## **REFERENCES**

Adachi M, Suematsu S, Kondo T, Ogasawara J, Tanaka T, Yoshida N, and Nagata S (1995): Targeted mutation in the Fas gene causes hyperplasia in peripheral lymphoid organs and liver. Nat Genet; 11:294.

Allan DJ, Harmon BV, and Roberts SA (1992): Spermatogonial apoptosis has three morphologically recognizable phases and shows no circadian rhythm during normal spermatogenesis in the rat. Cell Prolif; 25: 241.

Allen JW, Dix DJ, Collins BW, Merrick BA, He C, Selkirk JK, Poorman-Allen P, Dresser ME, and Eddy EM (1996): HSP 70-2 is part of the synaptonemal complex in mouse and hamester spermatocyes. Chromosomes; 104: 414.

Antinori S, Versaci C, Dani G, Antinori M, Pozza D, and Selman HA (1997): Fertilization with human testicular spermatids: Four successful pregnancies. Hum Reoprod: 12 (2): 286.

**Ashkenazi A and Dixit VM (2007)**: Death receptors: signaling and modulation. Science; 281:1305.

**Ashkenazi A and Dixit VM (2006):** Apoptosis control by death and decoy receptors. Curr Opin Cell Biol; 11:255.

**Baccetti B, Collodel G, and Piomboni P (1996):** Apoptosis in human ejaculated sperm cells (notulae seminologicae 9). J Submicrosc Cytol Pathol; 28:587.

Bellgrau D, Gold D, Selawry H, Moore J, Franzusoff A, and Duke RC (1995): A role for CD95 ligand in preventing graft rejection. Nature; 337:630.

**Benoff S and Gilbert BR (2001) :** Varicocele and male infertility : part 1. Hum Reprod Update; 7 (1): 47-54.

Billig H, Furuta I, Rivier C, Tapanainen J, Parvinen M, and Hsuech AJ (1995): Apoptosis in testis germ cells: developmental changes in gonadotropin dependence and localization to selective tubule stages. Endocrinology; 136:5.

Blanco-Rodrigues JA (1998): matter of death and life: the significance of germ cell death during spermatogenesis. Int J Androl; 21:236.

Brinkworth MH, Weinbauer GF, Schlatt S, and Nieschlag E (1995): Identification of male germ cells undergoing apoptosis in adult rats. J reprod Fertil; 105:25.

**Brooks JD (2002) :** Anatomy of the lower urinary tract and male genitalia. In: "Campbell's Urology", edited by Walsh, 8<sup>th</sup> ed., Chapter 2, P 41, Elsevier.

Byskov AG, Anderson CY, and Nordholm L (1995): Mitochondrial differentiation during meiosis of male germ cells. Int J And; 18(2):7.

Caruso A, Walsh R, Trummer H (1999): Experimental varicocele induces testicular germ cell apoptosis in the rat 1083. J Urol; 161:280.

Cayan S, Kadioglu A, Orhan I, Kandirali E, Tefekli A, and Tellaloglu S (1999): The effect of microsurgical varicocelectomy on serum follicle stimulating hormone,

testosterone and free testosterone levles in infertile men with varicocele. BJU Int; 84(9): 1046.

Chinnaiyan AM, O'Rourke K, Yu GL, Lyons RH, Garg M, Duan DR, Xing L, Gentz R, Ni J, and Dixit VM (1996): Signal transduction by DR3, death domain-containing receptor related to TNFR-1 and CD95. Science; 274:990.

Chou JJ, Li H, Salvesen GS, Yuan J, and Wagner G (1999): Solution structure of BID, an intracellular amplifier of apoptotic signialing. Cell; 96:615.

Cigorrage SB, Chemes H, nd Pellizzari E (1994): Steroidogenic and morphogenic characteristics of human peritubular cells in culture, Biol Report; 51:1193.

Cotran RS, Kumar Y, and Collins T (1999): Cellular pathology, Cell injury and cell death. In: "Robbins pathological causes of disease", edited by Cotran RS, Kumar V, and Collins T, chapter 3, WB Saunders.

**Darmon AJ (1995):** Activation of the apoptotic protease CPP32 by cytotoxic T-cell derived granzyme B. Nature; 377:446.

**De Kretser DM and Kerr JB** (1994): The cytology of human testis In: "The testis", edited by Burger H and De kretser DM, P 141, Raven Press.

**De-Kretser DM and Kerr JB (1994):** The cytology of the testis. In: "Physiology and repreoduction". edited by knobil E and Neill JD, P 1177, Raven press.

De krester DM, Loveland KLL, and Meinbardt A (1998): Spermatogenesis Human Reprod: 13(1):1.

De Krester DM, Temle-smith PD, and Kerr JB (1992): Anatomical and functional aspects of the male reproductive organs. In :"Disturbances in male infertility", edited by Bandhauer K and Frick J, P I., Springer.

Desagher S, Osen-Sand A, Eskes R, Montessuit S, Lauper S, Mandrell K, Antonsson B, and Martinou JC (1999): Bidinduces confromational change of Bax is responsible for mitochondrial cytochrome c release during apoptosis. J Cell Biol; 144:891 (abstract).

**Deveraux QL, Schendel SL, and Reed JC (2001) :** Antiapoptotic proteins. The bcl-2 and inhibitor of apoptosis protein families Cardiol Clin; 19(1): 57.

**Dix DJ, Allen JW, and Collins BW (1996):** Targeted gene disruption of HSP 70-2 results in failed meiosis, germ cell apoptosis and male infertility., Proc Nat Acad Sci; 93:3264.

**Dunkel, L, Hirvonen, V, and Erkkila K** (1997): Clinical aspects of male germ cell apoptosis during testis development and spermatogenesis. Cell Death Differ; 4:171.

**Dym M (1994) :** Spermatogonial stem cells of the testis. Proc Nat Acad Sci USA; 91:11287.

**Dym M and Cavicchia JC** (1998): Functional morphology of the testis. Biological Reprod: 18:1.

Edward D, Albaha Z, Seo JT, and Randall B (2002): Apoptosis: its importance in spermatogenic dysfunction. Urol Clin North Am; 29:755.

**Elkon KB** (2001): Apoptosis In: "Kelley's Textbook of Rheumatology", editied by Ruddy S, Harris ED, and Sledge CB, 6<sup>th</sup> ed., chapter 21, P 291, WB Saunders.

Enari M, Sakahira H, Yokoyama H, Okawa K, Iwamatsu A, and Nagata S (1998): A caspase-activated DNase that degrades DNA during apoptosis, and its inhibitor ICAD. Nature; 391:43.

**Evan G and Littlewood T (1998):** A matter of life and cell death. Science; 281:1317.

Feng HL, Sandlow JI, Sparks AE, and Sandra A (1999): Decreased expression of the c-kit receptor is associated with increased apoptosis in subfertile human testes. Fertil Steril; 71:85.

**Fierlbeck W. Liu A, Coyle R, and Ballermann BJ (2006):** Endothelial cell apoptosis during glomerular capillary lumen formation in vivo. J Am Soc Nephrol; 14(5): 1349.

**Fujisawa M, Hiramine C, and Tanaka H (1999):** Increase in apoptosis of germ cells in the testes of infertile men with varicocele. World J Urol; 17: 296-300.

Furuta I, Porkka-Heiskanen T, and Scarbrough K (1994): Photoperiod regulated testis cell apoptosis in Djungarian hamsters. Bio Reprod; 51:1315.

**Gedalia FP, Yavtez H. and Huser R (1993):** Patophysiology of the human testis. In; "Infertility male and female", edited by Insler V and Lunecfeld B, P 195, Churchill Livingstone.

Glover TD, Barratt CLR, Tyler JPP, and Hennessey JF (1990): Sperm production and its control. In: "Human male fertility and semen analysis", edited by Glover TD, Barrat CLR, Tyler JPP, and Hennessey JF, P 50, Academic press.

**Godsen R and Spears N (1997):** Programmed cell death in the reproductive system. British Medicl Bullin; 53(3): 644.

**Green DR and Reed JC (1998) :** Mitochondria and apoptosis Science; 281:1309.

Gross A Jockel J, Wel MC, and Korsmeyer SJ (1998): Enforced dimerization of BAX results in its translocation, mitochondrial dysfunction and apoptosis. EMBO J; 17:3878.

Gross A, McDonnell JM, and Kormeyer SJ (1999): BCL-2 family members and the mitochondria in apoptosis. Genes Dev; 13:1899.

Guerif F, Cadoret V, Rahal-Perola V, Lansac J, Bernex F, Jacques Panthier J, Hochereau-de Reviers MT, and Royere D (2002): Apoptosis, onset and maintenance of spermatogenesis: evidence fot the involvement of Kit in Kithaplodeficient mice. Bio! Reprod; 67(1):70.

Hakem R, Hakem A, Duncan GS, Henderson JT, Woo M, Soengas MS, Elia, de la Pompa JL, Kagi D, Khoo W, Potter J, Yoshida R, Kaufman SA, Lowe SW, Penninger JM, and Mak TW (1998): Differential requirement for caspase 9 in apoptotic pathways in vivo. Cell: 94:339.

Hales DB, Diemer T, and Hales KH (1999): Role of cytokines in testicular function. Endocrine, 10:201.

**Hammond GL and Bocchinfuso WP (1995):** Sex hormone binding globulin/androgen-binding protein: steroid-binding and dimerization domains. J Steroid Biochem Mol Biol; 53:543.

**Hasegawa M, Zhang Y, and Niibe H (1998):** Resistance of differentiating spermatogonia to radiiation-induced apoptosis and loss in p53-deficient mice. Radiat Res; 149:263.

Henriksen K, Hakovirta H, and Parvinen M (1995): Testosterone inhibits and induces apoptosis in rat seminiferous tubules in a stage-specific manner: in situ quantification in squash preparations after administration of ethane dimethane sulfonate. Endocrinology; 136:3285.

Hikim AP, Wang C, Leung A, and Swerdloff RS (1995): involvement of apoptosis in the induction of germ cell degeneration in adult rats after gonadotropin-releasing hormne antagonist treatment, Endocrinology; 136:2770.

**Hinman F (1995):** Normal surgical anatomy In: "Atlas of surgical management of male infertility". edited by Thomas AJ and Naglar HM, P 9, lgaku-Shoin Tokyo.

**Houge G and Dosjeland SO (1996):** Divergence towards a dead end? Cleavage of the divergent domains of ribosomal RNA in apoptosis. Experientia; 52:963.

Hsuch AJ, Eisenhuer K, Chun SY, Hsu, and Billing (1996): Gonadal cell apoptosis. Recent Prog Horm Res; 51:433.

Huang DC, Hahne M, Schroeter M, Frie K, Fontana A, Villunger A, Newton K, Tschopp J, and Strasser A (1999): Activation of Fas by FasL induces apoptosis by a mechanism that cannot be blocked by Bcl-2 or Bcl-x (L). Proc Nat Acad Sci USA; 96:14871.

**Huckins C and Hellerstien DK (1991):** Development of the testis and establishment of spermatogenesis. In "infertility in the male" edited by Lipshultz LI and Howards SS, P 3 Mosby.

**Huckins C and Meacham RB (1991):** Spermatogensis in the adult. In. "Characteristics, Kinetics, and control of infertility in the male", edited by Lipshultz LI and Howards SS, P 204, Mosby.

**Huston JC** (1994): Testicular macrophages. Int Rev Cytol; 149:99.

Irmler M, Thome M, Hahne M, Schneider P, Hofmann K, Steiner V, Bodmer JL, Schroter M, Burns K, Mattmann C,

Rimoldi D, French LE, and Tschopp J (1997): Inhibition of death receptor signals by cellular FLIP. Nature; 388:190.

**Jeyaraj DA, Grossman G, and Petrusz p (2003) :** Dynamics of testicular germ cell apoptosis in normal mice and transgenic mice over-expressing rat androgen-binding protein. Reproductive Biology and Endoctinology; 1:48.

**Jow WW** (1995): Testicular biospy. In: "Surgery of male infertility", edited by Glodstein M, P 8; Saunders.

Kane DJ, Sarafian TA, Anton R, Hahn H, Gralla EB, Valentine JS, Ord T, and Bredesen DE (1993): Bcl-2 inhibition of neural death: decreased generation of reactive oxygen species. Science; 262:1274.

**Keiss W and Gallahar B (1998):** Hormonal control of programmed cell death/apoptosis. European Jornal of Endocrinology; 138 (5): 482.

**Kemp CJ, Sun S, and Gurley KE (2001):** p53 Induction and apoptosis in response to rario- and chemotherapy in vivo is tumor-type-dependent. Cancer Res; 61:327.

**Kerr JB** (1992): Spontaneous degeneration of germ cells in normal rat testis: assessment of cell types and frequency during the spermatogentic cycle. J Reprod Fertil; 95:825.

**Kerr JFR, Bishop CJ, and Searle J (1994):** Apoptosis. In: "Recent Advances in Hostopathology", edited by Anthotony P and Mascseween R, chapter 1, P 15, Churchill Livingstone.

**Kerr JFR Harmon BV (1991):** Definition and incidence of apoptosis: a historical prespective. In: "Apoptosis: The Moleculr Basis of Cell Death", edited by Tomei LD and Cope FQ, P 13, Cold Spring Harobr Laboratory Press.

**Kerr JFR, Wyllie AH, and Currie AR (1992):** Apoptosis : A basic biological phenomenon with wide-ranging implications in tissue kinetics. Br J Cancer; 26:239.

Kim ED, Barqwi AZ, Seo JT, and Meacham RB (2002): Apoptosis: its importance in spermatogenic dysfunction. Urol Clin North Am; 29(4):755.

Kinsella TJ, Trivette G, Rowland J, Sorace R, Miller R, Fraass B, Steinberg SM, Glatstein E, and Sherins RJ (1989):

Long-term follow-up of testicular function following radiation therapy for early-stage Hodgkin's disease. J Clin Oncol; 7: 718.

Knudson CM, Tung KS, Tourtellotte WG, Brown GA, and Korsmeyer SJ (1995): Bax-deficient mice with lymphoid hyperplasia and male germ cell death. Science; 270:96.

Kodaira K, Takahashi R, Hirabayashi M, Suzuki T, Obinata M, and Ued M (1996): Overexpression of c-myc induces apoptosis at the prophase of meiosis of rat primary spermatocytes. Mol Reprod Dev; 45:403.

**Kumar V, Cotran RS, and Robbins S.L. (1997):** Neoplasia. In: "Basic Pathology", edited by Kumar V, Cotran RS, and Robbins SL, P 132, WB Saunders.

**Larsen JW** (1997): Gametogenesis and fertilization In: "Human embroylogy", 2<sup>nd</sup> edition. P 1, Churchill Livingstone.

Lee J, Richburg JH, Shipp EB, Meistrich ML, and Boekelheide K (1999): The Fas system, a regulator of testicular germ cell apoptosis, is differentially up-regulated in Sertoli cell versus germ cell injury of the testis. Endocrinology; 140: 852.

**Lesson CR, Lesson TS, and Paparo AN (1995):** The male reproductive system. In: "Textbook of histology", edited by Lesson CR, Lesson TS, and Papro AN, P 493, WB Saunders.

Leist M, Single B, AF, Kuhnle S, and Nicotera P (1997): Intracellular adenosine triphosphate (ATP) concentration: A switch in the decision between apoptosis and necrosis. J Exp Med; 185:1481.

Li H, Zhu H, CJ, and Yuan J (1998): Cleavage of BID by capase 8 mediates the mitochondrial damage in the Fas pathway of apoptosis. Cell; 94:491.

Li P, Nijhawan D, Budihardjo I, Srinicasula SM, Ahmed M, Alnemri ES, and Wang X (1997): Cytochrome c and dATP-dependent formation of Apaf-1/caspase-9 complex initiates an poptotic protease cascade. Cell; 91:479.

Lin WW, Lamb DJ, Lipshultz LI, and Kim ED (1998): Absebce of cyclic adenosine 3<sup>7</sup>4<sup>7</sup>5 monophosphate responsive element modulator expression at the spermatocyte arrest stage. Fertil Steril; 69:533.

Lin WW, Lamb DJ, Wheeler TM, Lipshultz LI, and Kim ED (1997): In situ end-labeling of human testicular tissue demonstrates increased apoptosis in conditions of abnormal spermatogenesis. Fertil Steril; 68:1065.

Maelawa MO, Brien DA, and Allen RL (1992): Heat shock cognate protein (hsc 710) and related proteins in mouse spermatogenic cells. Biol Reprod; 40:843.

**Majno G and Joris I (1995):** Apoptosis, oncosis, and necrosis. An overview of the cell death. Am J Pathol; 146:3.

Meistrich ML, Wilson G, Kangasniemi M, and Huhtaniemi I (2000): Mechanism of protection of rat spermatogenesis by hormonal pretreatment: sitmulation of spermatogonial differentiation after irradiation. J Androl; 21:464.

**Mitchell RN and Cotran RS (1997):** Cell injury death and adaptation. In: "Basic Pathology". edited by Kumar V, Cotran RS, and Robbins SL, chapter 4, P 24, WB Saunders.

Muller J, Giwercman A, and Skakkebae KN (1996): Cytological aspect of spermatogenesis. In: "Male infertility", edited by FH Comhaire, P 4 Chapman and Hall medical.

Nagata S (1997): Apoptosis by death factor. Cell; 88:355.

**Nagata S and Golstein P (1995):** The Fas death factor. Science; 267:1449.

Nantel F, Monaco L, Foulkes NS, Masquilier D, LeMeur M, Henriksen K, Dierich A, Parvinen M, and Sassone-Corsi P (1996): Spermiogenesis deficiency and germ-cell apoptosis in CREM-mutant mice. Nature; 380:159.

Nes WD, Lukyanenko YO, Jia ZH, Quideau S, Howald WN, Pratum TK, West RR, and Hutson JC (2000): Identification of the lipophilic factor produced by macrophages that stimulates steroidogenesis. Endocrinology; 141:953.

Oldereid NB, De Angelis P, Wiger R, and Clausen OPF (2001): Testis and spermatogenesis; Expression of Bcl-2 family proteins and spontaneous apoptosis in normal human testis Molecular Human Reproduction; 7(5): 403.

**Orth JM, Gunsalus GL, and Lamperti AA (1990):** Evidence from Sertoli cell-depleted rats indicates that spermatid number in adults depends on numbers of Sertoli cells produce during perinatal development. Endocrinology; 122:787.

**Ownby C** (**2003**): Histology, male reproductive system http://www.cvm.okstate.edu/instruction/curr/histology/mr/HiMR P4.htm.

Packer AI, Besmer P, and Bachvarova RF (1995): Kit ligand mediates survival of type A spermatogonia and dividing spermatocytes in postnatal mouse testes. Mol Reprod Dev; 42:303.

**Reed JC** (1996): Apoptosis in normal development and cancer, Bcl-2 and regulation of programmed cell death in cancer. Taylor and Francis Ltd; 127-69.

**Reed JC** (1997): Double identity for proteins of the Bcl-2 family-Nature; 387:773.

**Roberts KP and Pryor JL (2006):** Anatomy and physiology of the male reproductive system. In: "male infertility and sexual dysfunction", edited by Wayer JG. P I, Springer.

Rodriguez I, Ody C, Araki K, Garcia I, and Vassalli P (1997): An early and massive of germinal cell apoptosis is required for the development of functional spermatogenesis. EMBO J; 16:2262.

**Rodriguez J and Lazebnik Y (1999):** Caspase-9 and APAF-1 from n active holoenzyme. Genes Dev; 13:3179-84.

**Russell LD (1991):** The consequences of actin distuption at sertoli ectoplasmic specialization sites facing spermatids after in vivo exposure of rat testis to cytochalasin D. Biol Reprod; 39:105.

**Russell LD (1991):** The perils of sperm relase "let my children go". Int J Androl; 14:307.

**Selvesen GS and Dixit VM (1997):** Caspases: Intracellular signaling by proteolysis. Cell; 91:443.

Sandlow JI, Feng HL, Zheng LJ, and Saandra A (1999): Migration and ultrastructural localization of the c-kit receptor protein in spermatogenic cells and spermatozoa of the mouse. J Urol; 161:1676.

Scaffidi C, Fulda S, Srinivasan A, Friesen C, Li F, Tomaselli KJ, Debatin KM, Krammer PH, and Peter ME (1998): Two CD95 (APO-1/Fas) signaling pathways. EMBO J; 17:1675.

Schneider P, Thome M, Burns K, Bodmer JL, Hofmann K, Kataoka T, Holler N, and Tschopp J (1997): TRAIL receptors 1 (DR4) and 2 (DR5)signal FADD-dependent apoptosis and activate NF-kappaB. Immunity; 7:831.

**Schwatzman RA and Cidlowski JA (1993):** Apoptosis: the biochemistry and molecular biology of programmed cell death. Endocr Res, 14:133.

**Sharpe RM (1994):** Regulation of spermatogenesis. In: "The Physiology of reproduction", edited by Knobil E and Neill JD, P 1363, Raven Press.

**Shikone T, Billing H, and Hsueh AJ** (1994): Experimentally induced cryptorchidism increases apoptosis in rat testis. Biol Reprod; 51:865.

**Simsek F, Turkeri L, Cevik I, Bircan K, and Akdas (1998):** Role of apoptosis in testicular tissue damage caused by varicocele. Arch Esp Urol; 51(9): 947.

Sinha Hikim AP, Wang C, and Lue Y (1998): Spontaneous germ cell apoptosis in humans evidence for ethnic differences in the susceptibility of germ cells to programmed cell death. J. Clin Endocrinol Metab; 83:152.

**Sinha Hikim AP and Swerdloff RS (1999):** Hormonal and genetic control of germ cell apoptosis in the testis. Rev Reprod; 4:38.

**Sinnatamby Chummy (1999) :** Last's Anatomy Regional and Applied to 220:226.

**Siokawa D and Tanuma S (1998) :** Molecular cloning and expression of cDNA encoding an apoptotic endonuclease DNAase gamma: J Biochemistry; 332 (3): 713.

**Snell RS (1984):** Male reproductive system. In: "Clinical and functional, histology for medical students", edited by Snell RS, P 185, Little, brown and company Boston.

Socher SA, Yin Y, Dewolf WC, and Morgentaler A (1997): Temperature-mediated germ cell loss in the testis is associated with altered expression of the cell-cycle regulator p53. J Urol; 157:1986.

**Stegh AH and Peter ME (2001):** Apoptosis and caspases Cardiol Clin; 19(1): 13.

**Stennicke HR and Salvesen GS (1998):** Properties of the caspases. Biochim Biophys Acta; 1387:17.

**Stephan H. Plozar B, Rauch F, Zanotti S, Ulke C, and Mannherz HG (1996):** Distribution of deoxyribonuclease I (Dnase I) and p53 rat testis and their correlation with apoptosis. Histochem Cell Biol; 106:383.

Sugihara A, Saiki S, Tsuji M, Tsujimura T, Nakata Y, Kubota A, Kotake T, and Terada N (1997): Expressio of Fas

and Fas ligand in the testes and testicular germ cell tumors: an immunohistochemical study. Anticancer Res; 17:3861.

Sur JH, Doster AR, Christian JS, Galeota JA, Wills RW, Zimmerman JJ, Osorio FA (1997): Procine reproductive and respiratory syndrome virus replicates in testicular germ cells, alters spermatogenesis, and induces germ cell death by apoptosis. J Virol; 71:9170.

**Tapanainen JS, Tilly JL, Vihko KK, and Hsueh AJ (1993):** Hormonal control of apoptotic cell death in the testis: gondotropins and androgens as testicular cell survival factors. Mol Endocrinol; 7: 643.

**Tesarik JMC (1996):** Spermatid injection into human oocytesII. Clinical application in the treatment of infertility due to non-obstructive azoospermia. Hum Reprod; 11:780.

**Tishler PV (1971) :** Diameter of testicles. N Engl J Med; 285:1489.

**Trainer S (1992):** Histopathology for pathologist, edited by Stenberg S, chapter 39, P 731, Raven press.

Tramontano F, Mlnga M, Farina B, Jones R, and Quesada P (2000): Heat stress reduces poly (ADPR) polymerase expression in rat testis. Mol Hum Reprod; 6:575.

**Tripp MB and Lamp DJ (1997):** Sertoli cell morphology, functionm and regulation. In; "Infertility in the male", edited by Lipshultz II and Howards SS, P 71, Mosby.

**Trump BJ and Berezesky I (1998):** The reactions of cells to lethal injury; oncosis and necrosis. In : "When cells die; a comprehensive evaluation of apoptosis and programmed Cell Death", edited by Lockshin RA, P 57, New York, Wiley-Liss.

Van England M, Kuijpers HJ, and Ramaeker S (1997): Plasma membrane alteration and cytoskeletal changes in apoptosis. Experimental Cell Research; 235:421.

Vanderzwalmen P, Nijs N, Schoysman R, Bertin G, Lejeune B, Vaandamme B, Kahraman S, and Zech H (1998): The problems of spermatid micro-injection in the human; the need for an accurate morphological approach and selective methods for viable and normal cells. Human Reprod; 13(2): 515.

Varfolomeev EE, Schuchmann M, Luria V, Chiannilkulchai N, Beckman JS, Mett IL, Rebrikov D, Brodinski VM, Kemper OC, Kollet O, Lapidot T, Soffer D, Sobe T, Avraham KB, Goncharov T, Holtmann H, Lonai P, and Wallach D (1998): Targeted disruption of themouse caspase 8 gene ablates cell death induction by the TNF receptors, Fas/Apol, and DR3 and is lethal prenatally. Immunity; 9:267.

**Vaux DL** (**1997**): CED-4-the third horseman of apoptosis. Cell; 90:389.

Verhagen AM, Ekert PG, Pakusch M, Slike J, Connolly LM, Reid GE, Moritz RL, Simpson RJ, and Vaux DL (2000): Identification of DIABLO, mammalian protein that promotes apoptosis by binding to and antagonizing IAP proteins. Cell; 102:43.

Wang C, Sinha Hikim AP, Lue YH, Leung A, Baravarian S, and Swerdloff RS (1999): Reproductive aging in the Brown Norway rat is is chracterized by accelerated germ cell apoptosis

and is not altered by luteinizing hormone replacement. J Androl; 20:509.

Wang CY, Mayo MW, Korneluk RG, Goeddel DV, and Baldwin AS Jr (1998): NF-kappaB antiapoptosis: induction of TRAFI and TRAF2 and c-IAPI to suppress caspse-8 activation. Science; 281:1680.

Wang RA, Nakane PK, and Koji T (1998): Autonomous cell death of mouse male germ cells during fetal and postnatal peroid Biol Reprod; 58:1250.

Weil M, Jacobson MD, and Raff MC (1998): Are caspses involved in the death of cells with a transcriptionally inactive nucleus? Sperm and chicken erythrocytes. J Cell Sci; 111(18): 2707.

Weinbauer GF, Behr R, and Bergmann M (1998): Testicular cAMP responsive element modulator (CREM) protein is expressed in round spermatids but is absent or reduced in men with round spermatid maturation arrest. Mol Hum Reprod; 4:9-15.

Weinbauer GF, Gromoll J, simoni M, and Nieschlag E (1997): Physiology of testicular function. In: "Andrology, male reproductive health and dysfunction", edited by Nieschlag E and Behre HM, P25, Springer.

Wolf BB and Green DR (1999): Suicidl tendencies: Apoptotic cell death by caspase family proteinases. J Biol Chem; 274:20049.

Wyllie AH, Kerr JF, and Currie AR (1980): Cell death: the significance of apoptosis. Int Rev Cytol; 68:251.

Yan H, Carter CE, Xu C, Singh PK, Jones MM, Johnson JE, and Dietrich MS (1997): Cadmium-induced apoptosis in the urogenitl organs of the male rat and its suppression by chelation. J Toxicol Environ Health; 52(2): 149.

Yan J, Liu X, Bhalla K, Kim CN, Ibrado AM, Cai J, Peng TI, Jones DP, and Wang X (1997): Prevention of apoptosis by Bcl-2: release of cytochrome c from mitochondria blocked Science; 275:1129.

Yang Y, Fang S, Jensen JP, Weissman AM, and Ashwell JD (2000): Ubiquitin protein ligase activity of IAPs an their degradation in proteasomes in response to apoptotic stimuli. Science; 288:874.

Yazawa H, Sasagawa I, and Nakad T (2000): Apoptosis of testicular germ cells induced by exogenous glucocorticoid in rats. Huhm Report; 15:1917.

Yeh WC, Pompa JL, McCurrach ME, Shu HB, Elia AJ, Shahinian A, Ng M, Wakeham A, Khoo W, Mitchell K, El-Deiry WS, Lowe SW, Goeddel DV, and Mak TW (1998): FADD: essential for embryo development and signaling from some, but not all, inducers of apoptosis. Science; 279:1954.

Yin Y, Hawkins KL, DeWolf WC, and Morgentaler A (1997): Heat stress causes testicular germ cell apoptosis in adult mice. J Androl; 18(2): 159.

Yoshida H, Kong YY, Yoshida R, Elia AJ, Hakem A, Hakem R, Penninger JM, and Mak TW (1998): Apafl is required for

mitochon-drial pathways of apoptosis and brain development. Cell; 94:739.

Yoshinaga K, Nishikawa S, Ogawa M, Hayashi S, Kunisada T, Fujimoto T, and Nishikawa S (1991): Role of c-kit in mouse spermatogenesis: Identification of spermatogonia as a specific site of c-kit experssion and function. Development; 113:689.

**Zha J, Harada H, Yang E, Jockel J, and Korsmeyer SJ (1996) :** Serine phosphorylation of death agonist BAD in response to survival factor results in binding to 14-3-3 not BCL-X(L). Cell; 87:619.

Zhou Q, Snipas S, Orth K, Muzio M, Dixit VM, and Salvesem GS (1997): Target protease specificity of the viral serpin CrmA: Analysis of five caspases. J Biol Chem 272:7797.

Zimmermann KC and Green DR (2001): How cells die: Apoptosis pathways. J Allergy and Clinical Immunology; 108(4).

Zirkin BR and Chen HL (2000): Regulation of Leydig cell steroidogenic function during aging. Biol Reprod; 63:997.