

**Lilia Arely Prado Barragán, Ph.D.**

Full time professor, Bachelor, Graduate studies and  
Research Leader

27 years of experience

**Biotechnology Department**

**Universidad Autónoma Metropolitana**

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**Research lines (Areas):**

1. Name of research line: Production, characterization and application in the food and pharmaceutical industry of bioactive molecules (enzymes, peptides, antioxidants, antihypertensive, hypoglycemic antimicrobials) by Solid State Fermentation.
2. Name of research line: Protein purification and modeling
3. Name of research line: Isolation and characterization of fungal strains with enzymatic Industrial Application

**4. Academic information:**

- **Bachelor Program:** Food Engineering. Universidad Autonoma Metropolitana – Iztapalapa Mexico City, Mexico. (1983 – 1987)
- **Master Program:** Food Science. University of Nottingham, UK, England. (1991 -1992)
- **PhD Program:** Food Science. University of Nottingham, UK, England. (1993 -1996)
- **Postdoctoral Research:** Microbiology Laboratories. University of Provence Mediterranean. Marseille, France. (2004)
- **Other(s):** Research Project. Department of Biology. University of Victoria, B.C., Canada. (2003)

**Selected Awards or Prizes:**

1. National Council for Science and Technology. National Research System Level II Mexico city, Mexico. 2013
2. Mexican Society of Biotechnology and Bioengineering: Award "Sergio Sanchez Esquivel" Reynaldo de la Cruz Quiroz (student), Co-Directors: Arely Prado Barragan, Christopher Noe Aguilar González, Advisors: Juan Carlos Contreras Esquivel, Antonio Aguilera, Raul Rodriguez Herrera, Queretaro, Mexico. 2011.



## Invited Professor

PhD Program in Food Science & Technology  
Universidad Autónoma de Coahuila  
2013



3. Universidad Autonoma Metropolitana. Research Area Award 2012. Mexico city, Mexico. 2012.
4. National Council for Science and Technology: National Research System Level I Mexico city, Mexico. 2009-2012
5. Ministry of Higher Education: Accreditation of desirable profile for full-time teachers by the Ministry of Education (PROMEP). 2003-2012.
6. Universidad Autonoma Metropolitana: Teaching Career Recognition. Mexico, city, Mexico. 2000-2013.

### Publications:

Mónica Lizeth Chávez-González, **Lilia Arely Prado-Barragán**, Juan Carlos Contreras-Esquivel, Raúl Rodríguez, Antonio Francisco Aguilera-Carbo, Luis Víctor Rodríguez, CN Aguilar 2012 Microbial and enzymatic hydrolysis of tannic acid: influence of substrate chemical quality. Chemical Papers. 66 (3) 171-177 DOI: 10.2478/s11696-011-0112-4.

Reynaldo de la Cruz, Antonio Aguilera Carbó, **Arely Prado Barragán**, Raúl Rodríguez-Herrera, Juan Contreras-Esquivel y Cristóbal Aguilar. 2011. Biodegradación Microbiana de Elagitaninos BioTecnología 15(3):11- 18

Juan A. Ascacio-Valdés, José J. Buenrostro-Figueroa, Antonio Aguilera-Carbó, **Arely Prado-Barragán**, Raúl Rodríguez-Herrera and Cristóbal N. Aguilar. 2011. Review. Ellagitannins: Biosynthesis, biodegradation and biological properties Journal of Medical Plants Research. 5(19):4696-4703.

Hernández-Martínez, R., Sancho-Solano, A., Loera-Corral, O., Rojo-Domínguez, A., Regalado-González, C., Huerta-Ochoa, S. and **Prado-Barragán, L. A.** 2011 Purification and characterization of a novel thermostable alkaline protease produced by the *Yarrowia lipolytica* Revista Mexicana de Ingeniería Química. 10(2): 333-341

Hernández-Martínez R., Gutiérrez-Sánchez G., Bergman C. W., Loera-Corral O., Rojo-Domínguez, A. Huerta-Ochoa, S., **Prado-Barragán L. A.** 2011. Purification and characterization of a thermodynamic stable serin protease from *Aspergillus fumigates* Process Biochemistry. 46: 2001-2006

S.Y. González-Toledo, J. Domínguez-Domínguez, B.E. García-Almendarez, **L.A. Prado-Barragán** and C. Regalado –González. 2010 Optimization of nisin production by *Lactococcus lactis* UQ2 using supplemented whey as alternative culture medium. Journal of Food Science 75 (6): 347-357

**Top three publications (most cited or publication with the highest impact factor):**

1. Cristóbal, N.A., Raúl Rodríguez, Gerardo Gutiérrez-Sánchez, Christopher Augur, Ernesto Favela-Torres, Lilia A. Prado-Barragán, Ascensión Ramírez-Coronel. Juan C. Contreras-Esquivel (2007). Mini Review. Microbial Tannases: advances and perspectives. *Appl Microbial and Biotechnol.* 76: 47-59. Impact Factor: 3.26
2. Rodríguez-Hueso, E. Duran-Lugo, L.A. Prado-Barragán, C. Pérez-Alonso, F. Cruz-Sosa, J.E. Vernón-Carter. 2007. Pre-selection of protective colloids for enhanced viability of *Bifidobacterium bifidum* following spray-drying and storage, and evaluation of aguamiel as thermoprotective prebiotic. *Food Research International.* 40 (10):1299-1306.
3. Rodríguez-Hueso, M.E., Pedroza-Islas, R., Prado-Barragán, L.A., Beristain, C.I., Vernon-Carter, E.J. (2004). Microencapsulation by spray-drying of multiple emulsions containing carotenoids. *Journal of Food Science.* 69 (7), p. 351-359.

**Research projects.**

Total of financed projects: 7.

Details of last three projects:

1. BioTRANS formation of by-products from fruit and vegetables processing industry into valuable BIOproducts. Seventh Framework Programme. 2012 -2015.
2. Solid culture bioprocess II. Biological Division Council, Metropolitan Autonomous University, Iztapalapa. Biennium 2010-2014.
3. Purification, characterization and immobilization of a thermostable fungal protease. National Council of Science and Technology 2007-2009.

**International Cooperation Projects.**

Total of financed projects: 1

Details of last three projects:

1. BioTRANS formation of by-products from fruit and vegetables processing industry into valuable BIOproducts. Seventh Framework Programme. 2012 -2015.



**Research Thesis and Postdoctoral stages (directions):**

1. Number of bachelor thesis: 25
2. Number of Master thesis: 8
3. Number of PhD thesis: 4
4. Number of Postdoctoral researchers: 0

**Organization of events:**

(Events organized). Details of the 3 most important events:

1. Partition bioreactors. Universidad Autónoma Metropolitana-Iztapalapa. Division of Biological Sciences and Health. Mexico, city, 2012.
2. Technical rapid detection of pathogens transmitted to humans by the fresh fruits and vegetables and irrigation water. Mexico Foundation for Science. Funded by the United States - Mexico Foundation for Science. Graduate level course, May, 2002.
3. New Processing Techniques in Seafood Waste Utilization with Protein Hydrolysates. Metropolitan Autonomous University Mexico-United States Foundation for Science. Course funded by the United States-Mexico Foundation for Science. 2000

**Other relevant scientific information (3):**

1. Coordinator of the Editorial in the editorial lines: books and other materials. Division of Biological Sciences and Health. 2010 – 2013-
2. Responsible for the actualization of the Academic Bachelor program: Industrial Biochemistry Engineering. Division of Biological Sciences and Health. Department of Biotechnology. Metropolitan Autonomous University, 2011.
3. Academic Representative of the Department of Biotechnology at the Divisional Council. UAM - I, Division of Biological Sciences. 2010-2012.