CURRICULUM VITAE GIOVANNI BROGGINI

NAME:	**Broggini,** Giovanni Antonio Lodovico
ADDRESS:	8134 Adliswil
DATE OF BIRTH:	7 December 1976
NATIONALITY:	Swiss, from Losone (TI)
MARITAL STATUS:	Married, 2 children
LANGUAGES:	Italian (mother tongue) German, English and French (fluently spoken and written)

EDUCATION:

2002-2006	PhD Thesis "Identification of apple scab avirulence gene *AvrVg* candidates", Phytopathology Group, Department of Agricultural and Food Sciences, ETH Zurich. (Dr. sc. nat. ETH)
1995-2001	Degree certificate in chemistry ETH, Diploma thesis: "Production and evolution of recombinant chorismate mutase of *Methanococcus jannaschii*", Laboratory of organic chemistry, ETH Zürich, Switzerland. (Dipl. chem. ETH)
1995	School-leaving examination Type C, scientific Institute: Pontificio Liceo Collegio Papio, Ascona, Switzerland

EMPLOYMENT:

2014-	Post-Doc, Phytopathology Group; Institute of Plant Production Sciences, Agroscope in Wädenswil.
2008-2014	Oberassistent, Phytopathology Group; Institute of Integrative Biology, Departement of Agricultural and Food Sciences, ETH Zurich.
2006-2008	Post-Doc, Phytopathology Group; Institute of Integrative Biology, Departement of Agricultural and Food Sciences, ETH Zurich.
2002 –2006	PhD student. "Identification of apple scab avirulence gene *AvrVg* candidates", Phytopathology Group; Department of Agricultural and Food Sciences, ETH Zurich.
2001-2002	Assistant researcher on the project "Detection of the fire blight biocontrol agent *Bacillus subtilis* BD170 (Biopro®) in a Swiss apple orchard" Phytopathology Group; Institute of Plant Sciences, ETH Zurich.

RESEARCH PROJECTS AND COLLABORATIONS:

Research projects (scientist)

- Detection of the fire blight biocontrol agent *Bacillus subtilis* BD170 in a Swiss apple orchard, SNF (2001-2)
- Identification of avr-genes in *Venturia inaequalis*, SNF (2003-06)

Research projects (science leader)

- Identification of candidate genes involved in fire blight resistance, COST 864 (2007-10, 1 PhD Student)
- Avirulence genes of the apple scab fungus, *Venturia inaequalis*, SNF (2006- 09, 1 PhD Student)
- Genetically modified apples resistant to scab containing only apple own DNA, SNF NRP59 (2007-11, 1 PhD Student)
- Züchtung feuerbrandtoleranter Obstsorten (ZUEFOS); BLW (2008-11, 1 PhD Student)
- Envirochange: effect of climate change on Ochratoxin A contamination in Wine; effect of climate change on development of ontogenic resistance to apple scab, Provincia autonoma del Trentino (2008-2011 , 2 PhD Students)
- Identification, cloning and functional characterization of genes related to fire blight resistance in Malus x robusta 5, SNF D-A-CH 310030L_130811 (2009-2013)
- Züchtung feuerbrandtoleranter Obstsorten II (ZUEFOSII); BLW (2012-13, 1 PhD Student)
- Integrated approach for increasing breeding efficiency in fruit tree crops, Fruitbreedomics EU project (2011-13)
- The defense cascade activated in GM-Gala apples against the Fire Blight causing bacterium, SNF project 31003A_149637 2012-13 (2013-14)

Past National Collaborations

- Agroscope Wädenswil; ZUFOSII (M. Kellerhals), Modul 2.
- Agroscope, Stazione di Cadenazzo ; Populations studies of Black rot (*Guignardia bidwellii)* on grape (M. Jermini)

Past International Collaborations

- Fondazione Edmundo Mach, San Michele all'Adige (Italy), PhD Mickael Malnoy; Cloning of the fireblight resistance gene of *Malus Robusta* 5.
- Dipartimento di Colture Arboree (DCA), University of Bologna (Italy), Prof. Silviero Sansavini; Expression analysis of apple scab resistance gene *HcrVf2* under different promoter lengths.
- INRA, Angers (France), PhD Charles-Eric Durel; Cloning of the apple fireblight resistance gene of *Malus* cv. 'Evereste'.
- Plant Research International, Wageningen (The Netherlands): PhD Henk Schouten; Genetically modified apples resistant to scab containing only apple own DNA, cloning of the apple scab resistance gene *Vr2*.
- Plant and Food Research, Havelock North (New Zealand), PhD Vincent Bus; Mapping of avirulence genes in *Venturia inaequalis*.

PUBLICATIONS (only peer-reviewed)

Broggini, G. A. L., B. Duffy, E. Holliger, H. J. Scharer, C. Gessler and A. Patocchi (2005). "Detection of the fire blight biocontrol agent Bacillus subtilis BD170 (Biopro ®) in a Swiss apple orchard." European Journal of Plant Pathology **111**(2): 93-100.

Patocchi, A., M. Walser, S. Tartarini, G. A. L. Broggini, F. Gennari, S. Sansavini and C. Gessler (2005). "Identification by genome scanning approach (GSA) of a microsatellite tightly associated with the apple scab resistance gene Vm." Genome **48**(4): 630-636.

Erdin, N., S. Tartarini, G. A. L. Broggini, F. Gennari, S. Sansavini, C. Gessler and A. Patocchi (2006). "Mapping of the apple scab-resistance gene Vb." Genome **49**(10): 1238-1245.

Broggini, G. A. L., B. Le Cam, L. Parisi, C. Wu, H. B. Zhang, C. Gessler and A. Patocchi (2007). "Construction of a contig of BAC clones spanning the region of the apple scab avirulence gene AvrVg." Fungal Genetics and Biology **44**(1): 44-51.

Broggini, G. A. L., P. Galli, G. Parravicini, L. Gianfranceschi, C. Gessler and A. Patocchi (2009). "HcrVf paralogs are present on linkage groups 1 and 6 of Malus." Genome **52**(2): 129-138.

Gessler, C., T. Vanblaere, I. Szankowski and G. Broggini (2009). "Cisgenic approach to disease resistance in Apple." Phytopathology **99**(6): S42-S42.

Szankowski, I., S. Waidmann, J. Degenhardt, A. Patocchi, R. Paris, E. Silfverberg-Dilworth, G. Broggini and C. Gessler (2009). "Highly scab-resistant transgenic apple lines achieved by introgression of HcrVf2 controlled by different native promoter lengths." Tree Genetics & Genomes **5**(2): 349-358.

Galli, P., G. A. L. Broggini, C. Gessler and A. Patocchi (2010). "Phenotypic Characterization of the Rvi15 (Vr2) Apple Scab Resistance." Journal of Plant Pathology **92**(1): 219-226.

Galli, P., G. A. L. Broggini, M. Kellerhals, C. Gessler and A. Patocchi (2010). "High-resolution genetic map of the Rvi15 (Vr2) apple scab resistance locus." Molecular Breeding **26**(4): 561-572.

Galli, P., A. Patocchi, G. A. L. Broggini and C. Gessler (2010). "The Rvi15 (Vr2) Apple Scab Resistance Locus Contains Three TIR-NBS-LRR Genes." Molecular Plant-Microbe Interactions **23**(5): 608-617.

Le Roux, P. M. F., M. A. Khan, G. A. L. Broggini, B. Duffy, C. Gessler and A. Patocchi (2010). "Mapping of quantitative trait loci for fire blight resistance in the apple cultivars 'Florina' and 'Nova Easygro'." Genome **53**(9): 710-722.

Storari, M., I. Pertot, C. Gessler and G. A. L. Broggini (2010). "Amplification Of polyketide synthase gene fragments in ochratoxigenic and nonochratoxigenic black aspergilli in grapevine." Phytopathologia Mediterranea **49**(3): 393-405.

Vanblaere, T., I. Szankowski, G. Broggini and C. Gessler (2010). "The creation of the cisgenic scab resistant apple." Journal of Biotechnology **150**: S116-S116.

Broggini, G. A. L., V. G. M. Bus, G. Parravicini, S. Kumar, R. Groenwold and C. Gessler (2011). "Genetic mapping of 14 avirulence genes in an EU-B04 x 1639 progeny of Venturia inaequalis." Fungal Genetics and Biology **48**(2): 166-176.

Parravicini, G., C. Gessler, C. Denance, P. Lasserre-Zuber, E. Vergne, M. N. Brisset, A. Patocchi, C. E. Durel and G. A. L. Broggini (2011). "Identification of serine/threonine kinase and nucleotide-binding site-leucine-rich repeat (NBS-LRR) genes in the fire blight resistance quantitative trait locus of apple cultivar 'Evereste'." Molecular Plant Pathology **12**(5): 493-505.

Vanblaere, T., I. Szankowski, J. Schaart, H. Schouten, H. Flachowsky, G. A. L. Broggini and C. Gessler (2011). "The development of a cisgenic apple plant." Journal of Biotechnology **154**(4): 304-311.

Gusberti, M., A. Patocchi, C. Gessler and G. A. L. Broggini (2012). "Quantification of Venturia inaequalis Growth in Malus x domestica with Quantitative Real-Time Polymerase Chain Reaction." Plant Disease **96**(12): 1791-1797.

Jansch, M., J. E. Frey, M. Hilber-Bodmer, G. A. L. Broggini, J. Weger, G. Schnabel and A. Patocchi (2012). "SSR marker analysis of Monilinia fructicola from Swiss apricots suggests introduction of the pathogen from neighbouring countries and the United States." Plant Pathology **61**(2): 247-254.

Storari, M., L. Bigler, C. Gessler and G. A. L. Broggini (2012). "Assessment of the ochratoxin A production ability of Aspergillus tubingensis." Food Additives and Contaminants Part a-Chemistry Analysis Control Exposure & Risk Assessment **29**(9): 1450-1454.

Storari, M., G. A. L. Broggini, L. Bigler, E. Cordano, E. Eccel, R. De Filippi, C. Gessler and I. Pertot (2012). "Risk assessment of the occurrence of black aspergilli on grapes grown in an alpine region under a climate change scenario." European Journal of Plant Pathology **134**(3): 631-645.

Storari, M., F. G. Dennert, L. Bigler, C. Gessler and G. A. L. Broggini (2012). "Isolation of mycotoxins producing black aspergilli in herbal teas available on the Swiss market." Food Control **26**(1): 157-161.

Wicht, B., O. Petrini, M. Jermini, C. Gessler and G. A. L. Broggini (2012). "Molecular, proteomic and morphological characterization of the ascomycete Guignardia bidwellii, agent of grape black rot: a polyphasic approach to fungal identification." Mycologia **104**(5): 1036-1045.

Fahrentrapp, J., G. A. L. Broggini, M. Kellerhals, A. Peil, K. Richter, E. Zini and C. Gessler (2013). "A candidate gene for fire blight resistance in Malus x robusta 5 is coding for a CC-NBS-LRR." Tree Genetics & Genomes **9**(1): 237-251.

Gusberti, M., C. Gessler and G. A. L. Broggini (2013). "RNA-Seq Analysis Reveals Candidate Genes for Ontogenic Resistance in Malus-Venturia Pathosystem." Plos One **8**(11).

Storari, M., R. von Rohr, I. Pertot, C. Gessler and G. A. L. Broggini (2013). "Identification of ochratoxin A producing Aspergillus carbonarius and A.niger clade isolated from grapes using the loop-mediated isothermal amplification (LAMP) reaction." Journal of Applied Microbiology **114**(4): 1193-1200.

Broggini, G. A. L., T. Wohner, J. Fahrentrapp, T. D. Kost, H. Flachowsky, A. Peil, M. V. Hanke, K. Richter, A. Patocchi and C. Gessler (2014). "Engineering fire blight resistance into the apple cultivar 'Gala' using the FB_MR5 CC-NBS-LRR resistance gene of Malus x robusta 5." Plant Biotechnology Journal **12**(6): 728-733.

Narduzzi-Wicht, B., M. Jermini, C. Gessler and G. A. L. Broggini (2014). "Microsatellite markers for population studies of the ascomycete Phyllosticta ampelicida, the pathogen causing grape black rot." Phytopathologia Mediterranea **53**(3): 470-479.

Schouten, H. J., J. Brinkhuis, A. van der Burgh, J. G. Schaart, R. Groenwold, G. A. L. Broggini and C. Gessler (2014). "Cloning and functional characterization of the Rvi15 (Vr2) gene for apple scab resistance." Tree Genetics & Genomes **10**(2): 251-260.

Vanblaere, T., H. Flachowsky, C. Gessler and G. A. L. Broggini (2014). "Molecular characterization of cisgenic lines of apple 'Gala' carrying the Rvi6 scab resistance gene." Plant Biotechnology Journal **12**(1): 2-9.

Jansch, M., G. A. L. Broggini, J. Weger, V. G. M. Bus, S. E. Gardiner, H. Bassett and A. Patocchi (2015). "Identification of SNPs linked to eight apple disease resistance loci." Molecular Breeding 35(1).

Caffier, V., Patocchi, A., Expert, P., Bellanger, M. N., Durel, C. E., Hilber-Bodmer, M., GAL Broggini, G.A.L, Groenwold, R. and Bus, V. (2014). Virulence characterization of *Venturia inaequalis* reference isolates on the differential set of *Malus* hosts. Plant Disease, **99**(3):370-375.