

REFERENCES

- Alm, P, Bjorklund, A, Owman, C, Sjöberg, N O & Thorbert, G 2007, Reduced tyrosine hydroxylase activity in guinea-pig uterus during pregnancy, *Acta Physiol Scand*, Suppl 452:97-102.
- Alm, P & Lundberg, L M 1988, Co-existence and origin of peptidergic and adrenergic nerves in the guinea pig uterus. Retrograde tracing and immunocytochemistry, effects of chemical sympathectomy, capsaicin treatment and pregnancy, *Cell Tissue Res*, 254:517-530.
- Bae, S E, Corcoran, B M & Watson, E D 2001, Immunohistochemical study of the distribution of adrenergic and peptidergic innervation in the equine uterus and the cervix, *Reproduction*, 122:275-282.
- Bansal, R K, Goldsmith, P C, He, Y, Zaloudek, C J, Ecker, J L & Riemer, R K 1997, A decline in myometrial nitric oxide synthase expression is associated with labor and delivery, *J Clin Invest*, 99:2502-2508.
- Borda, E S, Sterin-Borda, L, Sterin-Speziale, N, Gimeno, M F & Gimeno, A L 1978, Functional pharmacological and morphological characteristics of two regions of rat uterine horns, *Acta Physiol Lat Am*, 28:223-233.
- Brauer, M M 2008, Cellular and molecular mechanisms underlying plasticity in uterine sympathetic nerves, *Auton Neurosci*, 140:1-16.
- Brauer, M M, Shockley, K P, Chavez, R, Richeri, A, Cowen, T & Crutcher, K A 2000, The role of NGF in pregnancy-induced degeneration and regeneration of sympathetic nerves in the guinea pig uterus, *J Auton Nerv Syst*, 79:19-27.

- Chavez-Genaro, R, Lombide, P & Anesetti, G 2006, A quantitative study of rat uterine sympathetic innervation during pregnancy and post partum, *Reprod Fertil Dev*, 18:525-531.
- Finn CA & Porter DG 1975, Cells and tissues of the endometrium, in Finn CA & Porter DG (eds), *The Uterus*, Elek Science, London, pp. 18-26.
- Fried, G, Hokfelt, T, Lundberg, J M, Terenius, L & Hamberger, L 1986, Neuropeptide Y and noradrenaline in human uterus and myometrium during normal and pre-eclamptic pregnancy, *Hum Reprod*, 1:359-364.
- Fried, G, Hokfelt, T, Terenius, L & Goldstein, M 1985, Neuropeptide Y (NPY)-like immunoreactivity in guinea pig uterus is reduced during pregnancy in parallel with noradrenergic nerves, *Histochemie*, 83:437-442.
- Fried, G & Thoresen, M 1990, Effects of neuropeptide Y and noradrenaline on uterine artery blood pressure and blood flow velocity in the pregnant guinea-pig, *Regul Pept*, 28:1-9.
- Gangula, P R, Thota, C, Wimalawansa, S J, Bukoski, R D & Yallampalli, C 2003, Mechanisms involved in calcitonin gene-related Peptide-induced relaxation in pregnant rat uterine artery, *Biol Reprod*, 69:1635-1641.
- Granger, J P, LaMarca, B B, Cockrell, K, Sedeek, M, Balzi, C, Chandler, D & Bennett, W 2006, Reduced uterine perfusion pressure (RUPP) model for studying cardiovascular-renal dysfunction in response to placental ischemia, *Methods Mol Med*, 122:383-392.
- Guenther, A E, Conley, A J, Van Orden, D E, Farley, D B & Ford, S P 1988, Structural and mechanical changes of uterine arteries during pregnancy in the pig, *J Anim Sci*, 66:3144-3152.

- Haase, E B, Buchman, J, Tietz, A E & Schramm, L P 1997, Pregnancy-induced uterine neuronal degeneration in the rat, *Cell Tissue Res*, 288:293-306.
- Jones RE & Lopez KH 2006, The female reproductive system, in Jones RE & Lopez KH (eds), *Human Reproductive Biology*, Academic Press, China, pp. 31-72.
- Kingsley RE 2000, Principles of sensory transduction, in Kingsley RE (ed), *Concise text of neuroscience*, Lippincott Williams & Wilkins, New York, pp. 145-164.
- Klukovits, A, Gaspar, R, Santha, P, Jancso, G & Falkay, G 2002, Functional and histochemical characterization of a uterine adrenergic denervation process in pregnant rats, *Biol Reprod*, 67:1013-1017.
- Krizsan-Agbas, D, Pedchenko, T & Smith, P G 2008, Neurotrimin is an estrogen-regulated determinant of peripheral sympathetic innervation, *J Neurosci Res*, 86:3086-3095.
- Landreth GE. 2006, Growth Factors, in Siegel GJ, Albers RE, Brady ST & Price DL (eds), *Basic Neurochemistry*, Academic Press, New York, pp. 471-484.
- Latini, C, Frontini, A, Morroni, M, Marzioni, D, Castellucci, M & Smith, P G 2008, Remodeling of uterine innervation, *Cell Tissue Res*, 334:1-6.
- Lawson, S N 1995, Neuropeptides in morphologically and functionally identified primary afferent neurons in dorsal root ganglia: substance P, CGRP and somatostatin, *Prog Brain Res*, 104:161-173.
- Leeman, L & Fontaine, P 2008, Hypertensive disorders of pregnancy, *Am Fam Physician*, 78:93-100.
- Llewellyn-Smith, I J, DiCarlo, S E, Collins, H L & Keast, J R 2005, Enkephalin-immunoreactive interneurons extensively innervate sympathetic preganglionic neurons regulating the pelvic viscera, *J Comp Neurol*, 488:278-289.

- Llewellyn-Smith, I J & Hinrichs, J M 2009, Variability in the occurrence of nitric oxide synthase immunoreactivity in different populations of rat sympathetic preganglionic neurons, *J Comp Neurol*, in press.
- Llewellyn-Smith, I J & Minson, J B 1992, Complete penetration of antibodies into vibratome sections after glutaraldehyde fixation and ethanol treatment: Light and electron microscopy for neuropeptides, *J Histochem Cytochem*, 40:1741-1749.
- Llewellyn-Smith, I J, Minson, J B, Morilak, D A, Oliver, J R & Chalmers, J P 1990, Neuropeptide Y-immunoreactive synapses in the intermediolateral cell column of rat and rabbit thoracic spinal cord, *Neurosci Lett*, 108:243-248.
- Lobos, E, Gebhardt, C, Kluge, A & Spanel-Borowski, K 2005, Expression of nerve growth factor (NGF) isoforms in the rat uterus during pregnancy: accumulation of precursor proNGF, *Endocrinology*, 146:1922-1929.
- Maeda K, Ohkura S & Tsukamura H 2000, Physiology of Reproduction, in Krinke GJ (ed), *The Laboratory Rat*, Academic Press, New York, pp. 145-176.
- Majewski, M, Sienkiewicz, W, Kaleczyc, J, Mayer, B, Czaja, K & Lakomy, M 1995, The distribution and co-localization of immunoreactivity to nitric oxide synthase, vasoactive intestinal polypeptide and substance P within nerve fibres supplying bovine and porcine female genital organs, *Cell Tissue Res*, 281:445-464.
- Makris, A, Thornton, C, Thompson, J, Thomson, S, Martin, R, Ogle, R, Waugh, R, McKenzie, P, Kirwan, P & Hennessy, A 2007, Uteroplacental ischemia results in proteinuric hypertension and elevated sFLT-1, *Kidney Int*, 71:977-984.
- Markiewicz, W, Jaroszewski, J J, Bossowska, A & Majewski, M 2003, NPY: its occurrence and relevance in the female reproductive system, *Folia Histochem Cytobiol*, 41:183-192.

- Massmann, G A, Zhang, J & Figueroa, J P 1999, Functional and molecular characterization of nitric oxide synthase in the endometrium and myometrium of pregnant sheep during the last third of gestation, *Am J Obstet Gynecol*, 181:116-125.
- Melton, C E & Saldivar, J T 1967, The linea uteri, a conduction pathway in rat myometrium, *Life Sci*, 6:297-304.
- Mione, M C, Cavallotti, C, Burnstock, G & Amenta, F 1988, The peptidergic innervation of the guinea pig uterine artery in pregnancy, *Basic Appl Histochem*, 32:153-159.
- Mione, M C, Cavanagh, J F, Lincoln, J, Milner, P & Burnstock, G 1990, Pregnancy reduces noradrenaline but not neuropeptide levels in the uterine artery of the guinea-pig, *Cell Tissue Res*, 259:503-509.
- Morales, M A, Holmberg, K, Xu, Z Q, Cozzari, C, Hartman, B K, Emson, P, Goldstein, M, Elfvin, L G & Hokfelt, T 1995, Localization of choline acetyltransferase in rat peripheral sympathetic neurons and its coexistence with nitric oxide synthase and neuropeptides, *Proc Natl Acad Sci U S A*, 92:11819-11823.
- Nakanishi, H, McLean, J, Wood, E & Burnstock, G 1969, The role of sympathetic nerves in control of the nonpregnant and pregnant human uterus, *The Journal of Reproductive Medicine*, 2:20-33.
- Natuzzi, E S, Ursell, P C, Harrison, M, Buscher, C & Riemer, R K 1993, Nitric oxide synthase activity in the pregnant uterus decreases at parturition, *Biochem Biophys Res Commun*, 194:1-8.
- Nelson-Piercy C 2003, Pre-eclampsia: The women at risk, in Critchley H, MacLean A, Poston L & Walker J (eds), *Pre-eclampsia*, RCOG Press, London, pp. 342-353.

- Norman, J E, Thompson, A J, Telfer, J F, Young, A, Greer, I A & Cameron, I T 1999, Myometrial constitutive nitric oxide synthase expression is increased during human pregnancy, *Mol Hum Reprod*, 5:175-181.
- Owman, C 1981, Pregnancy induces degenerative and regenerative changes in the autonomic innervation of the female reproductive tract, *Ciba Found Symp*, 83:252-279.
- Page, E W 1939, The relation between hydatid moles, relative ischemia of the gravid uterus, and the placental origin of eclampsia, *American Journal of Obstetrics and Gynecology*, 37:291-293.
- Page, K L, Celia, G, Leddy, G, Taatjes, D J & Osol, G 2002, Structural remodeling of rat uterine veins in pregnancy, *Am J Obstet Gynecol*, 187:1647-1652.
- Papka, R E, Cotton, J P & Traurig, H H 1985, Comparative distribution of neuropeptide tyrosine-, vasoactive intestinal polypeptide-, substance P-immunoreactive, acetylcholinesterase-positive and noradrenergic nerves in the reproductive tract of the female rat, *Cell Tissue Res*, 242:475-490.
- Papka, R E, McNeill, D L, Thompson, D & Schmidt, H H 1995, Nitric oxide nerves in the uterus are parasympathetic, sensory, and contain neuropeptides, *Cell Tissue Res*, 279:339-349.
- Papka, R E, Thompson, B D & Schmidt, H H 1996, Identification of uterine-related sympathetic neurons in the rat inferior mesenteric ganglion: neurotransmitter content and afferent input, *J Auton Nerv Syst*, 59:51-59.
- Papka RE & Traurig HH 1993, Autonomic efferent and visceral sensory innervation of the female reproductive system: special reference to neurochemical markers in nerves and ganglionic connections, in Maggi CA (ed), *Nervous Control of the Urogenital System*, Harwood Academic Publishers, Chur, pp. 423-466.

- Quinn, M 2005, Pre-eclampsia and partial uterine denervation, *Med Hypotheses*, 64:449-454.
- Richeri, A, Bianchimano, P, Marmol, N M, Viettro, L, Cowen, T & Brauer, M M 2005, Plasticity in rat uterine sympathetic nerves: the role of TrkA and p75 nerve growth factor receptors, *J Anat*, 207:125-134.
- Riemer, R K, Buscher, C, Bansal, R K, Black, S M, He, Y & Natuzzi, E S 1997, Increased expression of nitric oxide synthase in the myometrium of the pregnant rat uterus, *Am J Physiol*, 272:E1008-E1015.
- Roberts J 2007, Pre-eclampsia a two-stage disorder: what is the linkage? Are there directed fetal/placental signals?, in Lyall F & Belfort M (eds), *Pre-eclampsia Etiology and Clinical Practice*, Cambridge University Press, New York, pp. 183-194.
- Roberts JM 2003, Pre-eclampsia: A two stage disorder, in Critchley H, MacLean A, Poston L & Walker J (eds), *Pre-eclampsia*, RCOG Press, London, pp. 66-78.
- Roberts, J M, Pearson, G, Cutler, J & Lindheimer, M 2003, Summary of the NHLBI Working Group on Research on Hypertension During Pregnancy, *Hypertension*, 41:437-445.
- Schobel, H P, Fischer, T, Heuszer, K, Geiger, H & Schmieder, R E 1996, Preeclampsia -- a state of sympathetic overactivity, *N Engl J Med*, 335:1480-1485.
- Thomson, A J, Telfer, J F, Kohlen, G, Young, A, Cameron, I T, Greer, I A & Norman, J E 1997, Nitric oxide synthase activity and localization do not change in uterus and placenta during human parturition, *Hum Reprod*, 12:2546-2552.
- Traurig, H, Saria, A & Lembeck, F 1984, Substance P in primary afferent neurons of the female rat reproductive system, *Naunyn Schmiedebergs Arch Pharmacol*, 326:343-346.

- Traurig HH & Papka RE 1993, Autonomic efferent and visceral sensory innervation of the female reproductive system: special reference to the functional roles of nerves in reproductive organs, in Maggi CA (ed), *Nervous Control of the Urogenital System*, Harwood Academic Publishers, Chur, pp. 103-142.
- VanWijk, M J, Kublickiene, K, Boer, K & VanBavel, E 2000, Vascular function in preeclampsia, *Cardiovasc Res*, 47:38-48.
- Varol, F G, Duchemin, A M, Neff, N H & Hadjiconstantinou, M 2000, Nerve growth factor (NGF) and NGF mRNA change in rat uterus during pregnancy, *Neurosci Lett*, 294:58-62.
- Venkatesha, S, Toporsian, M, Lam, C, Hanai, J, Mammoto, T, Kim, Y M, Bdolah, Y, Lim, K H, Yuan, H T, Libermann, T A, Stillman, I E, Roberts, D, D'Amore, P A, Epstein, F H, Sellke, F W, Romero, R, Sukhatme, V P, Letarte, M & Karumanchi, S A 2006, Soluble endoglin contributes to the pathogenesis of preeclampsia, *Nat Med*, 12:642-649.
- Villar J, Say L, Gulmezoglu AM, Merialdi M, Lindheimer MD, Betran AP & Piaggio G 2003, Eclampsia and pre-eclampsia: A health problem for 2000 years, in Critchley H, MacLean A, Poston L & Walker J (eds), *Pre-eclampsia*, RCOG Press, London, pp. 66-78.
- Westwood, F R 2008, The female rat reproductive cycle: a practical histological guide to staging, *Toxicol Pathol*, 36:375-384.
- Yallampalli, C, Chauhan, M, Thota, C S, Kondapaka, S & Wimalawansa, S J 2002, Calcitonin gene-related peptide in pregnancy and its emerging receptor heterogeneity, *Trends Endocrinol Metab*, 13:263-269.

- Zhou, C C, Zhang, Y, Irani, R A, Zhang, H, Mi, T, Popek, E J, Hicks, M J, Ramin, S M, Kellems, R E & Xia, Y 2008, Angiotensin receptor agonistic autoantibodies induce pre-eclampsia in pregnant mice, *Nat Med*, 14:855-862.
- Zoubina, E V, Fan, Q & Smith, P G 1998, Variations in uterine innervation during the estrous cycle in rat, *J Comp Neurol*, 397:561-571.
- Zoubina, E V, Mize, A L, Alper, R H & Smith, P G 2001, Acute and chronic estrogen supplementation decreases uterine sympathetic innervation in ovariectomized adult virgin rats, *Histol Histopathol*, 16:989-996.
- Zoubina, E V & Smith, P G 2000, Axonal degeneration and regeneration in rat uterus during the estrous cycle, *Auton Neurosci*, 84:176-185.
- Zoubina, E V & Smith, P G 2001, Sympathetic hyperinnervation of the uterus in the estrogen receptor alpha knock-out mouse, *Neuroscience*, 103:237-244.