CURRICULUM VITAE et STUDIORUM

PERSONAL DATA:

Name	**Silvia Dal Santo, Ph.D.**
Date and location of birth	25th November 1980, Vicenza, Italy
Citizenship	Italian
Private Address	[redacted]
Work Address	Strada Le Grazie 15, 37134 Verona, Italy Tel. +39 045 802 7901
E-mail	silvia.dalsanto@univr.it silvia.dalsanto@gmail.com

EDUCATION:

January 2006 – September 2009

Ph.D. in Molecular Biology, University of Vienna, Austria.

PhD thesis: "The role of GSK-3 like kinases in *Arabidopsis thaliana* stress response". Supervisor: Univ. Doz. Dr. Claudia Jonak - Gregor Mendel Institute of Molecular Plant Biology, Austrian Academy of Science, Vienna, Austria.

Ph.D. Defense Board: Prof. Heribert Hirt, Prof Marie-Therese Hauser and Prof. Laszlo Szabados.

September 1999 - December 2004

Master Degree in "Agro-industrial Biotechnologies".

Master degree thesis: “Isolation and study of the regulative region of *PhEXPA1* gene and functional-genetical analysis of its insertional mutant”, Supervisor: Prof. Mario Pezzotti – Scientific and Technological Department, University of Verona, Verona, Italy.

September 1994 - July 1999

High School Diploma – Liceo Scientifico P. Lioy, Vicenza, Italy

FOREIGN LANGUAGES:

Italian: Mother tongue

English: Excellent reading, writing and speaking.

German: Intermediate reading; beginner writing and speaking

WORKING EXPERIENCES:

March 2014 - Present — Researcher (RTD A – AGR/07), Department of Biotechnology, University of Verona, Italy

January 2014 - June 2014 on Maternity Leave

October 2009 – February 2014

Post-Doctoral Fellowship, University of Verona, Italy.

January 2006 - September 2009

International PhD Program in Molecular Life Sciences, Vienna BioCenter. Mentor: Univ. Doz. Dr. Claudia Jonak - Gregor Mendel Institute of Molecular Plant Biology. Faculty Ph.D. Committee: Dr. Claudia Jonak, Prof. Manuela Baccarini, Dr. Werner Aufsatz.

May 2005 - December 2005

Fellowship, working group: Ao Univ. Prof. Gustav Ammerer - Max F. Perutz Laboratories (MFPL), Department of Biochemistry and Molecular Cell Biology, University of Vienna, Vienna, Austria.

ADDITIONAL COURSES:

14th -15th July 2011	PhD Summer School: "Innovative Strategies to Improve Winemaking: new perspective in the light of new knowledge", Pedemonte, Verona, Italy.
2008	German Course. GrundStufe A2. Iki Internationales KulturInstitut.
2007	German Course. GrundStufe A1. Iki Internationales KulturInstitut.
27th - 29th August 2007	PhD Summer School: "Environmental Signalling: Arabidopsis as a model" at Utrecht University, the Netherlands.

COORDINATION OR SCIENTIFIC RESPONSIBILITY OF GRANTED PROJECTS

2014 Joint Project - University of Verona and E. & J. Gallo Winery – "An integrative approach towards the characterization of grape berry response to source/sink balance alteration" - **Project Coordinator**

2013 F.I.R.B (Futuro in Ricerca) – Italian Ministry of University and Research - "The Epigenomic Plasticity of Grapevine in Genotype per Environment Interactions"- **Project Coordinator**

TEACHING/TUTORING EXPERIENCES:

2016 **Martina Albarello. Bachelor Degree.** "Functional characterization of *VvNAC33* and *VvNAC60*, putative master regulators of the vegetative-to-mature phase transition in grapevine.

2013	**Erica D'Incà. Master Degree.** "Characterization of genes involved in grapevine ripening after defoliation treatment".
2012	**Plant Genetics Teaching Assistant.** Master in Fruit Science, Genetics and Biochemistry, Free University of Bozen.
2012	**Francesca Baroni.** Bachelor degree. "PHEXPA1 expansin protein production through a transient expression system".
2009 - 2010	**Fasani Elisa.** Master Degree. "Functional Analysis of two *Vitis vinifera* MYB transcription factors involved in the volatile benzenoids biosynthesis regulation".
2007 - 2009	**Mag. Hansjörg Stampfl**. Master Degree. "ASKα and ASKγ, two Arabidopsis thaliana GSK-3/Shaggy-like kinases involved in biotic and abiotic stress signalling".
2006	**Richard Fischl**. Bachelor Degree. "Yeast-two-hybrid technique for the identification of ATK5 and ATK6 up-stream and down-stream interactors"**.**

REFEREE FOR INTERNATIONAL JOURNALS:

- Plos One
- American Journal of Enology and Viticulture
- Australian Journal of Grape and Wine Research
- Journal of Plant Physiology
- BMC Genomics

PUBLICATIONS:

1. Carbonell-Bejerano P, Rodriguez V, Hernaiz S, Royo C, **Dal Santo S**, Pezzotti M, Martinez-Zapater JM: Reducing sampling bias in molecular studies of grapevine fruit ripening: transcriptomic assessment of the density sorting method. *Theor Exp Plant Phys* 2016, **28**(1):109-129.

2. **Dal Santo S**, Fasoli M, Negri S, D'Inca E, Vicenzi N, Guzzo F, Tornielli GB, Pezzotti M, Zenoni S: Plasticity of the Berry Ripening Program in a White Grape Variety. *Frontiers in plant science* 2016, **7**:970.

3. Fasoli M, Dell'Anna R, **Dal Santo S**, Balestrini R, Sanson A, Pezzotti M, Monti F, Zenoni S: Pectins, Hemicelluloses and Celluloses Show Specific Dynamics in the Internal and External Surfaces of Grape Berry Skin During Ripening. *Plant & cell physiology* 2016, **57**(6):1332-1349.

4. Stampfl H, Fritz M, **Dal Santo S**, Jonak C: The GSK3/Shaggy-Like Kinase ASKalpha Contributes to Pattern-Triggered Immunity. *Plant physiology* 2016, **171**(2):1366-1377.

5. Zenoni S, Fasoli M, Guzzo F, **Dal Santo S**, Amato A, Anesi A, Commisso M, Herderich M, Ceoldo S, Avesani L *et al*: Disclosing the molecular basis of the postharvest life of berry in different grapevine genotypes. *Plant physiology* 2016.

6. Lopes Paim Pinto D, Brancadoro L, **Dal Santo S**, De Lorenzis G, Pezzotti M, Meyers B, Pè ME, Mica E: The Influence of Genotype and Environment on small RNAs profile in Grapevine Berry. *Frontiers in plant science* 2016, **7**(1459).

7. **Dal Santo S**, Commisso M, D'Incà E, Anesi A, Stocchero M, Zenoni S, Ceoldo S, Tornielli GB, Pezzotti M, Guzzo F: The terroir concept interpreted through grape berry metabolomics and transcriptomics**.** *Journal of Visualized Experiments* 2016. (116), e54410, doi:10.3791/54410.

8. **Dal Santo S**, Palliotti A, Zenoni S, Tornielli GB, Fasoli M, Paci P, Tombesi S, Frioni T, Silvestroni O, Bellincontro A *et al*: Distinct transcriptome responses to water limitation in isohydric and anisohydric grapevine cultivars**.** *BMC Genomics* 2016. *In press*.

9. Anesi A*, Stocchero M*, **Dal Santo S***, Commisso M, Zenoni S, Ceoldo S, Tornielli G, Siebert T, Herderich M, Pezzotti M *et al*: Towards a scientific interpretation of the terroir concept: plasticity of the grape berry metabolome. *BMC Plant Biol* 2015, 15(1):191.

10. Matus JT, Aquea F, Espinoza C, Vega A, Cavallini E, **Dal Santo S**, *et al*. Inspection of the grapevine BURP superfamily highlights an expansion of RD22 genes with distinctive expression features in berry development and ABA-mediated stress responses. *PloS One* 2014 9: e110372.

11. Liu J, Chen N, Chen F, Cai B, **Dal Santo S**, Tornielli GB, Pezzotti M, Cheng ZM. Genome-wide analysis and expression profile of the bZIP transcription factor gene family in grapevine (Vitis vinifera). *BMC Genomics* 2014 *15*, 281

12. Chen F, Fasoli M, Tornielli GB, **Dal Santo S**, Pezzotti M, Zhang L, Cai B, Cheng ZM. The evolutionary history and diverse physiological roles of the grapevine calcium-dependent protein kinase gene family. *PloS One* 2013 *8*, e80818.

13. **Dal Santo, S.**, Tornielli, G.B., Zenoni, S., Fasoli, M., Farina, L., Anesi, A., Guzzo, F., Delledonne, M., and Pezzotti, M. The plasticity of the grapevine berry transcriptome. *Genome Biology* 2013 *14*, r54.

14. **Dal Santo, S.**, Vannozzi, A., Tornielli, G.B., Fasoli, M., Venturini, L., Pezzotti, M., and Zenoni, S. Genome-wide analysis of the expansin gene superfamily reveals grapevine-specific structural and functional characteristics. *PloS One* 2013 *8*, e62206.

15. Venturini, L., Ferrarini, A., Zenoni, S., Tornielli, G.B., Fasoli, M., **Dal Santo, S.**, Minio, A., Buson, G., Tononi, P., Zago, E.D., *et al.* De novo transcriptome characterization of Vitis vinifera cv. Corvina unveils varietal diversity. *BMC Genomics* 2013 *14*, 41.

16. Zoccatelli, G., Zenoni, S., Savoi, S., **Dal Santo, S.**, Tononi, P., Zandonà, V., Dal Cin, A., Guantieri, V., Pezzotti, M., and Tornielli, G.B. Skin pectin metabolism during the postharvest dehydration of berries from three distinct grapevine cultivars. *Australian Journal of Grape and Wine Research* 2013 *19*, 171-179.

17. Fasoli, M., **Dal Santo, S.**, Zenoni, S., Tornielli, G.B., Farina, L., Zamboni, A., Porceddu, A., Venturini, L., Bicego, M., Murino, V., *et al*. The Grapevine Expression Atlas Reveals a Deep Transcriptome Shift Driving the Entire Plant into a Maturation Program. *Plant Cell*, 2012 *24* (9), 3489-3505.

18. **Dal Santo, S.**, Stampfl, H., Krasensky, J., Kempa, S., Gibon, Y., Petutschnig, E., Rozhon, W., Heuck, A., Clausen, T., and Jonak, C. Stress-Induced GSK3 Regulates the Redox Stress Response by Phosphorylating Glucose-6-Phosphate Dehydrogenase in Arabidopsis. *Plant Cell*, 2012 *24* (8), 3380-3392.

19. Zenoni, S., Zamboni, A., **Dal Santo, S.**, Fasoli, M., Pezzotti, M., and Tornielli, G.B. Lo sviluppo delle conoscenze genomiche in vite e il loro potenziale utilizzo nella viticoltura attuale e futura. *Italus Hortus*, 2012 *17-19.*

20. Pastore, C., Zenoni, S., Tornielli, G.B., Allegro, G., **Dal Santo, S.**, Valentini, G., Intrieri, C., Pezzotti, M., and Filippetti, I. Increasing the source/sink ratio in Vitis vinifera (cv Sangiovese) induces extensive transcriptome reprogramming and modifies berry ripening. *BMC Genomics*, 2011 *12*, 631.

21. **Dal Santo S.**, Fasoli M., Cavallini E., Tornielli G.B., Pezzotti M. and Zenoni S. PhEXPA1, a *Petunia hybrida* expansin, is involved in cell wall metabolism and in plant architecture specification. *Plant Signal and Behav*. 2011 Dec; 6(12).

22. Zenoni, S., Fasoli, M., Tornielli, GB, **Dal Santo, S.**, Sanson, A., de Groot, P., Sordo, S., Citterio, S., Monti, F. and Pezzotti M. Overexpression of PhEXPA1 increases cell size, modifies cell wall polymer composition and affects the timing of axillary meristem development in *Petunia hybrida*. *New Phytologist*. 2011 Aug; 191(3): 662-77.

23. Kempa, S., Krasensky, J., **Dal Santo, S**., Kopka, J., and Jonak, C. (2008). A central role of abscisic acid in stress-regulated carbohydrate metabolism. *PLoS One*, 2008 *3*, e3935.

CONFERENCES PARTICIPATION (ORAL PRESENTATIONS ONLY - *SPEAKER):

XIV FISV (Federazione Italiana Scienze della Vita) CONGRESS, Roma, September 20th – 23rd 2016

- **Mini Symposium on plant adaptation and phenotypic plasticity to climate change:** Dissecting GxE interactions in grapevine through a transcriptomic approach – Invited Speaker
  Silvia Dal Santo*

X INTERNATIONAL SYMPOSIUM ON GRAPEVINE PHYSIOLOGY AND BIOTECHNOLOGY, Verona, Italy, June 13th - 18th 2016

- Oral Presentation: The dissection of GxE interactions using a novel data mining approach uncovers the plasticity of the grapevine berry transcriptome
  Silvia Dal Santo* - Marco Sandri - Gabriella De Lorenzis - Sara Zenoni - Paola Zuccolotto *et al*
- Oral Presentation: Transcriptomic and metabolomic analysis unravels specific and common traits of grape berry ripening in Pinot noir and Cabernet Sauvignon
  Marianna Fasoli* - Chandra Richter - **Silvia Dal Santo** - Sara Zenoni *et al*
- Oral presentation: Changes in flavonoid metabolism and in the whole transcriptome of the cv. Sangiovese berry under moderate air temperature increase
  Chiara Pastore* - **Silvia Dal Santo** - Sara Zenoni - Gianluca Allegro *et al*
- Oral Presentation: Grapevine and somatic embryogenesis: molecular approaches to uncover the genotype effect
  Irene Perrone* - **Silvia Dal Santo** - Cristian Del Fabbro - Paolo Boccacci *et al*

60th Italian Society of Agricultural Genetics (SIGA) Annual Congress, Catania, Italy, 13th – 16th September, 2016

- Oral Presentation: I. Perrone, **S. Dal Santo**, C. Del Fabbro, P. Boccacci, W. Chitarra, S. Zenoni, G.B. Tornielli, M. Celii, I. Gribaudo, E. De Paoli*, G. Gambino
  Exploring the epigenetic signature of plant regeneration in the grapevine system
- Oral Presentation: S. Zenoni*, M. Fasoli, F. Guzzo, **S. Dal Santo**, M. Pezzotti, G.B. Tornielli
  The plasticity of phenylpropanoid metabolism distinguishes among genotypes during the postharvest dehydration of *Vitis vinifera* berries

59th Italian Society of Agricultural Genetics (SIGA) Annual Congress, Milan, Italy, 8th-11th September, 2015.

- Oral Presentation: The transcriptome plasticity of grapevine in Genotype by Environment Interaction (GxE)
  Silvia Dal Santo*, Sara Zenoni, Zuccolotto Paola, Sandri M *et al*

9th International Symposium on Grapevine Physiology & Biotechnology, La Serena, Chile, 21st-26th April, 2013.

- Oral Presentation: **S. Dal Santo**, G.B. Tornielli, S. Zenoni, L. Farina, M. Fasoli, M. Delledonne and M. Pezzotti*
  A single clone in different environments: the plasticity of the grapevine berry transcriptome
- Oral Presentation: Molecular and metabolite changes in response to postharvest dehydration in different wine grape varieties
  S. Zenoni*, G. B. Tornielli, **S. Dal Santo**, F. Guzzo, M. Fasoli and M. Pezzotti

21th Plant and Animal Genome (PAG) Meeting, San Diego, California, USA, 12th - 16th January, 2013.

- Oral Presentation: Zenoni, S., Tornielli, G.B., Zamboni A., **Dal Santo, S.**, Fasoli, M., Massonet, M., Tononi P., Ferrarini, A., Delledonne, M., Pezzotti, M*.
  Genetics and Genomics of Nutraceuticals in Grapes.

Macrowine 2012. Macrovision of viticulture, wine-making and markets Bordeaux, France, June 18th - 21th, 2012

- Oral Presentation: **Dal Santo S.**, Zenoni S., Farina L., Tornielli G.B., Guzzo F., Fasoli M., Delledonne M., Pezzotti M*
  Is grapevine phenotypic plasticity functional to interpret the term "terroir"?

12th World Petunia Days (WPD) Meeting, Erfurt, Germany, 18th-21st March 2012.

- Oral Presentation: **Dal Santo S.***, Zenoni S., Fasoli M., Tornielli G.B., Pezzotti M.
  The dual role of PhEXPA1, a *Petunia hybrida* expansin, in cell wall metabolism and in plant architecture specification.

20th Plant and Animal Genome (PAG) Meeting, San Diego, California, USA, 14th - 18th January 2012.

- Oral Presentation: **Dal Santo S.***, Zenoni S., Farina L., Tornielli G.B., Guzzo F., Fasoli M., Delledonne M., Pezzotti M.
  Interpreting the "Terroir" at Transcriptomic Level

55th Joint Meeting S I G A, A G I, S I B V, Cittadella di Assisi, Italy, 19th - 22nd September 2011.

- Oral Presentation: **Dal Santo, S.***, Fasoli M., Zenoni S., Farina L., Tornielli G.B., Guzzo F., Delledonne M., Pezzotti M.
  Transcriptome characterization of phenotypic plasticity in *Vitis vinifera* **ISBN** 978-88-904570-2-9.

10th International Conference on Reactive Oxygen and Nitrogen Species in Plants, Budapest, Hungary, 5th -8th July, 2011.

- Oral Presentation: **Dal Santo, S.**, Stampfl, H., Krasensky, J., Kempa, S., Gibon, Y., Heuck, A., Jonak, C*.
  Phosphorylation-mediated stress signaling and redox regulation.

54th S I G A (Italian Society of Agricultural Genetics) Annual Congress, Matera, Italy, 27th – 30th September 2010.

- Oral Presentation: Fasoli, M.*, Zenoni, S., **Dal Santo, S.**, Tononi, P., Delledonne, M., Pezzotti M.
  A gene expression map of *Vitis vinifera* 'Corvina' development.

7th Tri-National Arabidopsis Meeting, Salzburg, Austria, 15th - 18th September 2010.

- Oral Presentation: **Dal Santo, S.***, Kempa, S., Krasensky, J., Stampfl, H., Rozhon, W., Gibon, Y., Kopka J., Jonak, C.
  High soil salinity: Metabolic adaptation, redox balance and signaling

10th International Conference on Grapevine Breeding and Genetics, Geneva, New York, USA, 1st – 5th August 2010.

- Oral Presentation: Fasoli, M., Zenoni, S., **Dal Santo, S.**, Tononi, P., Delledonne, M., Pezzotti M.*
  A gene expression map of *Vitis vinifera* 'Corvina' development

International PhD Summer School "Environmental signaling: Arabidopsis as a model", Utrecht, the Netherlands, 27th -29th August 2007

- Oral Presentation: Kempa, S., Krasensky, J.*, **Dal Santo, S.**, Kopka, J., and Jonak, C.
  A central role of abscisic acid in stress-regulated carbohydrate metabolism.

Plants and Fungi – A Stressful Interaction. Workshop, 12th -14th November 2006 Brno, Czech Republic.

- Oral Presentation: Jonak, C., **Dal Santo, S.***, Petutschnig, E., Rozhon, W., Kempa S.

GSK3-Shaggy-like kinases are involved in Arabidopsis biotic and abiotic stress responses.

7th World Petunia Days, Nottingham, UK, 15th - 17th September 2005

- Oral Presentation: Zenoni S.*, **Dal Santo, S.**, Castelletti, S., Tornielli, G.B., Porceddu, A., Pezzotti M.
  The role of expansions in Petunia plant development.

10th International Cell Wall Meeting, Sorrento, Italy, 29th August - 3rd September 2004

- Oral Presentation: Zenoni S., **Dal Santo S.**, Tornielli G.B., Viviani, M., Pezzotti M.*
  Petunia hybrida, a model plant for seeking the function of expansin genes.

AWARDS:

SIGA Prize "Domenico Mariotti" for Plant Genetics Young Researcher: 58th Annual Congress, Quarté Sayàl, Alghero (SS) 15-18 September 2014

Poster Prize: "Phenotypic plasticity in *Vitis vinifera*: how environment shapes wine", 54th S I G A (Italian Society of Agricultural Genetics) Annual Congress, Matera, Italy, 27th – 30th 2010

SCIENTIFIC SOCIETIES MEMBERSHIP:

Italian Society of Agricultural Genetics (SIGA)

Verona, 7 Ottobre 2016

Silvia Dal Santo, PhD