

GLORIA M. CORUZZI

Carroll & Milton Petrie Professor

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Education

New York University

School of Medicine

1976 - 1979

Fordham University

1972 - 1976

Hunter College High School

Ph.D. Cell & Molecular Biology

Thesis Advisor: Dr. Alexander Tzagoloff

Field: Molecular-genetics of yeast mitochondrial DNA

B.S. Biology, cum Laude, in cursu Honorum

Sr. Thesis Mentor: Dr. E. Ruth Witkus,

Class of 1972

Appointments

1991 - present

Carroll & Milton Petrie Professor

New York University, Center for Genomics and Systems Biology,

2003 - 2011

Chair, New York University, Department of Biology

1990 - 1991

Associate Professor, The Rockefeller University,

Laboratory of Plant Molecular Biology

1983 - 1989

Assistant Professor, The Rockefeller University

1980 - 1983

NIH Post-doctoral Fellow, Rockefeller University

Field: Plant Molecular Biology, Advisor: Nam-Hai Chua

1979 - 1980

Postdoctoral Research Associate, Columbia University

Field: Yeast Molecular-Genetics, Advisor: A. Tzagoloff

1976 - 1979

NIH Pre-doctoral Fellow, New York University

School of Medicine, Department of Cell Biology

Honors and Awards

Agropolis Fellow, Biochem, Physiol & Mol Biol of Plants, Montpellier France, Spring 2012

Fellow of the American Society of Plant Biologists (ASPB), Elected 2010

Fellow of the American Association for the Advancement of Science (AAAS), Elected 2005

Carroll and Milton Petrie Chair in Biology, NYU, 1996- present

Herbert and Margaret Sokol Award in the Sciences, NYU, 1996

CNR Fellow, Research Advances for Innovations in Agriculture, La Sapienza, Roma, 1995

Editorial Boards and Affiliations

Affiliate Faculty, Center for Data Science, NYU Courant Institute, 2013-present

(<http://cds.nyu.edu/doku.php?id=start>)

Associate Editor G3: Genes, Genomes, Genetics (Genetics Society of America) 2011-present

Editorial Board, Trends in Plant Science, 2004- 2010

Editorial Board, Current Opinions in Plant Biology, 1998-2010

Associate Editor, Plant Physiology, 1992-1998; 2001-2005

Editorial Advisory Board, The Plant Journal, 1991-1999

Advisory Panels (selected)

Scientific Advisory Board, The Arabidopsis Information Portal (AIP); 2012-17.

International Arabidopsis Informatics Consortium (IAIC) Scientific Board, 2012-17.

Scientific Advisory Board, Donald Danforth Plant Science Center in St. Louis, MO, 2012-15.

Member of the Corporation of the New York Botanical Garden, 2008- present
NSF Bio Advisory Panel, Systems Biology- Speaker, April 19, 2007
National Academy of Sciences: Workshop on National Plant Genomic Initiative, June 2002
International Society of Plant Molecular Biology, Board Member, 1996-2000
North American Arabidopsis Steering Committee, 1994-1997
Board of Directors, International Society of Plant Molecular Biology, 1996-199

Biosketch: Dr. Coruzzi is currently the Carroll & Milton Petrie Professor at New York University's Center for Genomics and Systems Biology. Her research in Plant Systems Biology combines genomic, bioinformatic, and system biology approaches to identify gene networks involved in biological regulatory mechanisms controlling nitrogen use and the evolution of seeds. A native New Yorker, Dr. Coruzzi received her Ph.D. in Molecular & Cell Biology at New York University School of Medicine in yeast genetics where she decoded the yeast mitochondrial genome. As post-doctoral fellow at Rockefeller University, she began studies of plants by cloning some for the first plant nuclear genes. As an Assistant and then Associate Professor at Rockefeller, Dr. Coruzzi began her studies of the genes controlling Nitrogen Use Efficiency (NUE) in plants. Since joining NYU as professor in 1993, Dr. Coruzzi's lab has initiated genomic and systems biology approaches in Arabidopsis and other plant species to study gene regulatory networks. This work has included the development of new informatic and systems biology tools that involve collaborations with colleagues at NYU Courant Institute for Math & Computer Science. Using machine-learning approaches, her lab has generated the first dynamic and predictive regulatory networks in plants, a hallmark of Systems Biology. These informatic tools are embodied in a systems-biology enabling software platform called VirtualPlant (www.virtualplant.org). Dr. Coruzzi is also engaged in a collaborative NSF Plant Genome Project on the Comparative Genomics of Seed Evolution with co-PIs at the New York Botanical Garden, the American Museum of Natural History, and Cold Spring Harbor labs. This project created the BigPlantv1.0 matrix (<http://nyypg.bio.nyu.edu/bp/>), the largest genome-scale phylogeny of 150 seed plants. This community resource is now available as an interactive browser called PhyloBrowse, which enables researchers to explore the genomic underpinnings of plant diversification across a wide range of species. Dr. Coruzzi's research is currently funded by the National Institutes of Health, NSF 2010 Project, NSF Plant Genome Project, the NSF Database and Information Project, and Department of Energy. Dr. Coruzzi was named an American Association for the Advancement of Science Fellow in 2005, a Fellow of the American Society of Plant Biology in 2010, and currently serves on several science advisory and editorial boards.

Current Funding:

NSF Plant Genome: IOS1339362: "Nutri-Net: A network-inspired approach to improving nutrient use efficiency in crop plants," PI: Gloria Coruzzi; co-PIs: Dennis Shasha (NYU Courant), Stephen Moose (Univ. Illinois); Years 1-4 (9/1/2014-8/31/2018).

NSF Molecular and Cellular Biosciences: MCB-1412232: "Prospecting for Resources: A systems integration of local and systemic nutrient signaling," PI: Gloria Coruzzi; co-PI: Dennis Shasha (NYU Courant); Years 1-3 (7/01/2014 - 6/30/2017).

NSF MCB 1158273 Networks and Regulation: "A Systems Approach to the NPK Nutriome and its Effect on Biomass." PI: Gloria Coruzzi; Co-PI: Dennis Shasha (NYU Courant); Years 1-3 (3/1/2012-2/29/2015).

DOE Grant DEFG02-92ER20071: "Asparagine synthetase gene regulatory networks and plant nitrogen metabolism" PI: Gloria Coruzzi; Years 14-15 (12/1/2014-11/30/2016).

NSF Plant Genome Grant IOS-0922738: "GERP-Genomics of Comparative Seed Evolution"; PI: Gloria Coruzzi; Co-PIs: Dennis Shasha (NYU Courant), Dennis Stevenson (NYBG), Richard McCombie (CSHL), Rob DeSalle (AMNH); Years 4-8 (8/1/2010 to 7/31/2015).

NSF Arabidopsis 2010 Genome Grant (MCB-0929338): "Arabidopsis 2010 collaborative research: Nitrogen networks in plants" PI: Gloria Coruzzi; Co-PIs: Dennis Shasha (NYU Courant), Nigel Crawford (UCSD); Years 9-14 (7/15/2009-6/30/2015).

NIH NIGMS GRANT RO1 GM032877-28: "A systems approach to regulatory networks controlling N-assimilation" PI: Gloria Coruzzi, **Years 25-30** (5/1/2009-4/30/2015).

Past Support

NSF Database Activities: DBI-0445666, "Conceptual Data Integration for the Virtual Plant". Coruzzi, PI, CoPIs: Gutierrez R (NYU Biology), Shasha D (NYU Courant). Dates 6/1/05-11/31/11.

D. Patents and commercial licensing agreements:

Provisional Patent Application No. 61/865,438. Transgenic plants and a transient transformation system for genome-wide transcription factor target discovery.

Inventors: Coruzzi, G; Krouk G, Bargmann B and Birnbaum K; Filed: June 13, 2014

Patent No. 7,805,703: System and method for representing the interactions between multiple inputs and at least one output. (Issued Sept 28, 2010) Inventors: Dennis Shasha, Gloria Coruzzi, Rodrigo Gutierrez

Patent No. 7,739,053 B2: System and Process of determining a biological pathway based on a treatment of a biological specimen. (Issued June 15, 2010) Inventors: Peter Palenchar, Dennis Shasha, Michael Chou, Marc Rejali, Yair Dorsett, Andrei Kouranov, Gloria Coruzzi

Patent No. 60/919,818: Methods of affecting nitrogen assimilation in plants (Issued March 23, 2007) Inventors: G. Coruzzi, D. Nero, and R. A. Gutierrez,

Patent No. 60/918,443: Methods of affecting plant growth with microRNAs (Issued March 16, 2007) Inventors: G. Coruzzi, K.D. Birnbaum, M. Gifford, R.A. Gutierrez

Patent No. 6,177,25B1: Nitrogen regulatory protein PII and genes encoding same (Issued Jan 23, 2001) Inventors: Hsieh MH, Lam HM, Coruzzi G.

Patent No. 5,824,8676: Plant glutamate receptors (Issued Oct 20, 1998) Inventors: HM Lam, Oliveira I, Hsieh MH, and Coruzzi G,

Patent No. 5,955,651: Transgenic plants that exhibit enhanced nitrogen assimilation (Issued Sept 21, 1999) Inventors: G. Coruzzi and T. Brears.

Patent No. 5,595,896: Expression of heterologous genes in transgenic plants and plant cells using plant asparagine synthetase promoters. (Issued Jan. 21, 1997) Inventors: G. Coruzzi and F.Y. Tsai

Patent No. 07/448,036: Novel organ-specific plant promoter sequences Inventors: G. Coruzzi, J. Edwards, E. Walker

Patent No. 5,256,558: Genes encoding plant asparagine synthetase (Issued 10/26/93) Inventors: G. Coruzzi, F.Y. Tsai.

Recent Grant Panels and Workshops

NSF MCB, Chair, Committee of Visitors 2011

HHMI/ASPB Plant Biology Research Summit, Sept 22-24, 2011
NSF MCB, Grant Panel, March 2011
DOE Bioenergy Sciences, Contractor Meeting, Oct, 2010
NSF Plant Genome Awardee Meeting, Sept 9-10, 2010
NSF US-EU Taskforce on Plant Biotechnology: Speaker, June 2, 2010
DOE BER Grant Panel, Feb 21, 2010
NSF Plant Genome Awardee Meeting, Sept 10-11, 2009
NSF Plant Genome Awardee Meeting, Sept 4-6, 2008
DOE Bioenergy Sciences, Contractor Meeting, Oct, 2008
DOE Workshop on Carbon Cycling and Biosequestration, March 2008 (Panelist)
DOE GTL Workshop: Systems Biology Knowledgebase, May 2008 (Panelist)
NSF 2020 Workshop, Jan. 3, 2008 (co-organizer, Benfey & Estelle).
NSF: Joint AFGN/2010 Review Panel, May 15-18, 2007
NSF Bio Advisory Panel, Systems Biology- Invited Speaker, April 19, 2007
NSF Plant Genome Awardee Meeting, Sept 2007 (Invited speaker)
NIH Genetics, Genes & Genomes; MGB Panel, June 2006
NSF Plant Genome Awardee Meeting, Sept 2006
NSF Plant Cyberinfrastructure Meeting, Sept 2006.
NSF Workshop for a Plant Science Synthesis Center; Panel member, Oct. 17-19, 2005
NSF Plant Genome Research Program 8th Annual Awardees Meeting, September 8-9, 2005
NSF Arabidopsis 2010 Project Workshop, Aug 24-26, 2005
NSF US-EU Taskforce on Plant Biotechnology: Panelist, June 21-22, 2005
NSF TIGR Workshop: Data Integration & the *Arabidopsis* Community. Panelist, April 2005
NIH CDF1- Molecular Biology Oct 2004
DOE Workshop on Plant Systems Biology, Riverside CA Jan 2003
National Academy of Sciences: Workshop on National Plant Genomic Initiative, June 2002
Project 2010: NSF-workshop: “Functional Analysis of the Arabidopsis Genome, Jan 2000

Invited and Plenary Lectures at Meetings (2002 - present):

Gordon Conference on Plant Molecular Biology: 2018; Chair
Gordon Conference on Plant Molecular Biology: June 12-17, 2016; Vice Chair
ISPMB 2015, Oct 25-30, 2015, Brazil.; “Session 3: Networks in Plant Biology” (Co-Chair)
ICAR 2015, The 26th International Conference on Arabidopsis Research, Paris FR, July 2015
Plenary Speaker, Nutrition and Metabolism.
Gordon Conference on Plant Molecular Biology: Holderness School, NH (July 20-25, 2014)
“Decision-Making Pathways, Networks, and Models in Plant Biology”, Keynote Speaker
ICREA Workshop: From model systems to crops, challenges for a new era in plant biology.
Barcelona, May 7 - 8, 2014.
International Nitrogen 2013 Meeting, Puerto Varas, Chile, Nov. 18-22, 2013
Storer Lecture, “Major Issues in Modern Biology”, UC Davis, March 18, 2013
North Carolina Plant Molecular Biology Consortium Speaker, April 22, 2013.
Agropolis Foundation Lecture, CNRS INRA, Montpellier, May 23, 2012.
10th International Congress on Plant Molecular Biology, Oct 21-26, 2012, Jeju Korea(Plenary)
The 13th Annual Symposium: Danforth Plant Science Center St. Louis, MO
“Plant Genomes to Phenomes”, September 28-30, 2011.
HHMI/ASPB Plant Biology Research Summit, Sept 22-24, 2011
CSHL Plant Genome Course: Plant Systems Biology, July 2010
NSF US-EU Taskforce on Plant Biotechnology: Barcelona, Speaker, June 2, 2010
Mendel Biotechnology, March 2010
NYU Abu Dhabi, Genomics & Systems Biology Meeting, January 2010
CSHL Plant Genomes: Genes, Networks and Applications, March 4-7, 2009

CSHL Banbury Meeting: “Nutrient Sensing In Plants”, 21-24 September 2008
ICAR: 19th International Conference on Arabidopsis Research, Montreal, July 23-27, 2008,
Session Chair and Plenary speaker: Systems Biology Plenary Session
Society for Experimental Biology (UK) Symposium on Systems Biology the Society
Marseille, France 7-9th July 2008 (Keynote speaker)
NSF iPlant Meeting; CSHL, May 2008 (Session moderator; Systems Biology)
6th Annual Keen Lecture, UC Riverside, Genome Center Jan 18, 2008
Syngenta Fellows Symposium on Yield, Dec 18, 2007. Invited speaker.
CSHL 6th Plant Genome Meeting March 15-22, 2007, **co-organizer**
Keystone Symposium, Systems Biology & Regulatory Networks, Mar 22-27, 2007, Steamboat Springs.
CSHL 5th meeting on Systems Biology: Regulation of Gene Expression March 28 - April 1, 2007.
Monsanto, Invited speaker, Plant Systems Biology, May 2007.
ISPMB Meeting; Plenary Speaker, Systems Biology, Adelaide, Australia Aug. 20-25, 2006
Society for Developmental Biology, Plenary Speaker, Ann Arbor MI, June 17-19, 2006
Systems Biology Symposium; Plenary Speaker, Plant Biotech Denmark, Nov 2005
2nd Tri-National Arabidopsis Meeting: Neuchâtel, Switzerland, Aug 24-27, 2005.
Annual ASPB Meeting, Plenary Speaker, New Approaches for Integrating Plant Genomes &
Function. Seattle, WA. July, 2005
CSHL Arabidopsis Genome Course, Lecturer, July 2005
Frontiers in Plant Biology: Genomics & Beyond: Missouri Symposium, April 27-30, 2005
CSHL Plant Genome Meeting: From Sequence to Phenome, **Co-organizer** Dec. 12-14 2004,
7th Symp. Zurich-Basel Plant Science Center: Plant Systems Biology, Speaker, Dec 17, 2004
Salk Institute Plant Biology Biotechnology Symposium, Plenary Speaker, Oct. 2004
2nd EPSO Conference: “Interactions in Plant Biology”, Speaker, Ischia, Italy, October 2004
5th Annual GARNET Meeting: Plant Gene Networks, Speaker, Leicester, UK Sept. 2004.
ICAR: 14th International Arabidopsis Conference, Plenary Speaker. Berlin, July 10-18, 2004.
Gordon Research Conference, Plant Molecular Biology, Invited Speaker, NH July 2004.
6th International Meeting on Nitrate Assimilation, The Netherlands, June 2004
8th International Congress on Amino Acids and Proteins, Rome Sept 2003 (Plenary Lecture)
7th International Congress of Plant Molecular Biology, Spain June 2003 Invited Speaker
22nd Symposium: Frontiers in Plant Biology: Systems based approaches Riverside CA, 2003
CSHL Plant Genomes: Speaker & Chair: Plant Evolutionary Genomics, Dec 2002
ICAR: 13th International Conference on Arabidopsis Research, Spain, June 2002
5th International Meeting on Nitrate Assimilation, Cordoba Spain, July 2002
Gordon Research Conference, Chair, Plant Molecular Biology, July 2002

Interviews:

Campbell's Biology Textbook; 5th Edition:

http://bio2.shtechclub.org/cd/bc_campbell_biology_7/0,7052,4350315-,00.html

iPlant interview:

<http://www.iplantcollaborative.org/learn/media?p=Gloria%20Coruzzi>

Recent Press:

Wikipedia: http://en.wikipedia.org/wiki/Gloria_M._Coruzzi

<http://phys.org/news/2014-06-tom-sawyer-regulatory-protein-gene.html>

http://article.wn.com/view/2014/07/01/Tom_Sawyer_Regulatory_Protein_Initiates_Gene_Transcription_i/

http://www.nsf.gov/mobile/news/news_summ.jsp?cntn_id=131943&org=NSF&from=news

<http://f1000.com/prime/718465473>

OUTREACH ACTIVITIES:

High School Student Prize Winners

High School Student: Angela (Huihui) Fan (**Stuyvesant HS**)

Mentors: Drs. Gloria. Coruzzi, Ulises Rosas & Angelica Cibrian-Jaramillo

Intel and ISEF Finalist & Siemans Semi-finalist (2011-2012)

Project Title: Root Nutrient Foraging: A Morphometric Approach to Quantifying the Development Plasticity Space of Arabidopsis Ecotypes in Laboratory and Natural Environments

High School Student: Sam Goldman (Paul D. Schreiber HS)

Mentors: Gloria Coruzzi & Manpreet Katari

Siemans Semi-Finalist, 2014

Project Title: "A network-based identification of virus resistance genes in plants."

Recent Advances in Science, Oct. 22, 2005 "Plant Genomics and Networks", Science Education curriculum (High School), NYU Steinhardt School of Education, Department of Teaching and Learning

FRN Faculty Resource Network Summer 2005 Workshop

BIO 2010: Integrative Approaches to Teaching Life Sciences

Lecture: Plant Genomics and Systems Biology

COLLABORATORS:

Kenneth Birnbaum, New York University

Nigel Crawford, UCSD, CA

Francesca Chiaromonte, Penn State University

Joanna Chiu, Rutgers University

Robert DeSalle, AMNH

Mary Egan, NYBG

Pamela Green, U. Delaware

Gabriel Krouk, B&PMP, Montpellier, FR

C Robertson McClung, Dartmouth, NH

Blake Meyers, U. Delaware

Hong-Ming Lam, U. Hong Kong

Ernest Lee, AMNH

Robert Martienssen, CSHL

Richard McCombie, CSHL

Rodrigo Gutierrez, U Catolica de Chile

Michael Purugganan, NYU

Sandrine Ruffel, B & PMP, Montpellier, FR

Neil Sarkar, Woods Hole Labs, MA

Dennis Shasha, New York University

Dennis Stevenson, NY Botanical Garden, NY

Milos Tanurdzic, Cold Spring Harbor Lab, NY

Daniel Tranchina, New York University

Rongchen Wang, UCSD, CA

Xiangqun Xu, Zhejiang Sci-Tech University

GRADUATE ADVISOR AND POSTDOCTORAL SPONSOR:

PhD thesis: Dr. Alexander Tzagoloff, Columbia University, NY

Postdoctoral: Dr. Nam Hai Chua, Rockefeller University, NY

THESIS ADVISOR AND POSTGRADUATE-SCHOLAR SPONSOR:

PhD Students Mentored 2001-2010

Elsbeth Walker PhD 1990 Associate Professor, U Mass Amherst

Fong-Ying Tsai PhD 1990 Research Scientist, Genetech

Carolyn Schultz PhD 1992 Professor, University of Adelaide

Nora Ngai PhD 1997 Sr. Scientist, Columbia University

Rosana Melo PhD 1999 Research Scientist, EI DuPont/Pioneer

Barbara Miesak PhD 2002 Associate Researcher, Rutgers University

Annemarie Costello PhD 2002 Instructor, Ross School East Hampton, NY

Lisa Franchi PhD 2003 Research Scientist, U. Rome, La Sapienza

Nyree Conard Zerega	PhD	2003	Director Master's Program in Plant Biology and Conservation, NorthWestern University
Joanna Chiu	PhD	2004	Associate Professor, Dept Entomology, UC Davis
Chelsea Specht	PhD	2004	Associate Professor, UC Berkeley, Plant & Microbial Biology
Michael Shin	PhD	2005	Tenure track Faculty, Messiah College, PA
Ming Hsiun Hsieh	PhD	2006	Professor, Taiwan University
Lauren Raz	PhD	2007	Curator of Herbarium, Fairchild Botanic Garden, FL
Eduardo dela Torre	PhD	2008	Instructor, Baruch College
Damion Nero	PhD	2009	Statistician Programmer, FOJP Service Corp
Daniela Ristova	PhD	2014	Post-doc at Gregor Mendel Institute, Vienna
Joseph Swift	PhD	current	

Post-doctoral Fellows Trained:

Scott Tingey	Program Leader, DuPont
Janice Edwards	Program Leader, Monsanto
Igor Oliveira	Program Leader, DuPont
Timothy Brears	CEO, Xenion, UK
Gabrielle Tjaden	
Susan Martino-Catt	Program Leader, Monsanto
Karen Coschigano	
Lee Meisel	Associate Professor, University of Chile, Santiago
Hon-Ming Lam	Professor, Chinese U. Hong Kong
Laurence Lejay	Senior Scientist, B&PMP, Montpellier, FR
Peter Palenchar	Associate Prof, Rutgers University
Andrew Koruanov	Research Scientist, Monsanto
Eric Brenner	Clinical Asst. Professor of Biology, NYU
Miriam Gifford	Associate Professor, U Warwick, UK
Mariana Obertello	Research Scientist, U Argentina
Manpreet Katari	Clinical Asst. Professor of Biology, NYU
Karen Thum	
Rodrigo Gutierrez	Associate. Prof, U Catolica, Chile, HHMI International Fellow
Indrani Mukerjee	
Gabrielle Krouk	PI, CNRS, B&PMP, Montpellier, FR
Sandrine Ruffel	PI, INRA, B&PMP, Montpellier, FR
Amy Marshall-Colon	Assistant Prof, U Illinois, Champagne
Alessia Para Gallio	Associate Research Professor, Northwestern University
Kranthi Varala	Current
Ying Li	Current
Eleonore Bouygon	Current
Joan Doidy	Current
Matthew Brooks	Current
Sophie Leran	Current

Publications:

126. Medici A, Marshal-Colon A, Ronzier E, Szponarski W, Wang R, Gojon A, Crawford NM, Coruzzi GM, Krouk G. (2015) AtNIGT1/HRS1 integrates nitrate and phosphate signals at the Arabidopsis root tip. *Nature Communications* (In Press).
125. Li Y, Krouk G, Coruzzi GM and Ruffel S (2014) "Finding a nitrogen niche: a systems integration of local and systemic nitrogen signalling in plants" *J. Exp. Bot.* Oct;65(19):5601-10. doi: 10.1093/jxb/eru263. Epub 2014 Jun 24.
124. Delaux PM, Varala K, Edger PP, Coruzzi GM, Pires JC, Ané JM. (2014). "Comparative phylogenomics uncovers the impact of symbiotic associations on host genome evolution." *PLoS Genet.* 2014 Jul 17;10(7):e1004487. doi: 10.1371/journal.pgen.1004487. eCollection 2014.
123. Para A, Li Y, Marshall-Colon A, Varala K, Francoeur NJ, Moran T, Edward MB, Hackley C, Bargmann B, Birnbaum K, McCombie M, Krouk G, and Coruzzi M (2014) "Hit-and-run" transcriptional control by bZIP1 mediates rapid nutrient signaling in Arabidopsis" *Proc. Natl Acad Sci USA*, 2014, June 23, vol. 111(28); 10371-6. doi: 10.1073/pnas.1404657111 (<http://f1000.com/prime/718465473>).
122. Rosas U, Cibrian-Jaramillo A, Ristova D, Banta J, Gifford M, Fan HA, Zhou RW, Kim G, Krouk G, Birnbaum KD, Purugganan MD, Coruzzi G (2013) "Integration of responses within and across Arabidopsis natural accessions uncovers loci underlying root systems architecture". *Proc. Natl. Acad. Sci. USA*. 2013 Sep 10;110 (37):15133-8.
121. Gifford ML, Banta J, Katari MS, Hulsmans Jo, Chen L, Ristova D, Tranchina D, Coruzzi GM and Birnbaum KD (2013) "Plasticity regulators modulate specific root traits in discrete nitrogen environments". *PLoS Genet.* 2013 Sep;9(9):e1003760. doi: 10.1371/journal.pgen.1003760.
120. Lérán S, Varala K, ...Gloria Coruzzi, Benoît Lacombe (2013) "A unified nomenclature of NITRATE TRANSPORTER 1/PEPTIDE TRANSPORTER family members in plants". *Trends in Plant Sci.* 2013 Sep 18. doi:pii: S1360-1385(13)00170-2.
119. Krouk G, Lingeman J, Marshall Colon A, Coruzzi G and Shasha S (2013). "Gene regulatory networks in plants: Learning causality from time and perturbation". *Genome Biology* 14 (6):123. (*Highly accessed*.)
118. Vidal EA, Moyano TC, Krouk G, Katari MS, Tanurdzic M, McCombie WR, Coruzzi GM and Rodrigo Gutiérrez RA (2013) "Integrated RNA-seq and sRNA-seq analysis identifies novel nitrate-responsive genes in Arabidopsis thaliana roots" *BMC Genomics* Oct 11;14:701. doi: 10.1186/1471-2164-14-701.
117. Ristova D, Rosas U, Krouk G, Ruffel S, Birnbaum K, & Coruzzi G (2013) "RootScape: A rapid, landmark-based system for capturing root system architecture". *Plant Physiol.* 161(3):1086-96.
116. Bargmann B, Marshall-Colon A, Efroni I, Ruffel S, Birnbaum KD, Coruzzi G and Krouk G (2013) "TARGET: A Transient Transformation System for Genome-wide Transcription Factor Target Discovery". *Mol Plant.* 2013 May;6(3):978-80. doi: 10.1093/mp/sst010. Epub 2013 Jan 18.
115. Lee E, Katari M, Kolokotronis S, Cibrian A, Stamatakis A, Ott M, Little D, Stevenson D, McCombie WR, Chiu J, Martienssen R, Brenner E, Coruzzi G, DeSalle R (2011) "High resolution phylogeny of the seed plants: A functional phylogenomic view." *PLoS Genetics* Dec;7(12):e1002411. Epub 2011 Dec 15.
114. Ruffel S, Krouk G, Shasha D, Birnbaum KD, and Coruzzi GM (2011) "Nitrogen-economics of root foraging: Transitive closure of the nitrate-cytokinin relay and new systemic signals for N-supply vs. demand." *Proc. Natl. Acad. Sci. USA.* 108(45):18524-9.
113. Widiez T, El-Kafafi ES, Girin T, Berr A, Ruffel S, Krouk G, Vayssières A, Shen WH, Coruzzi G, Gojon A, and Lepetit M (2011) "High nitrogen insensitive 9 (HNI9)-mediated systemic repression of root NO₃- uptake is

- associated with changes in histone methylation.” (2011). *Proc. Natl. Acad. Sci. USA.*, 108; 13329-34.
112. Krouk G, Ruffel S, Gutiérrez RA, Gojon A, Crawford NM, Coruzzi GM and Lacombe B. (2011) “A framework integrating plant growth with hormones and nutrients.” *Trends in Plant Science*, 16 (4) 178-182.
111. Krouk G, Mirowski P, LeCun Y, Shasha D and Coruzzi G. (2010) “Predictive network modeling of the high-resolution dynamic plant transcriptome in response to nitrate.” *Genome Biology*, 11 (12), R123.
110. Obertello M, Krouk G, Katari MS, Runko SJ, Coruzzi GM (2010). “Modeling the global effect of the basic-leucine zipper transcription factor 1 (bZIP1) on nitrogen and light regulation in Arabidopsis.” *BMC Syst. Biol.*, 4:111.
109. Cibrián-Jaramillo A, de la Torre JE, Lee E, Katari M, Stevenson WD, Martienssen R, Brenner E, Coruzzi G, DeSalle R (2010) “Using Phylogenomic Patterns and Gene Ontology to Identify Proteins of Importance in Plant Evolution.” *Genome Biol. & Evol.*, 2:225-39.
108. Krouk G, Crawford NM, Coruzzi GM, Tsay YF (2010) “Nitrate signaling: adaptation to fluctuating environments.” *Curr. Opinion in Plant Biol.*, (3): 266-73.
107. Vidal EA, Araus V, Lu C, Parry G, Green PJ, Coruzzi GM, Gutiérrez RA (2010). “Nitrate-responsive miR393/AFB3 regulatory module controls root system architecture in Arabidopsis thaliana.” *Proc. Natl. Acad. Sci. USA*, 107(9): 4477-82.
106. Nero D, Kelfer J, Katari MS, Tranchina D, Coruzzi GM (2009) In silico Evaluation of Predicted Regulatory Interactions in Arabidopsis thaliana. *BMC Bioinformatics*, 10(1): 435.
105. Katari MS, Nowicki SD, Aceituno FF, Nero D, Kelfer J, Thompson LP, Cabello JM, Davidson RS, Goldberg AP, Shasha DE, Coruzzi GM, Gutierrez RA (2010) “VirtualPlant: A software platform to support Systems Biology research.” *Plant Physiol.* 152(2): 500-15.
104. Ruffel S, Krouk G, Coruzzi GM (2010). “A Systems View of Responses to Nutritional Cues in Arabidopsis: Towards a Paradigm Shift for Predictive Network Modeling.” *Plant Physiol.* 152(2): 445-52.
103. Nero D, Krouk G, Tranchina D, Coruzzi GM (2009) “A system biology approach highlights a hormonal enhancer effect on regulation of genes in a nitrate responsive "biomodule". *BMC Syst Biol.*, 3:59. (**Highly Accessed**)
102. Brenner ED, Feinberg P, Runko S, Coruzzi GM (2009). “A mutation in the Proteosomal Regulatory Particle AAA-ATPase-3 in Arabidopsis impairs the light-specific hypocotyl elongation response elicited by a glutamate receptor agonist, BMAA.” *Plant Mol Biol.* (5):523-33.
101. de la Torre JE, Lee E, Kolokotronis SO, Katari M, Stevenson WD, McCombie R, Martienssen R, Brenner E, Coruzzi G, DeSalle R (2009) “The Impact of Outgroup Choice and Missing Data on Major Seed Plant Phylogenetics Using Genome-Wide EST Data.” *PLoS ONE* 4(6): e5764.
100. Krouk, G., Tranchina, D., Lejay, L., Cruikshank, A., Shasha, D., Coruzzi, G., and Gutierrez, R. (2009). ‘A systems approach uncovers restrictions for signal interactions regulating genome-wide responses to nutritional cues in Arabidopsis’. *PLoS Comp. Biol.* Mar 5(3):e1000326. (Highly Accessed).
99. Egan M, Lee E, Chiu J, Coruzzi G & DeSalle (2009) “Gene orthology assessment with OrthologID” In: *Bioinformatics for DNA Sequence Analysis*, vol 537; Ed, David Posada, Humana Press, Springer.
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