

Curriculum vitae

Mohamed Cassim Mohamed Iqbal

Personal data

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Education

Primary and Secondary Education

Jan 1962-Dec 1975 : Kingswood College, Kandy, Sri Lanka

Academic education

April 1976-Dec 1980 : B. Sc (Agric.), Second Class (Lower division)
University of Peradeniya,
Sri Lanka.

Oct 1984 – Oct 1987 : Dipl. Ing. -Agr. (ETH) M. Phil
Department of Agriculture,
Swiss Federal Institute of Technology (ETH)
Zürich, Switzerland.

Feb 1990-July 1993 : Ph.D. in Plant Breeding
Institute of Agronomy and Plant Breeding,
Georg-August-University,
Göttingen, Germany.

Scholarships and awards

- July 1983- Oct 1987: Swiss Federal Government Scholarship for postgraduate studies at the Swiss Federal Institute of Technology (ETH), Zürich Switzerland.
- Jan 1990– July 1993: Rotary Foundation scholarship (Freedom from Hunger program), to read for a Ph.D degree at the University of Göttingen, Germany.
- April 1996–July 1996: DAAD Research Fellowship at the Institute of Agronomy and Plant Breeding, University of Göttingen, Germany.
- Nov 2000 : Presidential Award for research publications in Science Citation Index, Sri Lanka.
- Aug 2003–Jan 2005: DAAD Research Fellowship at the Institute of Agronomy and Plant Breeding, University of Göttingen, Germany.
- Nov 2003 : Presidential Award for research publications in Science Citation Index, Sri Lanka.

Published as thesis

- IQBAL, M.C.M., 1987: Investigation of the performance of doubled haploid spring wheat in comparison to their corresponding breeding lines under field conditions. *M.Sc. thesis*. Swiss Federal Institute of Technology (ETH), Zurich.
- IQBAL, M.C.M. 1993: Methodological improvements in microspore culture of *Brassica napus* L. *Ph.D thesis (Part I)*. Georg-August University, Göttingen.
- IQBAL, M.C.M. 1993: Investigations on *in vitro* glucosinolate biosynthesis. *Ph.D thesis (Part II)*. Georg-August University, Göttingen.

Research publications in refereed journals

1. MÖLLERS, C., M.C.M. IQBAL and G. RÖBBELEN, 1994: Efficient diploidization of *Brassica napus* microspores by colchicine treatment to regenerate doubled haploid plants. *Euphytica* 75: 95-104, 1994.
2. IQBAL, M.C.M., C. MÖLLERS, and G. RÖBBELEN, 1994: Increased embryogenesis after colchicine treatment of microspore cultures of *Brassica napus* L. *J of Plant Physiol.* 143: 222-226.

3. **IQBAL, M.C.M.**, G. RÖBBELEN and C. MÖLLERS, 1995. Biosynthesis of glucosinolates by microspore derived embryoids and plantlets *in vitro* of *Brassica napus* L. *Plant Science* 112: 107-115.
4. MÖLLERS, C., NEHLIN, L., GLIMELIUS, K. and **M.C.M. IQBAL**, 1999: Influence of *in vitro* conditions on glucosinolate composition of microspore-derived embryos of *Brassica napus*. *Physiologia Plantarum* 107: 441-446.
5. **IQBAL, M.C.M.** and C.MÖLLERS, 1999: Double haploids in *Brassica napus* L. breeding programs. *Pakistan Journal of Biological Sciences*, 2 (4): 1197-1202.
6. **IQBAL, M.C.M.**, S. MEIYALAGHAN, K.B. WIJESEKARA, and K.P. ABEYRATNE, 2001: Antifungal activity from water extracts of some common weeds in Sri Lanka. *Pakistan Journal of Biological Sciences*, 4 (7): 843-845.
7. **IQBAL, M.C.M.**, K.B. WIJESEKARA and R.B. HAPUKOTUWA 2001: Fruits in *Brugmansia x candida* Pers. *Ceylon Journal of Science (Bio.Sci)* 28:19-20.
8. **IQBAL, M.C.M.**, and K.B. WIJESEKARA 2002: Cells of the connective tissue differentiate and migrate into pollen sacs. *Naturwissenschaften* 89: 39-42.
9. **IQBAL, M.C.M.**, and K.B. WIJESEKARA 2002: Cytological aspects of pollen embryogenesis in anther culture of *Datura metel* L. *Ceylon Journal of Science (Bio.Sci)* 30: 89-98.
10. **IQBAL, M.C.M.** and C.MÖLLERS 2003: Uptake and distribution of sinigrin in microspore derived embryos of *Brassica napus* L. *Journal of Plant physiology* 160, 961-966.
11. **IQBAL, M.C.M.**, U.L.B. JAYASINGHE, H.M.T.B. HERATH, K.B. WIJESEKARA and Y. FUJIMOTO 2004: A fungistatic chromene from *Ageratum conyzoides*. *Phytoparasitica* 32(2): 119-126.
12. ZARNOWSKI, R, A, JAROMIN, M. CERTIK, T. CZABANY, J. FONTAINE, T. JAKUBIK, **M.C.M. IQBAL**, A. GRANDMOUGIN-FERJANI, A. KOZUBEK AND S.J. PIETR 2004: The oil of *Adenanthera pavonina* L. seeds and its emulsions. *Zeitschrift für Naturforschung* 59c, 321-326.
13. **IQBAL, M.C.M.**, S. R. WEERAKOON, and P.K.D. PIERIS 2006: Variability of fatty acid composition in interspecific hybrids of mustard *Brassica juncea* and *Brassica napus*. *Ceylon Journal of Science, (Bio. Sci.)* 35 (1):17-23.
14. NATH U.K., **IQBAL, M.C.M.** and MÖLLERS, C. 2007: Early, non-destructive selection of microspore derived embryo genotypes in oilseed rape (*Brassica napus* L.) by molecular markers and oil quality analysis. *Molecular Breeding* 19: 285-289.
15. **IQBAL, M.C.M.**, and K.B. WIJESEKARA 2007: A brief temperature pulse enhances the competency of microspores for androgenesis in *Datura metel*. *Plant Cell, Tissue and Organ Culture* 89: 141-149.

16. Wijesekara, T.P., M.K.A.S. Jayasena, M.N. Medagoda, **M.C.M. Iqbal**. 2006: Callusing and regeneration of three genotypes of *Oryza sativa* ssp. *indica* by 2,4 dichlorophenoxy acetic acid (2,4-D). Journal of the National Science Foundation 35(2): 139-141.
17. DISSANAYAKE, C. and **M.C.M. IQBAL** 2007. Sustainable use of *Cryptocoryne wendtii* de Wit and *Echinodorus cordifolius* in the aquaculture industry of Sri Lanka by micropropagation. Sri Lanka Journal of Aquatic Sciences 12: 89-101.
18. WIJESEKARA, T.P., **M.C.M. IQBAL** and D.C. BANDARA 2007. Plant regeneration *in vitro* by organogenesis on callus induced from mature embryos of three rice varieties (*Oryza sativa* ssp. *indica*). Tropical Agricultural Research 19: 25-35.
19. **M.C.M. IQBAL** (2008). Falsifiability of theories in the Biological Sciences. Ceylon Journal of Science, (Bio. Sci.) 36(2): 127-134.
20. H.A.S. WEERASINGHE and **M.C.M. IQBAL** (2008). Plant diversity and soil characteristics of the Ussangoda serpentine site. Journal of the National Science Foundation (accepted).
21. **M.C.M. IQBAL, K. TENNAKONE** and **I. RAHEEM** (2008). The Royal Society, Robert Hooke and a captive from Ceylon: fascinating facets from the 17th century. Notes and Records of the Royal Society (accepted).

Proceedings of conferences

1. **IQBAL, M.C.M.**, and C. MÖLLERS, 1991: Selection for low glucosinolate content of rapeseed in *Brassica napus* L. using haploid embryoids from microspore culture. Proc. of the GCIRC Congress, July 9-11 1991 in Saskatoon, Saskatchewan Canada. Vol 1, 187-190.
2. MÖLLERS, C., S. ALBRECHT and **M.C.M. IQBAL**, 1993: Early diploidisation of rapeseed microspores and possibilities for selection of fatty acids in embryoids. Ber. der 44 Arbeitstagung, 23-25 November 1993, BAL Gumpenstein, Austria.
3. JAYASENA, M.K.A.S., **M.C.M. IQBAL**, and D.P.S.T.G. ATTANAYAKE. Early plantlet regeneration from five local indica rice genotypes (*Oryza sativa* L.). Proceedings of the 5th Agricultural Research Symposium, p. 17-23, 27-28 September 2005, Wayamba University of Sri Lanka.
4. WEERAKOON, S.R., S. SOMARATHNA, W.S.R. WIMALASURIYA and **M.C.M. IQBAL**. Phenotypic variation and the relationships among mustard (*Brassica juncea* L.) germplasm from Sri Lanka. The Open University of Sri Lanka, p. 67-73.
5. ABEYSINGHE, A.M.T.P. and **M.C.M. IQBAL**. Uptake and accumulation of Cadmium by *Brassica juncea* and *Ageratum conyzoides*. Proceedings of the 6th Agricultural Research Symposium, p. 117-121, 22-23 November 2006, Wayamba University of Sri Lanka.
6. SOMARATHNA, S., S.R. WEERAKOON and **M.C.M. IQBAL**. Agro-Morphological characters in classification of mustard accessions (*Brassica*

- juncea* L.) in Sri Lanka: A Classification Tree Approach. p. 77-80. Fourth Annual Academic Sessions, Open University of Sri Lanka, 28-29 June, 2007.
7. WEERAKOON, S.R. , **M.C.M. IQBAL**, S. SOMARATHNA, P.K.D. PIERIS, W.S.R. WIMALASURIYA. Delimitation of local mustard (*Brassica juncea*) germplasm in Sri Lanka and improvement of their nutritive quality. Proceedings of the 12th International Rapeseed Congress, Wuhan, China March 26-30, 2007. p. 75-78.
 8. NATH, U.K., **M.C.M. IQBAL**, C.MÖLLERS. *In vitro* selection of microspore derived embryo genotypes based on molecular marker and oil quality analysis in oilseed rape (*Brassica napus* L.). Proceedings of the 12th International Rapeseed Congress, Wuhan, China March 26-30, 2007. p. 20-23.

As abstracts in proceedings of conferences

1994

1. MÖLLERS, C., and **M.C.M. IQBAL**, 1994: Effiziente Produktion von doppelhaploiden *Brassica napus* Pflanzen durch Colchizin-Behandlung von Mikrosporen. Tagung des deutschen Sektion des IAPTC (Meeting of the International Association of Plant Tissue Culture (German Section). March 1994. Page 68.
2. MÖLLERS, C., and **M.C.M. IQBAL**, 1994: Glucosinolate synthesis in microspore-derived embryoids of *Brassica napus* in vitro. Tagung des deutschen Sektion des IAPTC (Meeting of the International Association of Plant Tissue Culture (German Section), March 1994. Page 47.

1995

3. RAMANAYAKE, S.M.S.D., K. YAKANDAWALA, P.K.D. NILMINI DEEPIKA, and **M.C.M. IQBAL**, 1995: *In vitro* auxiliary bud break and callus differentiation for the micropropagation of two bamboos *Dendrocalamus giganteus* and *Bambusa vulgaris*. In, Summaries of papers and posters, IV International Bamboo congress, Bali, 19-22 June, 1995.

1998

4. WIJESSEKARA, K.B. and **M.C.M. IQBAL**, 1998: Pollen development and pseudopollen in tea (*Camellia sinensis*) anthers. Abstract. Pages 61-62, Proceedings of Sri Lanka association for the advancement of science, Part I. 54th annual session, 14 – 19 December 1998. Sri Lanka association for the advancement of science, Colombo.
5. TENNAKONE, K. and **M.C.M. IQBAL**, 1998: Breaking of right-left symmetry in leaves of *Agaltonema pseudo-bractetum*. Abstract. Page 260, Proceedings of Sri Lanka association for the advancement of science, Part I. 54th annual session, 14 – 19 December 1998. Sri Lanka association for the advancement of science, Colombo.
6. **IQBAL, M.C.M.** and C.MÖLLERS, 1998: Glucosinolates in *in vitro* biosynthesis and uptake by microspore derived embryos of *Brassica napus* L. Proceedings of IX International Congress on Plant Tissue and Cell Culture, Jerusalem, Israel, June 14-19, 1998.

1999

9. WIJESSEKARA, K.B., **M.C.M. IQBAL** and S. SATHYAPALA, 1999: Microsporogenesis and Anther culture in Tea [*C. sinensis* (L.) O. Kuntze]. Page 18. 3rd International Plant Tissue Culture Conference, Dhaka, Bangladesh, 1999.
10. WIJESSEKARA, K.B. and **M.C.M. IQBAL**, 1999: Induction of embryogenesis in *Datura metel* anthers. Abstract. Pages 74-75. Proceedings of Sri Lanka association for the advancement of science, Part I. 55th annual session, 29 November – 03 December 1999. Sri Lanka association for the advancement of science, Colombo.

2000

12. MEIYALAGHAN, S., **M.C.M. IQBAL** and K. WIJESEKARA, 2000: Antifungal activity of water extracts of some common weed species. Abstract. Page 53. Proceedings of Sri Lanka association for the advancement of science, Part I. 56th annual session, 27 November – 01 December 2000. Sri Lanka association for the advancement of science, Colombo.
13. **IQBAL, M.C.M.**, and K. B. WIJESEKARA, 2000: In vitro propagation of *Gordonia dassanayakei*. Abstract. Page 99. Proceedings of Sri Lanka association for the advancement of science, Part I. 56th annual session, 27 November – 01 December 2000. Sri Lanka association for the advancement of science, Colombo.
14. **IQBAL, M.C.M.**, and K. B. WIJESEKARA, 2000: Abnormalities in microspore derived embryos in *Datura metel*. Abstract. Page 100. Proceedings of Sri Lanka association for the advancement of science, Part I. 56th annual session, 27 November – 01 December 2000. Sri Lanka association for the advancement of science, Colombo.
15. **IQBAL, M.C.M.** Symmetry in Biology. Pragna. IFS Science Bulletin Vol. XIII, No. 2 & 3, June and Sept 2000.

2001

16. **IQBAL, M.C.M.**, and U.L.B. JAYASINGHE, 2001: Antifungal activity in seeds of some selected Sri Lankan plants. 13th International Reinhardtsbrunn Symposium, May 14-18, 2001, Friedrichroda, Germany. Verlag Th. Mann GmbH & Co. Gelsenkirchen.
17. **IQBAL, M.C.M.**, U.L.B. JAYASINGHE, G.S. MALLIKAARACHCHI and M. DHARSHEIYA, 2001: Antifungal activity in seeds of *Carica papaya* (Caricaceae). Abstract. Page . Proceedings of Sri Lanka association for the advancement of science, Part I. 57th annual session, 27 November – 01 December 2001. Sri Lanka association for the advancement of science, Colombo.
18. WIJEYSEKARA, K.B. and **M.C.M. IQBAL**, 2001: Secondary embryogenesis in pollen derived embryos of *Datura metel* L. Abstract. Page. Proceedings of Sri Lanka association for the advancement of science, Part I. 57th annual session, 27 November – 01 December 2001. Sri Lanka association for the advancement of science, Colombo.

2002

19. WIJEYSEKARA, K.B. and **M.C.M. IQBAL**, 2002: Enhanced androgenesis in *Datura metel* L. by temperature gradient treatment of anthers. Proceedings of Sri Lanka association for the advancement of science, Part I. 58th annual session, 2-7 December, 2002. Sri Lanka association for the advancement of science, Colombo.
20. **IQBAL, M.C.M.**, U.L.B. JAYASINGHE, H.M.T.B. Herath, K.B. WIJEYSEKARA and Y. Fujimoto, 2002: A fungistatic constituent from *Ageratum conyzoides*. Proceedings of Sri Lanka association for the advancement of science, Part I. 58th annual session, 2-7 December, 2002. Sri Lanka association for the advancement of science, Colombo.

2003

21. CHRISTIE, M.P., I.C.DE SILVA and **M.C.M. IQBAL**. Plant regeneration *in vitro* of three Sri Lankan rice varieties (*Oryza sativa ssp.indica*). Proceedings of Sri Lanka Association for the Advancement of Science, Part I. 59th Annual Session, December 2003, Colombo, p.64.

2004

22. S.R. Weerakoon, **M.C.M. Iqbal** and K. Pieris. Transfer of value added traits and agronomic characters from *Brassica napus* to *Brassica juncea* by conventional crossing. Annual Academic Sessions 2004, The Open University of Sri Lanka.

23. K.B. Wijesekara and **M.C.M. Iqbal**. Response of androgenic and zygotic embryos of *Datura metel* L. to excision of their meristems. Proceedings of Sri Lanka association for the advancement of science, Part I. 60 annual session, 2004. Sri Lanka association for the advancement of science, Colombo.
25. WEERAKOON, S.R., **M.C.M. IQBAL**, and P.K.D. PIERIS. Transfer of value added traits and agronomic characters from *Brassica napus* to *Brassica juncea* by conventional crossing. Annual Academic Sessions 2004, The Open University of Sri Lanka.
26. WIJESSEKARA, K.B., and **M.C.M. IQBAL**. Response of androgenic and zygotic embryos of *Datura metel* L. to excision of their meristems. Proceedings of Sri Lanka Association for the Advancement of Science, Part I. 60 Annual Sessions, 2004. Sri Lanka association for the advancement of science, Colombo, p.39.

2005

27. WIJESSEKARA, T., and **M.C.M. IQBAL** Rapid plant regeneration *in vitro* from four local rice varieties (*Oryza sativa* ssp. *indica*). Proceedings of the Sri Lanka Association of the Advancement of Science, Part I. 61st Annual Sessions, 2005. Sri Lanka Association of the Advancement of Science, Colombo, p.24.
28. WEERAKOON, S.R., **M.C.M. IQBAL**, and P.K.D. PIERIS. Interspecific hybridization of *Brassica juncea* (local mustard) with *Brassica napus* to improve the fatty acid content of *B. juncea*. Proceedings of the Sri Lanka Association of the Advancement of Science, Part I. 61st annual session, 2005, Colombo, p.46.
29. WEERAKOON, S.R., and **M.C.M. IQBAL** (2005). A preliminary study on phenotypic variation amongst mustard (*Brassica juncea* L.) germplasm in Sri Lanka.

2006

30. **M.C.M. IQBAL**, L. KULASEKARA, N. RAJAKARUNA and S.S. IQBAL. Plant soil relations of a serpentine site in the Southern coast of Sri Lanka. Vth International Conference on Serpentine Ecology, Siena 9-13, 2006.
31. WIJESSEKARA, T. P, M.K.A.S. JAYASENA, M.N. MEDAGODA and **M.C.M. IQBAL**. Rapid plantlet regeneration from callus *Oryza sativa* ssp. *indica* cultivated in Sri Lanka. Proceedings of the 11th International Association of Plant Tissue Culture and Biotechnology, Beijing China August 13-18, 2006.
32. WIMALASURIYA, W.S.R., S.R. WEERAKOON, S. SOMARATHNA and **M.C.M. IQBAL**. Characterization and differentiation of local mustard (*Brassica juncea* L.) germplasm in Sri Lanka. Proceedings of the Sri Lanka Association of the Advancement of Science, Part I. 62nd Annual Sessions, 2006, Colombo, p.77.
33. WEERASINGHE, H.A.S. and **M.C.M. IQBAL**. Plant diversity, its importance and conservation: a preliminary study of a serpentine site at Ussangoda, Sri Lanka. International conference on Humid Tropical Ecosystems: Changes, Challenges and Opportunities, Kandy, Sri Lanka, 4-9 December, 2006.

2007

34. SAMITHRI, Y.A.S., D.S.A. WIJESUNDERA and **M.C.M. IQBAL** 2007. A preliminary study of the Ussangoda Serpentine Flora. 12th International Forestry and Environment Symposium, 30th November-1st December 2007, Kalutara Sri Lanka.
35. H.A.S. WEERASINGHE and **M.C.M. IQBAL** 2007. Soil nutrient contents in the Ussangoda serpentine soil. Page76, Proceedings of Sri Lanka Association for the Advancement of Science, Part I. 63rd Annual Sessions. Sri Lanka Association for the Advancement of Science, Colombo.

2008

36. P.K.D. CHATURANGA, S.S. IQBAL and **M.C.M. IQBAL** 2008. Chromium removal by non-living biomass of *Cabomba* sp. – a kinetic and equilibrium study. Proceedings of Sri Lanka Association for the Advancement of Science, Part I. 64th Annual Sessions. Sri Lanka Association for the Advancement of Science, Colombo.

Postgraduate degrees supervised

- Wijesekara, K.B. Study of microsporogenesis and haploid induction in selected species of Theacea and Solanaceae.
M.Phil. degree (2002): Awarded by the University of Peradeniya, Sri Lanka.
- Dissanayake, W.A.D.C.P. Tissue culture propagation of ornamental aquatic plants, *Cryptocorine wendtii* (wendi brown) and *Echinodorus cordifolius* (marble queen).
M.Sc Degree (2004): Awarded by the University of Kelaniya, Sri Lanka.
- Shubajini, R. Uptake of Cadmium and Nickel by selected plant species under laboratory conditions.
M.Sc Degree: Postgraduate institute of Science, University of Peradeniya.