

1. Name and Academic Ranking

Andrés Fernando González Barrios
Associate Professor

2. Education

Ph. D. Chemical Engineering. University of Connecticut. U.S.A (2007).
M. Sc Chemical Engineering. University of Connecticut. U.S.A. (2006).
M. Sc Civil Engineering. Universidad de los Andes. Colombia. (2003).
Chemical Engineering. Universidad Pontificia Bolivariana Sede Medellín, Colombia (2000).

3. Academic Experience

Associate Professor 2011- Present. Full Time.
Assistant Professor 2007-2010. Full Time.
Instructor Professor 2002-2003. Full Time.

4. Non-academic Experience

Corporación Para Investigaciones Biológicas-CIB. January 1998-October 2000

5. Certifications or professional registrations

Colombia, Professional Card # 18013

6. Current membership in professional organizations

AIChE, American institute of Chemical Engineers - Member, 2006 –present
Chemical Engineering Professional Council - Member

7. Honors and awards

Fulbright Fellow, Fulbright Commission. 2003
Una librería de moléculas biodegradables que separan el agua del crudo, primer puesto en el Startup Boot Camp 2015.

8. Service activities

National or International Panels and committees:

American Institute of Chemical Engineers (AIChE), Advisor student chapter American institute of Chemical Engineers (AIChE), 2008 – 2016.

Faculty of Engineering, Chemical Engineering, Universidad de los Andes, Doctoral Program committee. 2011 – Present

Chemical Engineering, Universidad de los Andes, Director of the research group: Product and process Design (GDPP). 2010 – Present

Universidad de los Andes, Coexistence Committee. 2013 – Present

Faculty of Engineering, Chemical Engineering, Universidad de los Andes, committee for assessing professors and rankings -2015 – present

Chemical Engineering, Universidad de los Andes, Strategic Planning Committee, 2007 – Present

Scientific Meeting organization:

Faculty of Engineering, Universidad de los Andes, Revista de Ingeniería committee 2011 – present

9. Main Publications - Last Five Years

Aguilera S, Nuñez V, Achenie L, Alvarez O, Torres R, Gonzalez A. (2016) Peptides design based on transmembrane Escherichia coli's OmpA protein through molecular dynamics simulations in water–dodecane interfaces. *Journal of Molecular Graphics and Modelling* (ISSN 1093-3263) 68 (N/A), pp. 216-223.

Argoti A, Maghirang R, Gonzalez A, Chou S, L.t F. (2016) A generalized model for bacterial disinfection: Stochastic approach. *Biochemical Engineering Journal* (ISSN 1369-703X) 114 (N/A), pp. 218-225.

Alvarez A, Tibaquirá M, Rangel G, Clavijo I, Hernandez S, Nuñez V, Abraham W, Vives M, Gonzalez A. (2016) A comparison between conventional *Pseudomonas aeruginosa* rhamnolipids and *Escherichia coli* transmembrane proteins for oil recovery enhancing. *International Biodeterioration Biodegradation* (ISSN 0964-8305) 112 (N/A), pp. 59-65.

Vischi F, Paez D, Riaño D, Martins M, Caldana C, Gonzalez A. (2016) Analysis of sensitive CO₂ pathways and genes related to carbon uptake and accumulation in *Chlamydomonas reinhardtii* through genomic scale modeling and experimental validation. *Frontiers in plant science* (ISSN 1664-462X) 7 (-), pp. Número de artículo: 43-Número de artículo: 43.

Holguin A, Rangel G, Clavijo I, Prada C, Mantilla M, Gomez M, Kutter E, Taylor C, Fineran P, Gonzalez A, Vives M. (2015) Phage Φ Pan70, a Putative Temperate Phage, Controls *Pseudomonas aeruginosa* in Planktonic, Biofilm and Burn Mouse Model Assays. *Viruses-Basel* (ISSN 1999-4915) 7 (N/A), pp. 4602-4623.

Zamora M, Pinzon A, Zambrano M, Restrepo S, Broadbelt L, Moura M, Husserl J, Gonzalez A. (2015) A comparison between functional frequency and metabolic flows framed by biogeochemical cycles in metagenomes: The case of "El Coquito" hot spring located at Colombia's national Nevados park. *Ecological Modelling* (ISSN 0304-3800) 313 (N/A), pp. 259-265.

Alvarez M, Yepes S, Torres M, Gonzalez A. (2015) Proteins interaction network and modeling of IGHV mutational status in chronic lymphocytic leukemia. *Theoretical Biology and Medical Modelling* (ISSN 1742-4682) 12 (N/A), pp. 1-15.

Triana S, Celis A, Gonzalez A, Restrepo S. (2014) Caracterización enzimática preliminar y purificación parcial de una lipasa extracelular relacionada con la actividad lipolítica de *Malassezia furfur* con asimilación atípica de Tween 80. *Actualidades Biológicas* (ISSN 0304-3584) 36 (N/A), pp. 370-370.

Delgado P, Peñaranda N, Zamora M, Delgado M, Bohorquez E, Castro H, Gonzalez A, Jaramillo C. (2014) Computational approaches for evaluating the effect of sequence variations and the intrinsically disordered c-terminal region of the helicobacter pylori caga protein on the interaction with tyrosine kinase Src. *Journal of Molecular Modeling* (ISSN 1610-2940) 20 (N/A), pp. 1-7.

Prada C, Holguín A, Gonzalez A, Vives M. (2015) Fagoterapia, alternativa para el control de las infecciones bacterianas. *Perspectivas en Colombia. Universitas Scientiarum* (ISSN 0122-7483) 20 (N/A), pp. 43-59.

Florez D, Ramirez V, Gonzalez A. (2014) Elucidating the role of metabolites as quorum sensing signals using phase plane analysis: the case of indole in *Escherichia coli*. *Journal of Biological Systems* (ISSN 0218-3390) 22 (4), pp. 523-531

Barreto C, Jessica R, Gomez J, Achenie L, Milona-bulla H, Gonzalez A. (2014) Dynamic flux balance analysis for predicting gene overexpression effects in batch cultures. *Journal of Biological Systems* (ISSN 0218-3390) 22 (N/A), pp. 1-12.

Alvarez M, Macias A, Núñez V, Garces N, Castro H, Alvarez O, Gonzalez A. (2013) Molecular dynamics approach to investigate the coupling of the hydrophilic–lipophilic balance with the configuration distribution function in biosurfactant-based emulsions. *Journal of Molecular Modeling* (ISSN 1610-2940) 19 (N/A), pp. 5539-5543

Moreno O, Lattig M, Gonzalez A. (2013) Modeling of the hypothalamic-pituitary-adrenal axis-mediated interaction between the serotonin regulation pathway and the stress response using a Boolean approximation: a novel study of depression. *Theoretical Biology and Medical Modelling* (ISSN 1742-4682) 10 (N/A), pp. 1-15.

Vischi F, Paez D, Gonzalez A. (2013) Carbon acquisition and accumulation in microalgae *Chlamydomonas*: Insights from “omics” approaches. *Journal of Proteomics* (ISSN 1874-3919) 94 (N/A), pp. 207-218.

Cabezas L, Calderon L, Medina L. M., Bahamon I, Cardenas M, Bernal A, Gonzalez A, Restrepo S. (2012) Characterization of cellulases of fungal endophytes isolated from *Espeletia* spp. *Journal of Microbiology* (ISSN 1225-8873) 50 (N/A), pp. 1009-1013.

10. Professional Development Activities

Specialization Biochemical Engineering. Universidad Nacional Autónoma de México. 2000.

Specialization Biochemical Engineering. Instituto de Investigación Inusav. 1999.

Short Course: Formulation and Stabilization of Biotherapeutics Massachusetts Institute of Technology MIT de Boston. 2016.

Completed the MIT VMS Immersion Program, Massachusetts Institute of Technology – MIT, MA, USA, 2014

Taller Quicklook - Technology Assessment Marketing, Connect Bogotá Región, The University of Texas at Austin, Bogotá, Colombia, 2014