

文献

Advenier, C., Naline, E., Drapeau, G., Regoli, D. Relative potencies of neurokinins in guinea pig trachea and human bronchus. *Eur J Pharmacol* 139:133-137, 1987.

Agrawal, K.P. Specific airway conductance in guinea pigs: Normal values and histamine induced fall. *Respir Physiol* 43:23-30, 1981.

Almenoff, J., Orłowski, M. Membrane-bound kidney neutral metalloendopeptidase: Interaction with synthetic substrates, natural peptides, and inhibitors. *Biochemistry* 22:590-599, 1983.

American Thoracic Society. Chronic obstructive lung disease. A statement of the committee on therapy. *Am Rev Respir Dis* 92: 513-518, 1965.

Andersson, P., Persson, H. Effect of substance P on pulmonary resistance and dynamic pulmonary compliance in the anesthetized cat and guinea-pig. *Acta Pharmacol Toxicol (Copenh)* 41:444-448, 1977.

Andersson, P. Antigen-induced bronchial anaphylaxis in actively sensitized guinea pigs. The effects of booster injection and cyclophosphamide treatment. *Int Archs Allergy appl Immun* 64: 249-258, 1981.

Arai, H., Hori, S., Aramori, I., Ohkubo, H., Nakanishi, S. Cloning and expression of a cDNA encoding an endothelin receptor. *Nature* 348:730-732, 1990.

Averill, F. J., Hubbard, W. C., Proud, D., Gleich, G. J., Liu, M. C. Platelet activation in the lung after antigen challenge in a model of allergic asthma. *Am Rev Respir Dis* 145:571-576, 1992.

Barnes, P. J. Neurogenic inflammation in airways and its modulation. *Arch Int Pharmacodyn* 303:67-82, 1990.

Black, P. N., Ghatei, M. A., Takahashi, K., Watt, D. B., Krausz, T., Dollery, C. T., Bloom, S. R. Formation of endothelin by cultured airway epithelial cells. *FEBS Lett* 255:129-132, 1989.

Bolger, G. T., Liard, F., Krogsrud, R., Thibeault, D., Jaramillo, J. Tissue specificity of endothelin binding sites. *J Cardiovasc Pharmacol* 16:367-375, 1990.

Booij-Noord, H., Orie, N. G. M., de Vries K. Immediate and late bronchial obstructive reactions to inhalation of house dust and protective effects of disodium cromoglycate and predonisolone. *J Allergy Clin Immunol* 48:344-354, 1971.

Borson, D. B., Corrales, R., Varsano, S., Gold, M., Viro, N. Enkephalinase inhibitors potentiate substance P-induced secretion of $^{35}\text{SO}_4$ -macromolecules from ferret trachea. *Exp Lung Res* 12:21-36, 1987.

Borson, D. B., Brokaw, J. J., Sekizawa, K., McDonald, D. M., Nadel, J. A. Neutral endopeptidase and neurogenic inflammation in rats with respiratory infections. *J Appl Physiol* 66:2653-2658, 1989.

Borson, D. B., Gruenert, D. C. Glucocorticoids induce neutral endopeptidase in transformed human tracheal epithelial cells. *Am J Physiol* 260(Lung Cell Mol Physiol 4):L83-L89, 1991.

Bowes, M., Kenny, A. J. Endopeptidase-24.11 in pig lymph nodes. Purification and immunocytochemical localization in reticular cells. *Biochem J* 236:801-810, 1986.

Brain, S. D., Williams, T. J. Inflammatory oedema induced by synergism between calcitonin gene-related peptide (CGRP) and mediators of increased vascular permeability. *Br J Pharmacol* 86:855-860, 1985.

Candenas, M. L., Naline, E., Sarria, B., Advenier, C. Effect of epithelium removal and of enkephalin inhibition on the bronchoconstrictor response to three endothelins of the human isolated bronchus. *Eur J Pharmacol* 210:291-297, 1992.

Cartier, A., Thomson, N. C., Frith, P. A., Roberts, R., Hargreave, F. E. Allergen-induced increase in bronchial responsiveness to histamine: relationship to the late asthmatic response and change in airway caliber. *J Allergy Clin Immunol* 70:170-177, 1982.

Castairs, J. R., Barnes, P. J. Autoradiographic mapping of substance P receptors in lung. *Eur J Pharmacol* 127:295-296, 1986.

Checler, F., Emson, P. C., Vincent, J. P., Kitabgi, P. Inactivation of neurotensin by rat brain synaptic membranes. Cleavage at the Pro¹⁰-Tyr¹¹ bond by endopeptidase 24.11 (enkephalinase) and a peptidase different from proline-endopeptidase. *J Neurochem* 43:1295-1301, 1984.

Ciba Guest Symposium. Terminology, definitions and classifications of chronic pulmonary emphysema and related conditions. *Thorax* 14:286-299, 1959.

Coles, S. J., Neill, K. H., Reid, L. M. Potent stimulation of glycoprotein secretion in canine trachea by substance P. *J Appl Physiol* 57:1323-1327, 1984.

Connelly, J. C., Skidgel, R. A., Schulz, W. W., Johnson, A. R., Erdos, E. G. Neutral endopeptidase 24.11 in human neutrophils: cleavage of chemotactic peptide. *Proc Natl Acad Sci U S A* 82:8737-8741, 1985.

Crimi, E., Brusasco, V., Losurdo, E., Crimi, P. Predictive accuracy of late asthmatic reaction to dermatophagoides pteronyssinus. *J Allergy Clin Immunol* 78:908-913, 1986.

Crimi, E., Balbo, A., Milanese, M., Miadonna, A., Rossi, G. A., Brusasco, V. Airway inflammation and occurrence of delayed bronchoconstriction in exercise-induced asthma. *Am Rev Respir Dis* 146:507-512, 1992.

De Monchy, J. G. R., Kauffman, H. F., Venge, P., Koeter, G. H., Jansen, H. M., Sluiter, H. J., De Vries, K. Bronchoalveolar eosinophilia during allergen-induced late asthmatic reactions. *Am Rev Respir Dis* 131:373-376, 1985.

Diaz, P., Gonzalez, M. C., Galleguillos, F. R., Ancic, P., Cromwell, O., Shepherd, D., Durham, S. R., Gleich, G. J., Kay, A. B. Leukocytes and mediators in bronchoalveolar lavage during allergen-induced late-phase asthmatic reactions. *Am Rev Respir Dis* 139:1383-1389, 1989.

Dixon, C. M. S., Barnes, P. J. Bradykinin-induced bronchoconstriction: Inhibition by nedocromil sodium and sodium cromoglycate. *Br J clin Pharmac* 27:831-836, 1989.

Dusser, D. J., Djokic, T. D., Borson, D. B., Nadel, J. A. Cigarette smoke induces bronchoconstrictor hyperresponsiveness to substance P and inactivates airway neutral endopeptidase in the guinea pig. Possible role of free radicals. *J Clin Invest* 84:900-906, 1989a.

Dusser, D. J., Jacoby, D. B., Djokic, T. D., Rubinstein, I., Borson, D. B., Nadel, J. A. Virus induce airway hyperresponsiveness to tachykinins:role of neutral endopeptidase. *J Appl Physiol* 67: 1504-1511, 1989b.

Erdos, E. G., Skidgel, R. A. Neutral endopeptidase 24.11 (enkephalinase) and related regulators of peptide hormones. *FASEB J* 3:145-151, 1989.

Fine, J. M., Gordon, T., Sheppard, D. Epithelium removal alters responsiveness of guinea pig trachea to substance P. *J Appl Physiol* 66:232-237, 1989.

Finney, M. J. B., Karlsson, J. A., Persson, C. G. A. Effects of bronchoconstrictors and bronchodilators on a novel human small airway preparation. *Br J Pharmacol* 85:29-36, 1985.

Fortes, Z. B., Scivoletto, R., Garcia-Leme, J. Endothelin-1 induces potent constriction of lymphatic vessels in situ. *Eur J Pharmacol* 170:69-73, 1989.

Frossard, N., Rhoden, K. J., Barnes, P. J. Influence of epithelium on guinea pig airway responses to tachykinins:Role of endopeptidase and cyclooxygenase. *J Pharmacol Exp Ther* 248:292-298, 1989.

Fujimura, M., Sakamoto, S., Saito, M., Miyake, Y., Matsuda, T. Effect of a thromboxane A₂ receptor antagonist (AA-2414) on bronchial hyperresponsiveness to methacholine in subjects with asthma. *J Allergy Clin Immunol* 87:23-27, 1991.

Gafford, J. T., Skidgel, R. A., Erdos, E. G., Hersh, L. B. Human kidney "enkephalinase", a neutral metalloendopeptidase that cleaves active peptides. *Biochemistry* 22:3265-3271, 1983.

Gamse, R., Saria, A. Potentiation of tachykinin-induced plasma protein extravasation by calcitonin gene-related peptide. *Eur J Pharmacol* 114:61-66, 1985.

Goetzl, E. J., Sreedharan, S. P., Turck, C. W., Bridenbaugh, R., Malfroy, B. Preferential cleavage of amino- and carboxyl-terminal oligopeptides from vasoactive intestinal polypeptide by human recombinant enkephalinase (neutral endopeptidase, EC3.4.24.11). *Biochem Biophys Res Commun* 158:850-854, 1989.

Gonzalez, M. C., Diaz, P., Galleguillos, F. R., Ancic, P., Cromwell, O., Kay, A. B. Allergen-induced recruitment of bronchoalveolar helper (OKT4) and suppressor (OKT8) T-cells in asthma. *Am Rev Respir Dis* 136:600-604, 1987.

Graf, L., Paldi, A., Patthy, A. Action of neutral metalloendopeptidase ("enkephalinase") on β -endorphin. *Neuropeptides* 6:13-19, 1985.

Gundel, R. H., Wegner, C. D., Letts, L. G. Antigen-induced acute and late-phase response in primates. *Am Rev Respir Dis* 146, 369-373, 1992.

Hargreave, F. E., Dolovich, J., O'Byrne, P. M., Ramsdale, E. H., Daniel, E. E. The origin of airway hyperresponsiveness. *J Allergy Clin Immunol* 78:825-832, 1986.

長谷川鎮雄. 呼吸器病学テキスト. 南山堂, 東京, 1985.

Henry, P. J., Rigby, P. J., Self, G. J., Preuss, J. M., Goldie, R. G. Relationship between endothelin-1 binding site densities and constrictor activities in human and animal airway smooth muscle. *Br J Pharmacol* 100:786-792, 1990.

Herxheimer, H. The late bronchial reaction in induced asthma. *Int Arch Allergy appl Immun* 3:322, 1952.

Holzer, P. Local effector functions of capsaicin-sensitive sensory nerve endings: involvement of tachykinins, calcitonin gene-related peptide and other neuropeptides. *Neuroscience* 24:739-768, 1988.

Hooper, N. M., Kenny, A. J., Turner, A. J. The metabolism of neuropeptides. Neurokinin A (substance K) is a substrate for endopeptidase-24.11 but not for peptidyl dipeptidase A (angiotensin-converting enzyme) *Biochem J* 231:357-361, 1985.

Hu, J. R., Berninger, U. G., Lang, R. E. Endothelin stimulates atrial natriuretic peptide (ANP) release from rat atria. *Eur J Pharmacol* 158:177-178, 1988.

Inoue, A., Yanagisawa, M., Kimura, S., Kasuya, Y., Miyauchi, T., Goto, K., Masaki, T. The human endothelin family: Three structurally and pharmacologically distinct isopeptides predicted by three separate genes. *Proc Natl Acad Sci U S A* 86:2863-2867, 1989.

Ishikawa, T., Yanagisawa, M., Kimura, S., Goto, K., Masaki, T. Positive inotropic action of novel vasoconstrictor peptide endothelin on guinea pig atria. *Am J Physiol* 255:H970-H973, 1988.

Ito, K., Kudo, K., Okudaira, H., Yoshinoya, S., Morita, Y., Nakagawa, T., Akiyama, K., Urata, C., Hayakawa, T., Ohta, K., Nakada, S., Horiuchi, T., Takizawa, H., Shoji, S., Ishii, A., Kitani, S., Haida, M., Yamashita, N., Honda, Z., Miyamoto, T. IgG1 antibodies to house dust mite (*dermatophagoides farinae*) and late asthmatic response. *Int Archs Allergy appl Immun* 81:69-74, 1986.

Iwamoto, I., Ueki, I. F., Borson, D. B., Nadel, J. A. Neutral endopeptidase modulates tachykinin-induced increase in vascular permeability in guinea pig skin. *Int Arch Allergy Appl Immunol* 88:288-293, 1989.

Jancso, G., Kiraly, E., Jancso-Gabor, A. Pharmacologically induced selective degeneration of chemosensitive primary sensory neurones. *Nature* 270:741-743, 1977.

Jancso, N., Jancso-Gabor, A., Szolcsanyi, J. Direct evidence for neurogenic inflammation and its prevention by denervation and by pretreatment with capsaicin. *Br J Pharmac Chemother* 31:138-151, 1967.

Johnson, A. R., Ashton, J., Schulz, W. W., Erdos, E. G. Neutral metalloendopeptidase in human lung tissue and cultures cells. *Am Rev Respir Dis* 132:564-568, 1985.

Katayama, M., Nadel, J. A., Bunnett, N. W., Di Maria, G. U., Haxhiu, M., Borson, D. B. Catabolism of calcitonin gene-related peptide and substance P by neutral endopeptidase. *Peptides* 12:563-567, 1991

Kerr, M. A., Kenny, A. J. The purification and specificity of a neutral endopeptidase from rabbit kidney brush border. *Biochem J* 137:477-488, 1974a

Kerr, M. A., Kenny, A. J. The molecular weight and properties of a neutral metallo-endopeptidase from rabbit kidney brush border. *Biochem J* 137:489-495, 1974b.

Kohrogi, H., Graf, P. D., Sekizawa, K., Borson, D. B., Nadel, J. A. Neutral endopeptidase inhibitors potentiate substance P- and capsaicin-induced cough in awake guinea pigs. *J Clin Invest*

82:2063-2068, 1988.

Kohrogi, H., Nadel, J. A., Malfroy, B., Gorman, C., Bridenbaugh, R., Patton, J. S., Borson, D. B. Recombinant human enkephalinase (neutral endopeptidase) prevents cough induced by tachykinins in awake guinea pigs. *J Clin Invest* 84:781-786, 1989.

Kohrogi, H., Yamaguchi, T., Kawano, O., Honda, I., Ando, M., Araki, S. Inhibition of neutral endopeptidase potentiates bronchial contraction induced by immune response in guinea pigs in vitro. *Am Rev Respir Dis* 144:636-641, 1991.

Koseki, C., Imai, M., Hirata, Y., Yanagisawa, M., Masaki, T. Autoradiographic distribution in rat tissues of binding sites for endothelin: a neuropeptide? *Am J Physiol* 256:R858-R866, 1989.

Kozuka, M., Ito, T., Hirose, S., Takahashi, K., Hagiwara, H. Endothelin induces two types of contractions of rat uterus: Phasic contractions by way of voltage-dependent calcium channels and developing contractions through a second type of calcium channels. *Biochem Biophys Res Commun* 159:317-323, 1989.

Lai, C. K. W., Twentyman, O. P., Holgate, S. T. The effect of an increase in inhaled allergen dose after rimeterol hydrobromide on the occurrence and magnitude of the late asthmatic response and the associated change in nonspecific bronchial responsiveness. *Am Rev Respir Dis* 140:917-923, 1989.

Laitinen L. A., Heino, M., Laitinen, A., Kava, T., Haahtela, T. Damage of the airway epithelium and bronchial reactivity in patients with asthma. *Am Rev Respir Dis* 131:599-606, 1985.

Leblanc, P., L'Heritier, A., Kordon, C., Horsthemke, B., Bauer, K., Wattiaux-de Coninck, S., Dubois, F., Wattiaux, R. Characterization of a neutral endopeptidase localized in the mitochondrial matrix of rat anterior pituitary tissue with GnRH as a substrate. *Neuroendocrinology* 38:476-483, 1984.

Lee, C. M., Iversen, L. L., Hanley, M. R., Sandberg, B. E. B. The possible existence of multiple receptors for substance P. *Naunyn-Schmiedeberg's Arch Pharmacol* 318:281-287, 1982.

Lee, C. M., Campbell, N. J., Williams, B. J., Iversen, L. L. Multiple tachykinin binding sites in peripheral tissues and in brain. *Eur J Pharmacol* 130:209-217, 1986.

- Lembeck, F., Holzer, P. Substance P as neurogenic mediator of antidromic vasodilation and neurogenic plasma extravasation. *Naunyn-Schmiedeberg's Arch Pharmacol* 310:175-183, 1979.
- Llorens, C., Schwartz, J.C. Enkephalinase activity in rat peripheral organs. *Eur J Pharmacol* 69:113-116, 1981.
- Lundberg, J.M., Saria, A. Bronchial smooth muscle contraction induced by stimulation of capsaicin-sensitive sensory neurons. *Acta Physiol Scand* 116:473-476, 1982a.
- Lundberg, J.M., Saria, A. Capsaicin-sensitive vagal neurons involved in control of vascular permeability in rat trachea. *Acta Physiol Scand* 115:521-523, 1982b.
- Lundberg, J.M., Brodin, E., Saria, A. Effects and distribution of vagal capsaicin-sensitive substance P neurons with special reference to trachea and lungs. *Acta Physiol Scand* 119:243-252, 1983a.
- Lundberg, J.M., Martling, C.R., Saria, A. Substance P and capsaicin-induced contraction of human bronchi. *Acta Physiol Scand* 119:49-53, 1983b.
- Lundberg, J.M., Saria, A. Capsaicin-induced desensitization of airway mucosa to cigarette smoke, mechanical and chemical irritants. *Nature* 302:251-253, 1983c.
- Lundberg, J.M., Hokfelt, T., Martling, C.R., Saria, A., Cuello, C. Substance P-immunoreactive sensory nerves in the lower respiratory tract of various mammals including man. *Cell Tissue Res* 235:251-261, 1984.
- Lundberg, J.M., Franco-Cereceda, A., Hua, X.Y., Hokfelt, T., Fischer, J.A. Co-existence of substance P and calcitonin gene-related peptide-like immunoreactivities in sensory nerves in relation to cardiovascular and bronchoconstrictor effects of capsaicin. *Eur J Pharmacol* 108:315-319, 1985.
- Lundblad, L., Lundberg, J.M., Brodin, E., Anggard, A. Origin and distribution of capsaicin-sensitive substance P-immunoreactive nerves in the nasal mucosa. *Acta Otolaryngol* 96:485-493, 1983.

MacCumber, M. W., Ross, C. A., Glaser, B. M., Snyder, S. H. Endothelin: Visualization of mRNAs by in situ hybridization provides evidence for local action. *Proc Natl Acad Sci U S A* 86:7285-7289, 1989.

Maggi, C. A., Giuliani, S., Patacchini, R., Barbanti, G., Turini, D., Meli, A. Contractile responses of the human urinary bladder, renal pelvis, and renal artery to endothelins and sarafotoxin S6b. *Gen Pharmacol* 21:247-249, 1990.

Malfroy, B., Swerts, J. P., Guyon, A., Roques, B. P., Schwartz, J. C. High-affinity enkephalin-degrading peptidase in brain is increased after morphine. *Nature* 276:523-526, 1978.

Malfroy, B., Schwartz, J. C. Comparison of dipeptidyl carboxypeptidase and endopeptidase activities in the three enkephalin-hydrolysing metallopeptidases: "angiotensin-converting enzyme" thermolysin and "enkephalinase". *Biochem Biophys Res Commun* 130:372-378, 1985.

Manning, P. J., Rokach, J., Malo, J. L., Ethier, D., Cartier, A., Girard, Y., Charleson, S., O'Byrne, P. M. Urinary leukotriene E₄ levels during early and late asthmatic responses. *J Allergy Clin Immunol* 86:211-220, 1990.

Martin, T. R., Altman, L. C., Albert, R. K., Henderson, W. R. Leukotriene B₄ production by the human alveolar macrophage: a potential mechanism for amplifying inflammation in the lung. *Am Rev Respir Dis* 129:106-111, 1984.

Martling, C. R., Theodorsson-Norheim, E., Lundberg, J. M. Occurrence and effects of multiple tachykinins: substance P, neurokinin A, neuropeptide K in human lower airways. *Life Sci* 40:1633-1643, 1987.

Martling, C. R., Saria, A., Fischer, J. A., Hokfelt, T., Lundberg, J. M. Calcitonin gene-related peptide and the lung: Neuronal coexistence with substance P, release by capsaicin and vasodilatory effect. *Regul Pept* 29:125-139, 1988.

Matsas, R., Fulcher, I. S., Kenny, A. J., Turner, A. J. Substance P and [Leu] enkephalin are hydrolyzed by an enzyme in pig caudate synaptic membranes that is identical with the endopeptidase of kidney microvilli. *Proc Natl Acad Sci U S A* 80:3111-3115, 1983.

Matsas, R., Kenny, A. J., Turner, A. J. The metabolism of neuropeptides. The hydrolysis of peptides, including enkephalins, tachykinins and their analogues, by endopeptidase-24.11. *Biochem J* 223:433-440, 1984.

松田健. アレルギー性肺疾患における肥満細胞の超微形態学的脱顆粒現象 *アレルギー* 36:49-55, 1987.

Matsumura, Y., Nakase, K., Ikegawa, R., Hayashi, K., Ohyama, T., Morimoto, S. The endothelium-derived vasoconstrictor peptide endothelin inhibits renin release in vitro. *Life Sci* 44:149-157, 1989.

McCormack, D. G., Salonen, R. O., Barnes, P. J. Effect of sensory neuropeptides on canine bronchial and pulmonary vessels in vitro *Life Sci* 45:2405-2412, 1989.

Metzger, W. J., Richerson, H. B., Wasserman, S. I. Generation and partial characterization of eosinophil chemotactic activity and neutrophil chemotactic activity during early and late-phase asthmatic response. *J Allergy Clin Immunol* 78:282-290, 1986.

Metzger, W. J., Zavala, D., Richerson, H. B., Moseley, P., Iwamoto, P., Monick, M., Sjoerdsma, K., Hunninghake, G. W. Local allergen challenge and bronchoalveolar lavage of allergic asthmatic lungs. Description of the model and local airway inflammation. *Am Rev Respir Dis* 135:433-440, 1987.

森川茂. 遅延型アレルギー調節機序の最近の話題 *Minophagen medical review* 31:17-32, 1986.

Morishita, R., Higaki, J., Ogihara, T. Endothelin stimulates aldosterone biosynthesis by dispersed rabbit adreno-capsular cells. *Biochem Biophys Res Commun* 160:628-632, 1989.

Mumford, R. A., Pierzchala, P. A., Strauss, A. W., Zimmerman, M. Purification of a membrane-bound metalloendopeptidase from porcine kidney that degrades peptide hormones. *Proc Natl Acad Sci U S A* 78:6623-6627, 1981.

Nakamichi, K., Ihara, M., Kobayashi, M., Saeki, T., Ishikawa, K., Yano, M. Different distribution of endothelin receptor subtypes in pulmonary tissues revealed by the novel selective ligands BQ-123 and [Ala^{1-3, 11, 15}] ET-1. *Biochem Biophys Res Commun* 182:144-150, 1992.

Ninomiya, H., Uchida, Y., Saotome, M., Nomura, A., Ohse, H., Matsumoto, H., Hirata, F., Hasegawa, S. Endothelins constrict guinea pig tracheas by multiple mechanisms. *J Pharmacol Exp Ther* 262: 570-576, 1992.

Nomura A., Uchida Y., Kameyama M., Saotome M., Oki K., Hasegawa S. Endothelin and bronchial asthma. *Lancet* II :747-748, 1989.

O'Byrne, P. M., Leikauf, G. D., Aizawa, H., Bethel, R. A., Ueki, I. F., Holtzman, M. J., Nadel, J. A. Leukotriene B₄ induces airway hyperresponsiveness in dogs. *J Appl Physiol* 59:1941-1946, 1985.

O'Byrne, P. M., Dolovich, J., Hargreave, F. E. Late asthmatic responses. *Am Rev Respir Dis* 136:740-751, 1987.

Ohlstein, E. H., Arleth, A., Bryan, H., Elliott, J. D., Sung, C. P. The selective endothelin ET_A receptor antagonist BQ123 antagonizes endothelin-1-mediated mitogenesis. *Eur J Pharmacol* 225:347-350, 1992.

大瀬寛高、野村明広、亀山昌明、二宮浩樹、早乙女幹朗、遠藤健夫、濱田雅史、大塚真人、石井幸雄、渡辺東、坂本透、内田義之、長谷川鎮雄。イブジラスト (KC-404) の気道平滑筋に及ぼす影響についての検討。 *日本臨床生理学学会雑誌* 22: 405-410, 1992.

大瀬寛高、遠藤健夫、野口佳子、杜盾、野村明広、二宮浩樹、早乙女幹朗、橋本健一、濱田雅史、渡辺東、内田義之、長谷川鎮雄。ET-1の気道収縮作用に対する抗アレルギー薬の影響についての検討。 *日本臨床生理学学会雑誌* 23:1993。(掲載予定)

Olgart, L., Gazelius, B., Brodin, E., Nilsson, G. Release of substance P-like immunoreactivity from the dental pulp. *Acta Physiol Scand* 101:510-512, 1977.

Ovary, Z. Passive cutaneous anaphylaxis. In "Immunological Methods" 1st Ed. (ed. by J. D. Ackroyd). *Blackwell Scientific Publications, Oxford* 259-283, 1964.

Palmer, J. B. A., Barnes, P. J. Neuropeptides and airway smooth muscle function. *Am Rev Respir Dis* 136:S50-S54, 1987.

Pepys, J., Hargreave, F. E., Chan, M., McCarthy, D. S. Inhibitory effects of disodium cromoglycate on allergen-inhalation tests. *Lancet* II :134-137, 1968.

Regoli, D., Drapeau, G., Dion, S., D'Orleans-Juste, P. Pharmacological receptors for substance P and neurokinins. *Life Sci* 40:109-117, 1987.

Robertson, D. G., Kerigan, A. T., Hargreave, F. E., Chalmers, R., Dolovich, J. Late asthmatic responses induced by ragweed pollen allergen. *J Allergy Clin Immunol* 54:244-254, 1974.

Rogers, D. F., Belvisi, M. G., Aursudkij, B., Evans, T. W., Barnes, P. J. Effects and interactions of sensory neuropeptides on airway microvascular leakage in guinea-pigs. *Br J Pharmacol* 95:1109-1116, 1988.

Rogers, D. F., Barnes, P. J. Opioid inhibition of neurally mediated mucus secretion in human bronchi. *Lancet* I:930-932, 1989.

Roques, B. P., Fournie-Zaluski, M. C., Soroca, E., Lecomte, J. M., Malfroy, B., Llorens, C., Schwartz, J. C. The enkephalinase inhibitor thiorphan shows antinociceptive activity in mice. *Nature* 288:286-288, 1980.

Rossi, G. A., Crimi, E., Lantero, S., Gianiorio, P., Oddera, S., Crimi, P., Brusasco, V. Late-phase asthmatic reaction to inhaled allergen is associated with early recruitment of eosinophils in the airways. *Am Rev Respir Dis* 144:379-383, 1991.

Rozengurt, N., Springall, D. R., Polak, J. M. Localization of endothelin-like immunoreactivity in airway epithelium of rats and mice. *J Pathol* 160:5-8, 1990.

Sakurai, T., Yanagisawa, M., Takuwa, Y., Miyazaki, H., Kimura, S., Goto, K., Masaki, T. Cloning of a cDNA encoding a non-isopeptide-selective subtype of the endothelin receptor. *Nature* 348:732-735, 1990.

Salonen, R. O., Webber, S. E., Widdicombe, J. G. Effects of neuropeptides and capsaicin on the canine tracheal vasculature in vivo. *Br J Pharmacol* 95:1262-1270, 1988.

Scioli, A. G., Vijayaraghavan, J., Hersh, L., Carretero, O. Neutral endopeptidase 24.11 (NEP) inactivates endothelin. *Hypertension* 14:353, 1989.

Sekizawa, K., Tamaoki, J., Graf, P. D., Basbaum, C. B., Borson, D. B., Nadel, J. A. Enkephalinase inhibitor potentiates mammalian

tachykinin-induced contraction in ferret trachea. *J Pharmacol Exp Ther* 243:1211-1217, 1987a.

Sekizawa, K., Tamaoki, J., Nadel, J. A., Borson, D. B. Enkephalinase inhibitor potentiates substance P- and electrically induced contraction in ferret trachea. *J Appl Physiol* 63:1401-1405, 1987b.

Sheppard, D., Thompson, J. E., Scypinski, L., Dusser, D., Nadel, J. A., Borson, D. B. Toluene diisocyanate increases airway responsiveness to substance P and decreases airway enkephalinase. *J Clin Invest* 81:1111-1115, 1988.

Shimosegawa, T., Said, S. I. Pulmonary calcitonin gene-related peptide immunoreactivity: Nerve-endocrine cell interrelationships. *Am J Respir Cell Mol Biol* 4:126-134, 1991.

Sokolovsky, M., Galron, R., Kloog, Y., Bdolah, A., Indig, F. E., Blumberg, S., Fleminger, G. Endothelins are more sensitive than sarafotoxins to neutral endopeptidase: Possible physiological significance. *Proc Natl Acad Sci U S A* 87:4702-4706, 1990.

Springall, D. R., Howarth, P. H., Counihan, H., Djukanovic, R., Holgate, S. T., Polak, J. M. Endothelin immunoreactivity of airway epithelium in asthmatic patients. *Lancet* I 337:697-701, 1991.

Stimler-Gerard, N. P. Neutral endopeptidase-like enzyme controls the contractile activity of substance P in guinea pig lung. *J Clin Invest* 79:1819-1825, 1987.

州之内健二、足立満、丸山繁、水野雅夫、田沢公樹、石原潤一、小林英樹、高橋昭三、辻章夫、前田昌子。 Local allergen challenge後のBALF中の cell population, chemical mediator の変化について。
アレルギー 40:660-668, 1991.

Takishima, T., Hida, W., Sasaki, H., Suzuki, S., Sasaki, T. Direct-writing recorder of the dose-response curves of the airway to methacholine. *Chest* 80:600-606, 1981.

Uchida, Y., Nomura, A., Ohtsuka, M., Hasegawa, S., Goto, K., Kimura, S., Sugita, Y., Uchiyama, Y. Neurokinin A as a potent bronchoconstrictor. *Am Rev Respir Dis* 136:718-721, 1987.

Uchida, Y., Ninomiya, H., Saotome, M., Nomura, A., Ohtsuka, M., Yanagisawa, M., Goto, K., Masaki, T., Hasegawa, S. Endothelin, a novel

- vasoconstrictor peptide, as potent bronchoconstrictor. *Eur J Pharmacol* 154:227-228, 1988.
- Ura, N., Carretero, O. A., Erdos, E. G. Role of renal endopeptidase 24.11 in kinin metabolism in vitro and in vivo. *Kidney Int* 32:507-513, 1987.
- Van Rossum. Cumulative dose-response curves. II. Technique for the making of dose-response curves in isolated organs and the evaluation of drug parameters. *Arch Int Pharmacodyn Ther* 143:299-330, 1963.
- Vargaftig, B. B., Chignard, M., Benveniste, J., Lefort, J., Wal, F. Background and present status of research on platelet-activating factor (PAF-acether). *Ann N Y Acad Sci* 370:119-137, 1981.
- Vijayaraghavan, J., Scicli, A. G., Carretero, O. A., Slaughter, C., Moomaw, C., Hersh, L. B. The hydrolysis of endothelins by neutral endopeptidase 24.11 (enkephalinase). *J Biol Chem* 265:14150-14155, 1990.
- Watanabe, A., Kameyama, M., Saotome, M., Nomura, A., Nonomiya, H., Ohse, H., Uchida, Y., Hasegawa, S. Increased plasma level of endothelin-1 during asthmatic attack. *Advances in Asthmology* 1990:479-482, 1991.
- Yamai, T., Watanabe, S., Motojima, S., Fukuda, T., Makino, S. The significance of leukotriene in antigen-induced late asthmatic response. *Am Rev Respir Dis* 139(Suppl):A462, 1989.
- Yanagisawa, M., Kurihara, H., Kimura, S., Tomobe, Y., Kobayashi, M., Mitsui, Y., Yazaki, Y., Goto, K., Masaki, T. A novel potent vasoconstrictor peptide produced by vascular endothelial cells. *Nature* 332:411-415, 1988.
- Yanagisawa, Y., Masaki, T. Endothelin, a novel endothelium-derived peptide. *Biochem Pharmacol* 38:1877-1883, 1989.
- Zimmerman, M., Yurewicz, E., Patel, G. A new fluorogenic substrate for chymotrypsin. *Anal Biochem* 70:258-262, 1976.
- Zimmerman, M., Quigley, J. P., Ashe, B., Dorn, C., Goldfarb, R., Troll, W. Direct fluorescent assay of urokinase and plasminogen activators of normal and malignant cells: kinetics and inhibitor profiles. *Proc Natl Acad Sci USA* 75:750-753, 1978.