

## **GLORIA M. CORUZZI**

**Chair and Carroll & Milton Petrie Professor**

New York University, Department of Biology

### **EDUCATION:**

<b>Hunter College High School</b>	<b>Class of 1972</b>
<b>Fordham University</b>	B.S. Biology, cum Laude, in Cursu Honorum Dr. Ruth Witkus, Sr. Thesis Mentor
1972 - 1976	
<b>New York University</b>	M.S.-Ph.D. Cell & Molecular Biology, Dr. Alexander Tzagoloff, Thesis Advisor
<b>School of Medicine</b>	PhD Thesis; Molecular-genetics of yeast mitochondrial DNA
1976 - 1979	

### **APPOINTMENTS:**

2003 - present	Department Chair, NYU Biology (2003- present)
1991 - present	Carroll & Milton Petrie Professor, NYU Dept. of Biology
1990 - 1991	Associate Professor, Rockefeller University
1983 - 1989	Assistant Professor, Rockefeller University
1980 - 1983	NIH Postdoctoral Fellow, Rockefeller University Field: plant molecular biology, Advisor: NH Chua
1979 - 1980	Postdoctoral Research Associate, Columbia University Field: yeast molecular-genetics, Advisor: A. Tzagoloff
1976 - 1979	NIH Predoctoral Fellow; New York University Medical School

### **HONORS AND PROFESSIONAL ACTIVITIES:**

AAAS Fellow, 2005  
Editorial Board; Current Opinions in Plant Biology, 1998-2007  
Associate Editor, Plant Physiology 2001-2005  
Editorial Advisory Board, The Plant Journal 1991-1999  
Carroll and Milton Petrie Chair in Biology, NYU 1996- present  
New York Botanical Garden, Botanical Science Committee, 1995-present.  
International Society of Plant Molecular Biology, Board Member 1996-2000  
Herbert and Margaret Sokol Award in the Sciences, NYU Dec. 1996  
CNR Fellow, Research Advances for Innovations in Agriculture, Universita di Roma, 1995  
White House, Office of Science and Technology Forum Panelist, Nov. 1994

**BIOSKETCH:** Dr. Coruzzi is currently the Carroll & Milton Petrie Professor and Chair of Biology at New York University. 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. Her studies on plant genes began during her studies as an Assistant and Associate Professor at Rockefeller University. Since joining NYU a professor in 1993, Dr. Coruzzi's lab initiated Plant Systems Biology approaches to perform functional genomic studies in Arabidopsis and other plant species. This work has included the development of new informatic tools encompassed in a software platform called VirtualPlant is being performed in collaboration with colleagues at NYU Courant Institute for Math & Computer Science. Dr. Coruzzi is also engaged in a collaborative genomic 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. Dr. Coruzzi's research is currently funded by The National Institutes of Health, The NSF 2010 Project, The NSF Plant Genome Project, the NSF Database and Information Project, and The Department of Energy. Dr. Coruzzi was named an AAAS Fellow in 2005 and currently serves on numerous science advisory and editorial boards.

### **CURRENT FUNDING:**

**NIH NIGMS GRANT GM3287:** "Regulation of amino acid biosynthesis genes in plants"

P.I.: Gloria Coruzzi, Years 21-25, 3/2004 - 2/2009.

**NSF Arabidopsis 2010 Genome Grant (IBN0115586):** "N2010: Nitrogen Networks in Plants"

P.I. Gloria Coruzzi, Co-PIs; D. Shasha (NYU Courant), N.Crawford (UCSD). Years 5-8 (9/05-8/09).

**NSF Plant Genome Grant: DBI-0421604.** "Genomics of Comparative Seed Evolution" P.I.:

Gloria Coruzzi; Co-PIs: Stevenson (NYBG), McCombie (CSHL), DeSalle (AMNH). Dates: 10/1/04 to 9/31/08.

**NSF Database Activities:** DBI-0445666, "Conceptual Data Integration for the Virtual Plant".

Coruzzi, PI, CoPIs: Gutierrez R (NYU Biology), Shasha D (NYU Courant). Dates 6/1/05-5/31/08.

**DOE GRANT DEFG02-92ER20071:** "Asparagine synthetase gene regulation and plant nitrogen metabolism" P.I. Coruzzi, Years 10-13 (6/04-5/08)

### **PATENTS:**

Serial No. 60/919,818 Methods of affecting nitrogen assimilation in Plants

Inventors: Gloria Coruzzi, Damion Nero, and Rodrigo A. Gutierrez

Serial No. 60/918,443 Methods of affecting plant growth with microRNA

Inventors: Gloria Coruzzi, Kenneth D. Birnbaum, Miriam Gifford, Rodrigo A. Gutierrez

Patent Application # 60/536,654: "PathExplore".

Patent Application: "System and method for representing the interactions between multiple inputs and at least one output" Inventors: Dennis Shasha, Gloria Coruzzi, Rodrigo Gutierrez

Patent # 5,256,558 "Genes encoding plant asparagine synthetase"

Inventors: G. Coruzzi, F.Y. Tsai.

Patent # 5,595,896 "Expression of heterologous genes in transgenic plants and plant cells using plant asparagine synthetase promoters. Inventors: G. Coruzzi and F.Y. Tsai

Patent # 5,824,8676 "Plant glutamate receptors"

Inventors: HM Lam, Oliveira I, Hsieh MH, and Coruzzi G,

Patent # 5,955,651: "Transgenic plants that exhibit enhanced nitrogen assimilation"

Inventors, G. Coruzzi and T. Brears.

Patent # 6,177,25B1 "Nitrogen regulatory protein PII and genes encoding same"

Inventors: Hsieh MH, Lam HM, Coruzzi G.

Patent #07/448,036: "Novel organ-specific plant promoter sequences"

Inventors: G. Coruzzi, J. Edwards, E. Walker

### **Recent Grant Panels and Workshops**

NSF Plant Genome Awardee Meeting, Sept 6-7, 2007

NSF: Joint AFGN/2010 Review Panel, May 15-18, 2007

NSF Bio Advisory Panel, Systems Biology Presentation, April 19, 2007

NSF Plant Genome Awardee Meeting, Sept 2006

NSF Plant Cyberinfrastructure Meeting, Sept 2006.

NIH Genetics, Genes & Genomes; MGB Panel, June 2006

NSF Workshop for a Plant Science Synthesis Center; Panel member, Oct. 17-19, 2005

NSF Plant Genome Research Program 8<sup>th</sup> 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  
NSF Plant Genome Panel April 2003  
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):**

Keen Lecture, UC Riverside, Jan 18, 2008  
CSHL 6<sup>th</sup> Annual Plant Genome Meeting March 15-22, 2007, co-organizer  
Keystone Symposium, Systems Biology and Regulatory Networks, Mar 22-27, 2007, Steamboat Springs.  
CSHL 5<sup>th</sup> meeting on Systems Biology: Global Regulation of Gene Expression March 28 - April 1, 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  
2<sup>nd</sup> 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,  
7<sup>th</sup> Symp. Zurich-Basel Plant Science Center: Plant Systems Biology, Speaker, Dec 17, 2004  
Salk Institute Plant Biology Biotechnology Symposium, Plenary Speaker, Oct. 2004  
2<sup>nd</sup> EPSO Conference: "Interactions in Plant Biology", Speaker, Ischia, Italy, October 2004  
5<sup>th</sup> Annual GARNET Meeting: Plant Gene Networks, Speaker, Leicester, UK Sept. 2004.  
14<sup>th</sup> International Arabidopsis Conference, Plenary Speaker. Berlin, July 10-18, 2004.  
Gordon Research Conference, Plant Molecular Biology, Invited Speaker, NH July 2004.  
6<sup>th</sup> International Meeting on Nitrate Assimilation, The Netherlands, June 2004  
8<sup>th</sup> International Congress on Amino Acids and Proteins, Rome Sept 2003 (Plenary Lecture)  
7<sup>th</sup> International Congress of Plant Molecular Biology, Spain June 2003 Invited Speaker  
22<sup>nd</sup> Symposium: Frontiers in Plant Biology: Systems based approaches Riverside CA, 2003  
CSHL Plant Genomes: Speaker & Chair: Plant Evolutionary Genomics, Dec 2002  
13<sup>th</sup> International Conference on Arabidopsis Research, Spain, June 2002  
5<sup>th</sup> International Meeting on Nitrate Assimilation, Cordoba Spain, July 2002  
Gordon Research Conference, Chair, Plant Molecular Biology, July 2002

**OUTREACH ACTIVITIES:**

**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 on**  
BIO 2010: Integrative Approaches to Teaching Life Sciences  
Lecture: Plant Genomics and Systems Biology

**PhD Students Mentored 2001-2006**

Barbara Miesak PhD 01/02  
Annemarie Costello PhD 09/02 Instructor, Ross School East Hampton, NY

Lisa Franchi	PhD	01/03	Research Scientists, U. Rome, La Sapienza
Nyree Conard Zerega	PhD	05/03	Director Master's Program in Plant Biology and Conservation, NorthWestern University
Joanna Chiu	PhD	05/04	post-doctoral Fellow, Rutgers University
Chelsea Specht	PhD	01/04	Asst. Professor, UC Berkeley, Plant & Microbial Biology Dept
Michael Shin	PhD	01/05	Tenure track Faculty, Messiah College, PA
Lauren Raz	PhD	01/07	Curator of Herbarium, Fairchild Tropical Botanic Garden, Coral Gables, FL
Eduardo dela Torre			current doctoral student
Damion Nero			current doctoral student;
Philip Feinberg			current doctoral student

### **Publications:**

94. Egan E, Lee E, Chiu J, Coruzzi G and DeSalle R (2007) "Gene Orthology Assesment With OrthologID" Bioinformatic Tools, Humana Press Editor: David Posada (In Press)
93. Katari MS, Nowicki S, Nero D, Chiaromonte F, Shasha D, Coruzzi GM and Gutierrez R (2007). VirtualPlant: A software platform to support systems biology research in the post-genomic era. (submitted)
92. Thum KE, Shin MJ, Gutierrez R, Katari M, Nero D, Shasha D, Coruzzi GM (2007) "An integrated genetic, genomic and systems approach defines gene networks regulated by the interaction of light and carbon signaling pathways". (submitted)
91. Gutiérrez R, Stokes T, Katari M, Dean A, Nero D & Coruzzi G (2007). Systems approach identifies an organic nitrogen-responsive gene network that is regulated by the master clock gene CCA1. (submitted)
90. Rodrigo A. Gutierrez; Miriam L. Gifford; Chris Poultney; Rongchen Wang; Dennis E. Shasha; Gloria M. Coruzzi; Nigel M. Crawford "Insights into the genomic nitrate response using genetics and the Sungear Software System" **Journal of Experimental Botany** 2007; doi: 10.1093/jxb/erm079
89. Gutiérrez RA, Lejay L, Chiaromonte F, Shasha DE, Coruzzi GM (2007) "Qualitative network models and genome-wide expression data define carbon/nitrogen-responsive biomodules in Arabidopsis" **Genome Biology**, 8: R7.
88. Poultney C, Gutiérrez RA, Katari MS, Gifford ML, Paley WB, Coruzzi GM and Shasha DE (2007) "Sungear: Interactive visualization, exploration and functional analysis of genomic datasets". **Bioinformatics**, 23:259-61.
87. de la Torre<sup>1</sup> JEB, Egan MG, Katari M, Brenner E, Stevenson DS, Coruzzi GM, DeSalle R (2006) "ESTimating plant phylogeny: lessons from partitioning" **BMC Evolutionary Biology** 6:48.
86. Chiu J, Lee E, Egan M, Sarkar IN, Coruzzi GM, and DeSalle R (2006) "OrthologID: Automation of Genome-scale Ortholog Identification within a Parsimony Framework" **Bioinformatics** Vol 22, pp. 699-707.
85. Brenner E, Katari M, Rudd S, Stevenson S, Douglas A, Moss W, Twigg RW, Runko S, Stellari G, McCombie RW, Coruzzi G (2005) EST analysis in Ginkgo biloba: An assessment of conserved developmental regulators and gymnosperm-specific genes. **BioMed Central Genomics**. Vol 6: 143.

84. Gutierrez R, Shasha S and Coruzzi G. (2005) "Systems Biology for the Virtual Plant". **Plant Physiol.** Vol 138, pp 550-554.
83. Wang R, Tischner R, Gutierrez RA, Hoffman M, Xing X, Chen M, Coruzzi G, Crawford NM. Genomic analysis of the nitrate response using a nitrate reductase-null mutant of Arabidopsis. **Plant Physiol.** 2004 Sep;136 (1) : 2512-22. Epub 2004 Aug 27.
- 82 Wong HK, Chan HK, Coruzzi GM, Lam HM (2004) Correlation of *ASN2* gene expression with ammonium metabolism in Arabidopsis. **Plant Physiology** 134: 332-338.
81. Palenchar PM, Kouranov A, Lejay LV, Coruzzi GM. Genome-wide patterns of carbon and nitrogen regulation of gene expression validate the combined carbon and nitrogen (CN)-signaling hypothesis in plants. **Genome Biol.** 2004; 5(11):R91. Epub 2004 Oct 29.
80. Lejay L, Shasha D, Kouranov A, Palenchar P, Cruickshank A, Chou M and Coruzzi. G (2004) Adaptive combinatorial design: A framework for systems biology. **Systems Biology; Vol 1 (2) 1-7.**
79. Thum KE, Shin MJ, Palenchar PM, Kouranov A, Coruzzi GM. (2003). "Genome-wide investigation of light and carbon signaling interactions in Arabidopsis". **Genome Biol.** 2004; 5(2):R10. Chosen by Faculty of 1000.
78. Brenner E, Stevenson D, McCombie R, Kataru M, Rudd S, Mayer K, Palenchar P, Runko S, Twigg R, Dai G, Martienssen R, Benfey P, and Coruzzi G. (2003). "Expressed sequence tag analysis in *Cycas*, the most primitive living seed plant", **Genome Biol.** 2003; 4(12):R78. Paper cited by BioMedCentral as most highly "visited" paper in Dec 2003 (1300 downloads).
77. Raikhel N and Coruzzi G (2003). Achieving the in silico plant. Systems Biology and the future of plant biological research. **Plant Physiology** 132; 404-409.
76. Thum KE, Shasha DE, Lejay LV, Coruzzi GM. (2003) Light- and carbon-signaling pathways. Modeling circuits of interactions. **Plant Physiol.** Jun;132(2):440-52
75. Hon-Ming Lam, Piu Wong, Hiu-Ki Chan, Kwan-Mei Yam, Li Chen, Cheung-Ming Chow & Gloria M. Coruzzi (2003) Overexpression of the *ASN1* gene enhances nitrogen status in seeds of Arabidopsis thaliana. **Plant Physiology**, 132; 926-935.
74. Chiu J, Brenner E, DeSalle R, Barboza N and Coruzzi G (2003) Analysis of Glutamate receptor genes in Plants: Progress and Prospects. In: "Glutamate Receptors in Peripheral Tissue: Excitatory Transmission outside the CNS. Eds. Gill S and Pulido O. Kluwer Academica/Plenum. New York.
73. Miesak B & Coruzzi G (2002) Molecular and Physiological Analysis of Arabidopsis mutants defective in cytosolic or chloroplastic aspartate aminotransferase. **Plant Physiology** 129: 650-660.
72. Oliveira I, Brears T, Knight T, Clark, A & Coruzzi G (2002) Overexpression of cytosolic glutamine synthetase. Relation to Nitrogen, Light and photorespiration. **Plant Physiology** 129: 1170-1180.
71. Chiu J, Brenner E, DeSalle R, Nitabach M, Holmes T, & Coruzzi G (2002) Phylogenetic and expression analysis of the glutamate receptor like gene family in Arabidopsis thaliana. **Molecular Biology & Evolution** 19: 1066-1082.

70. Lancien M, Martin M, Hsieh MH, Leustek T, Goodman H & Coruzzi G. (2001) Arabidopsis glt1-T mutant defines a role for NADH GOGAT in the non-photorespiratory ammonium assimilatory pathway. **The Plant Cell** 29: 347-358.
69. Shasha D, Kouranov A, Lejay L, Chou C. & Coruzzi G (2001) Using Combinatorial Design to Study Regulation by Multiple input signals: A tool for parsimony in the post-genomic era. **Plant Physiology** 127: 1590-1594.
68. Lancombe B, Becker D, Hedrich R, DeSalle R, Hollman M, Kwak J, Schroeder J, Le Novere N, Nam HG, Spalding E, Tester M, Turano F, Chiu J, and Coruzzi G (2001) The identity of plant glutamate receptors. **Science** 292: 1486-1487.
67. Oliveira I, Brenner E, Chiu J, Hsieh MH, Kouranov A, Lam HM, Shin M and Coruzzi G (2001). Metabolite and light regulation of metabolism: Lessons from the study of a single pathway. **Brazilian Journal of Medical and Biological Research** 34: 567-575.
66. Coruzzi G and Zhou L (2001) Carbon and nitrogen sensing/signaling in plants: Emerging Matrix Effects. **Curr. Opinion in Plant Biology** 4: 247-253.
65. Coruzzi G and Bush D (2001) Nitrogen and Carbon Nutrient and Metabolite Signaling in Plants. **Plant Physiology** 125: 61-64.
64. Coruzzi G and Last R (2000); "Amino acids" In: Biochemistry and Molecular Biology of Plants: **American Society of Plant Physiologists Textbook**; Buchanan B, Gruissem W. and Jones. Chapter 8, pp. 358-410.
63. Coruzzi G and Browse J (2000) Physiology and Metabolism: Two old grannies catch fire in the new millennium. **Current Opinion in Plant Biology** 3: 179-181.
62. Brenner E, Martinez-Barbosa N, Clark A, Liang Q, Stevenson DW, and Coruzzi G (2000) Arabidopsis mutants resistant to BMAA, a Cycad-derived glutamate receptor agonist. **Plant Physiology** 124: 1615-1624.
61. Oliveira I and Coruzzi G (1999) Carbon and amino acids reciprocally modulate the expression of glutamine synthetase in Arabidopsis. **Plant Physiology** 121: 301-309.
60. Chiu J, DeSalle R, Lam HM, Meisel L and Coruzzi G (1999) Molecular Evolution of glutamate receptors: A primitive signaling mechanism that existed before plants and animals diverged. **Molecular Biology and Evolution** 16: 826-838.
59. Lam HM, Chiu J, Hsieh MH, Meisel L, Oliveira I, Shin M and Coruzzi G (1998) Glutamate receptor genes in plants. **Nature** 396: 125-126.
58. Hsieh MH, Lam HM, van de Loo F and Coruzzi G. (1998). A PII like protein in Arabidopsis: Putative role in nitrogen sensing. **Proc. Nat'l Acad. Sci. USA** 95: 13965-13970.
57. Lam HM, Hsieh MH, and Coruzzi G.M. (1998) Reciprocally regulated genes for distinct isoenzymes of asparagine synthetase in Arabidopsis thaliana. **Plant Journal** 16: 345-353.

56. Schultz C, Hsu M, Meisak B & Coruzzi G. (1998) Arabidopsis mutants define a role for isoenzymes of aspartate aminotransferase in plant nitrogen assimilation. **Genetics** 149: 491-499.
55. Coschigano K, Melo-Oliveira R, and Coruzzi G. (1998) Arabidopsis mutants and genes for distinct ferredoxin-dependent glutamate synthase isoforms: Implications for photorespiration and primary nitrogen assimilation. **Plant Cell** 10: 741-752.
54. Ngai, N and Coruzzi, G. (1998) Dissecting light repression of the asparagine synthetase gene in Arabidopsis. In NATO ASI, "**Cellular Integration of Signaling Pathways in Plant Development**". Eds. LoSchiavo, Raikhel, R. Last and G. Morelli. Springer Verlag. pp. 147-157.
53. Ngai N, Tsai F.Y. and Coruzzi G.M. (1997) Light-induced transcriptional repression of the ASI gene: Identification of cis- elements and transfactors. **Plant Journal** 12: 1021-1034.
52. Oliveira I, Lam H, Coschigano K, Melo-Oliveira R, and Coruzzi G. (1997) Molecular-genetic dissection of N assimilation in Arabidopsis thaliana. **Plant Physiol. and Biochem.** 35: 185-198.
51. Melo-Oliveira R, Oliveira I, and Coruzzi G. (1996) Arabidopsis mutant analysis and gene regulation define a nonredundant role for glutamate dehydrogenase in nitrogen assimilation. **Proc. Nat'l Acad. Sci.** 93: 4718-4723.
50. Lam HM, Coschigano K, Oliveira I, Melo-Oliveira R, and Coruzzi G. (1996) The molecular-genetics of nitrogen assimilation into amino acids in higher plants. **Annu. Rev. Plant Physiol. Plant Mol. Biol.** 47: 569-593.
49. Tjaden, G and Coruzzi, G. (1995) Cis-elements and trans-factors affecting the expression of a non-photosynthetic light-regulated genes for chloroplast glutamine synthetase. **Plant Physiology** 108: 1109-1117.
48. Walker E.L., Weeden, N., Taylor, C, Green, P. and Coruzzi, G. (1995) Molecular evolution of duplicate copies of genes encoding cytosolic glutamine synthetase in *Pisum sativum*. **Plant Molecular Biology** 29: 1111-1125.
47. Lam HM, Coschigano K., Schultz C., Melo-Oliveira R., Tjaden G., Oliveria I., Ngai N, Hsieh M, Coruzzi G (1995) Use of Arabidopsis mutants and genes to study amide amino acid biosynthesis. **Plant Cell** 7: 887-898.
46. Schultz, C and Coruzzi G (1995) The aspartate aminotransferase gene family in Arabidopsis encodes isoenzymes localized to three subcellular compartments. **The Plant Journal** 7: 61-75.
45. Lam HM, Peng S, and Coruzzi G. (1994) Metabolic regulation of the gene encoding glutamine-dependent asparagine synthetase in Arabidopsis thaliana. **Plant Physiology** 106: 1347-1357.
44. Tjaden, G. and Coruzzi, G. (1994) A novel AT-rich DNA binding protein that combines an HMGI-like DNA-binding domain with a putative transcription domain. **The Plant Cell** 6: 107-118.
43. Coruzzi, G., Coschigano, K., Lam, H.M., Oliveira, R., Peng, S., & Schultz, C. (1994) "Molecular genetics of nitrogen assimilation into amino acids in Arabidopsis thaliana". In: **VIIth NATO/ASI on Plant Molecular Biology**; Molecular-genetic analysis of plant development and metabolism, Eds. P.

Puigdomenech, G. Coruzzi. Springer-Verlag, pp. 141-150.

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41. Tjaden, G. and Coruzzi, G. (1993) "Glutamine and Asparagine biosynthesis: Regulation of genes for enzymes along a common nitrogen-metabolic pathway." In: **Control of Plant Gene Expression**. Ed. D.P. Verma. CRC Press, London. pp. 459-470.
40. Coruzzi, G. (1992) "A molecular approach to the analysis of the regulation of glutamine and asparagine biosynthesis in plants." In: **Biosynthesis and molecular regulation of amino acids in plants**. Eds. B. Singh, H. Flores, J. Shannon, ASPP Series. Vol 7. pp. 52-58.
39. Coruzzi, G., Edwards, J., Walker, E., Tsai, F., Brears, T. (1992) "Regulation of genes along a common nitrogen metabolic pathway." In: **NATO/ASI Plant Molecular Biology 2**. Eds. B.A. Larkins and R. Herrmann. Plenum Press; pp. 139-146.
38. Tsai, F.-Y. and Coruzzi, G.M. (1991) "Transgenic plants for studying genes encoding amino acid biosynthetic enzymes." In: **Transgenic Plants**, Eds. S.D. Kung and R. Wu., Academic Press, NY (p. 181 - 194).
37. Brears, T., Walker, E.L., Coruzzi, G.M. (1991) A promoter sequence involved in the cell-specific expression of the pea glutamine synthetase GS3A gene in organs of transgenic tobacco and alfalfa. **The Plant Journal** 1: 235-244.
36. McGrath, R.B. and Coruzzi, G.M. (1991) Minireview: A gene network controlling glutamine and asparagine biosynthesis in plants. **The Plant Journal** 1: 275-280.
35. Brears, T. and Coruzzi G.M. (1991) "The molecular biology of amino acid biosynthesis in plants." In: **Genetic Engineering, Principles and Methods**. Ed. J. Setlow, Vol. 13, 221-236.
34. Tsai, F.-Y. and Coruzzi, G.M. (1991) Light represses the transcription of plant asparagine synthetase genes in photosynthetic and non-photosynthetic organs of plants. **Mol. Cell. Biol.** 11: 4966-4972.
33. Coruzzi, G.M. (1991) "Molecular approaches to the study of amino biosynthesis in higher plants". **Plant Science** 74: 145-155.
32. Edwards J.W. and Coruzzi G.M. (1990) Cell-specific gene expression in plants. **Ann. Rev. Genet.** Vol. 24, Chpt. 12, p. 275-303.
31. Edwards, J.W., Walker, E.L., and Coruzzi, G.M. (1990) Cell-specific expression in transgenic plants reveals non-overlapping roles for chloroplast and cytosolic glutamine synthetase. **Proc. Nat'l Acad. Sci.** 87: 3459-3463.
30. Tsai F.Y. and Coruzzi G.M. (1990) Dark-induced and organ-specific expression of two asparagine synthetase genes in *Pisum sativum*. **Embo. J.** 9: 323-332.
29. Walker E.L. and Coruzzi G.M. (1989) Developmentally regulated expression of the gene family for cytosolic glutamine synthetase in *Pisum sativum* **Plant Physiology** 91: 702 - 708.
28. Edwards J.W. and Coruzzi G.M. (1989) Photorespiration and light act in concert to regulate the

expression of the nuclear gene for chloroplast glutamine synthetase. **The Plant Cell** 1: 241-248.

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26. Tingey, S.V., Tsai F.Y., Edwards J.W., Walker E.L. and Coruzzi G.M. (1988) Chloroplast and cytosolic glutamine synthetase are encoded by homologous nuclear genes which are differentially expressed *in vivo*. **J. Biol. Chem.** 263: 9651-9657.
25. Coruzzi, G.M., Tingey, S.V., Walker E.L., Edwards J.W., and Tsai F.Y. (1987) Molecular analysis of glutamine synthetase genes in higher plants. In: *Plant Gene Systems and their Biology. UCLA Symposia on Molecular and Cellular Biology*, Vol 62. Eds. L. McIntosh and J. Key. Alan R. Liss Inc., New York. pp. 217-226.
24. Tingey, S.V., and Coruzzi, G. (1987) Glutamine synthetase of *Nicotiana plumbaginifolia*: cloning and *in vivo* expression. **Plant Physiology** 84: 366-373.
23. Tingey, S.V., Walker, E., and Coruzzi G.M. (1987) Glutamine synthetase genes of pea encode distinct polypeptides are differentially expressed in leaves, roots and nodules. **Embo J.** 6: 1-9.
22. Fluhr, R., Moses, P., Morelli, G., Coruzzi, G., and Chua, N.H. (1986) Expression dynamics of the pea *rbcS* multigene family and organ distribution of the transcripts. **Embo J.** 5: 2063-2071.
21. Broglie, R. and Coruzzi, G.M (1985) Expression of a pea gene encoding the small subunit of ribulose-1,5-bisphosphate carboxylase *in vivo* and in transformed plant cells. **In: Recent Advances in Photosynthesis Research**. D. Longstreth Ed., pp.31-35.
20. Coruzzi, G., Broglie, R., Edwards, C., and Chua, N.H. (1984) Tissue-specific and light-dependent expression of a nuclear gene encoding the small subunit of ribulose-1,5-bisphosphate carboxylase. **Embo J.** 3: 1671-1679.
19. Broglie, R., Coruzzi, G., Fraley, R.T., Rogers, S.G., Horsch, R.B., Niedermeyer, J.G., Fink, C.L., Flick, J.S., and Chua, N.H. (1984) Light-regulated expression of a pea ribulose-1,5 bisphosphate carboxylase small subunit gene in transformed plant cells. **Science** 224: 838-843.
18. Broglie, R., Coruzzi, G., Lamppa, G., Keith, B., and Chua, N.H. (1984) Monocot and dicot genes encoding the small subunit of ribulose 1,5 bisphosphate carboxylase: structural analysis and gene expression. **Stadler Symp.** 15: 59-71.
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