

6 LITERATUR

Afework M, Tomlinson A, Belai A, Burnstock G (1992) Colocalization of nitric oxide synthase and NADPH-diaphorase in rat adrenal gland. Neuro Report 3:893-896 .

Afework M, Burnstock G. (1995) Colocalization of neuropeptides and NADPH-diaphorase in the intra-adrenal neuronal cell bodies and fibres of the Cell. Tissue Res. 280:291-5.

Aimi Y, Fujimura M, Vincent SR, Kimura H (1991) Localization of NADPH-diaphorase-containing neurons in sensory ganglia of the rat. J Comp Neurol 306:382-392 .

Aimi Y, Kimura H, Kinoshita T, Minami Y, Fujimura M and Vincent S R (1993) Histochemical localization of nitric oxide synthase in rat enteric nervous system. Neurosci 53:553-60.

Alm P, Uvelius B, Ekstrom J, Holmqvist B, Larsson B, Andersson KE. (1995) Nitric oxide synthase-containing neurons in rat parasympathetic, sympathetic and sensory ganglia: a comparative study. Histochem J 27:819-31.

Andersson KE, García-Pascual A, Forman A, Totstrup A (1991) Non-adrenergic, non-cholinergic nerve-mediated relaxation of rabbit urethra is caused by nitric oxide. Acta Physiol Scand 141:133-134

Ashley LM (1962) Laboratory Anatomy of the Turtle. WMC Brown Co. Inc., Dubuque, Iowa.

Assreuy J, Cunha FQ, Liew FY, Moncada S (1993) Feedback inhibition of nitric oxide synthase activity by nitric oxide. Br J Pharmacol 108:833-837.

Baccari GC, Minucci S, Di Matteo L, Chieffi G (1990) Harderian gland and the lacrimal

gland of the lizard *Podarcis s. sicula*: histology, histochemistry, and ultrastructure. *Anat Rec* 226:269-78.

Balaskas C, Saffrey MJ, Burnstock G (1995) Distribution and colocalization of NADPH-diaphorase activity, nitric oxide synthase immunoreactivity, and VIP immunoreactivity in the newly hatched chicken gut. *Anat Rec*. 243:10-8.

Bandyopadhyay A, Chakder S, Rattan S (1997) Regulation of inducible and neuronal nitric oxide synthase gene expression by interferon-gamma and VIP. *Am J Physiol* 272:C1790-7.

Beyak MJ, Xue S, Collman PI, Valdez DT, Diamant NE (2000) Central nervous system nitric oxide induces oropharyngeal swallowing and esophageal peristalsis in the cat. *Gastroenterology* 119:377-85.

Blottner D, Baumgarten HG (1992) Nitric oxide synthetase (NOS) containing sympathoadrenal cholinergic neurons of the rat IML-cell column: evidence from histochemistry, immunohistochemistry and retrograde labeling. *J Comp Neurol* 326:45- 55.

Blottner D. (1997) Nitric oxide and fibroblast growth factor in autonomic nervous system: short- and long-term messengers in autonomic pathway and target-organ control. *Prog Neurobiol* 51:423-38.

Bodegas ME, Villaro AC, Montuenga LM, Moncada S, Riveros-Moreno V, Sesma P. (1995) Neuronal nitric oxide synthase immunoreactivity in the respiratory tract of the frog, *Rana temporaria*. *Histochem J* 27:812-8.

Boeckxstaens G E, Pelckmans P A, Bogers J J, Bult H, De Man J G, Herman A G and Van Maercke Y M (1991a) Evidence for nitric oxide as mediator of non-adrenergic relaxations induced by ATP and GABA in the canine gut. *Br J Pharmacol* 102:434-438.

Boeckxstaens G E, Pelckmans P A, Bogers J J, Bult H, De Man J G, Oosterbosch L, Herman A G and Van Maercke Y M (1991b) Release of nitric oxide upon stimulation of nonadrenergic noncholinergic nerves in the rat gastric fundus. *J Pharmac exp Ther* 256:441-447.

Branchek T A and Gershon M D (1989) Time course of expression of neuropeptide Y, calcitonin gene related peptide and NADPH diaphorase activity in neurons of the developing murine bowel and the appearance of 5-hydroxytryptamine in mucosal enterochromaffin cells. *J comp Neurol* 285:262-273.

Bredt DS, Snyder SH (1989) Nitric oxide mediates glutamate-linked enhancement of cGMP levels in the cerebellum. *Proc Natl Acad Sci USA* 86:9030-3.

Bredt DS, Hwang PM, Snyder SH (1990a) Localization of nitric oxide synthase indicating a neural role for nitric oxide. *Nature* 347:768-770

Bredt DS, Snyder SH (1990b) Isolation of nitric oxide synthetase, a calmodulin-requiring enzyme. *Proc Natl Acad Sci USA* 87:682-685.

Bredt DS, Glatt CE, Hwang PM, Fotuhi M, Dawson TM, Snyder SH (1991) Nitric oxide synthase protein and mRNA are discretely localized in neuronal populations of the mammalian CNS together with NADPH diaphorase. *Neuron* 7:615-624.

Bredt DS, Snyder SH. (1994) Transient nitric oxide synthase neurons in embryonic cerebral cortical plate, sensory ganglia, and olfactory epithelium. *Neuron* 13:301-13.

Brüning G (1993) Localization of NADPH-diaphorase in the brain of the chicken. *J Comp Neurol* 334:192-208.

Brüning G (1994a) NADPH-diaphorase histochemistry in the adrenal gland of the mouse. Acta Histochem 96:205-211.

Brüning G (1994c) Zur Anatomie der neuronalen Stickoxid-Synthase im zentralen und peripheren Nervensystem von Vertebraten. Berlin.

Brüning G, Funk U, Mayer B (1994b) Immunocytochemical localization of nitric oxide synthase in the brain of chicken. Neuro Report 5:2425-2428.

Brüning G, Wiese S, Mayer B (1994d) Nitric oxide synthase in the central nervous system of the turtle, *Trachemys scripta elegans*. J Comp Neurol 348:183-206.

Brüning G (1995a) NADPH-diaphorase is not inhibited by EDTA and is not specific for nitric oxide synthase in the choroid plexus. Neurosci Lett 185:16-19.

Brüning G, Katzbach R, Mayer B (1995b) Histochemical and immunocytochemical localization of nitric oxide synthase in the central nervous system of the goldfish, *Carassius auratus*. J Comp Neurol 358:353-382

Brüning G, Mayer B (1996c) Localization of nitric oxide synthase in the brain of the frog, *Xenopus laevis*. Brain Res 741:331-343.

Brüning G, Hattwig K, Mayer B (1996a) Histochemical and immunocytochemical localization of nitric oxide synthase in the peripheral nervous system of the goldfish. J Histochem Cytochem 44:786.

Brüning G, Hattwig K, Mayer B (1996b) Nitric oxide synthase in the peripheral nervous system of the goldfish, *Carassius auratus*. Cell Tissue Res 284:87-98.

Bult H, Boeckxstaens GE, Pelckmans PA, Jordaens FH, van Maercke YM, Herman AG (1990) Nitric oxide as an inhibitory non-adrenergic non-cholinergic neurotransmitter. *Nature* 345:346-347.

Burnett AL, Lowenstein CJ, Bredt DS, Chang TS, Snyder SH. (1992) Nitric oxide: a physiologic mediator of penile erection. *Science* 257:401-3.

Burnett AL, Tillman SL, Chang TS, Epstein JI, Lowenstein CJ, Bredt DS, Snyder SH, Walsh PC. (1993) Immunohistochemical localization of nitric oxide synthase in the autonomic innervation of the human penis. *J Urol* 150:73-6.

Burnett AL, Nelson RJ, Calvin DC, Liu JX, Demas GE, Klein SL, Kriegsfeld LJ, Dawson VL, Dawson TM, Snyder SH. (1996) Nitric oxide-dependent penile erection in mice lacking neuronal nitric oxide synthase. *Mol Med* 2:288-96.

Burnett AL, Johns DG, Kriegsfeld LJ, Klein SL, Calvin DC, Demas GE, Schramm LP, Tonegawa S, Nelson RJ, Snyder SH, Poss KD. (1998) Ejaculatory abnormalities in mice with targeted disruption of the gene for heme oxygenase-2. *Nat Med* 4:84-7.

Burnstock G, Campbell G, Bennett M, Holman M (1963) Inhibition of the smooth muscle of the taenia coli. *Nature* 200:581-582.

Burnstock G (1969) Evolution of the autonomic innervation of visceral and cardiovascular systems in vertebrates. *Pharmac Rev* 21:247-324.

Burnstock G, Campell G, Satchell Dand Smythe A (1970) Evidence that adenosine triphosphate or a related nucleotide is the transmitter substance released by non-adrenergic inhibitory nerves in the gut. *Br J Pharmac Chemother* 40: 668-688.

Burnstock G (1983) Autonomic neurotransmitters and trophic factors. *J Auton Nerv Syst* 7:213-7.

Burnstock G (1986a) The changing face of autonomic neurotransmission. *Acta Physiol Scand* 126:67-91.

Burnstock G (1986b) The non-adrenergic non-cholinergic nervous system. *Arch Int Pharmacodyn Ther* 280(2 Suppl):1-15.

Cajal Y SR (1909) *Histologie du système nerveux de l'homme et de vertébrés*. Paris.

Calupca MA, Vizzard MA, Parsons RL. (2000) Origin of neuronal nitric oxide synthase (NOS)-immunoreactive fibers in guinea pig parasympathetic cardiac ganglia. *J Comp Neurol* 426:493-504.

Ceccatelli S, Lundberg JM, Fahrenkrug J, Bredt DS, Snyder Sh and Hökfelt T (1992) Evidence for involvement of nitric oxide in the regulation of Hypothalamic portal blood flow. *Neuroscience* 51:769-72.

Ceccatelli S, Lundberg JM, Zhang X, Aman K, Hokfelt T. (1994) Immunohistochemical demonstration of nitric oxide synthase in the peripheral autonomic nervous system. *Brain Res* 656:381-95.

Cellek S, Moncada S. (1997) Nitroergic control of peripheral sympathetic responses in the human corpus cavernosum: a comparison with other species. *Proc Natl Acad Sci USA*.

Chieffi G, Baccari GC, Di Matteo L, d'Istria M, Minucci S, Varriale B (1996) Cell biology of the harderian gland. *Int Rev Cytol* 168:1-80.

Clark RB, Kinsberg ER, Giles WR. (1994) Histochemical localization of nitric oxide synthase in the bullfrog intracardiac ganglion. *Neurosci Lett* 182:255-8.

Costa M, Furness J B, Pompolo S, Brookes S J H, Bornstein J C, Bredt D S and Synder S H (1992) Projections and chemical coding of neurons with immunoreactivity for nirtic oxide synthase in guinea-pig small intestine. *Neurosci Lett* 148:121-125.

Cruce WL, Nieuwenhuys R (1974) The cell masses in the brain stem of the turtle *Testudo hermanni*; a topographical and topological analysis. *J Comp Neurol* 156:277-306.

Cuadra AE, El-Fakahany EE (1997) Enhancement of maximal activation of neuronal nitric oxide synthase at muscarinic M₁ receptors following prolonged agonist treatment. *Eur J Pharmacol* 334:107-10.

Dale H (1933) Nomenclatur of fibres in the autonomic system and their effects. *J Physiol Lond* 80:10-11.

Dawson TM, Bredt DS, Fotuhi M, Hwang PM, Snyder SH (1991) Nitric oxide synthase and neuronal NADPH-diaphorase are identical in brain and peripheral tissue. *Proc Natl Acad Sci USA* 88:7797-7801.

De Giorgio R, Parodi JE, Brecha NC, Brunicardi FC, Becker JM, Go VLW and Sternini C (1994) Nitric oxide prodcing neurons in the monkey and human digestive system. *J Comp Neurol* 342: 619-27.

De Man JG, Pelckmans PA, Boeckxstaens GE, Bult H, Oosterbosch L, Herman AG, Van Maercke YM (1991) The role of nitric oxide in inhibitory non-adrenergic non-cholinergic neurotransmission in the canine lower oesophageal sphincter. *Br J Pharmacol* 103:1092-6.

de Rada OD, Villaro AC, Montuenga LM, Martinez A, Springall DR, Polak JM. (1993) Nitric oxide synthase-immunoreactive neurons in human and porcine respiratory tract. *Neurosci Lett* 162:121-4.

Dey RD, Mayer B, Said SI (1993) Colocalization of vasoactive intestinal peptide and nitric oxide synthase in neurons of the ferret trachea. *Neurosci* 54:839-43.

Dey RD, Altemus JB, Rodd A, Mayer B, Said SI, Coburn RF (1996) Neurochemical characterization of intrinsic neurons in ferret tracheal plexus. *Am J Respir Cell Mol Biol* 14:207-16.

Dhat N, Buchan AMJ (1994) Colocalization of neuropeptides with calbinden D28k and NADPH diaphorase in the enteric nerve plexuses of normal human ileum. *Gastroenterology* 107:680-90.

Dokita S, Morgan WR, Wheeler MAS, Yoshida M, Latifpour J, Weiss RM (1991) NG-nitro-L-arginine inhibits non-adrenergic, non-cholinergic relaxation in rabbit urethral smooth muscle. *Life Sci* 48:24-29.

Drazen DL, Klein SL, Burnett AL, Wallach EE, Crone JK, Huang PL, Nelson RJ. (1999) Reproductive function in female mice lacking the gene for endothelial nitric oxide synthase. *Nitric Oxide* 3:366-74.

Dun NJ, Dun sl, Wu SY, FörstermannU (1993b) Nitric oxide synthase immunoreactivity in rat superior cervical ganglia and adrenal glands. *Neurosci Lett*. 158:51-4.

Dun NJ, Dun sl, Wu SY, Förstermann U, Schmidt HHHW and Tseng LF (1993a) Nitric oxide synthase immunoreactivity in the rat, mouse, cat, squirrel monkey spinal cord. *Neuroscience*

54:845-57.

Ekblad E, Alm P, Sundler F. (1994) Distribution, origin and projections of nitric oxide synthase-containing neurons in gut and pancreas. *Neuroscience* 63:233-48.

Esteban FJ, Pedrosa JA, Jimenez A, Fernandez AP, Bentura ML, Martinez-Murillo R, Rodrigo J, Peinado MA. (1997) Distribution of neuronal nitric oxide synthase in the rat liver. *Neurosci Lett* 226:99-102.

Esteban FJ, Pedrosa JA, Jimenez A, del Moral ML, Rodrigo J, Peinado MA. (1998) Nitrergic innervation of the cat liver. *Neurosci Lett* 243:45-8.

Ferrendelli JA, Chang MM, Kinscherf DA (1974) Elevation of cyclic GMP levels in central nervous system by excitatory and inhibitory amino acids. *J Neurochem* 22:535-40.

Fischer A, Mundel P, Mayer B, Preissler U, Philippin B, Kummer W. (1993) Nitric oxide synthase in guinea pig lower airway innervation. *Neurosci Lett*. 149:157-60.

Furchtgott RF, Zawadzki JV (1980) The obligatory role of endothelial cells in the relaxation of arterial smooth muscle by acetylcholine. *Nature* 288:373-376.

Furness JB, Costa M (1980) Types of nerves in the enteric nervous system. *Neuroscience* 5:1-20

Furness JB, Costa M (1987) The Enteric Nervous System. Churchill-Livingstone London/Edinburgh.

Furness JB, Pompolo S, Shuttleworth CWR and Burleigh DE (1992) Light- and electron-microscopic immunochemical analysis of nerve fibre types innervating the taenia of the

guinea-pig caecum. *Cell Tissue Res* 270:125-37.

Furness JB, Li ZS, Young HM and Förstermann U (1994) Nitric oxide synthase in the enteric nervous system of the guinea-pig: a quantitative description. *Cell Tissue Res* 277:139-49.

Gabe M (1970) The adrenal. In *Biology of the Reptilia* (C Gans and TS Parsons, eds) Morphology C Academic Press London and New York 3:263-318.

Garthwaite J, Charles SL, Chess-Williams R (1988) Endothelium-derived relaxing factor release on activation of NMDA receptors suggests role as intercellular messenger in the brain. *Nature* 336:385-388.

Gaskell WH (1886) On the structure, distribution and function of the nerves which innervate the visceral and vascular systems. *J Physiol Lond* 7:1-80.

Gershon MD (1981) The enteric nervous system. *Ann Rev Neurosci* 4:227-272.

Giovanelli J, Campos KL, Kaufman S. (1991) Tetrahydrobiopterin, a cofactor for rat cerebellar nitric oxide synthase, does not function as a reactant in the oxygenation of arginine. *Proc Natl Acad Sci USA* 88:7091-5.

Golgi C (1894) Untersuchungen über den feineren Bau des centralen und peripherischen Nervensystems. Fischer, Jena.

Gonzalez CM, Brannigan RE, Bervig T, Zelner D, Podlasek CA, McKenna KE, McVary KT. (2001) Protein and gene expression of nitric oxide synthase isoforms I and III in the rat penile shaft. *J Androl* 22:54-61.

Grozdanovic Z, Baumgarten HG, Brüning G (1992) Histochemistry of NADPH-diaphorase, a

marker for neuronal nitric oxide synthase, in the autonomic nervous system of the mouse. *Neuroscience* 48:225-235.

Grozdanovic Z, Mayer B, Baumgarten HG, Brüning G (1994) Nitric oxide synthase-containing nerve fibers and neurones in the gall bladder and biliary pathways of the guinea-pig. *Neuro Report* 5:837-840.

Grozdanovic Z, Gossrau R (1995a) Nonspecific alkaline phosphatase activity can be responsible for staining of NADPH-diaphorase activity in certain non-neuronal cells. *Folia Histochem Cytobiol* 33:3-10.

Grozdanovic Z, Nakos G, Dahrmann G, Mayer B, Gossrau R (1995b) Species-independent expression of nitric oxide synthase in the sarcolemma region of visceral and somatic striated muscle fibers. *Cell Tissue Res* 281:493-499.

Guembe L, Villaro AC (1999) Histochemical demonstration of neuronal nitric oxide synthase during development of mouse respiratory tract. *Am J Respir Cell Mol Biol* 20:342-51.

Gulati P, Tay SS, Leong SK (1997) Nitrergic, peptidergic and substance P innervation of the chick thymus. *J Hirnforsch* 38:553-64.

Hanazawa T, Motosugi H, Konno A, Kaneko T, Tanaka K, Chiba T (1993) Distribution of NADPH-diaphorase positive nerve fibers in the rat nasal mucosa. *Neurosci Lett*. 159:71-4.

Hassall CJ, Saffrey MJ, Belai A, Hoyle CH, Moules EW, Moss J, Schmidt HH, Murad F, Forstermann U, Burnstock G (1992) Nitric oxide synthase immunoreactivity and NADPH-diaphorase activity in a subpopulation of intrinsic neurones of the guinea-pig. *Neurosci Lett* 143:65-8.

Hassall CJ, Saffrey MJ, Burnstock G (1993a) Expression of NADPH-diaphorase activity by guinea-pig paratracheal neurones. *Neuroreport* 4:49-52.

Hassall CJ, Stanford SC, Burnstock G, Buckley NJ (1993b) Co-expression of four muscarinic receptor genes by the intrinsic neurons of the rat and guinea-pig heart. *Neuroscience* 56:1041-8.

Hassall CJ, Hoyle CH. (1997) Heme oxygenase-2 and nitric oxide synthase in guinea-pig intracardiac neurones. *Neuroreport*. 8:1043-6.

Hebard WB and Charipper HA (1955) A comparative study of the morphology and histochemistry of the reptilian adrenal gland. *Zoologica* 40:101-123.

Hedlund P, Ny L, Alm P, Andersson KE (2000) Cholinergic nerves in human corpus cavernosum and spongiosum contain nitric oxide synthase and heme oxygenase. *J Urol* 164:868-75.

Hevel JM, Marletta MA (1992) Macrophage nitric oxide synthase: relationship between enzyme-bound tetrahydrobiopterin and synthase activity. *Biochemistry* 31:7160-5.

Heym C , Colombo-Beckmann M, Mayer B (1994) Immunohistological demonstration of the synthesis enzyme for nitric oxide and mediators in neurons and chromaffin cells of the human adrenal medulla. *Ann. Anat.* 176:11-6.

Hibbs JB Jr, Taintor RR, Vavrin Z (1987) Macrophage cytotoxicity: role for L-arginine deaminase and imino nitrogen oxidation to nitrit. *Science* 235:473-476.

Hiramatsu K, Kawamori Y, Ohshima K. (1999) Histochemical study of the distribution of

nicotinamide adenine dinucleotide phosphate diaphorase (NADPHd)-positive neurons in the chicken caecum. *Anat Histol Embryol* 28:345-9.

Ho KM, Ny L, McMurray G, Andersson KE, Brading AF, Noble JG. (1999) Co-localization of carbon monoxide and nitric oxide synthesizing enzymes in the human urethral sphincter. *J Urol* 161:1968-72.

Holmqvist BI, Ostholt T, Alm P, Ekstrom P. (1994) Nitric oxide synthase in the brain of a teleost. *Neurosci Lett* 171:205-8.

Hope BT, Michael GJ, Knigge KM, Vincent SR (1991) Neuronal NADPH-diaphorase is a nitric oxide synthase. *Proc Natl Acad Sci USA* 88:2811-2814.

Hoyle CH, Burnstock G. (1986) Evidence that ATP is a neurotransmitter in the frog heart .*Eur J Pharmacol* 124:285-9.

Hoyle CH and Burnstock G (1989) Neuromuscular transmission in the gasrtointestinal tract. In GF Makhoul (ed.) *Handbook of Physiol. Sect. 6. The Gastrointestinal System Vol. I* American Physiol Society, Wash. 435-464.

Huang PL, Dawson TM, Bredt DS, Snyder SH, Fishman MC (1993) Targeted disruption of the neuronal nitric oxide synthase gene. *Cell* 75:1273-1286.

Huang PL. (2000) Mouse models of nitric oxide synthase deficiency. *J Am Soc Nephrol* 11 Suppl 16:120-3.

Ignarro LJ, Buga GM, Wood KS, Byrns RE, Chaudhuri G (1987) Endothelium-derived relaxing factor produced and released from artery and vein is nitric oxide. *Proc Natl Acad Sci USA* 84:9265-9269.

Jansson L, Falkmer S (1998) Blood flow to the pancreatic islet parenchyma of the Atlantic hagfish (*Myxine glutinosa*). *Horm Metab Res.* 30:182-7.

Jiang PJ, Terashima S (1996) Distribution of NADPH-diaphorase in the central nervous system of an infrared-sensitive snake, *Trimeresurus flavoviridis*. *Brain Res.* 713:168-77.

Jones SP, Girod WG, Huang PL, Lefer DJ. (2000). Myocardial reperfusion injury in neuronal nitric oxide synthase deficient mice. *Coron Artery Dis* 11:593-7.

Kadota O, Matsuda S, Ohta S, Kumon Y, Sakaki S, Sakanaka M. (1996) Origins of nitric oxide synthase-containing nerve fibers in the rat basilar artery with reference to the fine structure of the nerve fibers. *Brain Res.* 706:129-36.

Keast JR (1991) Patterns of co-existence of peptides and differences of nerve fibre types associated with noradrenergic and non-noradrenergic (putative cholinergic) neurons in the major pelvic ganglion of the male rat. *Cell Tissue Res* 266:405-15.

Kim YC, Davies MG, Hagen PO, Carson CC 3rd (1994) Experimental evidence for endothelium dependent relaxation and neuronal nitric oxide in corpus cavernosum. *Yonsei Med J* 35:308-13.

Kirch W, Horneber M, Tamm ER (1996) Characterization of Meibomian gland innervation in the cynomolgus monkey (*Macaca fascicularis*). *Anat Embryol (Berl)* 193:365-75.

Kirchgessner AL, Liu MT and Gershon MD (1994) NADPH diaphorase (nitric oxide synthase)-containing nerves in the enteropancreatic innervation: sources, costored neuropeptides and pancreatic function. *J Comp Neurol* 342:115-30.

Kishimoto J, Keverne EB, Hardwick J, Emson PC (1993) Localization of nitric oxide synthase in the mouse olfactory and vomeronasal system: a histochemical, immunological and in situ hybridization study. Eur J Neurosci 5:1684-94.

Kline LW, Pang PK (1994) Calcitonin gene-related peptide relaxes cholecystokinin-induced tension in Iguana iguana gallbladder strips. Gen Comp Endocrinol 95:381-6.

Klimaschewski L, Kummer W, Mayer B, Couraud JY, Preissler U, Philippin B, Heym C (1992) Nitric oxide synthase in cardiac nerve fibers and neurons of rat and guinea-pig heart. Circ Res 71:1533-1537.

Klimaschewski L, Kummer W, Mayer B (1994) Co-localization of nitric oxide synthase with vasoactive intestinal polypeptide and neuropeptide Y in the guinea-pig heart. Cell Vision 1:131-137.

Knight GE, Burnstock G (1999) NANC relaxation of the circular smooth muscle of the oesophagus of the *Agama* lizard involves the L-arginine-nitric oxide synthase pathway. Comp Biochem Physiol C Pharmacol Toxicol Endocrinol 122:165-171.

Knowles RG, Palacios M, Palmer RMJ, Moncada S (1988) Formation of nitric oxide from L-arginine in the central nervous system: a transduction mechanism for stimulation of the soluble guanylate cyclase. Proc Natl Acad Sci USA 86:5159-5162.

Kobzik L, Reid MB, Bredt DS, Stamler JS (1994) Nitric oxide in skeletal muscle. Nature 372:546-548.

Kolossow NG (1930) Zur Frage der Innervation der Nebennieren. Z f mikr-anat Forsch 20:107-121.

Kuntz A (1953) The Autonomic Nervous System. 4th edn, Lea and Febiger, Philadelphia.

Lamanna C, Costagliola A, Vittoria A, Mayer B, Assisi L, Botte V, Cecio A (1999) NADPH-diaphorase and NOS enzymatic activities in some neurons of reptilian gut and their relationships with two neuropeptides. *Anat Embryol* 199:397-405.

Lamanna C, Vittoria A, Assisi L, Lucini C, Castaldo L, Botte V (2001) NADPH-d positive neurons of the lizard *Podarcis sicula* oviduct and their relationship to 17beta-estradiol hormone. *Life Sci* 69:1765-73.

Langley, JN and Dickinson WL (1889) On the local paralysis of peripheral ganglia, and on the connexion of different classes of nerve fibres with them. *Proc Roy Soc* 46:423-431.

Langley JN (1898) On the union of the cranial autonomic (visceral) fibres with the nerve cells of the superior cervical ganglion. *J Physiolog Lond*. 23:241-270.

Langley JN (1900) The sympathetic and other related systems of nerves. In Schäfer, EA: Text-Book of Physiology, 2nd ed., pp. 616-696. Young J. Pentland, Edinburgh und London.

Langley JN (1921) The Autonomic Nervous System. Part1. W Heffer, Cambridge.

Levin RM, Hypolite J, Broderick GA (1994) Comparative studies on rabbit corpus cavernosal contraction and relaxation. An in vitro study. *J Androl* 15:36-40.

Li CG, Rand MJ (1989) Evidence for a role of nitric oxide in the neurotransmitter system mediating relaxation of the rat anococcygeus muscle. *Clin Exp Pharmacol Physiol* 16:933-938

Li CG and Rand MJ (1990) Nitric oxide and vasoactive intestinal polypeptide mediate non-

arenergic, non-cholinergic inhibitory transmission to smooth muscle of the rat gastric fundus.
Eur J Pharmac 191:303-309.

Li ZS, Furness JB, Young HM, Campbell G (1992) Nitric oxide synthase immunoreactivity and NADPH-diaphorase enzyme activity in neurons of the gastrointestinal tract of the toad, *Bufo marinus*. Arch Histol Cytol 55:333-350.

Li ZS, Furness JB. (1993b) Nitric oxide synthase in the enteric nervous system of the rainbow trout, *Salmo gairdneri*. Arch Histol Cytol 56:185-93.

Li ZS, Murphy S, Furness JB, Young HM, Campbell G (1993a) Relationships between nitric oxide synthase, vasoactive intestinal polypeptide and substance P immunoreactivities in neurons of the amphibian intestine. J Auton Nerv Syst 44:197-206.

Lindh B, Hokfelt T (1990) Structural and functional aspects of acetylcholine peptide coexistence in the autonomic nervous system. Prog Brain Res 84:175-91.

Liu HP, Leong SK, Tay SS (1994). Localization of NADPH-diaphorase positive neurons in the pancreas of the mouse, rat, chick, kitten and monkey. J Hirnforsch 35:501-10.

Lyon MJ. (2000) Jun Nonadrenergic innervation of the rat laryngeal vasculature. Anat Rec 259:180-8.

Marletta MA. (1989) Nitric oxide: biosynthesis and biological significance. Trends Biochem Sci 14:488-92.

Marletta MA (1993) Nitric oxide synthase structure and mechanism. J Biol Chem 268:12231-12234.

Marletta MA (1994) Nitric oxide synthase: aspects concerning structure and catalysis. *Cell* 78:927-30.

Marley PD, McLeod J, Anderson C, Thomson KA. (1995) Nerves containing nitric oxide synthase and their possible function in the control of catecholamine secretion in the bovine adrenal medulla. *J Auton Nerv Syst* 54:184-94.

Martinez-Ciriano C, Junquera C, Castiella T, Gomez-Barrena E, Aisa J, Blasco J. (2000) Intrinsic innervation in the intestine of the lizard *Podarcis hispanica*. *Histol Histopathol* 15:1093-105.

Matsuda H, Kusakabe T, Kawakami T, Takenaka T, Sawada H, Tsukuda M. (1996) Coexistence of nitric oxide synthase and neuropeptides in the mouse vomeronasal organ demonstrated by a combination of double labeling and a multiple dye filter. *Brain Res* 712:35-9.

Matsumoto T, Nakane M, Pollock JS, Kuk JE, Förstermann U (1993) A correlation between soluble brain nitric oxide synthase and NADPH-diaphorase activity is only seen after exposure of the tissue to fixative. *Neurosci Lett* 155:61-64.

Mayer B, John M, Böhme E (1990) Purification of a Ca⁺⁺/calmodulin-dependent nitric oxide synthase from porcine cerebellum. *FEBS Lett* 277:215-219.

Mayer B, John M, Heinzel B, Werner ER, Wachter H, Schultz G, Bohme E (1991) Brain nitric oxide synthase is a biopterin- and flavin-containing multi-functional oxido-reductase. *FEBS Lett* 288:187-91.

McNeill DL, Traugh Jr NE, Vaidya AM, Hua HT, Papka RE (1992) Origin and distribution of

NADPH-diaphorase-positive neurons and fibers innervating the urinary bladder of the rat. Neurosci Lett 147:33-39.

Mensah-Brown EP, Bailey TA, Pallot DJ, Garner A (2000) Peptidergic hormones and neuropeptides, and aminergic neurotransmitters of the pancreatic islets of the Houbara bustard (*Chlamydotis undulata*). J Anat 196:233-41.

Minami Y, Kimura H, Aimi Y and Vincent SR (1994) Projections of nitric oxide synthase-containing fibres from the sphenopalatine ganglion to cerebral arteries in the rat. Neuroscience 60:745-59.

Moncada S, Palmer RMJ, Higgs EA (1989) Biosynthesis of nitric oxide from L-arginine: a pathway for the regulation of cell function and communication. Biochem Pharmacol 38:1709-1715.

Morris R, Southam E, Gittins SR, Garthwaite J. (1993) NADPH-diaphorase staining in autonomic and somatic cranial ganglia of the rat. Neuroreport 4:62-4.

Nakos G, Gossrau R (1994) When NADPH diaphorase (NADPHd) works in the presence of formaldehyde, the enzyme appears to visualize selectively cells with constitutive nitric oxide synthase (NOS) Acta Histochem 96:335-43.

Neuhuber WL, Worl J, Berthoud HR, Conte B. (1994) NADPH-diaphorase-positive nerve fibers associated with motor endplates in the rat esophagus: new evidence for co-innervation of striated muscle by enteric. Cell Tissue Res 1994 276:23-30.

Nichols K, Krantis A and Staines W (1992) Histochemical localisation of nitric oxide-synthesizing neurons and vascular sites in the guinea-pig intestine. Neuroscience 51:791-799.

Nilsson S (1983) Autonomic nerve function in the vertebrates. Springer, Berlin Heidelberg New York.

Nilsson S, Holmgren S (1989) Novel neurotransmitters in the autonomic nervous system of nonmammalian vertebrates. *Pharmac Ther* 41:257-287.

Nozaki K, Moskowitz MA, Maynard KI, Koketsu N, Dawson TM, Bredt DS, Snyder SH. (1993) Possible origins and distribution of immunoreactive nitric oxide synthase- containing nerve fibers in cerebral arteries. *J Cereb Blood Flow Metab* 3:70-9.

Ogushi K (1913a) Anatomische Studien an der japanischen dreikralligen Lippenschildkröte (*Trionyx japonicus*), II Mitteilungen, Muskel und peripheres Nervensystem, *Morph Jb* 46:299-562.

Ogushi K (1913b) Zur Anatomie der Hirnnerven und des Kopfsympathicus von *Trionyx japonicus* nebst einigen kritischen Bemerkungen. *Morph Jb* 45:441-480.

Olsson C, Gibbins I. 1999. Nitric oxide synthase in the gastrointestinal tract of the estuarine crocodile, *Crocodylus porosus*. *Cell Tissue Res* 296:433-437.

Palmer RMJ, Ferrige AG, Moncada S (1987) Nitric oxide release accounts for the biological activity of endothelium-derived relaxing factor. *Nature* 327:524-526.

Papka RE, McNeill DL (1992) Distribution of NADPH-diaphorase-positive nerves in the uterine cervix and neurons in dorsal root and paracervical ganglia of the female rat. *Neurosci Lett* 147:224-8.

Pauletzki JG, Sharkey KA, Davison JS, Bomzon A, Shaffer EA (1993) Involvement of L-

arginine-nitric oxide pathways in neural relaxation of the sphincter of Oddi. Eur J Pharmacol 232:263-270 .

Persson K, Alm P, Johansson K, Larsson B, Andersson KE. (1993) Nitric oxide synthase in pig lower urinary tract: immunohistochemistry, NADPH diaphorase histochemistry and functional effects. Br J Pharmacol 110:521-30.

Persson K, Johansson K, Alm P, Larsson B, Andersson KE. (1997) Morphological and functional evidence against a sensory and sympathetic origin of nitric oxide synthase-containing nerves in the rat lower urinary tract. Neuroscience.77:271-81.

Powers AS, Reiner A. (1980) A stereotaxic atlas of the forebrain and midbrain of the eastern painted turtle (*Chrysemys picta picta*). J Hirnforsch 21:125-59..

Rengasamy A, Johns RA (1993) Regulation of nitric oxide synthase by nitric oxide. Mol Pharmacol 44:124-128.

Santer RM and Symons D (1993) Distribution of NADPH-diaphorase activity in rat paravertebral, prevertebral and pelvic sympathetic ganglia. Cell Tissue Res. 271:115-21.

Scherer-Singler U, Vincent SR, Kimura H, McGeer EG (1983) Demonstration of a unique population of neurons with NADPH-diaphorase histochemistry. J Neurosci Methods 9:229-234.

Schrodl F, Brehmer A, Neuhuber WL. (2000) Intrinsic choroidal neurons in the duck eye express galanin. J Comp Neurol 425:24-33.

Schwarz PM, Rodriguez-Pascual F, Koesling D, Torres M, Forstermann U. (1998) Functional

coupling of nitric oxide synthase and soluble guanylyl cyclase in controlling catecholamine secretion from bovine chromaffin cells. *Neuroscience*. 82(1):255-65.

Sears CE, Choate JK, Paterson DJ (1998) Effect of nitric oxide synthase inhibition on the sympatho- vagal control of heart rate. *J Auton Nerv Syst* 73:63-73.

Sharp FR, Gonzales F, Ferriero DM and Sagar SM (1986) Injured adult neocortical neurons sprout fibres into surviving fetal frontal cortex transplants: evidence using NADPH-diaphorase staining. *Neuroscience Lett*. 65:204-8.

Shimosegawa T, Abe T, Satoh A, Askura T, Yoshida K, Koizumi, M, and Toyota T (1992) Histochemical demonstration of NADPH-diaphorase activity, a marker for nitric oxide synthase, in neurons of the rat pancreas. *Neurosci Lett* 148:67-70.

Shimosegawa T, Toyota T (1994) NADPH-diaphorase activity as a marker for nitric oxide synthase in neurons of the guinea pig respiratory. *Am J Respir Crit Care Med.*;150:1402-10.

Smet PJ, Edyvane KA, Jonavicius J, Marshall VR. (1994) Distribution of NADPH-diaphorase- *J Auton Nerv Syst* 47:109-13.

Soliman MA (1964) Die Kopfnerven der Schildkröten. *Z wiss Zool* 169:216-312.

Sosunov AA, Hassall CJ, Loesch A, Turmaine M, Burnstock G. (1996) Nitric oxide synthase-containing neurones and nerve fibres within cardiac ganglia of rat and guinea-pig: an electron-microscopic immunocytochemical study. *Cell Tissue Res* 284:19- 28.

Stark ME, Bauer AJ, Szurszewski JH (1991) Effect of nitric oxide on circular muscle of the canine small intestine *J Physiol* 444:743-61.

Steele PA, Gibbins IL, Morris JL, Mayer B (1994) Multiple populations of neuropeptide-containing intrinsic neurons in the guinea-pig. *Neuroscience* 62:241-50.

Stuehr DJ, Gross SS, Sukuma I, Levi R, Nathan CF (1989) Activated murine macrophages secrete a metabolite of arginine with the bioactivity of endothelium-derived relaxing factor and the chemical reactivity of nitric oxide. *J Exp Med* 169:1011-1020.

Sumeray MS, Rees DD, Yellon DM. 2000 Jan. Infarct size and nitric oxide synthase in murine myocardium. *J Mol Cell Cardiol* 32:35-42.

Sun W, Erichsen Jt and May PJ (1994) NADPH-diaphorase reactivity in ciliary ganglion neurons: a comparison of distributions in the pigeon, cat and monkey. *Visual Neurosci* 11:1027-31.

Syed MA, Leong SK, Chan AS. (1994) Localization of NADPH-diaphorase reactivity in the chick and mouse thyroid gland .*Thyroid* 4:475-8.

Tamura M, Kagawa S, Kimura K, Kawanishi Y, Tsuruo Y, Ishimura K. (1995) Coexistence of nitric oxide synthase, tyrosine hydroxylase and vasoactive intestinal polypeptide in human penile tissue--a triple histochemical and immunohistochemical study. *J Urol* 153:530-4.

Tamura M, Kagawa S, Tsuruo Y, Ishimura K, Kimura K, Kawanishi Y. (1997) Localization of NADPH diaphorase and vasoactive intestinal polypeptide-containing neurons in the efferent pathway to the rat corpus cavernosum. *Eur Urol* 32:100-4.

Tanaka K, Fukuuchi Y, Shirai T, Nogawa S, Nozaki H, Nagata E, Kondo T, Suzuki N, Shimizu T. (1995) Chronic transection of post-ganglionic parasympathetic and nasociliary

nerves does not affect local cerebral blood flow in the rat. J Auton Nerv Syst. 53:95-102.

Tanaka K, Chiba T. (1998) The vagal origin of preganglionic fibers containing nitric oxide synthase in the guinea-pig heart. Neurosci Lett. 252:135-8.

Tanaka K, Hassall CJ, Burnstock G. (1993) Distribution of intracardiac neurones and nerve terminals that contain a marker for nitric oxide, NADPH-diaphorase, in the guinea-pig heart. Cell Tissue Res 273:293-300.

Thomas E, Pearse AGE (1961) The fine localization of dehydrogenases in the nervous system. Histochem 2:266-282.

Thomas E, Pearse AGE (1964) The Solitary Active Cells. Histochemical Demonstration of Damage-Resistant Nerve Cells with a TPN-diaphorase reaction. Acta Neuropath 3:238- 249.

Thornbury KD, Ward SM, Dalziel HH, Carl A, Westfall DP, Sanders KM. (1991) Nitric oxide and nitrosocysteine mimic nonadrenergic, noncholinergic hyperpolarization in canine proximal colon. Am J Physiol 261:G553-7.

Toda N, Ayaliki K, Yoshida K, Kimura H and Okamura T (1993) Impairment by damageof the pterygopalatine ganglion of nitroxidergic vasodilator nerve function in canine cerebral and retinal arteries. Circ Res 72:206-13.

Toellner R (1986) Illustr. Geschichte der Medizin. Bd 2, Andreas & Andreas, Salzburg.

Ursell PC, Mayes M. (1993) The majority of nitric oxide synthase in pig heart is vascular and not neural. Cardiovasc Res 27:1920-4.

Ursell PC, Mayes M. (1995) Anatomic distribution of nitric oxide synthase in the heart. Int J Cardiol 50:217-23.

Van Voorhis BJ, Moore K, Strijbos PJ, Nelson S, Baylis SA, Grzybicki D, Weiner CP (1995) Expression and localization of inducible and endothelial nitric oxide synthase in the rat ovary. Effects of gonadotropin stimulation in vivo. J Clin Invest. 96:2719-26.

Vanderwinden J-M, Mailleux P, Schiffmann SN, Vanderhaegen J-J, De Laet M-H (1992) Nitric oxide synthase activity in infantile hypertrophic pyloric stenosis. N Engl J Med 327:511-5.

Vaney DI, Young HM (1988) GABA-like immunoreactivity in NADPH-diaphorase amacrine cells of the rabbit retina. Brain Res 474:380-5.

Vanhatalo S, Parkkisenniemi U, Steinbusch HW, de Vente J, Klinge E. (2000) No colocalization of immunoreactivities for VIP and neuronal NOS, and a differential relation to cGMP-immunoreactivity in bovine penile smooth muscle. J Chem Neuroanat 19:81-91.

Vincent SR, Johansson O, Hökfelt T, Skirboll L, Elde RP, Terenius L, Kimmel J and Goldstein M (1983) NADPH diaphorase: a selective histochemical marker for striatal neurons containing both somatostatin and avian pancreatic polypeptide (APP)- like immunoreactivities. J Comp Neurol 217:252-63.

Vincent SR, Satoh K, Armstrong DM, Panula P, Vale W and Fibieger HC (1986) Neuropeptides and NADPH diaphorase activity in the ascending cholinergic reticular system of the rat. Neuroscience 17:167-82.

Vincent SR (1994) Nitric oxide: a radical neurotransmitter in the central nervous system. Prog

Neurobiol 42:129-60.

Werkstrom V, Alm P, Persson K, Andersson KE. (1998) Inhibitory innervation of the guinea-pig urethra; roles of CO, NO and VIP. J Auton Nerv Syst 74:33-42.

Wörl J, Wiesand M, Mayer B, Greskötter KR and Neuhuber WL (1994) Neuronal and endothelial nitric oxide synthase immunoreactivity and NADPH-diaphorase staining in rat and human pancreas: influence of fixation. Histochemistry 102:353-64.

Xue L, Farrugia G, Miller SM, Ferris CD, Snyder SH, Szurszewski JH (2000) Carbon monoxide and nitric oxide as coneurotransmitters in the enteric nervous system: evidence from genomic deletion of biosynthetic enzymes. Proc Natl Acad Sci U S A. 97:1851-5.

Yamamoto R, Bredt DS, Snyder SH, Stone RA. (1993) The localization of nitric oxide synthase in the rat eye and related cranial ganglia. Neuroscience 54:189-200.

Yoshida K, Okamura T and Toda N (1994) Histological and functional studies on the nitroxidergic nerve innervating monkey cerebral, mesenteric and temporal arteries. Jpn J Pharmacol 65:351.

Yoshida K, Toda N. (1996). NADPH diaphorase-positive neurons in the intracardiac plexus of human, monkey and canine right atria. Brain Res. 724:256-9.

Zakhary R, Poss KD, Jaffrey SR, Ferris CD, Tonegawa S, Snyder SH (1997) Targeted gene deletion of heme oxygenase 2 reveals neural role for carbon monoxide. Proc Natl Acad Sci USA 94:14848-53

Zhang X, Ji RR, Arvidsson J, Lundberg JM, Bartfai T, Bedecs K, Hokfelt T. (1996)

Expression of peptides, nitric oxide synthase and NPY receptor in trigeminal and nodose ganglia after nerve lesions. *Exp Brain Res* 111:393-404.

Zhu W, Dey RD (2001) Projections and pathways of VIP- and nNOS-containing airway neurons in ferret trachea. *Am J Respir Cell Mol Biol* 24:38-43.