

## REFERENCES

- Arkarapanthu, A., Chavasit, V., Sungpaug, P. and Phuphatthanapong, L. (2005). Gel extracted from Khrua-Ma-Noi (*Cyclea arbata Miers*) Leaves: chemical composition and gelation properties. *Journal of the science of Food and Agriculture.* **85:** 1741-1749.
- Aspinal, G. O. (1982). *The Polysaccharides*. New York: Academic Press.
- Bailey, R.W. (1973). Chemistry and Biochemistry of Herbage. *American Journal of Clinical Nutrition.* **1:** 157.
- Bayliss, C. E. and Houston, A. P. (1984). Characterization of plant polysaccharides and mucin-fermenting anaerobic bacteria from human feces. *Applied and Environmental Microbiology.* **48 (3):** 626-632.
- Behall, K. and Reiser, S. (1986). Effects of pectin on human metabolism. in M. L. Fishman, and J. J. Ren (Eds.), *Chemistry and functions of pectins* (pp. 248-265). Washington, DC: American Chemical Society.
- Blumenkrantz, N. and Asboe-Hansen, G. (1973). New method for quantitative determination of uronic acids. *Analytical Biochemistry.* **54:** 484-489.
- Bourhnik, Y., Vahedi, K., Achour, L., Attar, A., Salfati, J., Pochart, P., Mareau, P., Bornet, F. and Rambaud, J. (1999). Short-chain fructooligosaccharide administratin dose-dependently increases fecal bifidobacteria in health human. *Journal of Nutrition.* **129:** 113-116.
- Buddington, K. K., Danohoo, J. B. and Buddington, R. K. (2002). Dietary oligofructose and inulin protect mice from enteric and systemic pathogens and tumour inducers. *Journal of Nutrition.* **4:** 132.
- Cambell, J. M., Fahey, G. C. and Wolf, B. W. (1997). Selected indigestible oligosaccharides affect large bowel mass, fecal and fecal short-chain fatty acid, pH and microflora in rats. *Journal of Nutrition.* **127:** 130-136.

- Causey, J. L., Feirtag, J. M., Gallaher, D. D., Tungland, B. C. and Slavin, J. L. (2000). Effects of dietary inulin on serum lipids, blood glucose and the gastrointestinal environment in hypercholesterolemic men. *Nutrition of Research*. **20**: 191-201.
- Chaplin, M. F. (1986). Monosaccharides. in Chaplin, M. F. and Kennedy, J. F. (Eds.), *Carbohydrate analysis a practical approach* (pp.5-6), New York: IRL Press Limited.
- CP Kelco company*. 2006. “*applications of pectin*” [Online]. Available. <http://www.cpkelco.com/pectin/applications.html>. (6 September 2005).
- Cyber Colloids*. 2005. “*Introduction of pectin science*”. [Online]. Available. <http://www.cybercolloids.net/library/library.php>. (6 September 2005).
- Dische, Z. (1947). Uronic acid: Carbazole assay. in Chaplin, M. F. and Kennedy, J. F. (Eds.), *Carbohydrate analysis a practical approach* (pp.5), New York: IRL Press Limited.
- Diplock, A. T., Aggett, P. J., Ashwell, M., Bornet, F., Fern, E. B. and Roberfroid, M. B. (1999). Scientific concepts of functional foods in Europe: consensus document. *Journal of Nutrition*. **8**: 1-27.
- Dongowski, G. and Lorenz, A. (1998). Unsaturated oligogalacturonic acids are generated by *in vitro* treatment of pectin with human faecal flora. *Carbohydrate Research*. **314**: 237-244.
- Dumville, J. C. and Fry, S. C. (2000). Uronic acid-containing oligosaccharides: Their biosynthesis, degradation and signaling roles in non-diseased plant tissues. *Plant Physiology and Biochemistry*. **38**:125-140.
- Dubois, M., Gilles, K. A., Hamilton, J. K., Rebers, P. A. and Smith, F. (1956). Colorimethod for determination of sugars and related substances. *Analysis of Chemical*. 28(3): 350 - 356.
- Dwuma-badu, D., Ayim, J. S. K., Mingle, C. A., Tackiet, A.N., Slatkin, D. J., Knapp, J. E. and Schief, P. L. (1975). Constituents of West African medicine plants part 10, alkaloids of *Cissampelos pareira*. *Phytochemistry*. **14**: 2520-2521.

- Englyst, H. N. and Cummings, J. H. (1987). Fermentation in the human large intestine and the available substrates. *American Journal of Clinical Nutrition.* **45:** 1243-1255.
- Flourine, B., Vidon, N., Chayvialle, J.A., Palma, R., Franchisseur, C. and Bernier, J.J. (1985). Effect of increased amounts of pectin on solid-liquid meal digestion in healthy man. *American Journal of Clinical Nutrition.* **42:** 495-503.
- Fuller, R. (1997). *Application and Practical Aspects: Probiotics 2.* United Kingdom: Chapman and Hall.
- Gibson, G. R. and Roberfromid, M. B. (1995). Dietary modulation of the human colonic microbiota: introducing the concept of prebiotics. *Journal of Nutrition.* **125:** 1401-1412.
- Healthwize. 2007. "Probiotic gold". [Online]. Available. [www.hwize.com/probiotic/probiotic.html](http://www.hwize.com/probiotic/probiotic.html). (6 September 2005).
- Hidaka, H., Eida, T., Takizawa, T., Tokunaga, T. and Tashiro, Y. (1986). Effects of fructooligosaccharides on intestinal flora and human health. *Bifidobacteria Microflora.* **5:** 37-50.
- Hotchkiss, A. T. 2003. "Pectin carries prebiotic properties". [Online]. Available <http://www.nutraingredients.com/news/ng.asp?id=38604-pectin-carries-prebiotic>. (15 September 2005).
- Isolauri, E., Salminen, S. and Ouwehand, A. C. (2004). Probiotic. *Best Practice and research clinical gastroenterology.* **18:** 299-313.
- Itokawa, H., Morita. H., Matsumoto, K. and Takeya, K. (1993). A novel antileukemic tropoloisoquinoline alkaloid, pareirubrine, from *Cissampelos pareira*. *Chemistry Letters.* **2:** 339-342.
- Komalavilas, P. and Mort, A. (1986). Identification of acetate groups on the backbone of rhamnogalacturonan I a pectic polysaccharide of primary cell walls obtained from suspension-cultured cotton cells. *Plant Physiology.* **80:** 30-37.
- Kullen, M. J., Khil, J., Busta, F. F., Gallaher, D. D. and Brady, L. (1998). Carbohydrate source and bifidobacteria influence the growth of

*Clostridium perfringens* in vivo and in vitro. *Nutrition of Research.* **18:** 1889-1897.

- Laere, K. M. J., Bosveld, M., Schols, H. A., Beldman, G. and Voragen, A. G. J. (1997). Fermentative degradation of plant cell wall derived oligosaccharides by intestinal bacteria. in Cummings, J. H., Macfarlane, G. T. and Englyst, H. N. (Eds.), *Prebiotic digestion and fermentation.* (pp.145-420), The American Journal of Clinical Nutrition.
- Lovegrove, J. A. and Jackson, K. G. (2000). Coronary heart disease. in Gibson, G. R. and Williams, C. M., (Ed.), *Functional Foods: Concept to product* Cambridge:Woodhead Publishing Limited. 97-139.
- Mackey, B. M. and Gibson, G. R. (1997). *Escherichia coli* O157-from farm to fork and beyond. *Society of General Microbiology Quarterly.* **24:** 55-57
- Mandalari, G., Nueno, P. C., Tuohy, K., Gibson, G. R., Bennett, R. N., Waldron, K. W., Bisignano, G., Narbad, A. and Faulds, C. B. (2007). *In vitro* evaluation of the prebiotic activity of a pectic oligosaccharide-rich extract enzymatically derived from bergamot peel. *Applied Microbial and Cell Physiology.* **73:** 1173-1179.
- Manderson, K., Pinart, M., Tuohy, K. M., Grace, W. E., Hotchkiss, A. T., Widmer, W., Yadhav, M. P., Gibson, G. R., and Rastall, R. A. (2005). *In vitro* determination of prebiotic properties of oligosaccharides derived from an orange juice manufacturing by-product stream. *Applied and Environmental Microbiology.* 8383-8398.
- Manske, R. H. F., and Holmes, H. L. (1954). *The Alkaloids Chemistry and Physiology.* New York: Academic Press.
- Mazza, G. (1998). Vegetables Rich in Nondigestible Oligosaccharide. In *Functional Food: Biochemical & Processing Aspects,* Pennsylvania: Technomic Publishing Company, Inc. 215-220.
- Medibase. 2007. "Prebiotic product". [Online]. Available. [http://www.medibase.it/scheda.asp?codice=PREBIOTIC\\_&lingua=ita](http://www.medibase.it/scheda.asp?codice=PREBIOTIC_&lingua=ita) (1 September 2007).

- Miller, G.L. (1959). Use of dinitrosalicylic acid reagent for determination of reducing sugar. *Analysis and Chemical.* **31:** 426-428.
- Mukerji, B., and Bhandari, P.R. (1959). *Cissampelos pareira* source of a new curariform drug. *Planta Medica.* **7:** 250-259.
- Nakamura, S. 2005. "Xylanase". [Online]. Available. <http://www.nakamura.bio.titech.ac.jp/xyn/xyn.html>. (1September 2007).
- Niamsup, P., Sujaya, I. N., Tanaka, M., Sone, T., Hanada, S., Kamagata, Y., Lumyong, S., Assavanig, A., Asano, K., Tomita, F. and Yokota, A. (2003). *Lactobacillus thermotolerans* sp. Nov., a novel thermotolerant species isolated from chicken faeces. *International Journal of Systematic and Evolutionary Microbiology.* **53:** 263-268.
- Olano-Martin, E., Mountzouris, K. C., Gibson, G. R. and Rastall, R. A. (2000). *In vitro* fermentability of dextran, oligodextran and maltodextrin by human gut bacteria. *British Journal of Nutrition.* **83:** 247-255.
- Olano-Martin, E., Gibson, G. R. and Rastall, R. A.. (2002). Comparison of their *in vitro* bifidogenic properties of pectins and pectic-oligosaccharides. *Journal of Applied and Microbiology.* **93:** 505-511.
- Olano-Martin, E., Mountzouris, K. C., Gibson, G. R. and Rastall, R. A. (2001). Continuous production of oligosaccharides from pectin in an enzyme membrane reactor. *Journal of Food Science.* **66:** 966-971.
- Olano-Martin, E., Rimbach, G. H., Gibson, G. R. and Rastall, R. A.. (2003 (a)). Pectins and pectic-oligosaccharides induce apoptosis in *in vitro* human colonic adenocarcinoma cells. *Anticancer and Research.* **23:** 341-346.
- Olano-Martin, E., Willians, M. R., Gibson, G. R. and Rastall, R. A.. (2003 (b)). Pectins and pectic-oligosaccharides inhibit Escherichia coli O157:H7 Shiga toxin as directed towards the human colonic cell line HT29. *Fermentation of Microbiology Letters.* **218:** 101-105.
- Oregon state university. 2007. "Chemical structures of amylose Cellulose and Beta-Glucans". [Online]. Available. <http://lpi.oregonstate.edu/infocenter/phytochemicals/fiber/fiberfig.html>. (1September 2007).

- Ouwehand, A. C., Makelaine, H., Tiihonen, K. and Rautonen, N. (2006). Sweeteners and sugar alternatives in food technology. *Digestive Health*. 44-51.
- Pellerin, P., Doco, T., Vidal, S., Williams, P., Brillouet, J. M. and O'Neill, M. A. (1996). Structural characterization of red wine rhamnogalacturonan II, *Carbohydrate Polymers*. **290**: 183-197.
- Plant genetic conservation project*. 1996. “*Cissampelos pareira*”. [Online]. Available. [www.rspg.thaigov.net/plants\\_data/use/animals3.htm](http://www.rspg.thaigov.net/plants_data/use/animals3.htm). (1 September 2007).
- Rastall, R. A., Fuller, R., Gaskins, H. R. and Gibson, G. H. (2000). In Gibson, G. R. and Williams, C. M., (Ed.), *Functional Foods: Concept to product* (pp.71-95), Cambridge. Woodhead Publishing Limited.
- Roberfroid, M. (1993). Dietary fiber, inulin, and oligofructose comparing their physiological effects. *Critical Reviews in Food Science and Nutrition*. **33**: 103-148
- Roberfroid, M. (2001). Prebiotics: preferential substrate for specific germs. *American Journal of Clinical Nutrition*. **73**: 406-409.
- Rowland, I. R. (1995) Toxicology of the colon: role of the intestinal microflora. In: Gibson, G. R. and Macfarlane, G. T.,(Eds.), *Human colonic bacteria: role in nutrition, physiology and pathology* (pp.155-174), Boca Raton, CRC Press.
- Ruang suriya, J., Lumyong, S. (2004). *Polysaccharide from Thai native plant, Stephania tomentella Forman: Chemical composition and Microbial Degradation*. Bachelor of Science, Chiang Mai University.
- Sa-nguansook, C. (2002). *Quality improvement of coconut meal by enzyme for applications in feed production*. Master's thesis. Chiang Mai University.
- Scherzenmeir, J. and Vrese, M. (2001). Probiotics, Prebiotics, and Synbiotics approaching a definition. *American Journal of Clinical Nutrition*. **73**: 361-364.
- Schiffrin, E. J., Rochat, F. and Link-Amster, H. A. (1995). Immune system stimulation by probiotics. *Journal of Dairy Science*. **78**:1597-1606.

- Schwartz, S.E., Levine, R.A., Schiedecker, J.R. and Track, N.S. (1982). Sustained pectin ingestion delays gastric emptying. *Gastroenterology*. **83**: 812-817.
- Seyrig, J.A., Naveau, S., Gonzales, R. and Petit, R. (1983). Pectins. *Gastroenterology and Clinical Biology*. **7**: 1031-1037.
- Sedona labs* <sup>TM</sup>. 2007. “*iFlora Complete Acidophilus Capsules*” [Online]. Available. [www.sedonalabspro.com/iflora.html](http://www.sedonalabspro.com/iflora.html). (6 September 2007).
- Shaklee Corporation*. 2007. “*Optiflora Prebiotic*”. [Online]. Available. [www.shop.shaklee.com](http://www.shop.shaklee.com), (6 September 2007).
- Singthong, J., Ningsanond, S., Cui, S. W. and Goff, H. D. (2005). Extraction and physicochemical characterization of Krueo Ma Noy pectin. *Food Hydrocolloids*. **19**: 793-801.
- Singthong, J., Cui, S. W., Ningsanond, S. and Goff, H. D. (2004). Structural characterization, degree of esterification and some gelling properties of Krueo Ma Noy (*Cissampelos pareira*) pectin. *Carbohydrate Polymers*. **58**: 391-400.
- Smitinand, T. and Larsen, K. (1991). *Flora of Thailand* Part.3 2Vol. Bangkok: The Forest Herbarium, Royal Forest Department.
- Spiller, G.A., Chernoff, M.C., Hill, R.A., Gates, J.E., Nassar, J.J. and Shipley, E.A.(1980). Effect of purified cellulose, pectin and low residue diet on fecal volatile fatty acids, transit time, and faecal weight in humans. *American Journal of Clinical Nutrition* **33**: 754-749.
- Steve's place*, 2007. “*Molecular structures*.” [Online]. Available <http://www.steve.gb.com/science/molecules.html>. (6 September 2007).
- Swanson, L. S. (2002). Supplemental FOS and MOS influence immune function, ileal and total tract nutrient digestibilities, microbial populations and concentrations of protein catabolites in the large bowel of dogs. *Journal of Nutrition*. **132**: 980-989.
- Total health centre. 2007. “*MAXimun Nutrition: probiotic*”. [Online]. Available. <http://wobenzymcatalog.com/inuflora.html>. (6 September 2007).
- Towle, G. A. and Christensen, O. (1982). Pectin. in G. O. Aspinall. (Ed.), *Polysaccharides* (pp. 429-455). New York : Academic Press.

- Vardhanabhuti, B., and Ikeda, S. (2006). Isolation and characterization of hydrocolloids from monoi (*Cissampelos pareira*) leaves. *Food Hydrocolloids.* **20:** 885-891.
- Wang, X. and Gibson, G. R. (1993). Effects of the *in vitro* fermentation of oligosaccharide and inulin by bacteria growing in the human large intestine. *Journal of Applied Bacteriology.* **75:** 373-380.
- William, G. T., Knox, J. P. and Mikkelsen, J. D. (2006). Pectin: new insights into an old polymer are starting to gel. *Trends in Food Science and Technology.* **17:** 97-104.
- Wobenzymcatalog. 2007. "Inuflora® Natural Support for Intestinal Health". [Online]. Available. <http://wobenzymcatalog.com/inuflora.html>. (6 September 2007).
- Wongputtisin, P. (2003). *Selective of Oligosaccharides From Some Local Plants for Utilizing as Prebiotics.* Master's thesis. Chiang Mai University.
- Woods, M. N. and Gorbach, S. L. (2001). *Influences of Fibre on the Ecology of the Intestinal Flora.* in Spiller, G. A., (Ed.), CRC Handbook.
- Yamada, H. (1996). Contribution of pectins on health care. in J. Visser, and A. G. J. Voragen (Eds.), *Pectins and Pectinases* (pp. 173-190). Amsterdam: Elsevier.
- Yamada, H., Kiyohara, H., and Mastsumoto, T. (2003). Recent studies on possible functions of bioactive pectins and pectic polysaccharides from medicinal herbs. in F. Voragen, H. Schols and R. Visser (Eds.), *Advances in Pectin and Pectinases Research.* (pp. 481-490). Dordrecht: Kluwer Academic Publishers.
- Zamora, A. 2007. "Carbohydrates - Chemical Structure". [Online]. Available. <http://www.scientificpsychic.com/fitness/carbohydrates1.html> (1September 2007).