

CURRICULUM VITAE

Joe M Tohme

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Education: Ph.D., Crop Sciences, 1986, Michigan State University, East Lansing.

Positions Held:

January 2000-Present, Senior Staff, Leader of Agrobiodiversity and Biotechnology Project, Centro Internacional de Agricultura Tropical (CIAT, AA 6713; tel 57-2-4450000; fax: 57-2-445-0073; Cali, Colombia). Responsibilities include coordinating the Agrobiodiversity and Biotechnology project composed of 11 internationally recruited PhD researchers, setting up a microarray-gene expression and SNP facilities and conduct research on genome analysis for stress and nutritional traits.

Since 2004. Biotechnology coordinator for the HarvestPlus program. Responsibilities include: help to identify and negotiate joint activities with the private sector; identify new nutritional genomics partners and funding; provide written assessments of annual reports; funding raising; work with the nutrition genomics group in developing guidelines for the competitive grants and set up an external panel for the review of the proposals.

2001-2003. Co-coordinator of Biofortification Challenge Program of the CGIAR on Harnessing Agricultural Technology to Improve the Health of the Poor: "Biofortified" Crops to Combat Malnutrition. Acting biotechnology and breeding coordinator for HarvestPlus.

Since 2003 co-chair of the Global Cassava Partnerships.

February 1992-1999. Senior Staff, Biotechnology Research Unit, Centro Internacional de Agricultura Tropical (CIAT), Cali, Colombia. Geneticist in charge of genome analysis section. Responsibilities include planning, execution of research and analysis of results, supervision of post doctoral fellows, assistants and students.

Research areas include: Characterization of genetic diversity of wild and cultivated *Phaseolus* and *Manihot*; phylogeny of *Phaseolus* and *Manihot*; identification of gene pools for bean, cassava, rice and *Brachiaria*; tagging of useful genes like genes of resistance to rice blast, whitefly resistance in cassava and apomixis in *Brachiaria*; construction of molecular map and BAC library of Cassava; development of microsatellites for bean and *Brachiaria*; setting up facilities for markers assisted selection for bean and rice; training in the area of molecular markers for germplasm characterization and uses in breeding programs; setting up sequencing and gene expression facilities.

June 1989-January 1992. Senior Research Fellow, Biotechnology Research Unit, Centro Internacional de Agricultura Tropical (CIAT), Cali, Colombia. Responsibilities include: setting up molecular markers lab, RFLPs and RAPDs research on rice for tagging resistance genes to blast and hoja blanca virus, integration of molecular assisted selection in rice breeding program, initiate RFLPs and RAPDs genes tagging in bean, characterization of wild and cultivated bean germplasm with molecular markers, establishment of a bean core collection, supervision of students' thesis.

Relevant Publications 2004-2001:

- Camilo Lopez, Véronique Jorge, Benoît Piégu, Chickelu Mba, Diego Cortes, Silvia Restrepo, Mauricio Soto, Michèle Laudie, Christel Berger, Richard Cooke, Michel Delseny, Joe Tohme and Valérie Verdier. A unigene catalogue of 5,700 expressed genes in cassava (*Manihot esculenta*): identification of genes implicated in cassava bacterial blight resistance and starch biosynthesis. *Plant Molecular Biology*. 56 (4): 541-554,
- Galindo, LM; Gaitan-Solis, E; Baccam,P; Tohme, J. Isolation and characterization of Rnase LTR sequences of Ty1 - copia retrotransposons in common bean. Feb. 2004. *Genome* 47 (1): 84-95
- Ishitani M, Rao I, Wenzl P., Beebe S and Tohme J. (2004) Integration of genomics approach with traditional breeding towards improving abiotic stress adaptation: drought and aluminum toxicity as case studies. *Field Crops Research* 90: 35-45
- Aluko, G.; Martinez, C.;Tohme,J.; Castano,C. Bergman,C. and Oard, JH. 2004. QTL mapping of grain quality traits from the interspecific cross *Oryza sativa* x *O.glaberrima*. *Theor Appl. Genet* 109:630-639.
- Anderson J; Michel Delseny; Martin A. Fregene; Veronique Jorge; Chikelu Mba; Camilo Lopez; Silvia Restrepo; Mauricio Soto; Benoit Piegu; Valerie Verdier; Richard Cooke; Joe Tohme; David P. Horvath. 2004. An EST resource for cassava and other species of Euphorbiaceae. *Plant Molecular Biology*. 56: 527-539
- Tomkins J; M. Fregene; D. Main; H. Kim; R. Wing; J. Tohme. 2004. Bacterial artificial chromosome (BAC) library resource for positional cloning of pest and disease resistance genes in cassava (*Manihot esculenta* Crantz). *Plant Molecular Biology*. 56: 555-561
- Blair, M.W.; Pedraza,F.; Buendia, HF.; Gaitán-solis, E.; Beebe,S.E.; Gepts, P. and Tohme,J. Development of a genome-wide anchored microsatellite map for common bean. 2003. *Theor.Appl.Genet*. 107(8):1362-1374.
- López C. E. , A. P. Zuluaga, R. Cooke, M. Delseny, J. Tohme and V. Verdier. 2003. Isolation of Resistance Gene Candidates (RGCs) and characterization of an RGC cluster in cassava. *Molecular Genetics and Genomics* . Volume 269: 658 – 671
- Lopez, C.E.; Acosta, I.F.; Jara, C.; Pedraza, F.; Gaitan-Solis, E.; Gallego, G.; Beebe, S.; Tohme , J. 2003. Identifying resistance gene analogs associated with resistances to different pathogens in common bean. *Phytopathology*. 93(1): 88-95.
- Blair MW, Pedraza F, Buendia HF, Gaitán-Solís E, Beebe SE, Gepts P, Tohme J. 2003. Development of a genome-wide anchored microsatellite map for common bean (*Phaseolus vulgaris* L.) *Theor Appl Genet* 107: 1362-1374.
- Gaitán-Solís E., M.C. Duque, K.J. Edwards, and J. Tohme. 2002. Microsatellite repeats in common bean (*Phaseolus vulgaris*): isolation, characterization, and cross-species amplification in *Phaseolus sp.* *Crop Science* 42:2128-2136
- Cortes, F., K. Reilly, Okogbenin, J.R. Beeching, C. Iglesias and J. Tohme. Mapping wound response genes involved in post harvest physiological deterioration (PPD) of Cassava (*Manihot esculenta* Crantz). *Euphytica* 128: 47-53

Mba, C, R. Stephenson, K. Edwards, S. Melzer, J. Numbira, U. Gullberg, K. Apel, M. Gale, J. Tohme M. Fregene. 2001. Simple Sequence Repeat (SSR) Markers Survey of the Cassava (*Manihot esculenta* Crantz) Genome: Towards a SSR-Based Molecular Genetic Map of Cassava. *Theor Applied genetics* 102:21-31

Funding Support:

- 2000-2003: Co PI with Steve Beebe. Grant from the government of Belgium for genome mapping in *Phaseolus vulgaris*. Total amount: 1.391292 US\$. Partners: Univ. Ghent, Belgium.
- 2001-2005: PI: Grant from BMZ, Germany on mapping of Aluminum tolerance of Crops on Low-fertility Acid Soils. Total amount: 684,965 US\$. Partners: Univ. Hannover, Germany.
- 2001-2004: Co PI, Grant from DGIS, Holland on Cassava Biotechnology Network. Total amount: 903,000 US\$. Partners: National Programs in Colombia, Brazil, Ecuador and Cuba.
- 2003-2006: Co PI with Steve Beebe; Grant from BMZ, Germany on Bean genomics for improved drought tolerance in Central America. Total amount: Total amount: 769,915 US\$. Partners: Univ. Hannover and national programs in Central America.
- 2001-2004: Collaborating researcher: Grant form USDA on rice genomics with Yale University. Total amount 50,000US\$.
- 2003-2005: PI. USAID grant on: Expanding the range of uses of cassava starch: A source of income generation. Total amount: 600,000 US\$. Partners: Ohio State University.
- 2005 Coordinator of CIDA grant on: Biofortified Crops with Improved Vitamin A, Essential Minerals and Quality Protein, a collaborative project CIAT and a partnership of International Agricultural Research Centers and National Agricultural Research Systems in Latin America. Total amount: 15, 000,000 US\$.