

REFERENCES

- Ahmed, I., E. Adeghate, A. K. Sharma, D. J. Pallot and J. Singh. 2003. Effects of *Momordica charantia* fruit juice on islet morphology in the pancreas of the streptozotocin-diabetic rat. Nature' s Way. Available: <http://www.geocities.com/natureswy/naturesway.htm> [2003, February 19].
- APCTT. 2003. Protein-enriched GM potato. Biotechnology: Mar-Apr 2003. Nature Biotechnology. Available:http://www.techmonitor.net/techmon/03mar-apr/bio/bio_agri.htm [2003, September 22].
- Avert. 2003. HIV picture and structure of the virus. Available: <http://www.avert.org/virus.htm> [2003, April 7].
- Bailey, L. H. 1951. Manual of Cultivated Plants. Macmillan Publishing Co., New York. 1116 p.
- Bliss, F. A. 2003. Breeding common beans for improved protein and yield. Dept. of Horticulture, University of Wisconsin Madison, WI. 2 p. Available: http://www.alembic.nal.usda.gov:9500/BIC2/XML/p82/p82_059.html [2003, May 8].
- Bourinbaiar, A. S. and S. Lee-Huang. 1995. Potential of anti-HIV activity of anti-inflammatory drugs,dexamethasone and indomethacin, by MAP30, the antiviral agent from bitter melon. Biochem. Biophys. Res. Commun 208(2): 779-785.
- Bourinbaiar, A. S. and S. Lee-Huang. 1996. The activity of plant-derived antiretroviral proteins MAP30 and GAP31 against herpes simplex virus *in vitro*. Biochem. Biophys. Res. Commun 219(3): 923-929.
- Buchakul, N. 2001. The toxicity test of *Momordica charantia* L. seed protein. Thesis for Master of Science in Pharmacy (Toxicology). Mahidol University, Bangkok. 130 p.
- Cai, R., N. S. Hettiarachchy and M. Julaluddin. 2002. Characterization of proteins in fleshes and seeds of bitter gourds. Available: <http://ift.Confex.Com/ift/2002/techprogram-11058.htm> [2003, February 16].
- Chieco-Bianchi, L. 2003. H9 (human, leukemia, acute lymphoblastic). Short description of cell lines. Istituto di Oncologia, Universita' degli Studi, Padova. Available:

- <http://www.biotech.ist.unige.it/cldb/cl1555.html> [2003, April 9].
- China Daily. 2002. Momordica-Bitter melon-Cancer and Diabetes. Available:
<http://www.thensome.com/bitter melon.htm> [2003, February 19].
- Chu, C. K. and H. G. Cutler. 1992. Natural products as antiviral agents. Plenum Press, New York. 169 p.
- Dayu, X. 2003. Chinese bitter gourd adaptation trial. ARC-AVRDC. 5 p. Available:
<http://www.arcavrdc.org/Training%20 report/Training%20 report 2016th/XueDayu.html> [2003, April 23].
- DeMan, J. D. 1999. Principles of Food Chemistry. 3rd Eds. Aspen Publishers Inc., Gaithersburg, Maryland. 520 p.
- Deshpande, A. A., K. Venkatasubbaiah, V. M. Bankapur and U. G. Nalawadi. 1979. Studies on floral biology of bitter gourd (*Momordica charantia* L.) Mysore Journal of Agricultural Sciences 13(2): 156-159.
- Escalante, E. E. and J. R. Wilcox. 1993. Variation in seed protein among nodes of normal and high protein soybean genotypes. Crop Science 33(6): 1164-1166.
- Fong, W. P., Y. T. Poon, T. M. Wong, J. W. Y. Mock, T. B. Ng, R. N. S. Wong, Q. Z. Yao and H. W. Yeung. 1996. A highly efficient procedure for purifying the ribosome-inactivating proteins α - and β -momorcharins from *Momordica charantia* seeds. N-terminal sequence comparison and establishment of their N-glycosidase activity. Life Sciences 59: 901-909.
- Gallacher, D. 1999. Bitter melon. Plant Sciences Group of Central Queensland University. Available: <http://science.cqu.edu.au/psg/BitterMelon.html> [2003, April 23].
- Go, T. T., H. W. Yeung and W. P. Fong. 1992. Deoxyribonucleolytic activity of α - and β -momorcharins. Life Sci 51(17): 1347-1353.
- Griffing, B. 1956. Concept of general and specific combining ability in relation to diallel crossing systems. Aust. J. Biol. Sci 9(4): 463-492.
- Gu, H. P., Y. L. Lin and K. X. Chen. 1991. Genetic study of seed protein content in soyabean and breeding for high protein yield. Jiangsu Agricultural Sciences No. 1. p. 27-29.
- Harris, J. G. and M. W. Harris. 1994. Plant Identification Terminology: An Illustrated Glossary. Spring Lake Publishing, Utah. 188 p.
- Hrstkova, P. 1998. Variabilita a selekce lupiny promenlive (Variability and selection of

Lupinus mutabilis). Doctoral thesis. Text in Czech. Mendel University of Agriculture and Forestry Brno. 70 p.

Hoffman, A. D., B. Banapour and J. A. Levy. 1985. Characterization of the AIDS-associated retrovirus reverse transcriptase and optimal conditions for its detection in virions. *Virology* 147: 326-335.

Huang, J. C. and C. L. Tong. 1989. Analysis on the variation of protein and fat and their correlation in wild soyabean in Fujian. *Fujian Agricultural Science and Technology* No. 1. p. 7-8.

Imsande, J. 1992. Agronomic characteristics that identify high yield, high protein soybean genotypes. *Agronomy Journal* 84(3): 409-414.

Incafci, M. D'. and G. Balconi. 2003. WI-38 VA13 subline 2RA (human, Caucasian, lung, embryonic. Istituto Ricerche Farmacologiche Mario Negri, Milano.

Available: <http://www.biotech.ist.unige.it/cldb/cl4712.html> [2003, April 9].

Jayasooriya, A. P., M. Sakono, C. Yukizaki, M. Kawano, K. Yamamoto and N. Fukuda. 2000. Effects of *Momordica charantia* powder on serum glucose levels and various lipid parameters in rats fed with cholesterol-free and cholesterol-enriched diets. *Journal of Ethnopharmacology* 72: 331-336.

Jiratchariyakul, W. 1999. Development of anti-HIV drug from *Momordica charantia* L. Mahidol University, Bangkok. Personal communication.

Jiratchariyakul, W., C. Wiwat, M. Vongsakul, A. Somanabandhu, W. Leelamanit, I. Fujii, N. Suwannaroj and Y. Ebizuka. 2001. HIV Inhibitor from Thai Bitter Gourd. *Planta Med* 67: 350-353.

Jizhe, C. 1993. Cucumber evaluation trial. Cucumber evaluation trial in training report. 11th regional training course in vegetable production and research. 313 p.

Jones, S. B. and A. E. Luchsinger. 1987. Plant Systematics. McGraw-Hill Co. Ltd., New York. 457 p.

Katepa-Mupondwa, F., G. Rakow and P. Raney. 1999. Meal quality characteristics yellow mustard (*Sinapis alba* L.). "New horizons for an old crop" Proceedings of The 10th International Rapeseed Congress, Canberra. Available: <http://www.Regional.Org.au/au/gcirc/4/53.htm> [2003, March 22].

- Khanna, P. and S. C. Jain. 1981. Hypoglycemic activity of polypeptide-p from a plant source. *Journal of Natural Products* 44(6): 648-655.
- Kuang, B.F., C. H. Xiao, Z. X. Huang and S. Q. Zheng. 1997. Selection and breeding of early ripening variety Hengza Bitter Gourd No. 1. [Chinese]. *Journal of Hunan Agricultural University* 23(4): 331-335.
- Laal, S., S. Burda, S. Sharpe and S. Zolla-Pazner. 1993. A rapid, automated microtiter assay for measuring neutralization of HIV-1. *AIDS Res. Hum. Retroviruses* 9(8): 781-785.
- Laemmli, U. K. and M. Favre. 1973. Maturation of the head of bacteriophage T4. I. DNA packaging events. *J. Mol. Biol* 80: 573-599.
- Lawande, K. E. and A. V. Patil. 1989. Correlation studies in bitter gourd. *Journal of Maharashtra Agricultural Universities* 14(1): 77-79.
- Lee-Huang, S., H. Kung, P. Huang, P. Huang, A. Bourinbaiar, H. Huang and H. Chen. 1995a. Anti-HIV and anti-tumor activities of recombinant MAP30 of bitter melon. *Gene* 161: 151-156.
- Lee-Huang, S., P. L. Huang, P. L. Huang, A. S. Bourinbaiar, H. C. Chen and H. F. Chen. 1995b. Inhibition of the integrase of human immunodeficiency virus (HIV) type 1 by anti-HIV plant proteins MAP30 and GAP31. *Proc. Natl. Acad. Sci* 92: 8818-8822.
- Lee-Huang, S., P. L. Huang, P. L. Nara, C. Hao-Chia, K. Hsiang-fu, P. Huang, H. I. Huang and P. L. Huang. 1990. MAP30: a new inhibitor of HIV-1 infection and replication. *FEBS Letter* 272(1-2): 12-18.
- Lee-Huang, S., P. L. Huang, Y. Sun, H. C. Chen, H. F. Kung and W. J. Murphy. 2000. Inhibition of MDA-MB-231 human breast tumor xenografts and HER2 expression by anti-tumor agents GAP31 and MAP30. *Anticancer Res* 20(2A): 653-659.
- Leung, S. O., H. W. Yeung and K. N. Leung. 1987. The immunosuppressive activities of two abortifacient proteins isolated from the seeds of bitter melon (*Momordica charantia*). *Immunopharmacology* 13(3): 159-171.
- Lodge, J. K., W. K. Kaniewski and N. E. Turner. 1993. Broad-spectrum virus resistance in transgenic Plants expressing pokeweed antiviral protein. *Proceedings of National Academy of Science USA* 90: 7089-7093.

- Lowry, O. H., N. J. Rosebrough, A. L. Farr and R. J. Randall. 1951. Protein measurement with the folin phenol reagent. *J. Biol. Chem.* 193: 265-275.
- Mbopi-Keou, F. X., N. J. Robinson, P. Mayaud, L. Belec and D. W. Brown. 2003. Herpes simplex virus type 2 and heterosexual spread of human immunodeficiency virus infection in developing countries : hypotheses and research priorities. *Clin. Microbiol. Infect.* 9(3): 161-171.
- McGrath, M. S., K. M. Hwang, S. E. Caldwell, I. Gaston, K. C. Luk, P. Wu, V. L. Ng, S. Crowe, J. Daniels, J. Marsh, T. Deinhart, P. V. Lekas, J. Vennari, H. W. Yeung and J. D. Lifson. 1989. GLQ223: an inhibitor of human immunodeficiency virus replication in acutely and chronically infected cells of lymphocyte and mononuclear phagocyte lineage. *Proc. Natl. Acad. Sci* 86: 2844-2848.
- Meng, X. X., M. X. Hu, A. P. Li, S. M. Wang and C. W. Yi. 1990. Selection efficiency for protein content and its effects on seed yield and oil content in the early generations from three crosses of soyabean. *Acta Agronomica Sinica* 16(4): 377-380.
- Meng, X. X., M. X. Hu, A. P. Li and S. M. Wang. 1991. Selection efficiency for seed protein content and its effects on yield and oil content in the early generations of three soyabean crosses. *Soybean Science* 10(3): 179-186.
- Michael, D. 2002. Bitter melon P. E. Bitter malon P.E. Charantin 10% by UV. Available: http://www.wholebodyhealth.net/forum/_disc_2/00000123.htm [2003, September 20].
- Minami, Y. and G. Funatsu. 1993. The complete amino acid sequence of momordin-a, a ribosome-inactivating protein from the seeds of bitter gourd (*Momordica charantia*). *Biosci Biotechnol. Biochem* 57(7): 1141-1144.
- Minami, Y., M. R. Islam and G. Funatsu. 1998. Chemical modifications of momordin-a and luffin-a, ribosome-inactivating proteins from the seeds of *Momordica charantia* and *Luffa cylindrica* : involvement of His140, Tyr165, and Lys231 in the protein-synthesis inhibitory activity. *Biosci. Biotechnol. Biochem* 62(5): 959-964.
- Mishra, H. N., R. S. Mishra, S. N. Mishra and G. Parhi. 1994. Heterosis and combining ability in bitter gourd (*Momordica charantia*). *Indian Journal of Agricultural Sciences* 64(5): 310-313.
- Mock, J. W. Y., T. B. Ng, R. N. S. Wong, Q. Z. Yao, H. W. Yeung and W. P. Fong. 1996.

- Demonstration of ribonuclease activity in the plant ribosome-inactivating proteins α - and β -momorcharins. *Life Sciences* 59: 1853-1859.
- Mohanty, B. K. 2000. Quantitative inheritance in pumpkin- a combining ability analysis. *Indian J. Hort* 57(2): 160-163.
- Morgan, W. and D. Midmore. 2002. Bitter Melon in Australia. A report for the Rural Industries Research and Development Corporation. Rural Industries Research and Development Corporation, Central Queensland University, Rockhampton. 29 p.
Available: <http://www.rirdc.gov.au/reports/AFO/02-134.pdf> [2003, April 26].
- Nara, P. L. and P. J. Fischinger. 1998. Quantitative infectivity assay for HIV-1 and -2. *Nature* 332: 469-470.
- Nara, P. L., W. C. Hatch, N. M. Dunlop, W. G. Robey, L. O. Arthur, M. A. Gonda and P. J. Fischinger. 1987. A simple, rapid, quantitative syncytium-forming microassay for the detection of human immunodeficiency virus neutralizing antibody. *AIDS Res. Hum. Retroviruses* 3(3): 283-302.
- Nath, P. 1999. Bird bitter gourd (*Momordica charantia*). The vegetable sector in Thailand a review. Food and Agriculture Organization of the United Nations Region Office for Asia and the Pacific Bangkok, November, FAO 1999. Available:
<http://www.fao.org/DOCREP/004/AC145E/AC145E.09.htm> [2003, March 13].
- Natural Health Center. 2003. Bitter Gourd. Available:
http://www.e2121.com/food_db/viewherb.php?viewid=25 [2003, February 14].
- Nayar, N. M. and T. A. More. 1998. Cucurbits. Science Publishers Inc., New Hampshire. 340 p.
- Ng, T., B. Huang, W. Fong and H. Yeung. 1997. Anti-human immunodeficiency virus (anti HIV) natural products with special emphasis on reverse transcriptase inhibitors. *Life Sciences* 61: 933-949.
- Ng, T. B., P. P. Tam, W. K. Hon, H. L. Choi and H. W. Yeung. 1988. Effects of momorcharins on ovarian response to gonadotropin-induced superovulation in mice. *Int. J. Fertil* 33(2): 123-138.
- Ng, T. B., W. K. Liu, S. F. Sze and H. W. Yeung. 1994. Action of alpha-momorcharin, a ribosome inactivating protein, on cultured tumor cell lines. *Gen Pharmacol* 25(1):

75-77.

- Ng, T. B., W. Y. Chan and H. W. Yeung. 1992. Proteins with abortifacient, ribosome inacting, immunodulatory, antitumor and anti-AIDS activities from Cucurbitaceae plants. General Pharmacology 23: 575-590.
- Ng, T. B., Z. Feng, W. W. Li, and H. W. Yeung. 1991. Improved isolation and further characterization of beta-trichosanthin, a ribosome-inactivating and abortifacient protein from tubers of *Trichosanthes cucumeroides* (Cucurbitaceae). Int. J. Biochem 23: 561-567.
- Ng, T. J. 1993. New opportunities in the Cucurbitaceae. In J. Janick and J. E. Simon (eds.), New crops. Wiley, New York. p. 538-546.
- Nicolo', G. 2003. MDA-MB-231 (human, Caucasian, breast, adenocarcinoma). Complete description of the cell line that you requested. Version 4.200201. Istituto Nazionale per la Ricerca sul Cancro, Genova. Available: <http://www.Biotech.ist.unige.it/cldb/cl3402.html> [2003, April 9].
- Pala-or, K. 2001. Intraspecific variation of bitter gourd *Momordica charantia* L. by RAPD analysis. Thesis for Master of Science in Biochemistry. Chulalongkorn University, Bangkok. 94 p.
- Parkash, A., T. B. Ng and W. W. Tso. 2002. Purification and characterization of charantin, a napin-like ribosome-inactivating peptide from bitter gourd (*Momordica charantia*) seeds. J. Pept. Res 59(5): 197-202.
- Paroda, R. S. 1999. Genetically modified plants for food use. Indian Council of Agricultural Research. Ministry of Agriculture. Available: <http://www.nutritionfoundationofindia.org/ARCHIVES/JUL 99B. HTM> [2003, May 8].
- Patel, J. D., M. Elhalwagy, I. Falak and L. Tulsieram. 1999. S₁ per se recurrent selection in three spring canola (*Brassica napus*) populations. "New horizons for an old crop" Proceedings of the 10th International Rapeseed Congress, Canberra. Available: [#Top Of Page](http://www.Regional.Org.au/au/gcirc/4/278.htm) [2003, March 22].
- Patnaik, D. and P. Khurana. 2001. Wheat biotechnology: A minireview. Plant Biotechnology. Available: <http://www.ejbiotechnology.info/content/vol 4/issue 2/full/4> [2003, September 22].
- Paul, M. F., Tse, T. B. Ng, W. P. Fong, R. N. S. Wong, C. C. Wan, N. K. Mak and H. W. Yeung. 1999. New ribosome-inactivating proteins seeds and fruits of the bitter gourd *Momordica*

- charantia*. The International Journal of Biochemistry & Cell Biology 31: 895-901.
- Pental, D. 1998. Plant Molecular Biology and Biotechnology in India. Plant Molecular Biology Reporter 16: 93-97.
- Pinaev, G. P. 2003. MT-4 (human, peripheral blood, leukemia, T cell). Short description of cell lines. Russian Academy of Sciences. St. Peterburg. Available: <http://www.biotech.ist.unige.it/cldb/cl3594.htm> [2003, April 9].
- Porro, G., P. Lento, F. Marcucci, G. Gromo and D. Modena. 1995. Different cytotoxic activity and intracellular fate of an anti-CD5-momordin immunotoxin in normal compared to tumor cells. Cancer Immunol. Immunother 40(4): 213-218.
- Prodanovic, G. 1993. Analysis of some quantitative and qualitative traits in F_4 generation of soybean (*Glycine max* L.) lines in relation to parents. Review of research work at the Faculty of Agriculture, Belgrade 38(1): 29-38.
- Pu, Z., B. Y. Lu, W. Y. Liu and S. W. Jin. 1996. Characterization of the enzymatic mechanism of γ - momorcharin, a novel ribosome-inactivating protein with lower molecular weight of 11,500 purified from the seeds of bitter gourd *Momordica charantia*, Biochem. Biophys. Res. Commun 229: 287-294.
- Purseglove, J. W. 1968. Tropical Crops Dicotyledons 1. Longmans Green & Co. Ltd., London and Harlow. 332 p.
- Qui, L. J. and J. L. Wang. 1992. Principle and effect of selection for parents and early generations in soyabean high-protein breeding. Scientia Agricultura Sinica 25(2): 53-58.
- Qui, L. J., J. L. Wang and Q. X. Meng. 1991. Studies on parent selection and selection in early generations in breeding for high protein soyabeans. II. Correlation of protein content with other characteristics in F_2 , F_3 and F_4 hybrids. Soybean Science 10(2): 93-97.
- Ramachandran, C. and P. K. Gopalakrishnan. 1979. Correlation and regression studies in bitter gourd. Indian Journal of Agricultural Science 49: 850-854.
- Robinson, R. W. and D. S. Deckers-Walters. 1997. Cucurbits. Cab International, Cambridge. 226 p.
- Ross, I. A. 1999. Medicinal Plants of the World. Humana Press Inc., Totowa and New Jersey. 415 p.
- Saralamp, P., W. Chuakul, R. Temsiririrkkul and T. Clayton. 1996. Medicinal Plants in

- Thailand Vol. 1. Amarin Printing and Publishing Public Co. Ltd., Bangkok. 218 p.
- Schreiber, C. A., L. V. Wan, Y. T. Sun, L. Lu, L. C. Krey and S. Lee-Huang. 1999. Fertility and Sterility 72(4): 686-690.
- Shin, S. and S. R. Bhowmik. 1995. Thermal kinetics of color changes in pea puree. Journal of Food Engineering 24: 77-86.
- Siemonsma, J. S. and K. Piluek. 1994. Plant Resources of South-East Asia No. 8 Vegetables. Prosea Foundation, Bogor. 412 p.
- Srivastava, V. K. and L. S. Srivastava. 1976. Genetic parameters, correlation coefficients and path coefficient analysis in bitter gourd (*Momordica charantia* L.) Indian J. Hort 33: 66-70.
- Summers, M. F. 1996. National Institute of Allergy and Infectious Diseases (NIAID)-supported Researchers illuminate 3-D structure of HIV protein. Available: <http://www.niaid.nih.gov/newsroom/releases/hivprote.htm> [2003, April 5].
- Suwannaroj, N. 1997. Chemical investigation of *Momordica charantia* L. fruit. Thesis for Master of Science (Pharmacy). Mahidol University, Bangkok. 172 p.
- Taylor, L. 2002. Herbal Secrets of the Rainforest. 2nd edition. Sage Press Inc., Texas. 104 p. Available: <http://rain-tree.com/bitmelon.htm> [2003, February 14].
- Tsang, K. Y. and T. B. Ng. 2001. Isolation and characterization of a new ribosome inactivating protein, momorgrosvin, from seeds of the monk's fruit *Momordica grosvenorii*. Life Sciences 68: 773-784.
- Valbonesi, P., L. Barbieri, A. Bolognesi, E. Bonora, L. Polito and F. Stirpe. 1999. Preparation of highly purified momordin II without ribonuclease activity. Life Sciences 65(14): 485-491.
- Wang, Q. M. and G. W. I. Zeng. 1998. Study of specific protein on differentiation of *Momordica charantia*. Acta Botanica Sinica 40: 241-246.
- Wang, Y. K., N. Neamati, J. Jacob, I. Palmer, S. J. Stahl, J. D. Kaufman, P. L. Huang, P. L. Huang, H. E. Winslow, Y. Pommier, P. T. Wingfield, S. Lee-Huang, A. Bax and D. A. Torchia. 1999. Solution structure of anti-HIV-1 and anti-tumor protein MAP30: Structural insights into its multiple functions. Cell 99(4): 433-442.

- Wattanapiromsakul, C. 2002. Bitter gourd. Available:
<http://herbal.pharmacy.psu.ac.th/Article/07-45/Momordica.htm> [2002, August 29].
- Weaver, J. T. 2003. Bitter melon. Combination anti-viral herbal formula. Available:
<http://www.dizzle.com/~newroots/Combform.html> [2003, September 21].
- Wettberg, E. V. 1998. Biological and sociological aspects of the use of *Momordica charantia* to treat HIV infection. Available:
<http://kestrel.sccs.swarthmore.edu/~evonwet/Research/karela.html> [2002, March 8].
- Wilcox, J. R. 1998. Increasing seed protein in soybean with eight cycles of recurrent selection. *Crop Science* 38(6): 1536-1540.
- Wilcox, J. R. and J. F. Cavins. 1995. Backcrossing high seed protein to a soybean cultivar. *Crop Science* 34(4): 1036-1041.
- Xinhai, L., W. Jinling, Y. Qingkai, J. Shaojie and W. Liming. 1999. The effect of selection method on the association of yield and seed protein with agronomic characters in an interspecific cross of soybean. *Soybean Genetics Newsletter* 26 [online journal]. Available: <http://www.soygenetics.org/articles/sgn1999-002.html> [2003, March 22].
- Yang, S. L. and T. W. Walters. 1992. Ethnobotany and the economic role of the Cucurbitaceae of China. *Econ. Bot* 46: 349-367.
- Zeng, S., G. Li and S. Yan. 1992. Purification and characterization of the analogs of momorcharin. *Shengwu Huaxue Zazhi* 8(4): 429-433.
- Zheng, Y. T., K. L. Ben and S. W. Jin. 1999. Alpha- momorcharin inhibits HIV-1 replication in acutely but not chronically infected T-lymphocytes. *Zhongguo Yao Li Xue Bao* 20(3): 239-243.