

Ralph L Garcia-Bertrand
Colorado College

TITLE

Verner Z. Reed Professor and Chair
Department of Molecular Biology

EDUCATION

Ph.D. Botany, University of California, Riverside, 1987.
M.S. Biology, University of Nevada, Reno, 1982.
B.S. Biology, University of Nevada, Reno, 1978.

PROFESSIONAL EXPERIENCE

Research

Research Associate, University of California, Berkeley, 1987-91.
(Faculty Mentor: Michael Freeling)
Research Assistant, University of California, Riverside, 1982-87
(Faculty Mentor: Toshio Murashige)
Research Assistant, University of Nevada, Reno, 1979-82
(Faculty Mentor: Hugh Mozingo)
Plant Physiologist, Hesse Products, Reno, Nevada, 1980-82.

Positions in Education

Professor of Biology, Colorado College, 2003-present
Associate Professor of Biology, Colorado College, 1997-2003
Assistant Professor of Biology, Colorado College, 1991-1997
Member of Parents Advisory Council, Manitou Middle School, 1994-95
Council Member, Mount Diablo Unified School District, 1990-91
High School Tutor, ABC Tutoring Co., San Francisco, CA, 1987-88.
Graduate Representative Educational Advisory Committee, University of California,
Riverside, 1984-85.
Teaching Assistant, University of California, Riverside, 1986.
Lecturer and Teaching Assistant, University of Nevada, Reno, 1979 -82.

AWARDS

Verner Reed Professorship (for teaching and research) Colorado College, 2016-2019
Colorado School District #14 Award for Teaching and Service in District, 2003
Manitou High School Science Department Service Award, 2003
Who's Who Among America's Teachers, 1998 (Nominated by student)
NSF Presidential Young Faculty Award Nominee, 1995
John D. and Catherine T. MacArthur Professor, (Colorado College internal award) 1993-1996
Margaret Menzel Award in Genetics, Botanical Society of America, 1993
University of California Presidents Postdoctoral Fellow, 1988-91.
National Institute of Health Postdoctoral Fellow, 1988 (award declined).
National Hispanic Scholar, 1986.
Graduate Opportunity Research Fellow, University of California, Riverside, 1982-87.
Outstanding Teaching Assistant, University of Nevada, 1982.
Kontes and Millipore Tissue Culture Scholarship, 1980 and 81.

PROFESSIONAL SOCIETIES

American Botanical Society (Life Member)
American Genetic Association
National Association of Biology Teachers (Life Member)
Society for the Advancement of Chicanos and Native Americans in Science
(Life Member)

PROFESSIONAL ACTIVITIES

*Member of the National Institutes of Health, National Institute of General Medical Sciences, Training and Workforce Development Subcommittee 2012-2018.
*Chair Site Visit Review Panel for National Institutes of Health –University of Arizona (2018), University of Oregon (2017), University of California Berkeley (2016), Stanford University (2016), University of Chicago (2015), Harvard University (2015), MIT (2014), University of Montana, Bozeman (2010), University of Texas, El Paso (2010), Queens College, New York (2009), California State Long Beach (2009), Hunter College, New York (2009)
*Member of the NCAA Minority Opportunity and Inclusion Committee 2012-2016
*President, and outgoing president NCAA Faculty Athletics Representative Association 2010-2012 (1,176 member organization)
*President Elect, NCAA Faculty Athletics Representative Association 2009-2010
*Member of the National Institutes of Health Minority Biomedical Research Subcommittee – National Institute of General Medical Sciences, 2006-2010
*Chair - Study Sessions for National Institute of Health – General Medical Sciences, Genetics Section 2005-2012
*Study Session participant for National Institute of Health-General Medical Sciences, Genetics section 1995-2012
*NIH Recombinant DNA Safety Committee, and Member of Internal Review Board, University of Colorado at Colorado Springs 1996- 2012
*Vice President Division III, NCAA Faculty Athletics Representative Association 2008-09
*Proposal Reviewer for National Sciences Foundation 1993- 2004
*Reviewer for the American Journal of Botany, Planta, Trends in Genetics, Plant Physiology, Plant Cell 1991-1995
*Reviewer for J. Human Genetics, European J of Human Genetics, Gene 2009- present
*Book Reviewer for the Quarterly Review of Biology 1991-1995
*Director Howard Hughes Undergraduate Program at Colorado College 1998-2005
*Co-Director Howard Hughes Undergraduate Program at Colorado College 1993 -98
*Director of Freeman Foundation, Biology in Chinese Culture Program 2001-2007
*CC Faculty Director for University of Arizona Winter Research Program 1996-2004
*Director IBM Matching Grants Program for Colorado College, 1998-2009
*Member Committee on Diversity, National Association of Biology Teachers 1999-03
*Secretary-Treasurer for Mid-Continent Section, Botanical Society of America, 1994 - 1998.
*Member Activities Committee Botanical Society of America, 1995-98
*Member of the Maize Genetics Cooperative, Using maize in K-12 education, 1997-99
*Participant in University of Colorado Health Sciences Center, Continuing Education Program in Ethics of Genetics, 1997-2011 (3 day course each year)
*Chair, Western Collegiate Hockey Association Executive Committee, 2003-2004;2011-2012
*Colorado College Faculty Athletics Representative to the NCAA 1999-2016
*Executive Committee, NCAA Faculty Athletics Representative Association 2006- 2012
*Chair, Legislative Review Committee, NCAA Faculty Athletics Representative Association 2006-2008

GRANTS

External

Beckman-Coulter Matching Grants Program for equipment, PI, (\$49,500) 10/2006
Freeman Foundation, Biology in Chinese Culture Program, PD, (\$70,000) 7/2005 – 8/2007
Freeman Foundation, Biology in Chinese Culture, PD, (\$488,000) 4/2000 – 5/2005
Howard Hughes Medical Institute Undergraduate Biological Sciences Education Program, PD, Grant #52002641 (\$1,000,000) 8/2000 – 9/2005
Howard Hughes Medical Institute Undergraduate Biological Sciences Education Program, PD (\$750,000) 8/1996-7/2000
Howard Hughes Medical Institute Undergraduate Biological Sciences Education Program, Co-PD (\$650,000) 8/1993-7/1996
IBM Matching Grants Program, PD, Grant #05-1019099 (\$219,000) 1998-2009
National Endowment for the Humanities, Upper Rio Grande Hispano Farms Project, Co-PD, (\$700,000) 1/95–8/96
National Science Foundation Instrumentation and Laboratory Improvement Grant, PI, USE-9252251 (\$72,000) 6/92 -12/92.
National Institute of Health Postdoctoral Service Award, Co-PI (\$52,500) 6/88.
Bio Energy Council and the Andrew W. Mellon Foundation, Co-PI (\$30,000) 5/80.

Internal

*Asian Partners, \$4000 1/2006-3/2006 funds for faculty travel.
*Gaylord Fund for International Studies, \$28,300 6/2005-6/2006 funds to send students to Asia. 2011 -\$500 funds to send faculty to Thailand
*Howard Hughes Faculty Research Grants, PI, Student stipends & supplies \$179,500, 5/92 -04
*Minority Student Academic Careers Program, PI, \$16,000 - four separate awards 1993, 96, 98, 99
*CC Natural Science Division Faculty Research and Development Grants, PI, \$145,900, 1991-present.
*CC Presidents Faculty-Student Collaborative Research Award, PI, Total \$28,000, 1995, 1996, 2002, 2006, 2009, 2013, 2015
*MacArthur Professor award (Colorado College Internal Grant) \$20,000, 1994-1995

PUBLICATIONS

Books and Book Chapters

Herrera, RJ, and RL Garcia-Bertrand. 2018. **Ancestral DNA, Human Origins, and Migrations**. Academic Press-Elsevier, Cambridge MA

Herrera, RJ, RL Garcia-Bertrand, and F Salzano. 2016. **Genomes, Evolution, and Culture: Past, Present, and Future of Humankind**. Wiley and Sons, Chichester, West Sussex.

Bertrand-Garcia, R. 1991. Protein Electroelution from Milligram Quantities of Plant Tissue. In: *A Laboratory Guide for Cellular and Molecular Plant Biology*, Volume 4: 191-197. I. Potrykus and I. Negrutiu, eds. Birkhauser, Boston.

Peer Reviewed (Research)

- Hudjashov, G et al., 2018. Investigating the origins of eastern Polynesians using genome-wide data from the Leeward Society Isles. **Sci Rep** 8:1823-1836. doi:10.1038/s41598-018020026-8
- Bukhan, A, JR Luis, MA Alfonso-Sanchez, R Garcia Bertrand, and RJ Herrera. 2017 Taino and African maternal heritage in the Greater Antilles. **Gene** 637: 33-40
- Rowold, DJ, D Perez-Benedico, O Stojkovic, R Garcia-Bertrand, RJ Herrera. 2016. On the Bantu expansion. **Gene** 593: 48-57
- Perez-Benedico, D, J La Salvia, Z Zeng, GA Herrera, R Garcia-Bertrand, RJ Herrera. 2016. Mayans: a Y chromosome perspective. **Eur J Hum Genet**, 24: 1352-1358
- Perez-Benedico, D, S Chennakrishnaiah, T Gayden, DJ Rowold, R Garcia-Bertrand, RJ Herrera. 2016. Y-STR markers from Ladakh in the Himalayas. **Legal Med**, 21: 29-32
- Rowold, DJ, D Perez-Benedico, R Garcia-Bertrand, S Chennakrishnaiah, MA Alfonso-Sanchez, T Gayden, and RJ Herrera. 2016. Ladakh, India: the land of high passes and genetic heterogeneity reveals a confluence of migrations. **Eur J Hum Genet**, 24:442-449
- Tsering, T, T Gayden, S Chennakrishnaiah, A Bukhari, R Garcia-Bertrand, and RJ Herrera 2015. Ethnically distinct populations of historical Tibet exhibit distinct autosomal STR compositions. **Gene**, 578: 240-247
- Benedico, DP, S Calderon, O Stojkovic, R Garcia-Bertrand, DJ Rowold and RJ Herrera 2015. Genetic Diversity of Southeast African Bantus and African Americans Using the PowerPlex Y23 System. **Int J Foren Sci Pathol**, 3: 202-209
- Regueiro, M., R. Garcia-Bertrand, K. Fadhlou-Zid, J. Alvarez, and R.J. Herrera 2015. From Arabia to Iberia: A Y chromosomes prospective. **Gene**, 564: 141-152
- Fadhlou-Zid, K. R. Garcia-Bertrand, M.A. Alfonso-Sanchez, R. Zemni, A. Benammar-Elgaaied, and R.J. Herrera 2015. Sousse: extreme genetic heterogeneity in North Africa. **J. Hum Genet**, 60: 41-49
- Rowold D., R. Garcia-Bertrand, S. Calderon, L. Rivera, D.P. Benedico, M.A. Alfonso Sanchez, S. Chennakrishnaiah, M. Varela, and R.J. Herrera 2014. At the southeast fringe of the Bantu expansion: Genetic diversity and phylogenetic relationships to other sub-Saharan tribes. **Meta Gene**, 2: 670-685
- Zeng, Z., R. Garcia-Bertrand, S. Calderon, L. Li, M. Zhong, and R.J. Herrera 2014. Extreme genetic heterogeneity among nine major tribal Taiwanese island populations detected with new generation Y23 STR system. **Foren Sci Intern: Genet**, 12: 100-106
- Zeng, Z., D.J. Rowold, R. Garcia-Bertrand, S. Calderon, M. Regueiro, L. Li, M. Zhong, and R.J. Herrera 2014. Taiwanese aborigines: genetic heterogeneity and paternal contribution to Oceania. **Gene**, 542: 240-247.

- Garcia-Bertrand, R., T. M. Simms, A. M. Cadenas, and R. J. Herrera 2013. United Arab Emirates: phylogenetic relationships and ancestral populations. **Gene**, 533: 411-419
- Mirabal, S., A.M. Cadenas, R. Garcia-Bertrand, R.J. Herrera 2013. Ascertaining the Role of Taiwan as a source for the Austronesian Expansion. **Amer J Phys Anthro**, 150: 551-564
- Harlette L., T. Gayden, S. Chennakrishnaiah, A. Bukhari, M. Regueiro, V. Arce, P.A. Underhill, R.L. Garcia-Bertrand, and R.J. Herrera 2012. Afghanistan from a Y-chromosome perspective. **Eur J Hum Genet**, 20: 567-72
- Mirabal, S., K. J. Herrera, T. Gayden, M. Regueiro, P.A. Underhill, Ralph L. Garcia-Bertrand, Rene J. Herrera 2012 Increased Y-chromosome resolution of haplogroup O suggests genetic ties between the Ami aborigines from Taiwan and the Polynesian Islands of Samoa and Tonga. **Gene**, 492: 339-348
- Regueiro, M., S. Mirabal, H. Lacau, J.Caeiro, R. Garcia-Bertrand, and RJ Herrera, 2008. Austronesian genetic signature in East African Madagascar and Polynesia. **J Hum Genet**, 53: 106-120
- Chow, R. A., J. Caeiro, Shu-Ju chen, R. Garcia-Bertrand, and R.J. Herrera, 2005. Genetic Characterization of four Austronesian-Speaking Populations.. **J Hum Genet**, 50:550-559
- Shepard, E. M., R. A. Chow, E. Suafo'a, , D. Addison, A. M.Perez-Miranda*, R. Bertrand-Garcia, and R.J. Herrera, 2005. Autosomal STR Variation in Five Austronesian Populations.. **Hum Biol**, 77: 825-851
- Sewerin, B., F. Cuza, M. Szmulewicz*, D. Rowold, R. Bertrand-Garcia, R. Herrera, 2002. On the Genetic Uniqueness of the Ami Aborigines of Formosa. **J. Phys Anthro**. 119: 240-248
- Saberman*, J. and R. Bertrand-Garcia, 1997. Hairy-Sheath-Frayed 1-O is a non-cell-autonomous mutation which regulates developmental stage transitions in maize. **J Hered**, 88:549-553
- Sung, Z. R., A. Belachew, B. Shunong and R. Bertrand-Garcia. 1992, Embryonic flower, an *Arabidopsis* gene required for vegetative shoot development. **Science**, 258:1645-47
- Freeling M., R. Bertrand-Garcia and N. Sinha, 1992. Maize Mutants and Variants Altering Developmental Time and their Heterochronic Interactions. **BioEssays**, 14: 227-236
- Bertrand-Garcia, R., Walling, L. and T. Murashige, 1992. Analysis of Polypeptides Associated with Shoot Formation in Tobacco Callus Cultures. **Amer J Bot**, 79: 481-487
- Bertrand-Garcia, R. and M. Freeling, 1991. *Hairy-Sheath-Frayed 1-O*: A Systemic, Heterochronic Mutant of Maize which Specifies Slow Developmental Stage Transitions. **Amer J Bot** 78: 747-765

Bertrand-Garcia, R. and Lemaire, D. 1982. Evaluation of Six Great Basin Desert Plants as a Source of Hydrocarbons and Animal Feed. *Petroculture*, 2: 35-38

Non-Refereed

- Surdam*, D. and **R. Bertrand-Garcia**, 1997. Analysis of a zebra stripe double mutant. (Maize Genetics Newsletter 71: 23
- Snyder*, K. and **R. Bertrand-Garcia**, 1993. An examination of the morphological effects of a new *lg2* mutant in maize. *Proc. Nat. Conf. Undergrad. Res.* 3: 1077-81
- Saberman*, J. and **R. Bertrand-Garcia**, 1992. A single signal initiates ligule development in developmentally different regions of the maize leaf in *Hsf1-O* mutants. *Maize Genet. Newslett.* 67:29-30.
- Snyder*, K. and **R. Bertrand-Garcia**, 1992. A transposon induced liguleless mutant in maize alters cell fate at the sheath- blade boundary. *Maize Genet. Newslett.* 67: 28-29
- Bertrand-Garcia, R.** and M. Freeling, 1991. *Hairy-Sheath-Frayed (Hsf1-O)*: 5L linkage data. *Maize Genet. Newslett.* 65: 30

* indicates student authors

PUBLISHED ABSTRACTS

- Neophytou, Andreus*, and **R. Bertrand-Garcia**, 2003. Characterization of Greek Cipriot allele frequency variation in nine short tandem repeat (STR) loci. Thirtieth West Coast Undergraduate Research Conference, Point Loma Nazarene College, San Diego, CA
- Ngyun, Duc-Minh*, E. Moding*, W. Richardson, C. Aldridge*, and **R. Bertrand Garcia**, 2004. Analysis of two Tiawan aboriginal groups to test the Express train model of Indonesian origins. PEW Undergraduate Research Conference, Proceedings University of Chicago, Chicago Ill.
- Aldridge, Carolyn*, and R. Bertrand Garcia, 2003. STR analysis of two Indonesian populations. PEW Undergraduate Research conference, Proceedings, Washington University St. Louis, MO.
- Morse, Peter*, Aaron Ransome*, Peter Gibson*, **R. Bertrand-Garcia**, 2003. Characterization of Native American, Costa Rican, Indonesian, and Taiwanese populations based on allele frequency variation in nine short tandem repeat(STR) loci and five Alu sequences. Twenty-eighth West Coast Undergraduate Research Conference, Colorado College, Colorado Springs
- Ransome, Arron* and **R. Bertrand-Garcia**, 2002 Characterization of a native Indonesian population based on allele frequency variation in nine short tandem repeat(STR) loci. PEW Undergraduate Research Conference, Proceedings University of Chicago, Chicago Ill.
- Cuza, F., B. Sewerin, M. Szmulewicz*, D. Rowold, **R. Bertrand-Garcia**, R. Herrera, 2002. On the Genetic Uniqueness of the Ami Aborigines of Formosa. Indo-Pacific Prehisotry Conference, Proceedings, Taipei, Taiwan
- Szmulewicz, Martin*, Rene Herrera and **R. Bertrand-Garcia**, 2002. Characterization of a native Taiwanese population based on allele frequency variation in six short tandem repeat(STR) loci and 5 Alu loci. Twenty-seventh Annual West Coast Undergraduate Research Conference Proceedings, Loyola Marymount University
- Szmulewicz, Martin*, Jessie Springer*, Rene Herrera and **R. Bertrand-Garcia**, 2001. Characterization of a native Taiwanese population based on allele frequency variation in six short tandem repeat(STR) loci. PEW Undergraduate Research Conference, Washington University, St. Louis Missouri, pg 13
- Ramirez, Christina* and **R. Bertrand-Garcia**, 1999. DNA computational analysis. Associated Colleges of the Midwest, Minority Scholars Program, Cornell College, Mount Vernon, Iowa..
- Bertrand-Garcia, R.**, 1999. A morphogenetic analysis of the zebra stripe mutants of maize. Colorado State University Plant Biotechnology Symposium, Fort Collins, CO.

- Novembre*, J., J. Ebersole and **R. Bertrand-Garcia**, 1998. RAPD Analysis of Gambel Oak Populations in Colorado. PEW Undergraduate Research Symposium, University of Chicago, Chicago, IL
- Novembre*, J., J. Ebersole and **R. Bertrand-Garcia**, 1998. RAPD Analysis of Gambel Oak Populations in Colorado. Associated Colleges of the Midwest, Minority Scholars Program, Ripon College, Ripon, Wisconsin.
- Moss*, Andrew, and R. Bertrand-Garcia, 1998. Analysis of Alu insertion sequences in a Native American (Navaho) Population. Twenty third annual West Coast Undergraduate Research Conference, Proceeding, pg. 32.
- Surdam*, D., and R. Bertrand-Garcia, 1997. A *zb3-zb7* double mutant in maize removes the PSI complex in the juvenile leaves. Twenty-second annual West Coast Undergraduate Research Conference. Proceedings, pg 25.
- Meyers*, J., H. Drossman, and **R. Bertrand-Garcia**, 1996. Separation of DNA fragments of the D1S80 locus by capillary electrophoresis. PEW Midstates Undergraduate Research Symposium, Proceedings.
- Hansen-Higa*, A. and **R. Bertrand-Garcia**, 1996. D1S80 VNTR Analysis of a Native American (Navaho) Population in South-Western New Mexico. Associated Colleges of the Midwest, Minority Scholars Program, Carleton College, Northfield, MN.
- Porter*, B., *B. Fouts and **R. Bertrand-Garcia**, 1996. Molecular classification of zebra striped mutations in *Zea mays*. Twenty-first Annual West Coast Undergraduate Research Conference, Proceedings, pg. 44.
- Dodson*, B. and **R. Bertrand-Garcia**, 1995. Sex-Determination in recent and exhumed human remains using the polymerase chain reaction. PEW Midstates Undergraduate Research Symposium, Proceedings, pg. 10.
- Barnett*, D., B. Olsen*, K. Nixon* and **R. Bertrand-Garcia**, 1995. Analysis of two chloroplast mutants in maize. Forty-sixth Annual American Institute of Biological Sciences Conference, Proceedings, pg. 101.
- Barnett*, D., B. Olsen*, K. Nixon* and **R. Bertrand-Garcia**, 1995. Analysis of chloroplasts in two *zebra stripe* mutants. Twentieth Annual West Coast Undergraduate Research Conference, Proceedings, pg. 4.
- Barnett*, D., B. Olsen*, K. Nixon* and **R. Bertrand-Garcia**, 1995. Analysis of chloroplasts in two *zebra stripe* mutants. Thirty-seventh Annual Maize Genetics Conference, Proceedings, pg. 71.
- Bentz*, J., and **R. Bertrand-Garcia**, 1994. Separation of chloroplast membrane proteins in the *zb4* mutant of *Zea mays*. Nineteenth annual West Coast Undergraduate Research Conference, Proceedings, pg. 25.
- Snyder*, K., K. Huber* and **R. Bertrand Garcia**, 1994. Morphological Analysis of *liguleless-2757*, a Transposon induced Mutant that Alters Cell Determination in Maize Leaves. Thirty-sixth Annual Maize Genetics Conference Proceedings, pg. 59
- Bertrand-Garcia, R.** 1993. Hairy Sheath Frayed 1-O is a Non-Cell-Autonomous mutation which Regulates Developmental Stage Transitions in Maize. Supplement to the American Journal of Botany, 80: (6), Abstract 207.
- Bertrand-Garcia, R.** 1992. Hairy Sheath Frayed 1-O is a Non-Cell-Autonomous mutation which Regulates Developmental Stage Transitions in Maize. Thirty-Fourth Annual Maize Genetics Conference Proceedings pg. 7
- Belachew, A. T., **R. Bertrand-Garcia** and Z. R. Sung 1991. A Constitutive Flowering Mutant of *Arabidopsis*. Third International Congress of Plant Molecular Biology, Abstract 492.
- Bertrand-Garcia, R.** and M. Freeling 1991. Hairy-Sheath Frayed 1-0: A systemic, Heterochronic Mutant of Maize That Specifies Slow Developmental Stage Transitions. Supplement to American Journal of Botany, 78: (6), Abstract 232.
- Bertrand-Garcia, R.** and M. Freeling 1988. Molecular Genetics of Ligule Development in Maize. The Second International Congress of Plant Molecular

Biology, Abstract #55.

Bertrand-Garcia, R. and T. Murashige 1988. Non Histone Chromosomal Protein Variation During Tobacco Shoot Formation. *In Vitro* 24: (3) Abstract #182.

** indicates student authors*

BOOK REVIEWS

Bertrand-Garcia, 2000. Text book review; Genetic Analysis, Griffiths, et. al., Freeman publishing, NY.

Bertrand-Garcia, R 1999. Book review: Protein Delivery: Physical Systems. Pharmaceutical Biotechnology, volume 10. *Quart. Rev. Biol.* 74:371

Reviewed second edition of "The Human Genome," 1999, Academic Press, New York.

Reviewed seventh edition of "Introduction to Genetic Analysis, W. H. Freeman and Company, New York.

Bertrand-Garcia, R 1997. Book review: Laboratory investigations in cell and molecular biology. *Quart. Rev. Biol.* 72: 201

Bertrand-Garcia, R 1993. Book review: Protein Biosynthesis. *Quart. Rev. Biol.* 68: 426

Bertrand-Garcia, R 1993. Book review: Molecular Genetic Ecology. *Quart. Rev. Biol.* 68: 426

INVITED PRESENTATIONS

University of Minnesota, Duluth, MN, February, 2014. Genetic Insights into the Austronesian Expansion.

Albuquerque Academy, Year Long Topics Seminar, Albuquerque, NM,

December 2005. Ethics of genetic research with aboriginal peoples. R-Bertrand –Garcia.

Linda Hall Library of Science, Engineering and Technology, Kansas City, MO, 2004. DNA in the Courtroom. R. Bertrand-Garcia.

ASIANetwork, 11th Annual Conference, Greenville, South Carolina, 2003. The Freeman Biology in Chinese Culture Program with Colorado College and Tzu Chi University; A Dream Come True. R. Bertrand-Garcia and Timothy Cheek.

Academia Sinica, Indo-Pacific Prehistory Conference, Taipei, Taiwan, 2002. On the Genetic Uniqueness of the Ami Aborigines of Formosa. R. Bertrand-Garcia, R.J Herrera

Arizona State University, Phoenix, AZ, 2002. DNA Analysis of Austronesian Migration Patterns. R. Bertrand-Garcia.

Colorado State University, Fort Collins, CO, 1999. A Morpho-Genetic Analysis of the Zebra Stripe Mutants of Maize. R. Bertrand-Garcia

University of Missouri, Columbia, 1998. The Morphology and Photochemistry of the Zebra Stripe Mutants of Maize. R. Bertrand-Garcia

American Institute of Biological Sciences, Annual meeting, San Diego, CA, 1995. Genetic and Molecular analysis of two chloroplast mutants in maize. *Barnett, D., B. *Olsen, K. *Nixon and R. Bertrand-Garcia

University of Colorado, Colorado Springs, CO, 1994. Searching for Juvenile Genes. R. Bertrand-Garcia.

American Institute of Biological Sciences, Annual meeting, Ames, Iowa, 1993. Hairy Sheath Frayed 1-O is a Non-Cell-Autonomous Mutation Which Regulates Developmental Stage Transitions in Maize. *Jessica Saberman and R. Bertrand-Garcia

American Institute of Biological Sciences, Annual meeting, Ames, Iowa, 1993. Teaching Molecular Biology Using Maize as a Model System. R. Bertrand-Garcia

Biotransformations Inc. and Sigma XI of Colorado Springs, 1991. Heterochronic Mutants of Maize and Their Role in the Evolution of Plant Form. R. Bertrand-Garcia

Botanical Society of America Meetings, San Antonio, TX, 1991. Hsf1-0 a Systemic, Heterochronic Mutant of Maize That Specifies Slow Developmental Stage Transitions. R. Bertrand-Garcia and M. Freeling

Pennsylvania State University, University Park, PA, 1991. Heterochronic Mutants of Maize and Their Role in the Evolution of Plant Form. R. Bertrand-Garcia

Third International Congress of Plant Molecular Biology, 1991. A Constitutive Flowering Mutant of Arabidopsis. Belachew, A. T., R. Bertrand-Garcia and Z. R. Sung.
University of California Presidents Retreat, UCLA Conference Center, Lake Arrowhead, CA, 1990. Developmental Analysis of the Hsf1-0 Mutant of Maize. R. Bertrand-Garcia and M. Freeling
Second International Congress of Plant Molecular Biology, Jerusalem, Israel, 1988. Molecular Genetics of Ligule Development in Maize. R. Bertrand-Garcia and M. Freeling
International Tissue Culture Association Meetings, Las Vegas, NV, 1988. Chromosomal Protein Variation During Tobacco Shoot Formation In Vitro. R. Bertrand-Garcia and T. Murashige

VOLUNTEERED PRESENTATIONS

scientific groups

Thirty-seventh Annual Maize Genetics Conference, Asilomar, CA, March, 1995. Analysis of two chloroplast mutants in maize. *Barnett, D. and **R. Bertrand -Garcia.**
Thirty-sixth Annual Maize Genetics Conference, St. Charles, IL, March, 1994. Morphological Analysis of liguleless-2757, a Transposon Induced Mutant that Alters Cell Determination in Maize Leaves. *Snyder, K., K. *Huber. and **R. Bertrand -Garcia.**
Thirty-fourth Annual Maize Genetics Conference, Asilomar, CA, March, 1992. Hairy-Sheath Frayed 1-0: A systemic, Heterochronic Mutant of Maize That Specifies Slow Developmental Stage Transitions. **Bertrand-Garcia, R.** and M. Freeling.
Thirty-second Annual Maize Genetics Conference, Lake George, WI, March, 1990. A Morphogenetic Analysis of the Hsf1-O Mutation. **Bertrand-Garcia, R.** and M. Freeling

** indicates student authors*

COLLEGE RELATED ACTIVITIES

Director – Howard Hughes Medical Institute Program, 1996-2005.
Biology in Chinese Culture Program, 2001-2007.
IBM Matching Grants Program 1998-2009.
Chair – Department of Molecular Biology 2018- present
Athletics Board, 2000-2014;
West Coast Biological Sciences Committee
Undergraduate Research Conference at Colorado College, 2002-03;
Minority Concerns Committee, 1993-1994;
Counsel on Diversity 1999-00;
Western Collegiate Hockey Association Executive Committee May 2003-05 & 2011-12.
Co-Chair- Biology Department 1999-2000; Counsel on Diversity 1996-1999.
Colorado College Faculty Representative, NCAA 1999-2015; University of Arizona Winter Research Program 1996-2005; AAC&U Diversity in Higher Education 1998-2005; ACM University of Chicago Summer Research Program 1992-1998; ACM Minority Scholars Program, 1993, 96, 99, 00; University of Arizona, Visiting Faculty Program for Graduate Student Recruitment, 1997; University of Utah, Visiting Faculty Program for Graduate Student Recruitment, 1996; Western Cluster Pew Science Program, 1991-95; National Conference for Undergraduate Research, 1992; University of Colorado Health Sciences Center, Visiting Faculty Program for Graduate Student Recruitment, 1992; Colorado College Admitted Students Recruitment Program, and Minority Student Recruitment Program, 1992-2005; 2009-2011, 2012.
Coordinator - Colorado College Biochemistry Program, 1993-2009.

Committee Member – Athletics Board, 1998-2014; Faculty Executive Committee 1999-2001; Colorado College Council on Diversity, 1994-1999; Student Conduct Committee, 1996-1997; Minority Concerns Committee, 1992-1993.

Moderator for the Career Center Summer Jobs Program, 1993; New Student Orientation, 1992, 1994, 1995, 1997, 1999, 2000, 2005, 2008, 2010, 2013

Campus Speaker, for Parents, Alumni, Trustees, 1992, 93, 95, 96, 97, 98, 2001, 2005, 2013; Biological Sciences Curriculum Study group 1992, 93, 94 and 95.

Masters Thesis Advisor – Aimee Melton, Student at University of Colorado at Colorado Springs, 1999-2001; William Richardson, student at the University of Colorado, Colorado Springs, 2003-2005; Christina Ann Dill, student at California State University San Bernardino, 1995-1997

Faculty Advisor to 343 students 1991-present

Classes taught (1991-present)- Genetics, Molecular Biology, Cell Biology, Science and Ethics of Genetics, Research Problems in Biology, Analytical Biochemistry, Howard Hughes Minority Bridge Course, Howard Hughes Scientific Analysis and Writing Course, Howard Hughes Science Teachers Experience in Experimental Research Program, Human Evolution, Science and Ethics of Biotechnology, Advanced Genetic Analysis, Seminar on Biomedical Research, Capstone course in Molecular Biology.

COMMUNITY SERVICE

Presentations

Pikes Peak Skeptics Society, Colorado Springs, 2014. The Myths Associated with Genetically modified Organisms

Kiwanis Club of Colorado Springs, 2006. Tracing Human Migration using DNA.

Temple Shalom, Colorado Springs, CO, 2005. Stem Cell Research

Manitou High School, Advanced Biology Course, 2001 & 2002. Isolation of DNA from saliva and the use of DNA in forensic science.

Manitou High School, Beginning Biology Course, 2002. DNA and the human genome project.

City of Colorado Springs Senior Center, 2000. Life after the human genome project.

Manitou High School, Physiology Course, 2000. The use of DNA for gene therapy.

West Side Optimist Club, Colorado Springs 1999, Pharming: Using animals for the production of pharmaceuticals.

Colorado Springs School Medical Sciences Experience Seminar, 1997. Advances in Gene Therapy.

Marker Masters Women Investors Club, Colorado Springs, CO, 1996. The current state of Biotechnology.

Mitchell High School, AP Biology Program, Colorado Springs, CO, 1996. DNA variation within human populations.

Colorado College Alumni of St. Louis, St. Louis, MO, 1995. DNA on Trial.

Men's Club of Temple Shalom, Colorado Springs, CO, 1994. The ethics of genetic engineering.

Woodland Park Middle School, Woodland Park, CO, 1993. Elementary exercises in genetics.

Rudy Elementary School, Colorado Springs, CO, 1993. Learning about Genes.

Medallion West Academy, Colorado Springs, CO, 1993. Genetics in the 90's and Beyond.

Palmer High School International Baccalaureate Program, Colorado Springs, CO, 1993 and 94. The Theory of Knowledge in Science.

Medallion West Academy, Colorado Springs, CO, 1992. Biotechnology in today's society.

Community Activities

Scientific Review Committee Member for the International Science and Engineering Fair, 2003-2008

Special Awards Judge for Pikes Peak Regional Science Fair, 1997-2002

Scientific Expert for Palmer High School Science Fair Program, 1998-2006

Teacher in the Manitou Middle School "Take Out" program (Weekly instructor for high risk students) 1997-2000

Head Coach for the Colorado Springs Youth Hockey Program, 1997-1999

Assistant Coach for the Colorado Springs Youth Hockey Program 1996-1997

Member of the Manitou Springs Parents Advisory Council, 1994, 95, & 97.

Member of Colorado Springs Youth Symphony Program, 1992-1993.

Volunteer Instructor for Palmer High School International Baccalaureate Program, 1993-1995.

Supervisor for North Junior High School Geometry Field Days, 1993

Judge at the North Junior High School Science Fair, 1992.