

**NICOLAS COBO LEWIN**  
828 D St. Apt 1. Davis, CA. 95616  
Phone: +1 (530) 219 6871  
Email: [ncobo@ucdavis.edu](mailto:ncobo@ucdavis.edu)

## EDUCATION

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### University of California, Davis

PhD in Horticulture and Agronomy. Expected graduation August 2016

Emphasis: Wheat Breeding and Genetics.

Dissertation: **Discovery, high-density mapping and pyramiding of a partial resistance QTL for stripe rust (*Puccinia striiformis f.sp tritici*) resistance in wheat.**

PI: Dr. Jorge Dubcovsky. UC Davis Distinguished Professor & Howard Hughes Medical Institute Researcher.

- Identify and validate novel QTL for stripe rust resistance in field experiments
- Develop a high-density map for the identified QTL, and generate a tightly-linked marker to use in MAS
- Demonstrate that identified QTL is different to previously described genes in the region
- Pyramid novel identified QTL with other gene in the region and test for combined effects

### Universidad de Talca, Chile

Bachelor of Science in Agronomy Engineering, March 2010

Research Thesis: **Morphological and physiological changes in blueberries (*Vaccinium corymbosum* cv. *Brigitta*) induced by the modification of its light environment.**

PI: Dr. Alejandro del Pozo. Full Professor, Universidad de Talca, Chile.

- Designed a field experiment to assess effect of shadowing on blueberry physiology and morphology
- Assayed the stress status of plants exposed to different light conditions measuring chlorophyll fluorescence
- Evaluated changes in leaf morphology and characteristics due to changes in light environment

## WORK EXPERIENCE

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**Teaching Assistant.** PLB143, Evolution of Crop Plants. University of California, Davis (**Fall 2014**)

- Led two discussion groups for weekly coverage of class material
- Taught a section in yield and physiological aspects of plant breeding

**Teaching Assistant** (After Graduation). Crops Production. Universidad de Talca, Chile (**March-June 2011**)

- Prepared class material and evaluations for the class
- Coordinated lab and field activities with undergraduate assistants

**Research & Development Agronomist.** AMecological Trade SA, Chile (**2010-2011**)

- Coordinated and evaluated field trials with growers, advisors and universities along the country
- Elaborated commercial reports and extension talks presenting trial results. Technical assistance to regional sales teams

**Project Consultant – Agroindustry Area.** Fundacion Chile, Chile (**2010**)

- Designed first models and methodologies to assess water footprint in various crops. Worked in multidisciplinary team
- Assist in the elaboration of the Crop Check Wheat Recommendations Manual
- [http://www.fundacionchile.com/archivos/ManualTrigo\\_baja7853253.pdf](http://www.fundacionchile.com/archivos/ManualTrigo_baja7853253.pdf)

**Agronomist assistant – Pome fruit program.** Unifrutti Traders SA, Chile (**December 2009-March 2010**)

- Registered fruit maturity and quality before harvest for orchards exporting with the company
- Assisted preparing growers for Good Agricultural Practices (GAP) certifications for different markets

**Teaching Assistant.** Crops Ecophysiology. Universidad de Talca, Chile (**March-June 2009**)

- Prepared and graded class material and exams for the class
- Taught some topics of the course. Coordinated and taught lab and field activities

**Teaching Assistant.** Experimental Design and Analysis. Universidad de Talca, Chile (**July-December 2009**)

- Prepared and graded class material and exams for the class
- Led class discussion for practice exercises. Assisted and prepared laboratory activities

**Agronomist Assistant – Pome fruit program.** Frusan SA, Chile (**December 2008-March 2009**)

- Registered fruit maturity and quality before harvest for orchards exporting with the company
- Supervise harvesting at affiliated orchards assuring best fruit manipulation and quality for exportation

**Teaching Assistant.** Biochemistry. Universidad de Talca, Chile (**2006 – 2007, 4 semesters**)

- Prepared and graded class material and exams for the class
- Led laboratory and gave some lectures

**Teaching Assistant.** Chemistry laboratory. Universidad de Talca, Chile (2006, 2 semesters)

- Prepared lab materials for weekly laboratory classes
- Assisted students during lab activities, and reports elaboration

## RESEARCH

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**PhD Dissertation.** Discovery, high-density mapping and pyramiding of a partial resistance QTL for stripe rust (*Puccinia striiformis* f.sp *tritici*) resistance in wheat. University of California, Davis. (2011-present)

**Co-researcher.** Formulation of the project titled “Maximizing the productivity of fresh blueberries in the Maule Region” (Fondef regional, Chile). [http://www.conicyt.cl/573/articles-31424\\_resultados.pdf](http://www.conicyt.cl/573/articles-31424_resultados.pdf) (2010)

**Researcher.** Project titled “Morphological and Physiological Changes in Blueberries (*Vaccinium corymbosum* cv. Brigitta) Induced by the Modification of its Light Environment”. <http://dspace.otalca.cl/handle/1950/7936> (2008-2010)

**Researcher’s assistant.** Project titled “Extension of the harvest season and the presence in the market of Chilean native strawberry” (FIA, Chile) (2008-2009)

**Researcher’s assistant.** Project titled “Response of apple epicuticular waxes in sunburn” (PhD Thesis) (2008-2009)

**Researcher’s assistant.** Project titled “Shading nets influences in morphological, physiological and productive traits in *Vaccinium corymbosum* L.” (PhD Thesis) (2008-2009)

**Researcher’s assistant.** Project titled “Blueberry breeding” (Innova-CORFO, Chile) (2007-2009)

## HONORS, AWARDS & FELLOWSHIPS

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**Henry. A. Jastro Research Award**, University of California, Davis. (2014)

**Henry. A. Jastro Research Award**, University of California, Davis. (2013)

**Henry. A. Jastro Research Award**, University of California, Davis. (2012)

Research award (\$3000 each year) given by the UC Davis Plant Science Department to selected research proposals

**100 Young Leaders of Chile.** Center of Strategic Leadership-Universidad Adolfo Ibañez & Diario El Mercurio (2011)

**FULBRIGHT Fellowship.** To pursue PhD studies at UC Davis (2010)

**Beca Chile for PhD.** To pursue PhD studies at UC Davis, Education Ministry, Chile. (2010)

**“Francisco Antonio Encina Armanet” Honor.** Universidad de Talca, Chile (2010)

**“Beca de Honor al Merito Académico” Fellowship.** Universidad de Talca, Chile (2007)

To the best academic record

**Fourth Place Grand Award in Chemistry,** Intel ISEF Science fair; Portland, OR, USA. (2004)

**First place on “IV Congreso Nacional Científico Escolar”,** Organized by CONICYT. Antofagasta, Chile (2004)

Science conference for high school students. Project: Cinnamon, an organic phytopesticide for Chilean agriculture

## PUBLICATIONS

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GA Lobos, JB Retamales, JF Hancock, JA Flore, **N Cobo**, and A del Pozo, 2012. Spectral irradiance, gas exchange characteristics and leaf traits of *Vaccinium corymbosum* L. ‘Elliott’ grown under photo-selective nets. *Environmental and Experimental Botany* 75:142-149.

Nicolas Cobo and Felipe Reyes, 2003. Cinnamon (*Cinnamomun zeylainicum*), an organic phytopesticide for Chilean agriculture. International Youth Scientific Congress, Congress Digest. Youth Science society-UNESCO, 170 p, 2003.

## PRESENTATIONS

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**Cobo, N;** Tomar, L; Alvarez, A; Pflüger, L and Dubcovsky, J. 2014. Mapping and validation of two QTL conferring stripe rust resistance in hexaploid wheat. Borlaug Summit on Wheat for Food Security, Obregón, Mexico.

**Cobo, N;** Tomar, L; Alvarez, A; Pflüger, L and Dubcovsky, J. 2014. Mapping and validation of two QTL conferring stripe rust resistance in hexaploid wheat. BGRI 2014 Technical Workshop, Obregón, Mexico.

**Cobo, N;** Abate, Z; Ammar, K and Dubcovsky, J. 2013. Effect of a 7EL translocation carrying leaf and stem rust resistance genes (*Lr19 & Sr25*) and yellow pigment gene (Y) on yield and semolina color in durum wheat. XXI Plant and Animal Genome, San Diego, CA, USA.

**Cobo, N;** Tomar, L; Alvarez, A; Yadav, N; Pflüger, L and Dubcovsky, J. 2012. QTL for High Grain Protein Content and Stripe Rust Resistance in a *Triticum aestivum* RIL Mapping Population. 2012 ASA, CSSA and SSSA International Annual Meeting. Cincinnati, OH, USA.

**Cobo, N;** Lobos, G. A.; Retamales, J. B.; Del Pozo, A. H. 2010. Morphological and Physiological Changes in Blueberries (*Vaccinium corymbosum* cv. Brigitta) Induced by the Modification of its Light Environment. 28th International Horticultural Congress, Lisbon, Portugal.

**Nicolas Cobo,** Gustavo Lobos, Alejandro del Pozo and Jorge Retamales. 2009. Shade affects photosynthetic capacity of blueberries (*Vaccinium corymbosum*) cv. Brigitta. Presented at 60th Agronomical Congress. Talca, Chile.

## **LEADERSHIP EXPERIENCE**

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**2015 UCD Plant Breeding Symposium.** Member of the student organizing board.

**2014 ChileUCD Conference: 50 years of cooperation and academic exchange.** Organizer team member

**UC Davis Chilean Student Association.** General Secretary, **2014**

**2014 UCD Plant Breeding Symposium.** Member of the student organizing board.