDA) administration. Program of the 77th Annual Meeting of Endocrine Society, June 14-17, Washington, DC, p 138.
- 38) Wang C, Leung A, Sinha Hikim AP (1995) Progressive male reproductive dysfunction with aging in Brown-Norway rats. Program of the 77th Annual Meeting of Endocrine Society, June 14-17, Washington, DC, p 572.

- 39) Sinha Hikim AP, Garban H, Lue Y, Bonavera JJ, Wang C, Swerdloff RS (1996) Quantitative significance of apoptosis in mediating the temporal and stage-specific loss of germ cells in the adult rat after gonadotropin deprivation. Program of the 10th International Congress of Endocrinology, June 12-15, San Francisco, CA, p 58.
- 40) Sinha Hikim AP, Lue Y, Wang C, Wang X-H, Johnson L, Swerdloff RS (1996) Spontaneous germ cell apoptosis in human. Program of the 10th International Congress of Endocrinology, June 12-15, San Francisco, CA, p 177.
- 41) Lue Y, Sinha Hikim AP, Wang C, Bonavera JJ, Baravarian S, Leung A, Swerdloff RS (1996) Early effect of vasectomy on testicular apoptosis. Program of the 10th International Congress of Endocrinology, June 12-15, San Francisco, CA, p 544.
- 42) Bonavera JJ, Wang C, Leung A, Lue Y, Baravarian S, Superlano L, Sinha Hikim AP, Swerdloff RS (1996) Aging is associated with decreased LH pulse amplitude in the Brown-Norway (BN) male rat. Program of the 10th International Congress of Endocrinology, June 12-15, San Francisco, CA, p 83.
- 43) Rajavashisth TB, Sinha Hikim AP, Misra NK, Cai Y, Tripathi JN, Lue Y, Wang C, Baravarian S, Leung A, Lee WNP, Swerdloff RS (1996). Mice deficient in macrophage-colony stimulating factor exhibit reduced testicular testosterone and augmented stage-specific germ cell apoptosis. Program of the 6th International Congress on Cell Biology / 36th American Society for Cell Biology Annual Meeting, December 7-11, San Francisco, CA, p32a.
- 44) Sinha Hikim AP, Rajavashisth T, Lue Y, Tripathi J, Nabi HF, Suh A, Bonavera JJ, Wang C, Brasel JA, Swerdloff RS (1996) Stage-specific suppression of spontaneous germ cell apoptosis in p53 deficient mice. Program of the 6th International Congress on Cell Biology / 36th American Society for Cell Biology Annual Meeting, December 7-11, San Francisco, CA, p32a.
- 45) Lue YH, Sinha Hikim AP, Leung A, Baravarian S, Wang C, Swerdloff RS (1997) Triptolide: A post-testicular antifertility agent. 22nd Annual Meeting of American Society of Andrology, February 23-25, Baltimore, MD.
- 46) Lue YH, Sinha Hikim AP, Im P, Tiang KS, Bui T, Leung A, Swerdloff RS, Wang C (1997) Stage-specific loss of germ cells in the rat after a single exposure to heat occurs by apoptosis. 22nd Annual Meeting of American Society of Andrology, February 23-25, Baltimore, MD.
- 47) Swerdloff RS, Lue YH, Rajavashisth T, Wang C, Sinha Hikim AP (1997) Hormonal regulation of germ cell apoptosis. XIVth Testis Workshop : Germ Cell Development, Division, Disruption and Death. February 19-22, Baltimore, MD.
- 48) Lue YH, Sinha Hikim AP, Leung A, Baravarian S, Swerdloff RS, Wang C (1997) Stage-related activation of germ cell apoptosis in the male aging Brown-Norway rat. Program

- of the 79th Annual Meeting of the Endocrine Society, June 11-14, Minneapolis, MN, p 533.
- 49) Sinha Hikim AP, Lue YH, Rajavashisth TB, Wang C, Swerdloff RS (1997) Role pituitary gonadotropins in preventing the GnRH-A induced stage-specific acceleration of germ cell apoptosis in the adult. Program of the 79th Annual Meeting of the Endocrine Society, June 11-14, Minneapolis, MN, p 533.
 - 50) Lue Y, Sinha Hikim AP, Rajavashisth TB, Wang C, Salameh WE, Swerdloff RS (1998) p53 deficiency suppresses germ cell apoptosis and stimulates cellular proliferation *in vivo*. 23rd Annual Meeting of American Society of Andrology, March 27-29, Long Beach, CA.
 - 51) Lue Y, Sinha Hikim AP, Leung A, Baravarian S, Wang C, Swerdloff RS (1998) Stage-specific hormonal protection against heat-induced germ cell apoptosis in the rat. 23rd Annual Meeting of American Society of Andrology, March 27-29, Long Beach, CA.
 - 52) Sinha Hikim AP, Lue Y, Smith L, Park JH, Kung C, Nam G, Wang C, Swerdloff RS (1997) Differential expression of Bcl-2 and Bax in the rat seminiferous epithelium. 23rd Annual Meeting of American Society of Andrology, March 27-29, Long Beach, CA.
 - 53) Sinha Hikim AP, Stefanovic K, Lue YH, Vernet D, Wang C, Swerdloff RS (1998) Increased expression of Bax is an early event in the induction of germ cell apoptosis after mild testicular hyperthermia. Program of the 80th Annual Meeting of the Endocrine Society, June 24-27, New Orleans, LA, p 270.
 - 54) Lue YH, Sinha Hikim AP, Machida Y, Mayerhofer A, Urbansky H, Wang C, Swerdloff RS (1998) Accelerated germ cell apoptosis in aging rhesus monkeys. Program of the 80th Annual Meeting of the Endocrine Society, June 24-27, New Orleans, LA, p 381.
 - 55) Sinha Hikim AP, Stefanovic K, Lue YH, Vernet D, Wang C, Swerdloff RS (1998) Increased expression of Bax is an early event in the induction of germ cell apoptosis after mild testicular hyperthermia. Program of the 80th Annual Meeting of the Endocrine Society, June 24-27, New Orleans, LA, p 270.
 - 56) Lue YH, Sinha Hikim AP, Machida Y, Mayerhofer A, Urbansky H, Wang C, Swerdloff RS (1998) Accelerated germ cell apoptosis in aging rhesus monkeys. Program of the 80th Annual Meeting of the Endocrine Society, June 24-27, New Orleans, LA, p 381.
 - 57) Huynh PN, Sinha Hikim AP, Stefanovic K, Lue YH, Leung A, Atienza V, Baravarian S, Swerdloff RS, Wang C. Long-term effects of triptolide on spermatogenesis, epididymal sperm function, and fertility in male rats. Program of the 24th Annual Meeting of American Society of Andrology, April 11-13, 1999, Louisville, KY, p 30.
 - 58) Lue YH, Sinha Hikim AP, Wang C, Casillas A, Bono L, Leung A, Swerdloff RS. Rapid suppression of spermatogenesis in the rat by combined treatment with GnRH antagonist

- and a single heat exposure. Program of the 24th Annual Meeting of American Society of Andrology, April 11-13, 1999, Louisville, KY, p 42.
- 59) Huynh PN, Stefanovic K, Hwang R, Ching C, Sinha Hikim AP, Wang C, Swerdloff RS. Effect of heat on testicular heat shock protein expression. Program of the 24th Annual Meeting of American Society of Andrology, April 11-13, 1999, Louisville, KY, p 42.
 - 60) Lue YH, Rao PN, Sinha Hikim AP, Im M, Salameh WA, Yen P, Wang C, Swerdloff RS. Progressive loss of germ cells by apoptosis in XXY male mouse: an excellent experimental model for Klinefelter syndrome. Program of the 25th Annual Meeting of American Society of Andrology, April 7-11, 2000, Boston, MA, p 36.
 - 61) Guo TB, Salameh WA, Huynh PN, Sinha Hikim AP, Chen X, Wang C, Toscani A, Reddy EP, Swerdloff RS. Characterization of the spermatogenic cell cycle defects in A-myb knockout mice. Program of the 25th Annual Meeting of American Society of Andrology, April 7-11, 2000, Boston, MA, p 35.
 - 62) Vernet D, Sinha Hikim AP, Swerdloff RS, Gonzalez-Cdavid NF, Wang C. Age-related increase in germ cell apoptosis in male Brown-Norway (BN) rats is associated with increased expression of inducible nitric oxide synthase (iNOS). Program of the 25th Annual Meeting of American Society of Andrology, April 7-11, 2000, Boston, MA, p 45.
 - 63) Yamamoto C, Sinha Hikim AP, Shapiro B, Huynh PN, Lue Y, Salameh WA, Wang C, Swerdloff RS. Redistribution of Bax is an early step in an apoptotic pathway leading to germ cell death triggered by mild testicular hyperthermia. Program of the 25th Annual Meeting of American Society of Andrology, April 7-11, 2000, Boston, MA, p 35
 - 64) Huynh PN, Fernando G, Fernando M, Yamamoto C, Sinha Hikim AP, Wang C, Swerdloff RS. Caspase-7 increases in germ cells undergoing apoptosis following heat stress. Program of the 25th Annual Meeting of American Society of Andrology, April 7-11, 2000, Boston, MA, p 45.
 - 65) Ferrini MG, Wang C, Swerdloff RS, Vernet D, Sinha Hikim AP, Gonzalez-Cadavid. Aging-related expression of inducible nitric oxide synthase (iNOS) and cytotoxicity markers in rat hypothalamic regions associated with male reproductive dysfunction. Program of the 82nd Annual Meeting of the Endocrine Society, June 21-24, 2000, Toronto, Canada, p 71.
 - 66) Lue YH, Sinha Hikim AP, Yamamoto CM, Gonzalez-Cadavid NF, Wang C, Leung A, Swerdloff RS. Decrease in induction of germ cell apoptosis by a single testicular heat exposure in iNOS-deficient mice. Program of the 82nd Annual Meeting of the Endocrine Society, June 21-24, 2000, Toronto, Canada, p 334.
 - 67) Portugal AM, Sinha Hikim AP, Yamamoto CM, Lue YH, Guo TB, Hsu SY, Salameh WA, Wang C, Hsueh AJW, Swerdloff RS. Impairment of spermatogenesis in transgenic mice with selective overexpression of Bcl-2 in the somatic cells of the testis. Program of

- the 82nd Annual Meeting of the Endocrine Society, June 21-24, 2000, Toronto, Canada, p 335.
- 68) Huynh PN, Sinha Hikim AP, Fernando G, Fernando M, Camarillo D, Wang C, Swerdloff RS. Differential regulation of FasL and Fas receptor in the testis following mild testicular hyperthermia in rat. Program of the 82nd Annual Meeting of the Endocrine Society, June 21-24, 2000, Toronto, Canada, p 335.
 - 69) Sinha Hikim AP, Yamamoto CM, Lue Y, Huynh PN, Wang C, Swerdloff RS. Apoptotic pathways: a testicular perspective. Program of the 33rd Annual Meeting of Society for the Study of Reproduction, July 15-18, 2000, Madison, WI, p 96 (Plenary talk).
 - 70) Lue YH, Lasley B, Laughlin LS, Swerdloff RS, Sinha Hikim AP, Leung A, Wang C. Mild testicular hyperthermia induces oligospermia and azoospermia through increased germ cell apoptosis in adult monkeys. Program of the 83rd Annual Meeting of the Endocrine Society, June 20-23, 2001, Denver, CO, p 400.
 - 71) Sinha Hikim AP, Yamamoto CM, Lue YH, Wang C, Swerdloff RS. Key molecular components of the apoptotic pathway in heat-induced programmed germ cell death. Program of the 83rd Annual Meeting of the Endocrine Society, June 20-23, 2001 Denver, CO, 90-91 (oral presentation).
 - 72) Sinha Hikim AP, Huynh PN, Lue YH, Wang C, Swerdloff RS. The Fas signaling system may not be involved in the induction of germ cell apoptosis by mild testicular hyperthermia. Program of the 83rd Annual Meeting of the Endocrine Society, June 20-23, 2001, Denver, CO, p 90 (oral presentation).
 - 73) Lue YH, Sinha Hikim AP, Wang C, Leung A, Swerdloff RS. Increased germ cell apoptosis in inducible nitric oxide synthase (iNOS) deficient male mice. Program of the VII International Congress in Andrology, June 15-19, 2001, Montreal, Canada.
 - 74) Sinha Hikim AP, Lue YH, Rodriguez S, Yen PH, Wang C, Swerdloff RS. Activation of the mitochondria-dependent apoptotic pathway in heat-induced testicular germ cell apoptosis in Fas-ligand defective mice. Program of the 27th Annual Meeting of the American Society of Andrology, April 24-27, 2002, Seattle, Washington, p 28 (oral presentation).
 - 75) Lue YH, Wang C, Sinha Hikim AP, Yamamoto CM, Leung A, Atienza V, Diaz-Romero M, Swerdloff RS. Progesterone receptor expression, localization, and activity in rat testes. Program of the 27th Annual Meeting of the American Society of Andrology, April 24-27, 2002, Seattle, Washington, p 36.
 - 76) Palomeno G, Sinha Hikim AP, Lue YH, Atienza V, Wang C, Swerdloff RS. The initiator caspase 9 and the executioner caspases 3 and 6 are involved in germ cell apoptosis following gonadotropin deprivation in rats. Program of the 27th Annual Meeting of the American Society of Andrology, April 24-27, 2002, Seattle, Washington, p 36.

- 77) Sinha Hikim AP, Lue YH, Yen PH, Wang C, Swerdloff RS. Molecular mechanisms of germ cell apoptosis in the testis. NIH Workshop entitled "Apoptosis in the Male Reproductive System", March 21-22, 2002, Bethesda, Maryland (plenary talk).
- 78) Rodriguez S, Lue YH, Diaz-Romero M, Yen PH, Wang C, Swerdloff RS, Sinha Hikim AP. Involvement of DIABLO in heat-induced testicular germ cell apoptosis in Fas-ligand defective mice. Program of the 84th Annual Meeting of the Endocrine Society, June 19-22, 2002, San Francisco, California, p 130 (**oral presentation; recipient of a travel grant award**).
- 79) Diaz-Romero M, Sinha Hikim AP, Lue YH, Wang C, Swerdloff RS. Role of microtubules in heat-induced testicular germ cell apoptosis. Program of the 84th Annual Meeting of the Endocrine Society, June 19-22, 2002, San Francisco, California, p 511.
- 80) Cui Y, Lue YH, Sinha Hikim AP, Leung A, Wang C, Swerdloff RS. Testicular germ cell apoptosis induced by testosterone (T) implants in mice. Program of the 84th Annual Meeting of the Endocrine Society, June 19-22, 2002, San Francisco, California, p 511.
- 81) Lee KK, Ferrini MG, Sinha Hikim AP, Swerdloff RS, Gonzalez-Cadavid NF, Wang C. Aging-related expression of p53 in the hypothalamus and other brain regions, which regulate reproductive functions. Program of the 84th Annual Meeting of the Endocrine Society, June 19-22, 2002, San Francisco, California, p 125.
- 82) Sinha Hikim AP, Lue YH, Yen PH, Wang C, Swerdloff RS. Deciphering the pathways of apoptosis in the testis. **Program of the 11th International Congress on Hormonal Steroids/7th International Congress on Hormones and Cancer, October 21-25, Fukuoka, Japan, p85 (invited speaker)**.
- 83) Diaz-Romero M, Sinha Hikim AP, Vera Y, Lue Y, Datta S, Wang C, Swerdloff RS. The Fas signaling system is dispensable in heat-induced testicular germ cell apoptosis. Program of the 28th Annual Meeting of the American Society of Andrology, March 29-April 1, 2003, Phoenix, AZ, p 80.
- 84) Lue YH, Wang C, Mohder G, Chu R, Leung A, Sinha Hikim AP, Swerdloff RS. Levonorgestrel suppresses gonadotropin secretion, decreases intratesticular testosterone levels, and induces stage-specific activation of germ cell apoptosis in rats. Program of the 28th Annual Meeting of the American Society of Andrology, March 29-April 1, 2003, Phoenix, AZ, p 80.
- 85) Wang C, Sinha Hikim AP, Lue YH, Swerdloff RS. Hormonal regulation of spermatogenesis. Program of the 36th Annual Meeting of Society for the Study of Reproduction, July 19-22, 2003, Cincinnati, OH, p 102-103 (Plenary talk).
- 86) Vera Y, Rodriguez S, Yen P, Lue Y, Diaz-Romero M, Datta S, Wang C, Swerdloff RS, Sinha Hikim AP. Translocated cytosolic DIABLO through interaction with XIAP regulates heat-induced testicular germ cell apoptosis in Fas ligand-defective mice. Program of the XVIIth Testis Workshop, March 26-29, 2003, Phoenix, AZ, p 227.

- 87) Rodriguez S, Vera Y, Diaz-Romero M, Lue Y, Atienza V, Wang C, Swerdloff RS, Sinha Hikim AP. Protection of heat-induced testicular germ cell apoptosis in mice by a new generation broad-spectrum caspase inhibitor. Program of the 85th Annual Meeting of the Endocrine Society, Philadelphia, PA, p 113 (oral presentation).
- 88) Vera Y, Takagi T, Pope V, **Das D**, Lue Y, Wang C, Swerdloff RS, Sinha Hikim AP. Intrinsic pathway signaling in male germ cell apoptosis after hormone deprivation (oral presentation and recipient of the GlaxoSmithKline Endocrinology Scholar Award). J Invest Med (Suppl. 1) S 147, 2004
- 89) Lue YH, Wang C, Salameh W, Cai Y, Sinha Hikim AP, Li H, Lee SM, Swerdloff RS. Testicular gene expression after testosterone or heat treatment in rats. Program of the 29th Annual Meeting of the American Society of Andrology, April 17-20, 2004, Baltimore, MD, p 52.
- 90) Lue YH, Wang C, Liu YX, Zhang XS, Leung A, Sinha Hikim AP, Swerdloff RS. Transient testicular warming enhances the suppression of spermatogenesis induced by testosterone implant in monkeys. Program of the 29th Annual Meeting of the American Society of Andrology, April 17-20, 2004, Baltimore, MD, p 74.
- 91) Lue YH, Wang C, Ng J, Chen D, Li J, Sinha Hikim AP, Swerdloff RS. Progesterone receptor expression and localization in adult monkey testis. Program of the 86th Annual Meeting of the Endocrine Society, June 16-19, 2004, New Orleans, LA.
- 92) Lue YH, Wang C, Liu YX, Tao SX, Leung A, Sinha Hikim AP, Swerdloff RS. Levonorgestrel enhances the suppression of spermatogenesis induced by testosterone implant in monkeys. Program of the 86th Annual Meeting of the Endocrine Society, June 16-19, 2004, New Orleans, LA.
- 93) Vera Y, Rodriguez S, Pope V, Castanares, Lue Y, Atienza V, Wang C, Swerdloff RS, Sinha Hikim AP. Functional role of caspases in heat-induced male germ cell apoptosis. Program of the 37th Annual Meeting of the Society for the Study of Reproduction, August 1-4, 2004, Vancouver, BC, Canada, p 229.
- 94) Vera Y, Castanares M, Nunez C, Lue Y, Wang C, Swerdloff RS, Sinha Hikim AP. Involvement of p38 MAPK and nitric oxide in inducing male germ cell apoptosis via intrinsic pathway signaling after hormone deprivation. Program of the 30th Annual Meeting of the American Society of Andrology, March 30-April 5, 2005, Seattle, Washington, p 55.
- 95) Lue YH, Jentsch JD, Wang C, Sinha Hikim AP, Salameh WA, Swerdloff RS. Testicular failure and learning deficits in adult XXY mice. Program of the 30th Annual Meeting of the American Society of Andrology, March 30-April 5, 2005, Seattle, Washington, p 41.
- 96) Nunez C, Vera Y, Castanares M, Atienza V, Lue Y, Wang C, Swerdloff RS, Sinha Hikim AP. Aminoguanidine, a selective inhibitor of iNOS, up-regulates Bcl-2 and prevents

- male germ cell apoptosis after hormone deprivation. Program of the 87th Annual Meeting of the Endocrine Society, June 4-7, 2005, San Diego, CA, p 75.
- 97) Vera Y, Elhag RI, Lue Y, Pope V, Leung A, Atienza V, Wang C, Swerdloff RS, Sinha Hikim AP. Mouse model of male germ cell apoptosis in response to a lack of hormonal stimulation. Program of the 87th Annual Meeting of the Endocrine Society, June 4-7, 2005, San Diego, CA, p 236.
- 98) Lue YH, Wang C, Ma K, Sinha Hikim AP, Salameh A, Swerdloff RS. Loss of androgen receptor immunoexpression in Sertoli cells of adult XXY mice. Program of the 87th Annual Meeting of the Endocrine Society, June 4-7, 2005, San Diego, CA, p 75.
- 99) Lue YH, Swerdloff RS, Lydon JP, Sinha Hikim AP, Leung A, Wang C. Characterization of the functional and physiological roles of progesterone receptor in the murine testis. Program of the 87th Annual Meeting of the Endocrine Society, June 4-7, 2005, San Diego, CA, p 76.
- 100) Lue YH, Liu PY, Erkkila K, Wang C, Sinha Hikim AP, Swerdloff RS. Fate of bone marrow stem cells transplanted into the testis. Program of the 29th Annual Meeting of the American Society of Andrology, April 8-11, 2006, Chicago, IL, p. 37.
- 101) Erkkila K, Kyttanen S, Dunkel L, Lue YH, Wang C, Sinha Hikim AP, Swerdloff RS. N-acetyl-L-cysteine (NAC) restores GSH-GSSG ratio and prevents human male germ cell apoptosis. Program of the 29th Annual Meeting of the American Society of Andrology, April 8-11, 2006, Chicago, IL, p. 51.
- 102) Jia Y, Sinha Hikim AP, Swerdloff RS, Lue YH, Vera Y, Zhang XS, Hu ZY, Li YC, Liu YX, Wang C. Mild testicular hyperthermia and exogenous testosterone induce germ cell apoptosis through mitochondria-dependent pathway in adult cynomolgus monkeys. Program of the 29th Annual Meeting of the American Society of Andrology, April 8-11, 2006, Chicago, IL, p. 74.
- 103) Castellanos J, Vera Y, Meyer J, Jia Y, Lue Y, Wang C, Swerdloff RS, Sinha Hikim AP. ERK activation promotes heat-induced germ cell apoptosis via inactivation of Bcl-2 through phosphorylation. Program of the 88th Annual Meeting of the Endocrine Society, June 24-27, 2006, Boston, MA, p 718.
- 104) Jia Y, Sinha Hikim AP, Lue Y, Swerdloff RS, Vera Y, Zhang X-S, Hu Z-Y, Li Y-C, Liu Y-X, Wang C. Involvement of ERK and iNOS in apoptotic signaling of primate male germ cells. Program of the 88th Annual Meeting of the Endocrine Society, June 24-27, 2006, Boston, MA, p 717.
- 105) Erkkila K, Liu PY, Lee PWN, Boros LG, Ferrini M, Sinha Hikim AP, Wang C, Lue YH, Swerdloff RS. XXY mice exhibit altered palmitate and stearate metabolism in the brain. Program of the 88th Annual Meeting of the Endocrine Society, June 24-27, 2006, Boston, MA.

- 106) Lue YH, Liu PY, Ma K, Erkkila K, Wang C, Sinha Hikim AP, Swerdloff RS. Transplanted XY spermatogonia stem cells colonize in the seminiferous tubules of XXY mice. Program of the 88th Annual Meeting of the Endocrine Society, June 24-27, 2006, Boston, MA.
- 107) Johnson C, Jia Y, Sinha Hikim AP, Swerdloff RS, Lue Y, Han X, Zhang XS, Hu ZY, Li YC, Liu YX, Wang C. Role of caspase 2 in apoptotic signaling of primate male germ cells. Program of the 32nd Annual Meeting of the American Society of Andrology, April 18-24, 2007, Tampa, FL, p. 46.
- 108) Castellanos J, Jia Y, Meyer Y, Lue Y, Wang C, Swerdloff RS, Sinha Hikim AP. Testicular hyperthermia but not hormone deprivation results in stage-and cell-specific of ERK and inactivation of Bcl-2. Program of the 32nd Annual Meeting of the American Society of Andrology, April 18-24, 2007, Tampa, FL, p. 46.
- 109) Lue Y, Swerdloff RS, Cui Y-G, Wang X-H, Sinha Hikim AP, Sha J-H, Zhou Z-M, Xu J, Wang C, Wang C. Testicular gene expression in men after treatment with testosterone and levonorgestrel. Program of the 89th Annual Meeting of the Endocrine Society, June 2-5, 2007, Toronto, Canada, p.599.
- 110) Wang C, Cui Y-G, Wang X-H, Jia Y, Sinha Hikim AP, Lue Y, Tong J-S, Qian L-X, Sha J-H, Zhou Z-M, Christenson PD, Hull L, Leung A, Swerdloff RS. Transient testicular hyperthermia enhanced spermatogenic suppression by testosterone in men. Program of the 89th Annual Meeting of the Endocrine Society, June 2-5, 2007, Toronto, Canada, p. 602.
- 111) Ma K, Berglund F, Crespo M, Lue Y, Swerdloff RS, Sinha Hikim AP, Liu Y-X, Cui Y-G, Wang X-H, Sha J-H, Zhou Z-M, Wang C. Potential male contraceptive target: Germ cell specific vasa protein localization in monkey and human testes. Program of the 89th Annual Meeting of the Endocrine Society, June 2-5, 2007, Toronto, Canada, p.730.
- 112) Jia Y, Sinha Hikim AP, Wang C, Lue YH, Atienza V, Castellanos J, Johnson C, Swerdloff RS. Role of mitogen-activated protein kinase (MAPK), MAPK activated protein kinase 2(MK2), and heat shock protein 27 (Hsp 27) in male germ cell apoptosis after mild testicular hyperthermia in the rat. To be presented at the 33rd Annual Meeting of the American Society of Andrology, April 12-15, Albuquerque, NM.
- 113) Lue H, Swerdloff RS Cui Y-G, Wang X-H, Sinha Hikim AP, Sha J-H, Zhou Z-M, Xu J, Wang C, Wang C. Effects of Combined Treatment of Testosterone with Testicular Heat Exposure on Human Testicular Gene Expression. Submitted to the 90th Annual Meeting of the Endocrine Society, June 15-18, San Francisco, CA.
- 114) Jia Y, Sinha Hikim AP, Wang C, Lue YH, Atienza V, Swerdloff RS. Effect of heat shock protein 27 (Hsp27) phosphorylation in male germ cell apoptosis after mild testicular hyperthermia in the rat. Submitted to the 90th Annual Meeting of the Endocrine Society, June 15-18, San Francisco, CA.