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## EDUCATION

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2007-2013 Ph.D.  
Major: Ecology, Evolution, Behavior - Minor: Genetics  
Indiana University Bloomington  
Advisor: Curtis M. Lively

2000 -2006 Microbiologist  
Universidad de los Andes Bogotá, Colombia

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## WORK EXPERIENCE

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Present President  
Agricultural Genomics Foundation

Present Research Associate  
University of Colorado Boulder

Present Director of Genomic Services  
Steep Hill, Inc.

2012-2013 Assistant Instructor Indiana University

2011 - 2012 Research Assistant Indiana University

2007 - 2010 Assistant Instructor Indiana University

2006 - 2007 Associate Investigator  
Programa de Estudio y Control de Enfermedades Tropicales  
(PECET) Universidad de Antioquia, Medellín Colombia

2005 Second Semester Intern  
Programa de Estudio y Control de Enfermedades Tropicales  
(PECET) Universidad de Antioquia, Medellín Colombia

2005 First Semester Research assistant at CIMPAT Laboratory, Universidad de los  
Andes, Bogotá, Colombia.

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## TEACHING EXPERIENCE

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### **Indiana University (Assistant Instructor):**

- Biology of Birds (L-376), Spring and Summer Semesters 2013, Spring Semester 2010
- Honors Evolution (S-318), Fall Semester 2010
- Fungi Lab (B-352), Fall Semester 2009
- Biology Lab (L-113), Spring and Fall Semesters 2008
- Evolution and Diversity (L-111), Fall Semester 2007

### **Universidad de los Andes (Teacher's Assistant):**

- Cellular Biology, 2005 First Semester
- Cellular and Organism Biology Lab, 2002 Second Semester

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## GRANTS AND SCHOLARSHIPS

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2017 CSU Pueblo Institute of *Cannabis* research

2017 New Phytologist Next Generation Scientists Award

2015 AAAS Mass Media Science & Engineering Fellowship (Declined)

2013 Louse Constable Hoover Fellowship, Indiana University

- 2011 Doctoral Dissertation Improvement Grant, National Science Foundation  
2010 Committee for Research and Exploration Grant, The National Geographic Society  
2010 Louise Constable Hoover Fellowship, Indiana University  
2009 Senior Research Grant Indiana Academy of Science

## PUBLICATIONS

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\* Undergraduate student co-author

- Vergara D**, Huscher E.L, Gaudino R, Torres A, Givens R.M, Kane N.C. Gene duplications associated with phytochemistry in *Cannabis sativa*. In prep
- Shocket M, **Vergara D**, Sickbert A, Walsman J, Strauss A, Hite J, Duffy M, Cáceres C, Hall S. Parasite rearing and infection temperatures jointly influence disease transmission and shape seasonality of epidemics. Accepted, *Ecology*.
- Gibson A.K, **Vergara D**, Delph L.F, Lively C.M. Periodic, parasite-mediated selection for and against sex. Accepted *The American Naturalist*.
- Bharadwaj R, **Vergara D**, Kane N.C. 2018. Exploring the Repetitive Content in the Genome of *Cannabis sativa*. *BMC Genomics* 19:156
- Vergara D**, Bidwell C, Gaudino R, Torres A, Du G, Ruthenburg T, deCesare K, Land D.P, Hutchison K.E, Kane N.C. 2017. Compromised External Validity: Federally Produced *Cannabis* Does Not Reflect Legal Markets. *Scientific Reports*. 7:46528.
- Vergara D**, Baker H\*, Clancy K\*, Keepers K.G., Mendieta P.J\*, Pauli C.S\*, Tittes S.B, White K.H. Kane N.C. 2016. Genetic and Genomic Tools for *Cannabis sativa*. *Critical Reviews in Plant Sciences*. 35:364-377.
- Lynch, R.C., **Vergara D**, Tittes S.B, White K.H, Schwartz C.J, Gibbs M.J, Ruthenburg T.C., Land D.P., Kane N.C. 2016. Genomic and Chemical Diversity in Cannabis. *Critical Reviews in Plant Sciences*. 35:349-363.
- Gray, D. J., Baker H, Clancy K\*, Clarke R. C., deCesare K., Fike J., Gibbs M. J., Grotenhermen F., Kane N. C., Keepers K. G., Land D. P., Lynch R. C., Mendieta J. P.\*, Merlin M., Müller-Vahl K., Pauli C. S.\*, Pearson B. J., Rhan B., Ruthenberg T. C., Schwartz C. J., Tittes S. B., **Vergara D**., White K. H., and Trigiano R. N. 2016. Current and Future Needs and Applications for Cannabis. *Critical Reviews in Plant Sciences* 35:425-426.
- Vergara D**, Fuentes J.A, Stoy K.S\*, Lively C. Evaluating shell variation across different populations of a freshwater snail. 2016. *Molluscan Research*. 1-13
- White K.H, **Vergara D**, Keepers K.G, Kane N.C. 2016. The complete mitochondrial genome for *Cannabis sativa*. *Mitochondrial DNA Part B: Resources*.
- Vergara D**, White K.H, Keepers K.G, Kane N.C. 2015. The complete chloroplast genomes of *Cannabis sativa* and *Humulus lupulus*. *Mitochondrial DNA*. 2:1-2
- Vergara D**, Jokela J, Lively C. 2014. Infection dynamics in coexisting sexual and asexual populations support the Red Queen Hypothesis. *The American Naturalist* 184:S1
- Soper D.M, King K.C, **Vergara D**, Lively C. 2014. Exposure to parasites increases promiscuity in a freshwater snail. *Biology Letters* 10:4

- Vergara D**, King K.C, Lively C, Jokela J. 2013. The fine-scale geographic mosaic of sex and infection in New Zealand lakes. *The American Naturalist* 182:4
- Acosta L.A, Mondragon-Shem K, **Vergara D**, Velez-Mira A, Cadena H, Carrillo L.M. 2013. Ampliación de la distribución de *Lutzomyia longipalpis* en Colombia. Aumento del riesgo de la leishmaniosis visceral *Biomédica* 33:2, 319-325
- Koskella B, **Vergara D**, Lively C. 2011. Experimental evolution of sexual host populations in response to sterilizing parasites. *Evolutionary Ecology Research*, 13:315-322.
- Vergara D**, Velasquez L.E. 2009. Larvas de Digenea en *Melanoides tuberculata* (Gastropoda: Thiaridae) en Medellín, Colombia. *Acta Biológica Colombiana*. 14:1, 135-142.
- Vergara D**, Bejarano E.E, Velez I.D. 2008. Anomalías Morfológicas en Diferentes Estructuras de Cinco Especies de *Lutzomyia* (Diptera: Psychodidae). *Revista de la Sociedad Entomológica Argentina (RSEA)*, 67:3-4, 87-92.
- Vergara D**, Bejarano E.E., Carrillo L.M., Velez I.D. 2008. Primer Informe de *Lutzomyia yuilli* (Young & Porter 1972) y *Lutzomyia triramula* (Fairchild & Hertig 1952) (Diptera: Psychodidae) en el Departamento de Caldas, Colombia. *Biota Neotropica*, 8:3,251-253
- Vergara D**, Bejarano E.E., Carrillo L.M., Sierra D., Velez I.D. 2008. Primer Registro de *Lutzomyia scorzai* y *Lutzomyia reburra* (Diptera: Psychodidae) en Antioquia, Colombia. *Revista Colombiana de Entomología*, 34:1,102-104
- Guhl F, Aguilera G, Pinto N, **Vergara D**. 2007. Actualización de la Distribucion Geográfica y Ecoepidemiología de la Fauna de Triatominos (Reduviidae: Triatominae) en Colombia. *Biomédica*, 1, 143-162

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## OTHER GENOMIC RESOURCES

- *Cannabis sativa* cultivar Carmagnola annotated chloroplast. NCBI Accession KP274871
- *Cannabis sativa* cultivar Carmagnola annotated mitochondrion. NCBI Accession KR059940
- *Cannabis sativa* cultivar Dagestani annotated chloroplast. NCBI Accession KR779995
- *Humulus lupulus* cultivar Saaze annotated mitochondrion. NCBI Accession KT266264
- *Erythroxylum novogranatense* cultivar pajarito annotated chloroplast. NCBI Accession KX256287

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## SCIENTIFIC CONFERENCES AND PUBLIC TALKS

- 2017, 2018 Guest Speaker: Cannabisalud. México.
- 2017 Presenter: New Phytologist Next Generation Scientists Meeting
- 2017 Presenter: Evolution Meeting, Portland, Oregon
- 2017 Speaker: Institute of Cannabis Research Conference. Pueblo, Colorado.
- 2017 Presenter: Brown Bag Seminar. University of Colorado, Boulder.
- 2017 Guest Speaker: Cannabis Clinicians Colorado. Denver, Colorado.

- 2015, 2016, 2017 Guest Speaker: Women Grow. Boulder/Denver, Colorado  
2016 Presenter: Evolution Meeting, Austin, Texas  
2015 Guest Speaker: Cannabis Symposia. University of Colorado, Boulder.  
2015 Guest Speaker: Department of Biological Sciences Seminar Series. University of Denver. Denver, Colorado.  
2015 Guest Speaker: Denver Museum of Nature and Science. Denver, Colorado  
2014 Guest Speaker: Developing a Marketing Strategy for MBA students. University of Colorado, Anschutz medical Campus  
2013 Guest Speaker: EAWAG- Aquatic Research Institute. Zurich, Switzerland  
2013 Presenter: Evolution Meeting. Snowbird, Utah.  
2012 Presenter: Ecology and Evolution of Infectious Diseases. Ann Arbor, Michigan  
2012 Presenter: Evolution Meeting. Ottawa, Canada  
2012 Presenter: Brown Bag Seminar. Indiana University, Bloomington  
2012 Guest Speaker: Statistical Consulting (S690). Indiana University, Bloomington  
2011 Guest Speaker: School Colegio Bolivar. Cali, Colombia  
2011 Presenter: Evolution Meeting. Norman, Oklahoma  
2010 Presenter: Evolution Meeting. Portland, Oregon.  
2009 Presenter: IGERT Symposium: Evolution, Development and Genomics, Indiana University, Bloomington.

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## MENTORSHIP AND VOLUNTEER WORK

### Research Mentor:

- Present: Two undergraduate students on statistics and scientific writing.  
Undergraduate student on Geometric Morphometrics and statistic analyses.  
2015-2016: Undergraduate student on field work, statistical analysis and scientific writing  
Two undergraduate students on statistics and scientific writing  
2014-2015: Two undergraduate students in PCR amplification technique.  
Undergraduate student on Geometric Morphometrics analysis.  
Three undergraduate students in scientific writing  
2013: Two undergraduate students on Flow Cytometry technique  
2012: Undergraduate student on Flow Cytometry and Geometric Morphometrics analysis.  
2009-2010: two undergraduate students on PCR and microsatellite analysis

### Volunteer:

- 2013-2014: Denver Museum of Nature and Science  
2013: Ethnic Diversity Panel, Communication in the classroom (G203)  
2012: Middle Way House- Domestic Violence & Rape Crisis Shelter

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## OTHER PROFESSIONAL ACTIVITIES

### President and Founder:

Agricultural Genomics Foundation ([www.agriculturalgenomics.org](http://www.agriculturalgenomics.org)) Non-profit organization that educates about *Cannabis* science and makes genomic tools available to farmers, scientists and interested users.

### Reviewer For:

- Molecular Ecology
- Biological Journal of the Linnean Society
- National Science Foundation Division of Environmental Biology
- Scientific Reports
- Plos

**Legal work:**

- *Cannabis* expert witness

**Memberships:**

- Society for the Study of Evolution (SSE)
- American Association of University Women (AAUW)
- Red Colombiana de Biología Evolutiva- COLEVOL (Colombian Network for Evolutionary Biology)

**PUBLIC OUTREACH**

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2013-Present Writing for a general audience in Spanish about evolution at  
[www.acienciaabierta.wordpress.com](http://www.acienciaabierta.wordpress.com)

2014-Present Writing for a general audience about *Cannabis* science at  
[www.cannabisgenomics.org/blog](http://www.cannabisgenomics.org/blog)

2014-Present Public speaker, Cannabis Genomics

**POPULAR PRESS COVERAGE**

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- April 2017 *The Atlantic* “The Government's Weed Is Terrible... and that’s a big problem for medical marijuana research.”
- April 2017 *Science* “A new neglected crop: cannabis”
- February 2017 *FiveThirtyEight* “Why That Maui Wowie Doesn’t Hit You the Same Way Every Time”
- November 2016 *Science* “Government pot is less potent than commercial pot, questioning dozens of scientific studies”
- October 2016 *The Rooster* “The government’s weed is wack! And that’s bad for science.”
- June 2015 *Fortune* “High times: Behind the scenes at a women's pot conference”
- February 2015 *Fusion* “How genetics is changing the marijuana industry”
- February 2014 *Daily Camera* “CU-Boulder prof pursues deepest-ever exploration of the cannabis genome”
- May 2014 *Science Daily* “Red queen hypothesis: Does exposure to parasites makes species resilient?”
- May 2014 *Iowa Now* “Researchers test whether Red Queen hypothesis makes species resilient”
- March 2014 *The Rocky Mountain Collegian* “Understudied cannabis research to increase”
- March 2014 *Culture* “Knowledge is Power: Say Hello to the Cannabis Genome Project”