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Research lines (Areas):

Fungal secretomes during plant pathogen interactions and the analysis of macromolecules interactions using surface plasmon resonance technology.

Academic information:

B.S. in Biochemical Engineering

M.S. in Biotechnology from Metropolitan Autonomous University, campus Iztapalapa (UAM-I), Mexico.

Ph.D., in Molecular Microbiology and Biotechnology from the University of Provence, France.

Publications:

- P. Shah, D.A. Powell, R. Orlando, C. Bergmann, G. Gutierrez-Sanchez. 2012. A proteomic analysis of ripening tomato fruit infected by *Botrytis cinerea*. *J Proteome Res* 11: 2178-2192. PMID:22364583
- G. Gutierrez-Sanchez, J.A. Atwood, K.V.S. Kolli, A. Darvill, S. Roussos, C. Augur. 2012. Initial proteome analysis of caffeine induced proteins in using two-dimensional fluorescence difference gel electrophoresis. *Appl Biochem Biotechnol* In press.
- E. Condac, H. Strachan, G. Gutierrez-Sanchez, B.M. Brainard, C. Giese, C. Heiss, D. Johnson, P. Azadi, C. Bergmann, R. Orlando, C. Esmon, J. Harenberg, K. Moremen, L. Wang. 2012. Structural reorganization of the interleukin-7 signaling complex. *Proc. Natl. Acad. Sci* 22: 1183-1192. PMID:22641771
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- S. Zhang, E. Condac, H. Qiu, J. Jiang, G. Gutierrez-Sanchez, C. Bergmann, T. Handel, L. Wang. 2011. Heparin-Induced Leukocytosis Requires 6-O-Sulfation and is Caused by Blockade of Selectin-and CXCL12-Mediated Leukocyte Trafficking in Mice. *J. Biol. Chem.* 287: 5542-5553. PMID:22194593
- A. Loreda, G. Gutierrez-Sanchez, R.R. Herrera, C.N. Aguilar. 2011. Microbial enzymes involved in polyurethan biodegradation: A Review. *J. Polymers and Environ.* 20: 258-265.
- R. Hernandez-Martinez, G. Gutierrez-Sanchez, C.S. Bergmann, O. Loera-Corral, A. Rojo-Dominguez, S. Huerta-Ochoa, L.A. Prado-Barragan. 2011. Purification and characterization of a thermodynamic stable serin protease from *Aspergillus fumigates*. *Process Biochem.* 46: 2001-2006.
- J. Renovato, G. Gutierrez-Sanchez, L.V. Rodriguez-Duran, C. Bergmann, R. Rodriguez, C.N. Aguilar. 2011. Differential properties of *Aspergillus niger* tannase produced under solid-state and submerged fermentations. *Appl Biochem Biotechnol* 165: 382-395. PMID:21503777
- J.J. Espino, G. Gutierrez-Sanchez, N. Brito, P. Shah, R. Orlando, C. Gonzalez. 2010. The *Botrytis cinerea* early secretome. *Proteomics* 10: 3020-3034.
- S.H. Stalnaker, S. Hashmi, J-M Lim, K. Aoki, M. Porterfield, G. Gutierrez-Sanchez, J. Wheeler, J.M. Ervasti, C. Bergmann, M. Tiemeyer, L. Wells. 2010. Site-mapping and characterization of O-glycan structures on

- alpha-dystroglycan isolated from rabbit skeletal muscle. *J. Biol. Chem.* 285: 24882-24891. PMID:20507986
- S.H. Stalnaker, S. Hashmi, J-M Lim, K. Aoki, M. Porterfield, G. Gutierrez-Sanchez, J. Wheeler, J.M. Ervasti, C. Bergmann, M. Tiemeyer, L. Wells. 2010. Site-mapping and characterization of O-glycan structures on alpha-dystroglycan isolated from rabbit skeletal muscle. *J. Biol. Chem.* 285: 24882-24891. PMID:20507986
- P. Shah, G. Gutierrez-Sanchez, R. Orlando, C. Bergmann. 2009. A proteomic study of pectin-degrading enzymes secreted by *Botrytis cinerea* grown in liquid culture. *Proteomics* 9: 3126-3135. PMID:19526562
- J. Ventura, G. Gutierrez-Sanchez, R. Rodriguez-Herrera, C.N. Aguilar. 2009. Fungal cultures of tar bush and creosote bush for production of two phenolic antioxidants (pyrocatechol and gallic acid). *Folia Microbiol* 54: 199-203. PMID:19649735
- J. Ventura, R. Belmares, A. Aguilera-Carbo, G. Gutierrez-Sanchez, R. Rodriguez-Herrera, C.N. Aguilar. 2008. Fungal biodegradation of tannins from creosote bush (*Larrea tridentata*) and tar bush (*Flourensia cernua*) for gallic and ellagic acid production. *Food Technol Biotechnol* 46: 213-217.
- C.N. Aguilar, G. Gutierrez-Sanchez, L.A. Prado-Barragan, R. Rodriguez-Herrera, J.L. Martinez-Hernandez, J.C. Contreras-Esquivel. 2008. Perspectives of solid state fermentation for production of food enzymes. *Amer. J. Biochem Biotechnol* 4: 354-366.
- C.N. Aguilar, G. Gutierrez-Sanchez, L.A. Prado-Barragan, R. Rodriguez-Herrera, J.L. Martinez-Hernandez, J.C. Contreras-Esquivel. 2008. Perspectives of solid state fermentation for production of food enzymes. *Amer. J. Biochem Biotechnol* 4: 354-366.
- C.N. Aguilar, R. Rodriguez, G. Gutierrez-Sanchez, C. Augur, E. Favela-Torres, L.A. Prado-Barragan, A. Ramirez-Coronel, J.C. Contreras-Esquivel. 2007. Microbial tannases: advances and perspectives. *Appl Microbiol Biotechnol* 76: 47-59. PMID:17530245
- S.C. Wu, J.E. Halley, C. Luttig, L.J. Fernekes, G. Gutierrez-Sanchez, A.G. Darvill, P. Albersheim. 2006. Identification of an endo-beta-1,4,D-xylanase from *Magnaporthe grisea* by gene knockout analysis, purification, and heterologous expression. *Appl. Environ. Microbiol.* 72: 986-993. PMID:16461639
- G. Gutierrez-Sanchez, S. Roussos, C. Augur. 2004. Effect of the nitrogen source on caffeine degradation by *Aspergillus tamaril*. *Lett Appl Microbiol* 38: 50-55. PMID:14687215

Book Chapters

- G. Gutierrez-Sanchez, P. Shah, J.A. Atwood, D. Lennon, E.L. Tran, P. Albersheim, A. Darvill, R. Orlando, S.C. Wu. 2011. Proteomics of pathogen-host interactions: *Magnaporthe grisea*-rice as a model. In: *Phytopathology in the Omics Era* (R. Rodriguez-Herrera, C.N. Aguilar, J.K. Simpson-Williamson, G. Gutierrez-Sanchez Eds.), pp. 161-174. Research Signpost.
- G. Gutierrez-Sanchez, S. Roussos, C. Augur. 2008. Electroforesis diferencial 2D-DIGE para estudio de proteínas reguladas en microorganismos. In: R. Rodriguez-Herrera, O. Soto-Cruz, L. Martinez and C.N. Aguilar (Eds.), pp. 285-308. Valle de Candamo.
- C. Augur, G. Gutierrez-Sanchez, A. Ramirez-coronel, M. Contreras-Dominguez, I. Perraud-Gaime, S. Roussos. 2005. Analysis of antiphysiological components of coffee pulp. In: *Current Topics in Bioprocesses in Food Industries* (C. Larroche, A. Pandey, C.G. Dussap Eds.), pp. 391-402. Asiatech Publishers Inc..