

BIBLIOGRAPHY

- Abe, J., Sidenius, U. and Svensson, B. 1993. Arginine is essential for the α -amylase inhibitory activity of the α -amylase/subtilisin inhibitor (BASI) from barley seeds. *J. Biochem.* 293, 151-155.
- Bernfeld, P. 1955. Amylase α and β . In S.P. Colowick and N.O.Kaplan(eds.), Methods in Enzymology (Vol. 1), pp. 149-158. New York, USA: Academic Press.
- Bamroongrusa, N. and Yaacob, O. 1990. Production of economic fruits in southern Thailand and northern Malaysia. Prince of Songkhla University, *Pattani Campus Publ.* 96.
- Chiba, S. 1997. Molecular mechanism in α -glucosidase and glucoamylase. *Biosci. Biotech. Bioch.* 61, 1233-1239.
- Chrispeels, MJ., Fatima Grossi de Sa, M. and Higgins, T.J.V. 1998. Genetic engineering with α - amylase inhibitors makes seeds resistant to bruchids. *Seed Sci. Res.* 8, 257-263.
- Choudhury, A., Maeda, K., Murayama, R., and Dimagno, E.P. 1996. Character of a wheat amylase inhibitor preparation and effects on fasting human pancreaticobiliary secretions and hormones. *Gastroenterology.* 111, 1313-1320.
- Dayler, C.S.M., Mendes, P.A.M., Prates, M.V., Bloch Jr.C., Franco, O.L.,Grossi-de-Sa, M.F. 2005. Identification of a novel bean α -amylase inhibitor with chitinolytic activity. *Febs. Lett.* 579, 5616-5620.
- Figueira, E.L.Z., Blanco-Labra, A., Gerage, A.C., Ono, E.Y.S., Mendiola-Olava, E., Ueno, Y. and Hirooka, E.Y. 2003. New amylase inhibitor present in corn seeds active in vitro against amylase from *Fusarium verticillioides*. *Plant Dis.* 87, 233-240.

- Franco, O.L., Rigden, J.D., Melo, R.F., Bloch Jr, C., Silva, P.C. and Grossi-de-Sa, M. F. 2000. Activity of wheat α -amylase inhibitors towards bruchid α -amylase inhibitors and structural explanation of observed specificities. *Eur. J. Biochem.* 267, 2166-2173.
- Franco, O.L., Rigden, J.D., Melo, R.F. and Grossi-de-Sa, M. F. 2002. Plant α -amylase Inhibitors and their interaction with insect α -amylases. *Eur. J. Biochem.* 269, 397-412.
- Gibbs, B.F. and Alli, I. 1998. Characterization of a purified α -amylase inhibitor from white kidney beans (*Phaseolus vulgaris*). *Food Res. Inte.* 31, 217-225.
- Giri, A.P. and Kachole, M. 1998. Amylase inhibitors of pigeonpea (*Cajanus cajan*) seeds. *Phytochemistry.* 47, 197-202.
- Grant, G., Edwards, E. J. and Puszta A. 1995. α -Amylase inhibitor levels in seeds generally available in Europe. *J. Sci. Food Agr.* 67, 235-238.
- Gupta, R.K., Kesari, A.N., Murthy, P.S., Chandra, R., Tandon , V. and Watal, G. 2005. Hypoglycemic and antidiabetic effect of ethanolic extract of leaves of *Annona squamosa* L. in experimental animals. *J. Ethnopharmacol.* 99, 75-81.
- Gyémánt, G., Kranda, L., Nagy, V. and Somsák, L. 2003. Inhibition of human salivary α -amylase by glucopyranosylidene-spiro-thiohydantion. *Biochem. Bioph. Res. Cos.* 312, 334-339.
- Hansawasdi, C., Kawabata, J. and Kasai T. 2000. Alpha-amylase inhibitors from roselle (*Hibiscus sabdariffa* Linn.) tea. *Biosci. Biotech. Bioch.* 64, 1041-1043.
- Harborne, J.B. 1973. Phytochemical method. Cox & Wyman Ltd Fakenham, Norfolk Great Britain. 34-38.

- Iulek, J., Franco, O.L., Silva, M., Slivinski, C.T., Bloch Jr.C., Rigden, J.D. and Grossi-de-Sa, M.F. 2000. Purification, biochemical characterisation and partial primary structure of a new α -amylase inhibitor from *Secale cereal* (rye). *Int. J. Bioch. Cell Biol.* 32, 1195-1204.
- Jamaluddin, F., Mohamed, S., and Lajis, N. 1995. Hypoglycaemic effect of stigmast-4-en-3-one, from *Parkia speciosa* empty pods. *Food Chem.* 54, 9-13.
- Kameswara Rao, B., Giri, R., Kesavulu, M.M. and Apparao, Ch. 2001. Effect of oral administration of bark extracts of *Pterocarpus santalinus* L. on blood glucose level in experimental animals. *J. Ethnopharmacol.* 74, 69-74.
- Kandra, L., Gyemant, G., Zajacz, A. and Batta, A. 2004. Inhibitory effect of tannin on human salivary α -amylase. *Biochem. Biophys. Res. Co.* 319 , 1265-1271.
- Kim, J.S., Kwon, C.S. and Son, K.H. 2000. Inhibition of alpha-glucosidase and amylase by luteolin, a flavonoid. *Biosci. Biotech. Bioch.* 64, 2458-2461.
- Kim, M.J., Lee, H.S., Cho, J.S., Kim, T.J., Moon, T.W., Oh, ST., Kim, JW., Oh, BH. and Park, KH. 2002. Preparation and characterization of R-D-glucopyranosyl-R-acarviosinyl-D-glucopyranose, a novel inhibitor specific for maltose-producing amylase. *Biochemistry.* 41, 9099-9108.
- Kim, Y.M., Jeong, Y.K., Wang, M.H., Lee, W.Y. and Rhee, H.I. 2005 . Inhibitory effect of pine extract on α -glucosidase activity and postprandial hyperglycemia. *Nutrition.* 21, 756-761.
- Kluh, I., Horn, M., Hýblová, J., Hubert, J., Dolečková-Marešová, L., Voburka, Z., Kudlíková, I., Kocourek, F. and Mareš, M. 2005. Inhibitory specificity and insecticidal selectivity of α -amylase inhibitor from *Phaseolus vulgaris*. *Phytochemistry.* 66, 31-39.
- Larner, J. 1985. Insulin and oral hypoglycemic drugs; Glucagon. In : Gilman, A.G., Goodman, L.S., Rall, T.W., Murad, F. (Eds.), *The Pharmacological Bases for Therapeutic*, 7th edn. Macmillan, New York, 149-151.

- Le Berre-Anton, V., Bompard-Gilles, C., Payan, F. and Rouge P. 1997. Characterization and functional properties of the alpha-amylase inhibitor (alpha-Al) from kidney bean (*Phaseolus vulgaris*) seeds. *Biochim Biophys. Acta.* 1, 31-40.
- Lee, S.C., Gepts, P.L. and Whitaker J.R. 2002. Protein structures of common bean (*Phaseolus vulgaris*) α -amylase inhibitors. *J. Agric. Food Chem.* 50, 6618-6627.
- Lowry. OH., Rosebrough, NJ., Farr AL. and Randall, RJ. 1951. Protein measurement with the folin phenol reagent. *J. Biol. Chem.* 193, 265-75.
- Marshall, J. J. and Lauda, C. M. 1975. Purification and properties of phaseolamin, an inhibitor of α -amylase from the kidney bean, *Phaseolus vulgaris*. *J. Biol. Chem.* 250, 8030-8037.
- McCue, P., Kwon, Y-I. and Shetty, K. 2004. Anti-amylase, and anti-angiotensin I-converting enzyme potential of selected foods. *J. Food Biochem.* 29, 278-294.
- McCue, P., Kwon, Y-I. and Shetty, K. 2005. Anti-diabetic and anti-hypertensive potential of sprouted and solid-state bioprocessed soybean. *Asia Pac. J. Clin. Nutr.* 14, 145-152.
- Mudaliar, S. and Henry, R.R. 2001. New oral therapies for type 2 diabetes mellitus : The glitazones or insulin sensitizers. *Annu. Rev. Med.* 52, 23-257.
- Ohmura, C., Tanaka, Y., Mitsuhashi, N., Atsum, Y., Matsuoka, K., Onuma, T. and Kawamori, R. 1998. Efficacy of low-dose metformin in Japanese patients with type 2 diabetes mellitus. *Curr. Ther. Res.* 59(12), 889-895.
- Pueyo J.J. and Delgado-Salinas, A. 1997. Presence of α -amylase inhibitor in some members of the subtribe Phaseolinae (Phaseoleae: Fabaceae). *Am. J. Bot.* 84, 79-84.
- Rekha , M. R., Sasikiran, K. and Padmaja, G. 2004. Inhibitor potential of protease and α -amylase inhibitors of sweet potato and taro on the digestive enzymes of root crop storage pests. *J. Stored Prod. Res.* 40, 461-470.

- Sasikiran, K., Rekha, M.R. and Padmaja G. 2002. Proteinase and alpha-amylase inhibitor of sweet potato: Changes during growth phase, sprouting, and wound induced alterations. *Bot. Bull. Acad.Sin.* 43, 291-2002.
- Sezik, E., Aslana, M., Yesiladaa, E. and Itob, S. 2005. Hypoglycaemic activity of *Gentiana olivieri* and isolation of the active constituent through bioassay-directed fractionation techniques. *Life Sci.* 76, 1223–1238.
- Sitipong, P. 2005. Amylase, maltase and sucrase inhibitors from red kidney bean (*Phaseolus vulgaris*). Faculty of Science, Prince of Songkla University.
- Somsák, L. and Nagy, V. 2000. A new scalable preparation of a glucopyranosylidene-spiro-thiohydantoin: One of the best inhibitors of glycogen phosphorylases. *Tetrahedron: Asymmetry.* 11, 1719-1727.
- Suranant, S. 2001. Under-utilized tropical fruits of Thailand. Faculty of Agriculture of Kasetsart University, Bangkok, Thailand.
- Talamon, P., Desseaux, V., Santimone, M. and Marchis-Mouren, G. 2002. Isolation, characterization and inhibition by acabose of the α -amylase form *Lactobacillus fermentum*: comparison with *Lb. maniotivorans* and *Lb. plantarum* amylases. *Comp. Biochem and Phys. B.* 133, 351-360.
- Taugbodhitham, A. 2000. Amylase inhibitor in seed of *Archidendrom clypearia*, *Archidendrom jiringa*(Jack)Nielson, *Parkia speciosa* and *Parkia timoriana*. Faculty of Science, Prince of Songkla University.
- Tormo, M. A., Gil-Exojo, I., Romero de Tejada, A. and Campillo, J. E. 2004. Hypoglycaemic and anorexigenic activities of an α -amylase inhibitor from white kidney beans (*Phaseolus vulgaris*) in Wistar rats. *Brit. J. Nutr.* 92, 785–790.
- Valiathan, M.S. 1998. Healing Plants. *Current Science.* 75, 1122-1126.
- Virdia, J., Sivakamia, S., Shahanib, S., Sutharc, A. C., Banavalikar, M. M. and Biyanic, M. K. 2003. Antihyperglycemic effects of three extracts from *Momordica charantia*. *J. Ethnopharmacol.* 88, 107-111.

- Yamada, T., Hattori, K. and Ishimoto, M. 2001. Purification and characterization of two alpha-amylase inhibitors from seeds of tepary bean (*Phaseolus acutifolius* A. Gray). *Phytochemistry*. 58, 59-66.
- Yamada, T., Moriyama, R. and Ishimoto, M. 2005. Isolation of two α -amylase inhibitor genes of tepary bean (*Phaseolus acutifolius* A. Gray) and their functional characterization in genetically engineered azuki bean. *Plant Sci.* 169, 502-511.
- Yoon, SH. and Robyt, JF. 2003. Study of the inhibition of four alpha amylases by acarbose and its 4IV-alpha-maltohexaosyl and 4IV-alpha-maltododecaosyl analogues. *Carbohydr. Res.* 338, 1969-80.
- Wang, JY., Iwasaki, T. and Aizono, Y. 1999. A 40-kilodalton protein with growth inhibitory activity against the adzuki bean weevil in seeds of *Vigna mungo*. *Appl. Ent. Zool.* 34, 9-17.
- WHO. 1980. Expert committee on diabetes mellitus, Technical reports series. World Health Organisation, Geneva.
- <http://www.rxlist.com/cgi./generic/acarbose.htm>, (9/1/06)
- <http://www.biologie.uni-hamburg.de/b-online/e26/11.html>, (9/10/06)
- http://www.lpi.oregonstate.edu/infocenter/phytochemical/flavonoids/basis_flav, (9/10/06)
- http://www.iaf.inrs.ca/gmre/Nos_realisations.html, (9/10/06)
- <http://www.ranong.doe.go.th/sator.html>, (20/10/06)
- <http://www.kochconnect.com/modulates.Php>, (20/10/06)
- <http://www.dipbot.unict.it/webnatur/antro/derrate2.htm>, (14/11/06)
- http://www.ento.csiro.au/aicn/name_c/a_1119.htm, (14/11/06)
- <http://www.uku.fi/~holopain/stt/lajilist.htm>, (14/11/06)