

## BIBLIOGRAPHY

- Ali, M., Jahangir, M., Hussan, S. and Choudhary, M. (2002) Inhibition of alpha-glucosidase by oleanolic acid and its synthetic derivaters. *Phytochemistry* 60, 295-299.
- Ali, H. Houghton, P.J. and Soumyanath, A. (2006).  $\alpha$ -Amylase inhibitory activity of some Malaysian plants used to treat diabetes; with particular reference to *Phyllanthus amarus*. *Journal Ethnopharmacology* 107, 449-455.
- Arajújo, C.L., Bezerra, I.W.L., Dantas, I.C., Lima, T.V.S., Oliveira, A.S., Miranda, M.R.A., Leite, E.L. and Sales, M.P. (2004) Biological activity of proteins from pulps of tropical fruits. *Food Chemistry* 85, 107-110.
- Bernfeld, P. 1955. Amylase  $\alpha$  and  $\beta$ , *Method Enzmology* 1, 149-258.
- Bhandari, M.R., Jong-Anurakkun, N., Hong, G. and Kawabata, J. (2008).  $\alpha$ -Glucosidase and  $\alpha$ -amylase inhibitory activities of Nepalese medicinal herb Pakhanbhed (*Bergenia ciliata*, Haw). *Food Chemistry* 106, 247-252.
- Bønsager, B.C., Praetorius-Ibba, M., Nielsen, P.K., and Svensson, B. (2003). Purification and characterization of the beta-trefoil fold protein barley alpha-amylase/subtilisin inhibitor overexpressed in *Escherichia coli*. *Protein Expression and Purification* 30, 185-193.
- Chokshi, D. (2007) Subchronic oral toxicity of a standardized white kidney bean (*Phaseolus vulgaris*) extract in rats. *Food and Chemical Toxicology* 45, 32-40.
- Dayler, C.S.A., Mendes, P.A.M., Prates, M.V., Bloch, C., Franco, O.L., and Grossi-de-Sa, M.F. (2005). Identification of a novel bean alpha-amylase inhibitor with chitinolytic activity. *Febs Letters* 579, 5616-5620.
- El-Demerdash, F.M., Yousef, M.I., and El-Naga, N.I. (2005). Biochemical study on the hypoglycemic effects of onion and garlic in alloxan-induced diabetic rats. *Food and Chemical Toxicology* 43, 57-63.
- Farias, L.R., Costa, F.T., Souza, L.A., Pelegrini, P.B., Grossi-de-Sa, M.F., Neto, S.M., Bloch, C., Laumann, R.A., Noronha, E.F., and Franco, O.L. (2007). Isolation of a novel *Carica papaya* alpha-amylase inhibitor with deleterious activity toward *Callosobruchus maculatus*. *Pesticide Biochemistry and Physiology* 87, 255-260.

- Figueira, E.L.Z., Hirooka, E.Y., Mendiola-Olaya, E. and Blanco-Labra, A. (2003). Characterization of a hydrophobic amylase inhibitor from corn (*Zea mays*) seeds with activity against amylase from *Fusarium verticillioides*. *Biochemistry and Cell Biology* 98, 917-922.
- Franco, O.L., Rigden, D.J., Melo, F.R. and Grossi de Sa, M.F. (2000). Activity of wheat  $\alpha$ -amylase inhibitors towards bruchid  $\alpha$ -amylase inhibitors and structural explanation of observed specificities. *European Journal of Biochemistry* 267, 2166-2173.
- Franco, O.L., Rigden, D.J., Melo, F.R. and Grossi de Sa, M.F. (2002). Plant  $\alpha$ -amylase inhibitor and their interaction with insect  $\alpha$ -amylase. *European Journal Biochemistry* 296, 397-412.
- Gibbs, B.F. and Alli, I. (1998). Characterization of a purified  $\alpha$ -amylase inhibitor from white kidney beans (*Phaseolus vulgaris*). *Food Research International* 31, 217-225.
- Giri, A.P. and Kachole, M.S. (1998). Amylase inhibitors of pigeonpea (*Cajanus cajan*) seeds. *Phytochemistry* 47, 197-202.
- Giusti, V. (2007). Management of obesity in patients with peripheral arterial disease. *European Journal of Vascular and Endovascular Surgery* 34, 576-582.
- Grant, G., Edwards, J.E. and Pusztai, A. (1995).  $\alpha$ -amylase inhibitor levels in seeds generally available in Europe. *Journal of the Science of Food and Agriculture* 67, 235-238.
- Guzman-Partida, A.M., Jatomea-Fino, O., Robles-Burgueno, M.R., Ortega-Nieblas, M. and Vazquez-Moreno, L. (2007). Characterization of  $\alpha$ -amylase inhibitor from Palo Fierro seeds. *Plant Physiology and Biochemistry*. xx, 1-5.
- Hansawasdi, C., Kawabata, J., and Kasai, T. (2000). Alpha-amylase inhibitors from roselle (*Hibiscus sabdariffa* Linn.) tea. *Bioscience Biotechnology and Biochemistry* 64, 1041-1043.
- Haq, S.K., Atif, S.M. and Khan, R.H. (2005). Biochemical characterization, stability studies and N-terminal sequence of a bi-functional inhibitor from *Phaseolus aureus* Roxb. (Mung bean). *Biochimie* 87, 1127-1136.

- Heacock, P.M., Hertzler, S.R., Williams J.A. and Wolf, B.W. (2005). Effect of a medical food containing an herbal  $\alpha$ -glucosidase inhibitor on postprandial glycemia and insulinemia in healthy adults. *Journal of the American Dietetic Association* 105, 65-71.
- Iulek, J., Franco, O.L., Silva, M., Slivinski, C.T., Bloch, C., Jr., Rigden, D.J., and Grossi de Sa, M.F. (2000). Purification, biochemical characterisation and partial primary structure of a new alpha-amylase inhibitor from *Secale cereale* (rye). *International Journal of Biochemistry & Cell Biology* 32, 1195-204.
- Jamaluddin, F., Mohamed, S. and Lajis, N. (1995). Hypoglycaemic effect of stigmast-4-en-3-one, from *Parkia speciosa* empty pods. *Food Chemistry* 54, 9-13.
- Kandra, L., Zajácz, A., Remenyik, J. and Gyémánt, G. (2005). Kinetic investigation of a new inhibitor for human salivary  $\alpha$ -amylase. *Biochemical and Biophysical Research Communications* 334, 824-828.
- Kawasaki, T., Uezono, K. and Nakazawa, Y. (2000) Antihypertensive mechanism of food for specified health use: “*Eucommia* leaf glycoside” and its clinical application, *Journal Health Science* 22, 29–36.
- Kim, M.J., Lee, S.B., Lee, H. S., Lee, S.Y., Baek, J.S., Kim, D., Moon, T.W., Robyt, J.F. and Park, K.H. (1999). Comparative study of the inhibition of  $\alpha$ -glucosidase,  $\alpha$ -amylase, and cyclomaltodextrin glucanotransferase by acarbose, isoacarbose, and acarviosine-glucose. *Archives of Biochemistry and Biophysics* 371, 277-283.
- Kim, M.J., Lee, H.S., Cho, J.S., Kim, T.J., Moon, T.W., Oh, S.T., Kim, J.W., Oh, B.H., and Park, K.H. (2002). Preparation and characterization of alpha-D-glucopyranosyl-alpha-acarviosinyl-D-glucopyranose, a novel inhibitor specific for maltose-producing amylase. *Biochemistry* 41, 9099-108.
- Kim, Y.M., Wang, M.H. and Rhee, H.I. (2004). A novel  $\alpha$ -glucosidase inhibitor from pine bark. *Carbohydrate Research* 339, 715-717.
- Kim, Y.M., Jeong, Y.K., Wang, M.H., Lee, W.Y., and Rhee, H.I. (2005). Inhibitory effect of pine extract on alpha-glucosidase activity and postprandial hyperglycemia. *Nutrition* 21, 756-761.

- Kitvorapat, W., Sinawat, S., Chongsuwat, R., Pradipasen, M., Imamee, N., Pandii, W., Akaramanee, W. (2004) Weight control program for overweight working women. *Journal of the Nutrition Association of Thailand* 39, 37-52.
- Kluh, I., Horn, M., Hyblova, J., Hubert, J., Doleckova-Maresova, L., Voburka, Z., Kudlikova, I., Kocourek, F., and Mares, M. (2005). Inhibitory specificity and insecticidal selectivity of alpha-amylase inhibitor from *Phaseolus vulgaris*. *Phytochemistry* 66, 31-39.
- Koike, D., Yamadera, K. and DiMagno, E.P. (1995). Effect of a wheat amylase inhibitor on canine carbohydrate digestion, gastrointestinal function, and pancreatic growth. *Gastroenterology* 108, 1221-1229.
- Lauber, R.P. and Sheard, N.F. (2001). The American heart association dietary guidelines for 2000: A summary report. *Nutrition Reviews* 59, 298-306.
- Layer, P., Carlson, G.L. and DiMagno, E.P. (1985) Partially purified white bean amylase inhibitor reduces starch digestion *in vitro* and inactivates intraduodenal amylase in humans. *Gastroenterology* 88, 1895-1902.
- Layer, P., Rizza, R.A. Zinsmeister, A.R., Carlson, G.L. and DiMagno, E.P. (1986b) Effect of a purified amylase inhibitor on carbohydrate tolerance in normal subjects and patients with diabetes mellitus. *Mayo Clinic Proceedings* 61, 442-447.
- Le Berre-Anton, V., Bompard-Gilles, C. Payan, F. and Roug, P. (1997). Characterization and function properties of the  $\alpha$ -amylase inhibitor ( $\alpha$ -AI) from kidney bean (*Phaseolus vulgaris*) seeds. *Biochimica et Biophysica Acta* 1343, 31-40.
- Lee, M.K., Kim, M.J., Cho, S.Y., Park, S.A., Park, K.K., Jung, U.J., Park, H.M., and Choi, M.S. (2005). Hypoglycemic effect of Du-zhong (*Eucommia ulmoides* Oliv.) leaves in streptozotocin-induced diabetic rats. *Diabetes Research and Clinical Practice* 67, 22-8.
- Lee, S.C., Gepts, P.L., and Whitaker, J.R. (2002). Protein structures of common bean (*Phaseolus vulgaris*) alpha-amylase inhibitors. *Journal of Agricultural and Food Chemistry* 50, 6618-6627.
- Loizzo, M.R., Saab, A.M., Statti, G.A., and Menichini, F. (2007). Composition and alpha-amylase inhibitory effect of essential oils from *Cedrus libani*. *Fitoterapia* 78, 323-326.

- Lowry, O.H., Rosebrough, N.J., Farr, A.L. and Randall, R.J. (1951). Protein measurement with the folin phenol reagent *Journal Biological Chemistry*. 193, 265-275.
- Mancinelli, L., Panara, F., Rutili, D., Maras, B. and Gianfranceschi, G.L. (2003) The CM2 and CM3 types of  $\alpha$ -amylase inhibitor are associated with *Triticum aestivum* seed chromatin. *Plant Physiology and Biochemistry* 41, 705-710.
- Matsuura, H., Miyazaki, H., Asakawa, C., Amano, M., Yoshihara, T., and Mizutani, J. (2004). Isolation of alpha-glucosidase inhibitors from hyssop (*Hyssopus officinalis*). *Phytochemistry* 65, 91-7.
- Marshall, J.J. and Landa, C.M. (1975). Purification and properties of phaseolamin, an inhibitor of  $\alpha$ -amylase, from the kidney bean, (*Phaseolus vulgaris*). *Journal Biological Chemistry* 250, 8030-8037.
- McAnuff-Harding, M.A., Omoruyi, F.O. and Asemota, H.N. (2006). Intestinal disaccharidases and some renal enzymes in streptozotocin-induced diabetic rats fed sapogenin extract from bitter yam (*Dioscorea polygonoides*). *Life Science* 78, 2595-2600.
- McCue, P., Vattem, D. and Shetty, K. (2004). Inhibitory effect of clonal oregano extracts against porcine pancreatic amylase *in vitro*. *Asia Pacific Journal of Clinical Nutrition*. 13, 401-408.
- McCue, P., Kwon, Y-I. and Sheetty, K. (2004). Anti-amylase-diabetic, and anti-angiotensin I-converting enzyme potential of selected foods. *J. Food Biochemistry* 29, 278-294.
- Murai, A., Iwamura, K., Takada, M., Ogawa, K. Usui, T. and Okumura, J. (2002). Control of postprandial hyperglycaemia by galactosyl maltobionolactone and its novel anti-amylase effect in mice. *Life Science* 71, 1405-1415.
- Murthy, B.K., Nammi, S., Kato, M.K., Krishna Rao, R.V., Koteswara Rao, N. and Annapurna, A. (2004). Evaluation of hyperglycemic and antihyperglycemic effects of *Datura metel* (Linn.) seeds in normal and alloxan-induced diabetic rats. *Journal of Ethnopharmacology* 91, 95-98.

- Ortiz-Andrade, R.R., Garcia-Jimenez, S., Castillo-Espana, P., Ramirez-Avila, G., Villalobos-Molina, R., and Estrada-Soto, S. (2007). Alpha-glucosidase inhibitory activity of the methanolic extract from *Tournefortia hartwegiana*: an anti-hyperglycemic agent. *Journal of Ethnopharmacology* 109, 48-53.
- Payan, F. (2004). Structural basis for the inhibition of mammalian and insect alpha-amylases by plant protein inhibitors. *Biochimica et Biophysica Acta* 1696, 171-180.
- Santimone, M., Koukiekolo, R., Moreau, Y., Le Berre, V., Rougé, P., Marchis-Mouren, G. and Desseaux, V. (2004). Porcine pancreatic  $\alpha$ -amylase inhibition by the kidney bean (*Phaseolus vulgaris*) inhibitor ( $\alpha$ -AI1) and structural changes in the  $\alpha$ -amylase inhibitor complex. *Biochimica et Biophysica Acta* 1696, 181-190
- Sasikiran, K., Rekha, M.R., and Padmaja, G. (2002). Proteinase and alpha-amylase inhibitors of sweet potato: Changes during growth phase, sprouting, and wound induced alterations. *Botanical Bulletin of Academia Sinica* 43, 291-298.
- Sharma, A., and Gupta, M.N. (2001). Three phase partitioning as a large-scale separation method for purification of a wheat germ bifunctional protease/amylase inhibitor. *Process Biochemistry* 37, 193-196.
- Sitthipong, P., 2005. Amylase, maltase and sucrase inhibitors from red kidney bean (*Phaseolus vulgaris*). Faculty of Science, Prince of Songkla University.
- Sørensen, J.F., Kragh, K.M., Sibbesen, O., Delcour, J., Goesart, H., Svensson, B., Tahir, J., Perez-Vendrell, A.M., Bellincampi, D., D'Ovidio, R., Camardella, L., Giovane, A., Bonnin, E. and Juge, N. (2004). Potential role of glycosidase inhibitors in industrial biotechnological applications. *Biochimica et Biophysica Acta* 1696, 275-287.
- Talamond, P., Desseaux, V., Moreau, Y., Santimone, M. and Marchis-Mouren, G. (2002). Isolation, characterization and inhibition by acarbose of the  $\alpha$ -amylase from *Lactobacillus fermentum*: comparison with *Lb. manihotivorans* and *Lb. plantarum* amylases. *Comparative Biochemistry and Physiology Part B* 133, 351-360.

- Teixeira, V.L., Rocha, F.D., Houghton, P.J., Kaplan, M.A., and Pereira, R.C. (2007). Alpha-amylase inhibitors from Brazilian seaweeds and their hypoglycemic potential. *Fitoterapia* 78, 35-6.
- WHO 1998. Obesity preventing and managing the global epidemic. Report of a WHO consultation on obesity, Geneva, 3-5 June 1997. World Health Organization, Geneva, 1998.
- 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., Hattori, K. and Ishimoto, M. (2005). Isolation of two  $\alpha$ -amylase inhibitor genes of tepary bean (*Phaseolus acutifolius* A. Gray) and their functional characterization in genetically engineered azuki bean. *Plant Science* 169, 502-511.
- Yamagishi, S., Nakamura, K. and Takeuchi, M. (2005). Inhibition of postprandial hyperglycemia by acarbose is a promising therapeutic strategy for the treatment of patients with the metabolic syndrome. *Medical Hypotheses* 65, 152-154.
- Ye, F., Shen, Z. and Xie, M. (2002). Alpha-glucosidase Inhibition from a Chinese Medical Herb (*Ramulus mori*) in Normal and Diabetic Rats and Mice, *Phytomedicine* 9, 161-166.
- Yoon, S.H., and Robyt, J.F. (2002). Synthesis of acarbose analogues by transglycosylation reactions of *Leuconostoc mesenteroides* B-512FMC and B-742CB dextranases. *Carbohydrate Research* 337, 2427-35.
- Yoon, S.H., and Robyt, J.F. (2003). Study of the inhibition of four alpha amylases by acarbose and its 4IV-alpha-maltohexaosyl and 4IV-alpha-maltododecaosyl analogues. *Carbohydrate Research* 338, 1969-80.
- Zajácz, A., Gyemant, G., Vittori, N., and Kandra, L. (2007). Aleppo tannin: structural analysis and salivary amylase inhibition. *Carbohydrate Research* 342, 717-723.

<http://www.nutrilite.com/th-TH/Nature/Products/carb-blocker.aspx> (11/7/50)

[http://www.medicinenet.com/obesity\\_weight\\_loss/article.htm](http://www.medicinenet.com/obesity_weight_loss/article.htm) (16/10/50)