

VII.-Bibliografía

Abbott, D.H.; Dumesic, D.A.; Eisner, J.W.; Kemnitz, J.W.; Goy, R.W.; (1997) The prenatally androgenised female rhesus monkey as a model for polycystic ovarian syndrome. In: Azziz R, Nestler JE, Dewailly D., editor. Androgen excess disorders in women. Philadelphia, Lippencott-Raven Press. 369-382.

Adams, N. (1990) Permanent infertility in ewes exposed to plant oestrogens. *Aust. Vet. J.* 67: 197-202.

Adams, N. (1995) Detection of the effects of phytoestrogens on sheep and cattle. *J. Anim. Sci.* 73: 1509-1515.

Aerts, J.M.J.; Bols, P.E.J. (2009) Ovarian follicular dynamics: review with emphasis on the bovine species. Part I: folliculogenesis and pre-antral follicle development. *Reprod. Domest. Anim.* 45: 171-179.

Alm, H.; Torner, H.; Tiemann, U.; Kanitz, W. (1998) Influence of organochlorine pesticides on maturation and postfertilization development of bovine oocytes in vitro. *Reprod. Toxicol.* 2: 559-563.

Alonso-Magdalena, P.; Laribi, O.; Ropero, A.B.; Fuentes, E.; Ripoll, C.; Soria, B.; et al. (2005) Low doses of bisphenol A and diethylstilbestrol impair Ca²⁺ signals in pancreatic alpha-cells through a non classical membrane estrogen receptor within intact islets of Langerhans. *Environ. Health Perspect.* 113: 969-977.

Armstrong, D.T.; Evans, G. (1983) Factors influencing success of embryo transfer in sheep and goats. *Theriogenology* 19: 31-42.

Armstrong, D.T.; Evans, G. (1984) Intrauterine insemination enhances fertility of frozen semen in superovulated ewes. *J. Reprod. Fertil.* 71: 89-94.

Armstrong, D.T.; Irvine, B.J.; Earl, C.R.; McLean, D.; Seamark, R.F. (1994) Gonadotropin stimulation regimens for follicular aspiration and in vitro embryo production from calf oocytes. *Theriogenology* 42: 1227-1236.

Andersen, H.R.; Andersson, A.M.; Arnold, S.F.; Autrup, H.; Barfoed, M.; Beresford, N.A.; et al. (1999) Comparison of short-term estrogenicity tests for identification of hormone-disrupting chemicals. *Environ. Health Perspect.* 107: 89-108.

Andrews, F. N.; Beeson, W. M.; Harper C. (1949) The effect of stilbestrol and testosterone on the growth and fattening of lambs. *J. Anim. Sci.* 8: 578-582.

Beldomenico, P.M.; Rey, F.; Prado, W.S.; Villarreal, J.C.; Muñoz-de-Toro, M.; Luque, E.H. (2007) In ovum exposure to pesticides increases the egg weight loss and decreases hatchlings weight of *Caiman latirostris* (Crocodylia: Alligatoridae). *Ecotoxicol. Environ. Saf.* 68: 246-51.

Bergstrom, S. (1966) Isolation, structure and action of the prostagladins. In *Prostaglandins: Proceedings of the Second Nobel Symposium*. S. Bergstrom, B. Samuelsson (Eds.). New York, London and Sydney: Wiley 21-30.

Bern, H.A. (1992) The Fragile Fetus. In *Chemically-Induced Alterations in Sexual and Functional Development: The Wildlife/Human Connection*. Colborn T. and Clements C., eds., Princeton Scientific Publishing, 9-15.

Bigbsy, R.M.; Caperell-Grant, A.; Madhukar, B.V. (1997) Xenobiotics released from fat during fasting produces estrogenic effects in ovariectomized mice. *Cancer Res.* 57: 865-9.

Bindon, B.M.; Piper, L.R.; Cahill, L.P.; Driancourt; M.A.; O'Shea, T. (1986) Genetic and hormonal factors affecting superovulation. *Theriogenology* 25: 53-70.

Binelli, M. and Murphy B.D. (2010) Coordinated regulation of follicle development by germ and somatic cells. *Reprod Fert. Dev.* 22: 1-2.

Bister, J.L.; Paquay, R. (1983) Fluctuations in the plasma levels of folliclestimulation hormone during estrous cycle: evidence for an endogenous rhythm of FSH release. *Theriogenology* 19: 565-582.

Block, K.; Kardana, A.; Igarashi, P.; Taylor, H.S. (2000) In utero diethylstilbestrol (DES) exposure alters Hox gene expression in the developing müllerian system. *FASEB J.* 14: 1101-1108.

Bo, G.A.; Adams, G.P.; Pierson, R.A.; Mapletoft, R.J. (1995) Exogenous control of follicular wave emergence in cattle. *Theriogenology* 43:31.

Bodin, L.; Bibe, B.; Blanc, M., Ricordeau, G. (1988) Genetic relationship between prepubertal plasma FSH levels and reproductive performance in Lacaune ewe lambs. *Genet. Sel. Evol.* 20: 489-498.

Bosquiazzo, V.L.; Ramos, J.G.; Varayoud, J.; Muñoz-de-Toro, M., Luque, E.H. (2007) Mast cell degranulation in rat uterine cervix during pregnancy correlates with expression of vascular endothelial growth factor mRNA and angiogenesis. *Reproduction* 133: 1045-55.

Bosquiazzo, V.L.; Varayoud, J.; Muñoz-de-Toro, M.; Luque, E.H.; Ramos, J.G. (2010) Effects of neonatal exposure to bisphenol A on steroid regulation of vascular endothelial growth factor expression and endothelial cell proliferation in the adult rat uterus. *Biol. Reprod.* 82: 86-95.

Britt, K.L.; Saunders, P.K.; McPherson, S.J.; Misso, M.L.; Simpson, E.R.; Findlay, J.K. (2004) Estrogen actions on follicle and early follicle development. *Biol. Reprod.* 71: 1712-23.

Bristol-Gould, S. and Woodruff, T.K. (2006) Folliculogenesis in the domestic cat (*Felis catus*). *Theriogenology* 66: 5-13.

Brotons, J.A.; Olea-Serrano, M.F.; Villalobos, M.; Olea, N. (1995) Xenoestrogens released from lacquer coating in food cans. *Environ. Health Perspect.* 103: 608-612.

Byers, M.; Kuiper, G.G.J.M.; Gustafsson, J.A.; Park-Sarge, O.K. (1997) Oestrogen receptor- β mRNA expression in rat ovary: down-regulation by gonadotropins. *Molec. Endocrinology* 11: 172-182.

Byskov, A.G.; Hoyer, P.E.; Westergaard, L. (1988) Origin and differentiation of the endocrine cells of the ovary. *Reprod. Fertil.* 75: 299-306.

Calafat, A.M.; Kuklennyik, Z.; Reidy, J.A.; Caudill, S.P.; Ekong, J.; Needham, L.L. (2005) Urinary concentrations of Bisphenol A and 4-Nonylphenol in a human reference population. *Environ. Health Perspect.* 113: 391-395.

Calle, E.E.; Mervis, C.A.; Thun, M.J.; Rodriguez, C.; Wingo, P.A.; Heath, C.W.J. (1996) Diethylstilbestrol and risk of fatal breast cancer in a prospective cohort of US women. *Am. J. Epidemiol.* 144: 645-52.

Campbell, K.H.S.; McWhir, J.; Ritchie, W.A.; Wilmut, I. (1996) Sheep cloned by nuclear transfer from a cultured cell line. *Nature* 380: 64-66.

Carson, R.S.; Richards, J.S.; Kahn, L.E. (1981) Functional and morphological differentiation of theca and granulosa cells during pregnancy in the rat: dependence on increased basal luteinising hormone activity. *Endocrinology* 109: 1433-1441.

Carson, R.S.; Zhang, Z.; Hutchinson, L.A.; Herrington, A.C.; Findlay, J.K. (1989) Growth factors in ovarian function. *J. Reprod. Fert.* 85:735-746.

Chupin, D.; Combarous, Y.; Procureur, R. (1985) Different effect of LH on FSH-induced in two breeds of cattle. *Theriogenology* 23: 184.

Colborn, T., vom Saal, F.S., Soto A.M. (1993) Developmental effects of endocrine-disrupting chemicals in wildlife and humans. *Environ. Health Perspect.* 1: 378-384.

Conway, B.A.; Mahesh, V.B.; Mills, T.M. (1990) Effect of dihydrotestosterone on the growth and function of ovarian follicles in intact immature females primed with PMSG. *J. Reprod. Fert.* 90:267-277.

Couse, J.F.; Lindzey, J.; Grandien, K.; Gustafsson, J.A.; Korach, K.S. (1997) Tissue distribution and quantitative analysis of estrogen receptor- α (ER α) and estrogen

receptor- β (ER β) messenger ribonucleic acid in the wild-type and ER α -knockout mouse. *Endocrinology* 138: 4613-4621

Couse, J.F. & Korach, K.S. (1999) Estrogen receptor null mice: what have we learned and where will they lead us? *Endocrine Reviews* 20: 358–417.

Craig, Z.R.; Wang, W.; Flaws, A. (2011) Endocrine-disrupting chemicals in ovarian function: effects on steroidogenesis, metabolism and nuclear receptor signaling. *Reproduction* 142: 633-646.

Crisp, T.M.; Clegg, E.D.; Cooper, R.L.; Wood, W.P.; Anderson, D.G.; Baetcke, K.P.; Hoffmann, J.L.; Morrow, M.S.; Rodier, D.J.; Schaefer, J.E.; Touart, L.W.; Zeeman, M.G.; Patel, Y.M. (1998) Environmental endocrine disruption: an effects assessment and analysis. *Rev. Environ. Health* 106: 11-56.

Crosby, T.F. (1993) Superovulation in sheep: the effects of pFSH type and ewe breed. *Theriogenology* 39: 205.

Davis, D.L.; Bradlow, H.L.; Wolff, M.; Woodruff, T.; Hoel, D.G.; Anton-Culver, H. (1993) Medical hypothesis: xenoestrogens as preventable causes of breast cancer. *Environ. Health Perspect* 101: 372-377.

De Felice, M.; Scaldaferrri, M.L.; and Farini, D. (2005) Adhesion molecules for mouse primordial germ cells. *Front. Biosci.* 10: 541-551.

De Ferranti, S.D.; Osganian, S.K. (2007). Epidemiology of paediatric metabolic syndrome and type 2 diabetes mellitus. *Diabetes Vasc. Dis. Res.* 4: 285-296.

De Las Heras Guillamón, A.; Borderías Clau L. (2010) The Sheep as a Large Animal Experimental Model in Respiratory Diseases Research. *Arch. Bronconeumol.* 46: 499-501.

Dessi-Fulgheri, F.; Porrini, S.; Farabollini, F. (2002) Effects of perinatal exposure to bisphenol A on play behavior of female and male juvenile rats. *Environ. Health Perspect.* 110: 403–407.

Delgado-Rosas, F.; Gaytán, M.; Morales, C.; Gómez, R.; Gaytán, F. (2009) Superficial ovarian cortex vascularization is inversely related to the follicle reserve in normal cycling ovaries and is increased in polycystic ovary syndrome. *Hum. Reprod.* 24: 1142-51.

Diamanti-Kandarakis E.; Bourguignon, J-P.; Giudice, L.C.; Hauser, H.; Prins, G.S.; Soto, A.M.; Zoeller, T.; Goreet, A.C. (2009) Endocrine-Disrupting Chemicals: An Endocrine Society Scientific Statement. *Endocrine Reviews* 30: 293-342.

Diamanti-Kandarakis, E.; Chatzigeorgiou, A.; Livadas, S.; Palioura, E.; Economou, F.; Koutsilieris, M.; Palimeri, S.; Panidis, D.; (2010) Endocrine Disruptors and Polycystic Ovary Syndrome (PCOS): Elevated Serum Levels of Bisphenol A in Women with PCOS. *J. Clin. Endocrinol. Metab.* 96: 480.

Dissen, G.A.; Hirshfield, A.N.; Malamed, S.; Ojeda, S.R. (1995) Expression of neurotrophins and their receptors in the mammalian ovary is developmentally regulated: changes at the time of folliculogenesis. *Endocrinology* 136: 4681-4692.

Dodds, E.C.; Lawson, W. (1936) Synthetic oestrogenic agents without the phenanthrene nucleus. *Nature* 137: 996.

Driancourt, M.A.; Gibson, W.R.; Cahill, L.P. (1985) Follicular dynamics throughout the oestrus cycle in sheep. A review. *Reprod. Nutr. Develop.* 25: 1-15.

Driancourt, M.A.; Gougeon, A.; Royère, D. (1993) Reproduction in mammals and man. R.H.F. Hunter, 305p.

Driancourt, M.A. (2001) Regulation of ovarian follicular dynamics in farm animals. Implications for manipulation of reproduction. *Theriogenology* 55: 1211-1239.

Drummond, A.E.; Baillie, A.J.; Findlay, J.K. (1999) Ovarian oestrogen receptor α and β mRNA expression: impact of development and oestrogen. *Molec. Cell Endocrinol.* 149: 153–161.

Drummond, A.E.; Britt, K.L.; Dyson, M.; Jones, M.E.; Kerr, J.B.; O'Donnell, L.; Simpson, E.R. & Findlay, J.K. (2002) Ovarian steroid receptors and their role in ovarian function. *Molecular and Cellular Endocrinology* 191: 27-33.

Drummond, A. E. (2006) The role of steroids in follicular growth. *Reprod. Biol. Endocrinol.* 4: 16.

Drummond, A.E.; Fuller, P.J. (2010) *The importance of ER β signalling in the ovary.* *Journal of Endocrinology* 205: 15-23. review.

Durando, M.; Kass, L.; Piva, J.; Sonnenschein, C.; Soto, A.M.; Luque, E.H.; Muñoz-de-Toro, M. (2007) Prenatal bisphenol A exposure induces preneoplastic lesions in the mammary gland in Wistar rats. *Environ. Health Perspect.* 115:80-86.

Durando, M.; Kass, L.; Perdomo V.; Bosquiazzo, V.L.; Luque, E.H.; Muñoz-de-Toro, M. (2011) Prenatal exposure to bisphenol A promotes angiogenesis and alters steroid-mediated responses in the mammary glands of cycling rats. *J. Steroid Biochem. Mol. Biol.* 127: 35-43.

Durando, M.; Cocito, L.; Rodríguez, H.A.; Varayoud, J.; Ramos, J.G.; Luque, E.H.; Muñoz-de-Toro, M. (2013) Neonatal expression of amh, sox9 and sf-1 mRNA in *Caiman latirostris* and effects of in ovo exposure to endocrine disrupting chemicals. *Gen Comp Endocrinol.* 15, 191:31-8.

Earl, C.R.; Irvine, J.; Kelly, J.M.; Rowe, J.P.; Armstrong, D.T. (1995) Ovarian stimulation protocols for oocyte recovery. *Theriogenology* 43: 209.

Ekbom A.; Trichopoulos D.; Adami H.O.; Hsieh C.C.; Lan S.J. (1992) Evidence of prenatal influences on breast cancer risk. *Lancet* 340: 1015-8.

Erhmann, D.A.; Barnes, R.B.; Rosenfield, R.L. (1995) Polycystic ovary syndrome as a form of functional ovarian hyperandrogenism due to dysregulation of androgen secretion. *Endocrine Rev.* 16: 322-353.

Evans, A.C.O.; Duffy, P.; Hynes, N.; Boland M.P. (2000) Waves of follicle development during the estrous cycle in sheep. *Theriogenology* 53: 699-715.

Evans, N.P.; North, T.; Dye, S.; Sweeney, T. (2004) Differential effects of the endocrine-disrupting compounds bisphenol-A and octylphenol on gonadotropin secretion, in prepubertal ewe lambs. *Domest. Anim. Endocrinol.* 26: 61-73.

Farabollini, F.; Porrini, S.; Della Seta, D., Bianchi, F.; Dessi-Fulgheri, F. (2002) Effects of perinatal exposure to bisphenol A on sociosexual behavior of female and male rats. *Environ. Health Perspect.* 110: 409-414.

Fang, H.; Tong, W.; Perkins, R.; Soto, A.M.; Prechtel, N.V.; Sheehan, D.M. (2000) Quantitative comparisons of in vitro assays for estrogenic activities. *Environ. Health Perspect.* 108: 723-729.

Fernandez, M.; Bourguignon, N.; Lux-Lantos, V.; and Libertun, C. (2010) Neonatal exposure to bisphenol A and reproductive and endocrine alterations resembling the polycystic ovarian syndrome in adult rats. *Environ. Health Perspect.* 118: 1217-1222.

Fero, M.L.; Rivkin, M.; Tasch, M.; Porter, P.; Carow, C.E.; Firpo, E.; Polyak, K.; Tsai, L.H., Broudy, V., Perlmutter, R.M., Kaushansky, K., and Roberts, J.M. (1996) A syndrome of multiorgan hyperplasia with features of gigantism, tumorigenesis, and female sterility in p27(Kip1)-deficient mice. *Cell* 85: 733-744.

Fogarty, N.M.; Maxwell, W.M.; Eppleston, J.; Evans, G. (2000) The viability of transferred sheep embryos after long-term cryopreservation. *Reprod. Fertil. Dev.* 12: 31-7.

Fortune, J.E. (2002) Activation of primordial follicles. En: Eppig J, Hegele-Hartung C.H.; Less I. M. (Eds.) The future of the oocyte, basic and clinical aspects. Springer, Nueva York, EEUU. 11-21.

Fortune, J.E. (2003) The early stages of follicular development: activation of primordial follicles and growth of preantral follicles. *Anim Reprod. Science* 78: 135-163.

Foster, D. L. y Karsh, F. J. (1975) Development of mechanism regulating preovulatory surge of luteinizing-hormone in sheep. *Endocrinology* 97: 1205-1209.

Franks, F.; Mc Carthy, M.I.; Hardy, K. (2006) Development of polycystic ovary syndrome: involvement of genetic and environmental factors. *International Journal of Andrology* 29: 278.

Franks, S.; Stark, J.; Hardy, K. (2008) Follicle dynamics and anovulation in polycystic ovary syndrome. *Hum. Reprod. Update* 14: 367-378.

Freeman, B. (2003) The active migration of germ cells in the embryos of mice and men is a myth. *Reproduction* 125: 635-43.

Fujimoto, T.; Kubo, K. ; Aou, S. (2006) Prenatal exposure to bisphenol A impairs sexual differentiation of exploratory behavior and increases depression-like behavior in rats. *Brain Res.* 1068: 49-55.

Gammaa, D.; Wang, P.Y., Qin, L.Q.; Hoshi, K.; Sato, A. (2001) Is milk responsible for male reproductive disorders? *Med. Hypotheses* 57: 510-4.

Gayrard, V.; Lacroix, M.Z.; Collet, S.H.; Viguié, C.; Bosquet-Melou, A.; Toutain, P-L and Picard, N. (2013) High Bioavailability of Bisphenol A from Sublingual Exposure. *Environ. Health Perspect.* online 12 June 2013. <http://dx.doi.org/10.1289/ehp.1206339>.

George, F. & Wilson, J. (1994) Sex determination and differentiation. In *The Physiology of Reproduction*, 2nd edn, pp 3-28. Eds E Knobil & JD Neill. New York: Raven Press.

Gilbert, S.F. (2000) In: Gilbert SF., editor. Developmental biology. Sunderland, MA: Sinauer Associates Ltd. 585-617.

Gill, A.; Jamnongjit, M.; Hammes, S.R. (2004) Androgens promote maturation and signalling in mouse oocytes independent of transcription: a release of I 2002). Effect of follicular status on superovulatory response in ewes is influenced by presence of corpus luteum at first FSH dose. *Theriogenology* 58: 1607-14.

Gonzalez-Bulnes, A.; Garcia-Garcia, R. M.; Castellanos, V.; Santiago-Moreno, J.; Ariznabarreta, C.; Dominguez V. (2003) Influence of maternal environment on the number of transferable embryos obtained in response to superovulatory FSH treatments in ewes. *Reprod. Nutr. Dev.* 43: 17-28.

Gordon, I. (1997) Controlled reproduction in sheep and goats. Wallingford, Oxon, UK; CAB International, New York, NY, USA.

Gordon, I.; Lu, K.H. (1990) Production of embryos in vitro and its impact on livestock production. *Theriogenology* 33: 77-87.

Gould, J.C.; Leonard, L.S.; Maness, S.C.; Wagner, B.L.; Conner, K.; Zacharewski, T.; Safe S., McDonnell D.P.; Gaido K.W.(1998) Bisphenol A interacts with the estrogen receptor α in a distinct manner from estradiol. *Mol. Cell Endocrinol.* 142: 203-214.

Grasselli, F.; Baratta, L.; Baioni, L.; Bussolati, S.; Ramoni, R.; Grolli, S. Basini, G. (2010) Bisphenol A disrupts granulosa cell function. *Domestic. Anim. Endocrinol.* 39: 34-39.

Graham, J.D.; Clarke, C.L. (1997) Physiological action of progesterone in target tissues. *Endocrine Rev.* 18: 502-519.

Greco, T.L. and Payne, .A.H. (1994) Ontogeny of expression of the genes for steroidogenic enzymes P.450 side-chain cleavage, 3 beta-hydroxysteroid dehydrogenase, P450 17 alpha- hydroxylase/C17-20 lyase, and P450 aromatase in fetal mouse gonads. *Endocrinology* 135: 262-268.

Green, G.L.; Gilna, P.; Waterfield, M.; Baker, A.; Hort, Y.; Shine, J. (1986) Sequence and expression of human oestrogen receptor complementary DNA. *Science* 231: 1150-1154.

Gupta, C. (2000) Reproductive malformation of the male offspring following maternal exposure to estrogenic chemicals. *Proc. Soc. Exp. Biol. Med.* 224: 61-68.

Hampton, J.H.; Manikkam, M.; Lubahn, D.B.; Smith, M.F.; Garverick, H.A. (2004) Androgen receptor mRNA expression in the bovine ovary. *Domest. Anim. Endocrinol.* 27: 81-88.

Hegele-Hartung, C.; Seibel, P.; Peters, O.; Kosemund, D.; Muller, G.; Hillisch, A.; Walter, A.; Kraetzschmar, J.; Fritzeimer, K.H. (2004) Impact of isotype-selective oestrogen receptor agonists on ovarian function. *Proc. Natl. Acad. Sci. (USA)*. 101: 5129-513

Herbst, A.L.; Ulfelder, H.; Poskanzer, D.C. (1971) Adenocarcinoma of the vagina. Association of maternal stilbestrol therapy with tumor appearance in young women. *N. Engl. J. Med.* 284: 878-881.

Hillier, S.G.; Ross, G.T. (1979) Effects of exogenous testosterone on ovarian weight, follicular morphology and intraovarian progesterone concentration in oestrogen-primed hypophysectomized immature female rats. *Biol. Reprod.* 20: 261-268

Hillier, S.G. (1981) Regulation of follicular oestrogen biosynthesis: a survey of current concepts. *J. Endo. Supp.* 3-18.

Hillier, S.G.; Tetsuka, M.; Fraser, H.M. (1997) Location and developmental regulation of androgen receptor in primate ovary. *Hum. Reprod.* 12: 107-111.

Hirshfield, A.N. (1991) Development of follicles in the mammalian ovary. *Int. Rev. Cytol.* 124: 43-101.

Ho, S. M.; Tang, W. Y.; Belmonte de Frausto, J.; Prins, G. S. (2006) Developmental exposure to estradiol and bisphenol A increases susceptibility to prostate carcinogenesis and epigenetically regulates phosphodiesterase type 4 variant 4. *Cancer Res.* 66: 5624-5632.

Honma, S.; Suzuki, A.; Buchanan, D.L.; Katsu, Y.; Watanabe, H.; Iguchi, T. (2002) Low dose effect of in utero exposure to bisphenol A and diethylstilbestrol on female mouse reproduction. *Reprod. Toxicol.* 16: 117-122.

Horie, K.; Takakura, K.; Fujiwara, H.; Suginami, H.; Liao, S.; Mori, T. (1992) Immunohistochemical localisation of androgen receptor in the human ovary throughout the menstrual cycle in relation to oestrogen and progesterone receptor expression. *Hum. Reprod.* 7: 184-190.

Howdeshell, K. L.; Hotchkiss, A. K.; Thayer, K. A.; Vandenberg, J. G.; vom Saal, F. S. (1999) Exposure to bisphenol A advances puberty. *Nature* 401: 763-764.

Howe, S.R.; Borodinsky, L. (1998) Potential exposure to bisphenol A from food-contact use of polycarbonate resins. *Food Addit. Contam.* 15: 370-375.

Hugo, E.R.; Brandebourg, T.D.; Woo, J.G.; Loftus, J.; Alexander, J.W.; Ben-Jonathan, N. (2008) Bisphenol A at environmentally relevant doses inhibits adiponectin release from human adipose tissue explants and adipocytes. *Environ. Health Perspect.* 116: 1642-1647.

Hunt, P.A.; Koehler, K.E.; Susiarjo, M.; Hodges, C.A.; Ilagan A.; Voigt, R.C.; Thomas, S.; Thomas, B.F.; Hassold, T.J. (2003) Bisphenol A exposure causes meiotic aneuploidy in the female mouse. *Current Biology* 13: 546-553.

Hussein, T. S.; Froiland, D. A.; Amato, F.; Thompson, J. G.; Gilchrist, R. B. (2005) Oocytes prevent cumulus cell apoptosis by maintaining a morphogenic paracrine gradient of bone morphogenetic proteins. *J. Cell Sci.* 118: 5257-5268.

Iguchi, T.; Takasugi, N.; Bern, H.A.; Mills, K.T. (1986) Frequent occurrence of polyovular follicles in ovaries of mice exposed neonatally to diethylstilbestrol. *Teratology* 34: 29-35.

Iguchi, T.; Fukazawa, Y.; Uesugi, Y.; Takasugi, N. (1990) Polyovular follicles in mouse ovaries exposed neonatally to diethylstilbestrol in vivo and in vitro. *Biol. Reprod.* 43: 478-84.

Ishwar, A.K.; Memon, M.A. (1996) Embryo transfer in sheep and goats: a review. *Small Rumin. Res.* 19: 35-46.

Jefferson, W.N.; Couse, J.F.; Padilla-Banks, E.; Korach, K.S.; Newbold, R.R. (2002) Neonatal exposure to genistein induces estrogen receptor (ER) alpha expression and multiocyte follicles in the maturing mouse ovary: evidence for ERbeta-mediated and nonestrogenic actions. *Biol. Reprod.* 67: 1285-96.

Johnson, A.L.; Bridgham, J.T. (2000) Caspase-3 and -6 expression and enzyme activity in hen granulosa cells. *Biol. Reprod.* 62: 589-598.

Johnson, J.; Canning, J.; Kaneko, T.; Pru, J.K.; Tilly, J.L. (2004) Germline stem cells and follicular renewal in the postnatal mammalian ovary. *Nature* 428: 145-150.

Jolly, P.D.; Smith, P.R.; Heath, D.A.; Hudson, N.L.; Lun, S.; Still, L.A., et al. (1997) Morphological evidence of apoptosis and the prevalence of apoptotic versus mitotic cells in the membrane granulosa of ovarian follicles during spontaneous and induced atresia in ewes. *Biol. Reprod.* 56: 837-46.

Jorio, A.; Mariana, J.C.; Lahlou-Kassi, A.; Hilali, M. (1999) Pattern of FSH secretion from birth to 4 months of age in two Moroccan ewe breeds varying in prolificacy. *Small Rumin. Res.* 31: 135-140.

Juengel, J.L.; Sawyer, H.R.; Smith, P.R.; Quirke, L.D.; Heath, D.A.; Lun, S.; Wakefield, S.J.; McNatty K.P. (2002) Origins of follicular cells and ontogeny of steroidogenesis in ovine fetal ovaries. *Mol. Cell Endocrinol.* 191: 1-10.

Juengel, J.L.; Heath, D.A.; Quirke, L.D.; McNatty, K.P. (2006) Oestrogen receptor and androgen receptor and progesterone receptor mRNA and protein localisation within the developing ovary and in small growing follicles of sheep. *Reproduction* 131: 81-92.

Junqueira, L.C.U.; Junqueira M.M.S. (1983) *Técnicas básicas en citología e histología*. (Eds: Livraria Editora Santos) São Paulo, Brasil.

Kaldis, P. (2007) Another piece of the p27Kip1 puzzle. *Cell* 128: 241-244.

Kass, L.; Durando, M.; Ramos, J.G.; Varayoud, J.; Powell, C.E.; Luque, E.H.; Muñoz-de-Toro, M. (2004) Association of increased estrogen receptor beta2 expression with parity-induced alterations in the rat mammary gland. *J. Steroid Biochem. Mol. Biol.* 91: 29-39.

Kass, L.; Altamirano, G.A.; Bosquiazzo, V.L.; Luque, E.H.; Muñoz-de-Toro, M. (2012) Perinatal exposure to xenoestrogens impairs mammary gland differentiation and modifies milk composition in Wistar rats. *Reprod. Toxicol.* 33: 390-400.

Kato, H.; Ota, T.; Furuhashi, T.; Ohta, Y.; Iguchi, T. (2003) Changes in reproductive organs of female rats treated with bisphenol A during the neonatal period. *Reprod. Toxicol.* 17: 283-288.

Kelly, J.M.; Kleemann, D.O.; Walker, S.K. (2005) Enhanced efficiency in the production of offspring from 4- to 8-week-old lambs. *Theriogenology*. 63:18.

Kennedy, J.P.; Worthington, C.A.; Cole, E.R. (1974) The post-natal development of the ovary and uterus of the Merino lamb. *J. Reprod. Fertil.* 36: 275-82.

Kezele, P.; Skinner, M.K. (2003) Regulation of Ovarian Primordial Follicle Assembly and Development by Estrogen and Progesterone: Endocrine Model of Follicle Assembly. *Reprod. Dev.* 144: 3329.

Kezele, P.; Nilsson, E.E.; Skinner, M.K. (2005) Keratinocyte growth factor acts as a mesenchymal factor that promotes ovarian primordial to primary follicle transition. *Biol. Reprod.* 73: 967-73.

Kipp, J.L.; Kilen, S.M.; Bristol-Gould, S.; Woodruff, T.K.; Mayo, K.E. (2007) Neonatal exposure to estrogens suppresses activin expression and signalling in the mouse ovary. *Endocrinology* 148: 1968-76.

Ko, J. C. H.; Kastelic J.P.; Del Campo, M.R.; Ginther, O.J. (1991) Effects of a dominant follicle on ovarian follicular dynamics during the estrous cycle in heifers. *J. Reprod. Fertil.* 91: 511-519.

Krege, J.H.; Hodgkin, J.B.; Couse, J.F.; Enmark, E.; Warne, M.; Mahler, J.F.; Sar, M.; Korach, K.S.; Gustafsson, J.A., Smithies, O. (1998) Generation and reproductive phenotypes of mice lacking oestrogen receptor β . *Proc Natl Acad Sci (USA)*. 95: 15677-15682

Kuiper, G.G.; Lemmen, J.G.; Carlsson, B.; Corton, J.C.; Safe, S.H.; Van Der Saag, P.T. (1998) Interaction of estrogenic chemicals and phytoestrogens with estrogen receptor beta. *Endocrinology* 139: 4252-4263.

Kumar y col., (2010) Robbins y Cotran, 8va edición, Elsevier.

Kwintkiewicz, J.; Nishi, Y.; Yanase, T.; Giudice, L.C. (2010) Peroxisome proliferator-activated receptor- γ mediates bisphenol A inhibition of FSH-stimulated IGF-1, aromatase, and estradiol in human granulosa cells. *Environ. Health Perspect.* 118: 400-406.

Lacau-Mengido, I.M.; Mejía, M.E.; Díaz-Torga, G.S.; Gonzalez Iglesias, A.; Formía, N.; Libertun, C.; Becú-Villalobos, D. (2000) Endocrine studies in ivermectin-treated heifers from birth to puberty. *J. Anim. Sci.* 78: 817-824.

Land, R. B. (1978) Reproduction in young sheep - some genetic and environmental sources of variation. *J. Reprod. Fert.* 52: 427-436.

Lang, I.A.; Galloway, T.S.; Scarlett, A., Henley, W.E.; Depledge, M.; Wallace, R.B.; Melzer D. (2008) Association of urinary Bisphenol A concentration with medical disorders and laboratory abnormalities in adults. *JAMA* 300: 1303-1310.

Ledda, S.; Bogliolo, L.; Calvia, P.; Leoni, G.; Naitana, S. (1997) Meiotic progression and developmental competence of oocytes collected from juvenile and adult ewes. *J. Reprod. Fert.* 109.

Ledda, S.; Bogliolo, L.; Leoni, G.; Naitana, S. (1999) Production and lambing rate of blastocysts derived from in vitro matured oocytes after gonadotropin treatment of prepubertal ewes. *J Anim Sci.* 77: 2234-9.

Lohuis, M.M. (1995) Potencial benefits of bovine embryo-manipulation technologies to genetic improvement programs. *Theriogenology* 43: 51-60.

López-Sebastian, A., Gonzalez-Bulnes A.; Santiago-Moreno J.; Gomez Brunet A.; Townsend, E.C.; Inskoop, E.K. (1997) Patterns of follicular development during the estrous cycle in monovular Merino del Pais ewes. *Anim. Reprod. Sci.* 48, 279-291.

Lun, S.; Smith, P.; Lundy, T.; O'Connell, A.; Hudson, N. & McNatty, K.P. (1998) Steroid contents of and steroidogenesis in vitro by the developing gonad and mesonephros around sexual differentiation infetal sheep. *J. Reprod. Fert.* 114: 131.139.

Lundy, T.; Smith, P.; O'Connell, A.; Hudson, N.L.; McNatty, K.P. (1999) Populations of granulosa cells in small follicles of the sheep ovary. *J. Reprod. Fertil.* 115: 251-62.

Lydon, J.P.; DeMayo, F.J.; Funk, C.R.; Mani, S.K.; Hughes, A.R.; Montgomery, C.A. Jr.; Shyamala, G.; Conneely, O.M.; O'Malley, B.W. (1995) Mice lacking progesterone receptor exhibit pleiotropic reproductive abnormalities. *Genes Dev.* 9: 2266-2278.

Lydon, J.P.; DeMayo, F.J.; Conneely, O.M. & O'Malley, B.W. (1996) Reproductive phenotypes of the progesterone receptor null mutant mouse. *J. Steroid Biochem. Mol. Biol.* 56: 67-77.

Ma, W.; Tan, J.; Matsumoto, H.; Robert, B.; Abrahamson, D.R.; Das, S.K.; Dey, S.K. (2001) Adult tissue angiogenesis: evidence for negative regulation by estrogen in the uterus. *Mol. Endocrinol.* 15: 1983-1992.

MacLusky, N.J.; Naftolin, F. (1981) Sexual differentiation of the central nervous system. *Science* 211: 1294-303.

Mahmood, S.; Koul, G.L.; Biswas, J.C. (1991) Comparative efficacy of FSH-P and PMSG on superovulation in Pashmina goats. *Theriogenology* 35: 1191-1196.

Maffini, M.V.; Rubin, B.S.; Sonnenschein, C.; Soto, A.M. (2006) Endocrine disruptors and reproductive health: the case of bisphenol-A. *Mol. Cell Endocrinol.* 254-255: 179-186.

Mansour, A.M. (1959) The hormonal control of ovulation in the immature lamb. *J. Agricult. Sci. Camb.* 52: 87-94.

Markey, C.M.; Luque, E.H.; Muñoz-de-Toro, M; Sonnenschein, C.; Soto, A.M. (2001) In utero exposure to Bisphenol A alters the development and tissue organization of the mouse mammary gland. *Biol. Reprod.* 65: 1215-1223.

Markey, C.M.; Rubin, B.S.; Soto, A.M. Sonnenschein, C. (2002) Endocrine disruptors: from Wingspread to environmental developmental biology. *J. Steroid Biochem. Mol. Biol.* 83: 235-244.

Martins da Silva, S. J.; Bayne, R. A.; Cambray, N.; Hartley, P. S.; McNeilly, A. S.; Anderson, R. A. (2004) Expression of activin subunits and receptors in the developing human ovary: activin A promotes germ cell survival and proliferation before primordial follicle formation. *Dev. Biol.* 266: 334-345.

Matzuk, M.M.; Burns, K.H.; Viveiros, M.M. (2002) Intercellular communication in the mammalian ovary: oocytes carry the conversation. *Eppig JJ. Science.* 21: 2178-80. Review.

Mauleon, P.; Bezard, J.; Terqui, M. (1977) Very early and transient^{17b} estradiol secretion by fetal sheep ovary. In vitro study. *Annales de Biologie Animale, Biochimie, Biophysique* 17: 399-401.

McDonald's (2009) *Veterinary Endocrinology and Reproduction*. Fifth edition, Iowa State Press.

McGee, E.A.; Hsueh, A.J. (2000) Initial and cyclic recruitment of ovarian follicles. *Endocr. Rev.* 21: 200-14.

McLachlan, J. (2001) Environmental signaling: What Embryos and evolution teach us about endocrine disrupting chemicals. *Endocr. Rev.* 22: 319-341.

McLachlan, J.A.; Simpson, E.; Martin, M. (2006) Endocrine disrupters and female reproductive health. *Best. Pract. Res. Clin. Endocrinol. Metab.* 20: 63-75.

McLachlan, J.A. (2006) Commentary: prenatal exposure to diethylstilbestrol (DES): a continuing story. *Int. J. Epidemiol.* 35: 868-870.

McNatty, K.P.; Smith, P.; Hudson, N.L.; Heath, D.A.; Tisdall, D.J.; O, W.S.; Braw-Tal R. (1995) Development of the sheep ovary during fetal and early neonatal life and the effect of fecundity. *J. Reprod. Fertil.* 49: 123-35. Review.

McNatty, K. P.; Quirke, L.D.; Fidler, A.; Smith, P.; Heath, D. A.; Tisdall D. (2000) Ovarian Development: Fetus to Puberty. In: *Hormones and Women's Health*. Ed. L.A. Salamonsen, Harwood Academic Publishers, The Netherlands, 9-22.

Melnick, R.; Lucier, G.; Wolfe, M.; Hall, R.; Stancel, G.; Prins, G; Gallo, M.; Reuhl, K.; Ho, S.M.; Brown, T. et al. (2002) Summary of the National Toxicology *Program's* report of the endocrine disruptors low-dose peer review. *Environ. Health Perspect.* 110: 427-31.

Mendola, P.; Messer, L.C.; Rappazzo, K. (2008) Science linking environmental contaminant exposures with fertility and reproductive health impacts in the adult female. *Fertil. Steril.* 89: 81-94.

Mlynarcíková, A.; Kolena, J.; Ficková, M.; Scsuková, S. (2005) Alterations in steroid hormone production by porcine ovarian granulosa cells caused by bisphenol A and bisphenol A dimethacrylate. *Mol. Cell Endocrinol.* 244: 57-62.

Monje, L.; Varayoud, J.; Luque, E.H.; Ramos, J.G. (2007) Neonatal exposure to bisphenol A modifies the abundance of estrogen receptor alpha transcripts with alternative 5'-untranslated regions in the female rat preoptic area. *J Endocrinol.* 194: 201-12.

Monje, L.; Varayoud, J.; Muñoz-de-Toro, M.; Luque, E.H.; Ramos, J.G. (2009) Neonatal exposure to bisphenol A alters estrogen-dependent mechanisms governing sexual behavior in the adult female rat. *Reprod. Toxicol.* 28: 435-42.

Monje L.; Varayoud, J.; Muñoz-de-Toro, M.; Luque, E.H.; Ramos, J.G. (2010) Exposure of neonatal female rats to bisphenol A disrupts hypothalamic LHRH pre-mRNA processing and estrogen receptor alpha expression in nuclei controlling estrous cyclicity. *Reprod. Toxicol.* 30: 625-34.

Montgomery, G.W.; Galloway, S.M.; Davis, G.H.; McNatty, K.P. (2001) Genes controlling ovulation rate in sheep. *Reproduction* 121: 843-852.

Morrison, L.J.; Marcinkiewicz, J.L. (2002) Tumor necrosis factor alpha enhances oocyte/follicle apoptosis in the neonatal rat ovary. *Biol. Reprod.* 66: 450-457.

Morton, K.M.; Maxwell, W.M.; Evans, G. (2008) Effect of aspiration pressure during oocyte harvesting on oocyte recovery and in vitro development of ovine oocytes. *Reprod. Domest. Anim.* 43: 106-10.

Muñoz-de-Toro, M.; Maffini, M.V.; Giardina, R.H.; Luque E.H. (1998) Processing fine needle aspirates of prostate carcinomas for standard immunocytochemical studies and in situ apoptosis detection. *Pathol. Res. Pract.* 194: 631-636.

Muñoz-de-Toro, M.; Markey, C.M.; Wadia, P.; Luque, E.H.; Rubin, B.S.; Sonnenschein, C.; Soto, A.M. (2005) Perinatal exposure to bisphenol A alters peripubertal mammary gland development in mice. *Endocrinology* 146: 4138-4147.

Muñoz-de-Toro, M.; Beldoménico, H.R.; García, S.R.; Stoker, C.; De Jesús, J.J.; Beldoménico, P.M.; Ramos, J.G.; Luque, E.H. (2006) Organochlorine levels in adipose tissue of women from a Littoral region of Argentina. *Environ. Res.* 102: 107-112.

Nagel, S.C.; Hagelbarger, J.L.; and McDonnell, D.P. (2001) Development of an ER action indicator mouse for the study of estrogens, selective ER Modulators, and xenobiotics. *Endocrinology* 142: 4721-4728.

Nandedkar, T.D.; Munshi, S.R. (1981) Effect of dihydrotestosterone on follicular development, ovulation and reproductive capacity of mice. *J. Reprod. Fert.* 62: 21-24.

National Research Council, USA. (1999) *Hormonally Active agents in the Environment*. National Academy Press, New York.

Newbold, R. R.; Jefferson, W. N.; Padilla-Banks, E.; Haseman, J. (2004) Developmental exposure to diethylstilbestrol (DES) alters uterine response to estrogens in prepubescent mice: low versus high dose effects. *Reprod. Toxicol.* 18: 399-406.

Newbold, R. R.; Jefferson, W. N.; Padilla-Banks, E. (2007a) Long-term adverse effects of neonatal exposure to bisphenol A on the murine female reproductive tract. *Reprod. Toxicol.* 24: 253-258.

Newbold, R.R.; Padilla-Banks, E.; Snyder, R.J.; Phillips, T.M.; Jefferson, W.N. (2007b) Developmental exposure to endocrine disruptors and the obesity epidemic. *Reprod. Toxicol.* 23: 290-296.

Nikaido, Y.; Yoshizawa, K.; Danbara, N.; Tsujita-Kyutoku, M.; Yuri, T.; Uehara, N. et al. (2004) Effects of maternal xenoestrogen exposure on development of the reproductive tract and mammary gland in female CD-1 mouse offspring. *Reprod. Toxicol.* 18: 803-811.

NTP-CERHR. (2008) NTP-CERHR monograph on the potential human reproductive and developmental effects of bisphenol A. NTP CERHR MON, vol. 22. NTP-CERHR BPA monograph. p. i–III1.

O'Brien, J.K.; Dwarte, D.; Ryan, J.P.; Maxwell, W.M.; Evans, G. (1996) Developmental capacity, energy metabolism and ultrastructure of mature oocytes from prepubertal and adult sheep. *Reprod. Fertil. Dev.* 8: 1029-37.

O'Brien, J.K.; Catt, S.L.; Ireland, K.A.; Maxwell, W.M.C.; Evans, G. (1997) In vitro and in vivo developmental capacity of oocytes from prepubertal and adult sheep. *Theriogenology* 47: 1433–43.

Ogura, Y.; Ishii, K.; Kanda, H.; Kanai, M.; Arima, K.; Wang, Y.; Sugimura, Y. (2007) Bisphenol A induces permanent squamous change in mouse prostatic epithelium. *Differentiation* 75: 745-756.

Olea, N.; Pulgar, R.; Pérez, P.; Olea-Serrano, F.; Rivas, A.; Novillo-Fertrell, A.; Pedraza, V.; Soto, A.M.; Sonnenschein, C. (1996) Estrogenicity of resin-based composites and sealants used in dentistry. *Environ. Health Perspect.* 104: 298-305.

Oliva, A.; Spira, A.; Multigner, L. (2001) Contribution of environmental factors to the risk of male infertility. *Hum. Reprod.* 16: 1768-1776.

Oliva, A.; Giami, A.; Multigner, L. (2002) Environmental agents and erectile dysfunction: a study in a consulting population. *J. Androl.* 23: 546-550.

Oktem, O., Urman, B. (2010) Understanding follicle growth in vivo. *Hum. Reprod.* 25: 2944-54.

Ortega, H.H.; Salvetti, N.R.; Padmanabhan, V. (2009) Developmental programming: prenatal androgen excess disrupts ovarian steroid receptor balance. *Reproduction* 137: 865-77.

Padmanabhan, V.; Manikkam, M.; Recabarren, S.; Foster, D. (2006) Prenatal testosterone excess programs reproductive and metabolic dysfunction in the female. *Mol. Cell. Endocrinol.* 246: 165-174.

Palanza, P. L.; Gioiosa, L.; Parmigiani, S.; vom Saal, F. S. (2008) Effects of developmental exposure to bisphenol A on brain and behavior in mice. *Environ. Res.* 108: 150-157.

Palma, G. (2008) *Biotechnología de la Reproducción*, ed. Reprobiootec.

Palmer, J.R.; Wise, L.A.; Hatch, E.E.; Troisi, R.; Titus-Ernstoff, L.; Strohsnitter, W.; Kaufman, R.; Herbst, A.L.; Noller, K.L.; Hyer, M.; Hoover, R.N. (2006) Prenatal diethylstilbestrol exposure and risk of breast cancer. *Cancer Epidemiol. Biomarkers Prev.* 15: 1509-1514.

Pannetier, M.; Fabre, S.; Batista F.; Kocer, A.; Renault, L.; Jolivet, G.; Mandon-Pepin, B.; Cotinot, C.; Veitia, R.; Pailhoux, E. (2006) FOXL2 activates P450 aromatase gene transcription: towards a better characterization of the early steps of mammalian ovarian development. *Journal of Molecular Endocrinology* 36: 399-413.

Pengue; W.A. (2000) *Cultivos transgenicos? Hacia donde vamos?* Lugar Editorial S.A., Buenos Aires, Argentina.

Pepling, M.E. (2006) From primordial germ cell to primordial follicle: mammalian female germ cell development. *Genesis* 44: 622-32.

Peretz, J.; Gupta, R.K.; Jeffrey Singh, J.; Hernández-Ochoa, I.; Flaws J.A. (2011) Bisphenol A Impairs Follicle Growth, Inhibits Steroidogenesis, and Downregulates Rate-Limiting Enzymes in the Estradiol Biosynthesis Pathway. *Toxicol. Sci.* 119: 209-217.

Petersen, D.N.; Tkalcevic, G.T.; Koza-Taylor, P.H.; Turi, T.G.; Brown, T.A. (1998) *Identification of oestrogen receptor β 2, a functional variant of estrogen receptor β expressed in normal rat tissues.* Endocrinology 139: 1082-1092.

Petroff, B.K.; Gao, X.; Rozman, K.K.; Terranova, P.F. (2000) Interaction of estradiol and 2,3,7,8 tetrachlorodibenzop- dioxin (TCDD) in an ovulation model: evidence for systemic potentiation and local ovarian effects. *Reprod. Toxicol.* 14: 247-55.

Picazo, R.A.; López, A.S. (1995) Desarrollo folicular en el ovario de la especie ovina. *Invest. Agrar.: Prod. Sanid. Anim.* 10: 77-93.

Picton, H.; Briggs, D.; Gosden, R. (1998) The molecular basis of oocyte growth and development. *Mol. Cell Endocrinol.* 145: 27–37.

Pocar, P.; Brevini, T.A.; Fisher, B.; Gandolfi, F. (2003) The impact of the endocrine disruptors on oocyte competence. *Reproduction* 125: 313-325.

Prins, G.S.; Tang, W.Y; Belmonte, J.; Ho, S-M. (2008) Perinatal Exposure to Oestradiol and Bisphenol A Alters the Prostate Epigenome and Increases Susceptibility to Carcinogenesis. *Basic Clin. Pharmacol. Toxicol.* 102: 134.

Pryse-Davies, J.; and Dewhurst, C. J. (1971) The development of the ovary and uterus in the foetus, newborn and infant: a morphological and enzyme histochemical study. *Journal of Pathology* 103: 5.

Ptak, G.; Loi, P.; Dattena, M.; Tischner, M.; Cappai, P. (1999) Offspring from 1-month-old lambs: studies on the developmental capability of prepubertal oocytes. *Biol. Reprod.* 61: 1568-74.

Pulgar, R.; Olea-Serrano, M.F.; Novillo-Fertrell, A.; Rivas, A.; Pazos, P.; Pedraza, V.; Navajas, J.M.; Olea, N. (2000) Determination of bisphenol A and related aromatic compounds released from bis-GMA-based composites and sealants by high performance liquid chromatography. *Environ. Health Perspect.* 108: 21-27.

Quirke, L.D.; Juengel, J.L.; Tisdall, D.J.; Lun, S.; Heath, D.A. & McNatty, K.P. (2001) Ontogeny of steroidogenesis in the fetal sheep gonad. *Biol. Reprod.* 65: 216-228.

Rajareddy, S.; Reddy, P.; Du, C.; Liu L.; Jagarlamudi, K.; Tang, W.; Shen, Y.; Berthet, C.; Peng, S.L.; Kaldis, P.; Liu, K. (2007) p27kip1 (cyclindependentkinase inhibitor 1B) controls ovarian development by suppressing follicle endowment and activation and promoting follicle atresia in mice. *Mol. Endocrinol.* 21: 2189-202.

Ramos, J.G.; Varayoud, J.; Sonnenschein, C.; Soto, A.M.; Muñoz-de-Toro, M.; Luque E.H. (2001) Prenatal exposure to low doses of bisphenol A alters the periductal stroma and glandular cell function in the rat ventral prostate. *Biol. Reprod.* 65: 1271-1277.

Ramos, J.G.; Varayoud, J.; Kass, L.; Rodríguez, H.; Costabel, L.; Muñoz-De-Toro, M.M.; Luque, E.H. (2003) Bisphenol A induces both transient and permanent histofunctional alterations of the hypothalamic-pituitary-gonadal axis in prenatally exposed male rats. *Endocrinology* 144: 3206-3215.

Retha, R.; Newbold, R.R.; Bullock, B.C.; McLachlan, J.A. (1990) Uterine Adenocarcinoma in mice following developmental treatment withestrogens: A model for hormonal carcinogenesis. *Cancer Research* 50: 7677-7681.

Rey, F.; Ramos, J.G.; Stoker, C.; Bussmann, L.E.; Luque, E.H.; Muñoz-de-Toro, M. (2006) Vitellogenin detection in *Caiman latirostris* (Crocodylia: Alligatoridae): a tool to assess environmental estrogen exposure in wildlife. *J. Comp. Physiol. B.* 176: 243-51.

Rey, F.; González, M.; Zayas, M.A.; Stoker, C.; Durando, M.; Luque, E.H.; Muñoz-de-Toro, M. (2009) Prenatal exposure to pesticides disrupts testicular histoarchitecture and alters testosterone levels in male *Caiman latirostris*. *Gen. Comp. Endocrinol.* 162: 286-92.

Richards, J.S.; Jonassen, J.A.; Rolfes, A.I.; Kersey K, Reichert, L.E. Jr. (1979) Adenosine 3', 5'-monophosphate, LH receptor and progesterone during granulosa cell differentiation: effects of oestradiol and FSH. *Endocrinology* 104: 765-773.

Richter, C. A.; Birnbaum, L. S.; Farabollini, F.; Newbold, R. R., Rubin; B. S., Talsness; C. E., Vandenberg, J. G.; Walser-Kuntz, D. R.; vom Saal; F. S. (2007a) In vivo effects of bisphenol A in laboratory rodent studies. *Reprod. Toxicol.* 24: 199-224.

Richter, C. A.; Taylor, J. A.; Ruhlen, R. R.; Welshons, W. V.; vom Saal, F. S. (2007b) Estradiol and bisphenol A stimulate androgen receptor and estrogen receptor gene expression in fetal mouse prostate cells. *Environ. Health Perspect.* 115: 902-908.

Robker, R.L.; Russell, D.L.; Espey, L.L.; Lydon J.P.; O'Malley, B.W.; Richards, J.S. (2000) Progesterone-regulated genes in the ovulation process: ADAMTS-1 and cathepsin L proteases. *Proc. Natl. Acad. Sci. U S A.* 97: 4689-94.

Robles, R.; Tao, X.J.; Trbovich, A.M.; Maravel, D.V.; Nahum, R.; Perez, G.I.; Tilly, K.I.; Tilly, J.L. (1999) Localization, regulation and possible consequences of apoptotic protease-activating factor-1 (Apaf-1) expression in granulosa cells of the mouse ovary. *Endocrinology* 140: 2641-2644.

Rodríguez, H.A.; Ramos, J.G.; Ortega, H.H.; Muñoz-de-Toro, M.; Luque, E.H. (2008) Regional changes in the spatio-temporal pattern of progesterone receptor (PR) expression in the guinea-pig genital tract as parturition approaches. *J. Steroid Biochem. Mol. Biol.* 111: 247-54.

Rodríguez, H.A.; Santambrosio, N.; Santamaría, C.G.; Muñoz-de-Toro, M.; Luque, E.H. (2010) Neonatal exposure to bisphenol A reduces the pool of primordial follicles in the rat ovary. *Reprod. Toxicol.* 30: 550-557.

Rovedatti, M.F.; Castane, P.M.; Topalian, M.L., Salibian, A. (2001) Monitoring of organochlorine and organophosphorus pesticides in the water of the Reconquista River (Buenos Aires, Argentina). *Water Res.* 35: 3457-3461.

Rubin, B. S.; Murray, M. K.; Bamassa, D. A.; King, J. C.; Soto, A. M. (2001) Perinatal exposure to low doses of bisphenol A affects body weight, patterns of estrous cyclicity, and plasma LH levels. *Environ. Health Perspect.* 109: 675-680.

Rubin, B. S.; Lenkowski, J. R.; Schaeberle, C. M.; Vandenberg, L. N.; Ronsheim, P. M.; Soto, A. M. (2006) Evidence of altered brain sexual differentiation in mice exposed perinatally to low, environmentally relevant levels of bisphenol A. *Endocrinology* 147: 3681-3691.

Sassoon, D. (1999) Wnt genes and endocrine disruption of the female reproductive tract: a genetic approach. *Mol. Cell Endocrinol* 158: 1-5.

Saumande, J. (1990) Culture of bovine granulosa cells in a chemically defined serum free medium: the effect of insulin and fibronectin on the response to FSH. *J. Steroid Biochem.* 38: 189.

Savabieasfahani, M.; Kannan, K.; Astapova, O.; Evans, N.P.; Padmanabhan, V. (2006) Developmental programming: differential effects of prenatal exposure to bisphenol-A or methoxychlor on reproductive function. *Endocrinology* 147: 5956-5966.

Sawyer, H.T.; Smith, P.; Heath, D.A.; Juengel, J.L.; Wakefield, S.J.; McNatty, K.P. (2002) Formation of ovarian follicles during fetal development in sheep. *Biol. Reprod.* 66: 1134-50.

Scaramuzzi, R.J.; Adams, N.R.; Baird, D.T.; Campbell, B.K.; Downing, J.A.; Findlay, J.K.; Henderson, K.M.; Martin, G.B.; McNatty, K.P.; McNeilly, A.S. et al. (1993) A model for follicle selection and the determination of ovulation rate in the ewe. *Reprod. Fertil. Dev.* 5:459-78. Review.

Schally, A.V.; Arimura, A.; Baba, Y.; Nair, R.M., Matsuo, H., Redding, T.W.; Debeljuk L. (1971) Isolation and properties of the FSH- and LH-releasing hormone. *Biochem. Biophys. Res. Commun.* 43: 393-399.

Scheerlinck, J-P.; Snibson, K.J.; Bowles, V.M.; Sutton, P. (2008) Biomedical applications of sheep models: from asthma to vaccines. *Trends in Biotechnology* 5: 259-266.

Scholzen, T.; Gerdes, J. (2000) The Ki-67 protein: from the known and the unknown. *J. Cell Physiol.* 182: 311–322.

Schreiber, J.R.; Ross, G.T. (1976) Further characterisation of a rat ovarian testosterone receptor with evidence for nuclear translocation. *Endocrinology* 99: 590-596.

Sekiguchi, S.; Ito, S. and Honma, T. (2003) Experimental Model to Study Reproductive Toxicity of Chemicals using Induced Ovulation in Immature F344 Rats. *Industrial Health* 41: 287-290.

Seung Gee Lee; Ji Young Kim; Jin-Yong Chung; Yoon-Jae Kim; Ji-Eun Park; Seunghoon Oh; Yong-Dal Yoon; Ki Soo Yoo; Young Hyun Yoo; Jong-Min Kim (2013) Bisphenol A Exposure during Adulthood Causes Augmentation of Follicular Atresia and Luteal Regression by Decreasing 17β -Estradiol Synthesis via Downregulation of Aromatase. *Environ. Health Perspect.* 121: 663-669.

Shankar, A.; Teppala, S. (2011) Relationship between urinary bisphenol A levels and diabetes mellitus. *J. Clin. Endocrinol .Metab.* 96: 3822-6.

Sharpe, R.M.; Skakkebaek, N. (1993) Are oestrogens involved in falling sperm counts and disorders of the male reproductive tract? *Lancet* 341: 1392-1395.

Sharpe, R.M.; Fisher J.S.; Millar, M.M.; Jobling, S.; Sumpter, J.P. (1995) Gestational and lactational exposure of rats to xenoestrogens results in reduced testicular size and sperm production. *Environ. Health Perspect.* 103: 1136-1143.

Sherr, C.J.; Roberts J.M. (1999) CDK inhibitors: positive and negative regulators of G1-phase progression. *Genes Dev.* 13: 1501-1512.

Silva-Santos, K.C.; Seneda, M.M. (2011) Multioocyte follicles in adult mammalian ovaries. *Anim. Reprod.* 8: 58-67.

Simonetti, L.; Forcada, F.; Rivera, O.E.; Carou, N.; Alberio, R.H.; Abecia, J.A.; Palacin, I. (2008) Simplified superovulatory treatments in Corriedale ewes. *Anim. Reprod. Sc.* 104: 227-237.

Skinner, M.K. (2005) Regulation of primordial follicle assembly and development. *Hum. Reprod. Update* 11: 461-71.

Slomczynska, M.; Duda, M.; Slzak, K. (2001) The expression of androgen receptor, cytochrome P450 aromatase and FSH receptor mRNA in the porcine ovary. *Folia Histochem. Cytobiol.* 39: 9-13.

Smith, C. (1986) Use of embryo transfer in genetic improvement of sheep. *Anim. Prod.* 42: 81-88.

Snyder, R.W.; Maness, S.C.; Gaido, K.W.; Welsch, F.; Sumner, S.C. and Fennell, T.R. (2000) Metabolism and disposition of bisphenol A in female rats. *Toxicology and Applied Pharmacology*, 168: 225-234.

Soto, A.; Sonnenschein, C. (1996) Environmental sex hormones mimics and antagonists. *Comm. Toxicol.* 5: 329-346.

Soto, A. M.; Vandenberg, L. N.; Maffini, M. V.; Sonnenschein, C. (2008) Does breast cancer start in the womb? *Basic Clin. Pharmacol. Toxicol.* 102: 125-133.

Sotomayor-Zarate, R.; Dorfman, M.; Paredes, A. and Lara, H.E. (2008) Neonatal exposure to estradiol valerate programs ovarian sympathetic innervation and follicular development in the adult rat. *Biol. Reprod.* 78: 673 -680.

Steckler, T.; Wang, J.; Bartol, F.F.; Roy SK, Padmanabhan, V. (2005) Fetal programming: prenatal testosterone treatment causes intrauterine growth retardation, reduces ovarian reserve and increases ovarian follicular recruitment. *Endocrinology* 146: 3185-93.

Stephany, R.W. (2001) Hormones in meat: different approaches in the EU and in USA. *APMIS*. 103: 303-4.

Stoker, C.; Rey, F.; Rodríguez, H.; Ramos, J.G.; Sirosky, P.; Larriera, A.; Luque, E.H.; Muñoz-de-Toro, M. (2003) Sex reversal effects on *Caiman latirostris* exposed to environmental relevant doses of the xenoestrogen bisphenol A. *Gen. Comp. Endocrinol.* 133: 287-296.

Stoker, C.; Beldoménico, P.M.; Bosquiazzo, V.L.; Zayas, M.A.; Rey F.; Rodríguez, H.; Muñoz-de-Toro, M.; Luque, E.H. (2008) Developmental exposure to endocrine disruptor chemicals alters follicular dynamics and steroid levels in *Caiman latirostris*. *Gen. Comp. Endocrinol.* 156: 603-12.

Stoker, C.; Repetti, M.R.; García, S.R.; Zayas, M.A.; Galoppo, G.H.; Beldoménico, H.R.; Luque, E.H.; Muñoz-de-Toro, M. (2011) Organochlorine compound residues in the eggs of broad-snouted caimans (*Caiman latirostris*) and correlation with measures of reproductive performance. *Chemosphere* 84: 311-7.

Strauss, J., Kallen, C.; Christenson, L.; Watari, H.; Devoto L.; Arakane, F.; Kiriakidou, M. (1999) The steroidogenic acute regulatory protein (StAR): a window into the complexities of intracellular cholesterol trafficking. *Recent Progress in Hormone Research* 54: 394.

Stubbs, S.A.; Stark, J.; Dilworth, S.M.; Franks, S.; Hardy, K. (2007) Abnormal Preantral Folliculogenesis in Polycystic Ovaries Is Associated with Increased Granulosa Cell Division. *J. Clin. Endoc. Metab.* 92: 4418-4426.

Sugiura-Ogasawara, M.; Ozaki, Y.; Sonta, S.; Makino, T. and Kaoru Suzumori (2005) Exposure to bisphenol A is associated with recurrent miscarriage. *Human Reproduction* 20: 2325-2329.

Susiarjo, M.; Hassold, T. J.; Freeman, E.; Hunt, P. A. (2007) Bisphenol A exposure in utero disrupts early oogenesis in the mouse. *PLoS Genet.* 3: 63-70.

Suzuki, A.; Sugihara, A.; Uchida, K.; Sato, T.; Ohta, Y.; Katsu, Y.; Watanabe, H.; Iguchi, T. (2002) Developmental effects of perinatal exposure to bisphenol-A and diethylstilbestrol on reproductive organs in female mice. *Reprod. Toxicol.* 16: 107-116.

Sweeney, T. (2002) Is exposure to endocrine disrupting compounds during fetal/post-natal development affecting the reproductive potential of farm animals? *Domest. Anim. Endocrinol.* 23: 203-209.

Sweeney, T.; Nicol, L.; Roche, J.F.; Brooks, A.N. (2000) Maternal exposure to octylphenol suppresses ovine fetal follicle-stimulating hormone secretion, testis size and Sertoli cell number. *Endocrinology* 141: 2667-2673.

Szoltys, M.; Slomczynska, M. (2000) Changes in distribution of androgen receptor during maturation of rat ovarian follicles. *Exp. Clin. Endocrinol. Diabetes.* 108: 228-234

Takahashi, O.; Oishi, S. (2000) Disposition of orally administered 2;2-Bis (4-hydroxyphenyl) propane (Bisphenol A) in pregnant rats and the placental transfer to fetuses. *Environ. Health Perspect.* 108: 931-935.

Takeuchi, T.; Tsutsumi, O.; Ikezuki, Y.; Takai, Y.; Taketani, Y. (2004) Positive relationship between androgen and the endocrine disruptor, bisphenol A, in normal women and women with ovarian dysfunction. *Endocr. J.* 51: 165-9.

Tassel, R.; Chamley, W.A.; Kennedy, J.P. (1978) Gonadotrophin levels and ovarian development in the neonatal ewe lamb. *Aust. J. Biol. Sci.* 31: 267-273.

Taylor, J. A.; Welshons, W.V. and vom Saal, F.S. (2008) No Effect of Route of Exposure (Oral; Subcutaneous Injection) on Plasma Bisphenol A throughout 24 hr after Administration in Neonatal Female Mice. *Reprod.Toxicol.* 25: 169-176.

Tetsuka, M.; Whitelaw, P.F.; Bremner, W.J.; Millar, M.R.; Smyth, C.D.; Hillier, S.G. (1995) Developmental regulation of androgen receptor in rat ovary. *J Endocrinol.* 145: 535-543.

Tetsuka, M.; Hillier, S.G. (1997) Differential regulation of aromatase and androgen receptor in granulosa cells. *J. Steroid Biochem. Molec. Biol.* 3–6: 233-239.

Tiemann, U.; Pöhland, R.; Schneider, F. (1996) Influence of organochlorine pesticides on physiological potency of cultured granulosa cells from bovine preovulatory follicles. *Theriogenology* 46: 253-265.

Tilly, J.L. (2003) Ovarian follicle counts – not as simple as 1, 2, 3. *Reprod. Biol. Endocrinol.* 1: 11.

Tinwell, H.; Haseman, J.; Lefevre, P.A.; Wallis, N.; Ashby, J. (2002) Normal sexual development of two strains of rat exposed in utero to low doses of bisphenol A. *Toxicol. Sci.* 68: 339-348.

USEPA (United States Environmental Protection Agency) (1997) Special report on environmental endocrine disruption: an effects assessment and analysis. EPA/630/R-96/012. February 1997. US EPA, Washington, U.S.A.

Ushinohama, K.; Son, D.S.; Roby, K.F.; Rozman, K.K.; Terranova, P.F. (2001) Impaired ovulation by 2,3,7,8- tetrachlorodibenzo-p-dioxin (TCDD) in immature rats treated with equine chorionic gonadotropin. *Reprod. Toxicol.* 15: 275-80.

van den Hurk, R.; Zhao, J. (2005) Formation of mammalian oocytes and their growth, differentiation and maturation within ovarian follicles. *Theriogenology* 63: 1717-51.

Vandenberg, L.N.; Hauser, R.; Marcus, M.; Olea, N.; Welshons, W.V. (2007) Human exposure to bisphenol A (BPA). *Reprod. Toxicol.* 24: 139-177.

Vandenberg, L.N.; Maffini, M.V.; Sonnenschein, C.; Rubin, B.S.; Soto, A.M. (2009) Bisphenol-A and the great divide: a review of controversies in the field of endocrine disruption. *Endocr. Rev.* 30: 75-95.

Varayoud, J.; Ramos, J.G.; Bosquiazzo, V.L., Muñoz-de-Toro, M.; Luque, E.H. (2008) Developmental exposure to Bisphenol A impairs the uterine response to ovarian steroids in the adult. *Endocrinology* 149: 5848-60.

Varayoud, J.; Ramos, J.G.; Bosquiazzo, V.L.; Lower, M.; Muñoz-de-Toro, M.; Luque, E.H. (2011) Neonatal exposure to bisphenol A alters rat uterine implantation-associated gene expression and reduces the number of implantation sites. *Endocrinology* 152: 1101-11.

Veiga-Lopez, A.; Gonzalez-Bulnes, A.; Garcia-Garcia, R.M.; Dominguez, V.; Cocero, M.J. (2005) The effects of previous ovarian status on ovulation rate and early embryo development in response to superovulatory FSH treatments in sheep. *Theriogenology* 63: 1973-1983.

Veiga-Lopez, A.; Luense, L.J.; Christenson, L.K.; Padmanabhan, V. (2013) Developmental programming: gestational bisphenol-A treatment alters trajectory of fetal ovarian gene expression. *Endocrinology*. 154(5):1873-84

Viñoles, C.; Rubianes, E. (1998) Origin of the preovulatory follicle after induced luteolysis during the early luteal phase in ewes. *Canadian Journal of Animal Science* 78:429-431.

Vitt, U.A.; Hayashi, M., Klein C. and Hsueh, A.J.W. (2000) Growth Differentiation Factor-9 Stimulates Proliferation but Suppresses the Follicle-Stimulating Hormone-Induced Differentiation of Cultured Granulosa Cells from Small Antral and Preovulatory Rat Follicles. *Biol. Reprod.* 62: 370-377

Völkel, W.; Colnot, T.; Csanády, G.A.; Filser, J.G.; Dekant, W. (2002) vom Saal, F.S.; Hughes, C. (2005). An extensive new literature concerning low dose effects of bisphenol A shows the need for a new risk assessment. *Environ. Health Perspect.* 113: 926-933.

vom Saal, F.; Bronson, F. (1978) In utero proximity of female mouse fetuses to males: Effect on reproductive performance during later life. *Biol. Reprod.* 19: 842-853.

vom Saal, F. S.; Timms, B.G.; Montano, M.M.; Palanza, P.; Thayer, K.A.; Nagel, S.C.; Dhar, M.D.; Ganjam, V.K.; Parmigiani, S.; Welshons, W.V. (1997) Prostate enlargement in mice due to fetal exposure to low doses of estradiol or diethylstilbestrol and opposite effects at high doses. *Proc. Natl. Acad. Sci. USA.* 94: 2056-2061.

vom Saal, F. S.; Cooke, P. S.; Buchanan, D. L.; Palanza, P.; Thayer, K. A.; Nagel, S. C.; Parmigiani, S.; Welshons, W. V. (1998) A physiologically based approach to the study of bisphenol A and other estrogenic chemicals on the size of reproductive organs, daily sperm production and behavior. *Toxicol. Ind. Health* 14: 239-260.

vom Saal, F.S.; Welshons, W.V. (2006) Large effects from small exposures. II. The importance of positive controls in low-dose research on bisphenol A. *Environ. Res.* 100: 50-76.

Walters, K.A.; Simanainen, U.; Handelsman, D.J. (2010) Molecular insights into androgen actions in male and female reproductive function from androgen receptor knockout models. *Hum. Reprod. Update* 16: 543-58.

Webb, R.; Campbell, B.K. (2007) Development of the dominant follicle: mechanisms of selection and maintenance of oocyte quality. *Society of Reproduction and Fertility* 64: 141-163.

Weil, S.; Vendola, K.; Zhou, J.; Adesanya, O.O.; Wang, J.; Okafor, J.; Bondy, C.A. (1998) Androgen receptor gene expression in the primate ovary: cellular localization, regulation, and functional correlations. *J. Clin. Endocrinol. Metab.* 83: 2479–2485.

Welshons, W.V.; Thayer, K.S.; Taylor, J.; Judy, B.M.; vom Saal, F.S. (2003) Large effects from small exposures. I. Mechanisms for endocrine-disrupting chemicals with estrogenic activity. *Environ. Health Perspect.* 111: 994-1006.

Welshons, W.V.; Nagel, S.C.; vom Saal, F.S. (2006) Large effects from small exposures. III. Endocrine mechanisms mediating effects of bisphenol A at levels of human exposure. *Endocrinology* 147: 56–69.

Weniger, J.P. (1990) Aromatase activity in fetal gonads of mammals. *Journal of Developmental Physiology* 14: 303-306.

Wetherill, Y.B.; Akingbemi, B.T.; Kanno, J.; McLachlan, J.A.; Nadal, A.; Sonnenschein C. (2007) In vitro molecular mechanisms of bisphenol A action. *Reprod Toxicol.* 24: 178-198.

Woodruff, T.J.; Carlson, A.; Schwartz, J.M.; Giudice, L.C. (2008) Proceedings of the Summit on Environmental Challenges to Reproductive Health and Fertility: Executive Summary. *Fertil. Steril.* 89: 281-300.

Wordinger, R.J.; Derrenbacher, J. (1989) In utero exposure of mice to diethylstilbestrol alters neonatal ovarian follicle growth and development. *Acta Anat. (Basel)* 134: 312-8.

Worthington, C.A.; Kennedy, J.P. (1979) Ovarian response to exogenous hormones in 6-week-old lambs. *Aust. J. Biol. Sci.* 33: 91-5.

Yeh, S.; Tsai, M.Y.; Xu, Q.; Mu, X.M.; Lardy, H.; Huang, K.E.; Lin, H.; Yeh, S.D.; Altuwajri, S.; Zhou, X.; Xing, L.; Boyce, B.F.; Hung, M.C.; Zhang, S.; Gan, L. & Chang, C. (2002) Generation and characterization of androgen receptor knockout (ARKO) mice: an in vivo model for the study of androgen functions in selective tissues. *PNAS* 99: 13498-13503.

Yokota, H.; Iwano, H.; Endo, M.; Kobayashi, T.; Inoue, H.; Ikushiro, S.; Yuasa, A. (1999) Glucuronidation of the environmental oestrogen bisphenol A by an isoform of UDP-glucuronosyltransferase, UGT2B1, in the rat liver. *Biochem. J.* 340: 405-409.

Zalko, D.; Soto, A.M.; Dolo, L.; Dorio, C.; Rathahao, E.; Debrauwer, L.; Faure, R.; Cravedi, J.P. (2003) Biotransformations of bisphenol A in a mammalian model: answers and new questions raised by low-dose metabolic fate studies in pregnant CD1 mice. *Environ. Health Perspect.* 111: 309-319.

Páginas web consultadas:

<http://www.epa.gov/iris/subst/0356.htm>, 1993