

# PHD IVAN SALMERÓN

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September 28, 2016

## POSITIONS

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**Lecture/Researcher**, 2010-Present  
School of Chemistry.  
**Autonomous University Of Chihuahua**  
Chihuahua, México

**Graduate teaching assistant**, 2006-2009  
**CEAS**  
**University of Manchester**  
**United Kingdom**

## EDUCATION

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- PhD** **University of Manchester**  
*Chemical Engineering and Analytical Science* March 2010  
Dissertation: "Chemical and sensorial properties of cereals fermented with human derived lactic acid bacteria"
- BS** **Autonomous University Of Chihuahua,**  
*Chemical Engineer with a Speciality in Food Science* June 2002

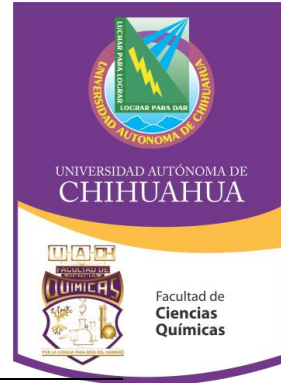
## HONORS AND AWARDS

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- CONACYT Postgraduate Study's** 2005  
Grant to study PhD at The University of Manchester
- Scale Up of Bioreactor for the Production of Pharmaceuticals and Food:  
Towards Quality-By-Design** 2016  
Under the Researcher Links scheme offered within the Newton Fund, the British Council together with Loughborough University and CONACYT together with the Universidad Autonoma de Guadalajara.

Facultad de Ciencias Químicas, circuito Universitario,  
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## RESEARCH EXPERIENCE

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**The analysis of pesticides in apples from the northwest region of Chihuahua, Autonomous University Of Chihuahua, Chihuahua Mexico** 2003

Advisor: Dr. Alfonso Gardea Bejar

- Use of Gas Chromatograph coupled with Mass Spectrometer
- Extraction of pesticides using SPE methods

## TEACHING EXPERIENCE

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**Autonomous University Of Chihuahua, Mexico** August 2010 to Present  
**Lecture/Researcher**, School of Chemistry

Teaching duties in under grad and post grad courses in the School of Chemistry. Here I teach subjects in the Chemical Engineer program such as Unit Operations (Evaporation, Gas absorption and Distillation), Refrigeration and Thermal Machinery and other subjects like Food Microbiology, Food Hygiene and Experimental Design.

### **Doctoral Students Advised**

Ana L. Herrera Ponce, “Antihypertensive, antioxidant and anti-pathogenic effect of a probiotic beverage formulated with oat and lactic whey”, in progression, Co-supervisor

### **Masters Students Advised**

Ana Luisa Herrera Ponce, “Evaluation of germinated and malted oat as substrate for the development of a probiotic beverage”, 2013.

Claudia Alejandra Aguilar Lozano, “Effect of Lambrisco (*Vauquelinia Corymbosa*) extracts in glucose, triglycerides and cholesterol levels in rats”, 2014.

Gabriela Sarahí, Rodríguez Aranda, “A symbiotic beverage formulated with malted oat and *L. casei*: *in vivo* and *in vitro* studies of its effects in glucose, triglycerides and cholesterol, in progression.

Kevin Francisco Chacón García, “ Optimization and scale-up of the biotechnological production of lactic acid from lactic whey, in progression

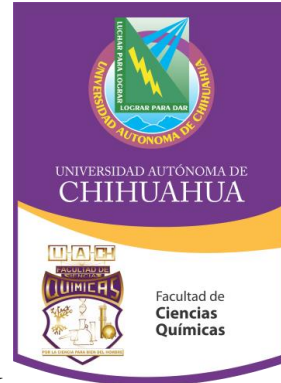
### **Bachelor Students Advised**

11 students with approved dissertation theses

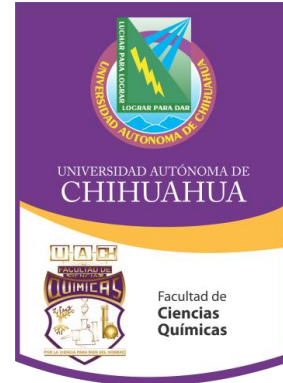
## SELECTED PUBLICATIONS

### *Journal Publications*

1. Salmeron, I., Fuciños, P., Charalampopoulos, D., Pandiella, S. S (2009). Volatile compounds produced by the probiotic strain *Lactobacillus plantarum* NCIMB 8826 in cereal-based substrates. *Food Chemistry* 117 (2), pp. 265-271.
2. Perez-Vega S., Sharratt P.N., Senior Peter, Salmeron-Ochoa I., A. Nieva-de la Hidalga (2011). Analytical hierarchy processes (AHP) for the selection of solvents in early stages of pharmaceutical process development. *Process Safety and Environmental Protection* 89 (4), pp. 261-267.
3. Sawaminee Nualkaekul, Ivan Salmeron, Dimitris Charalampopoulos (2011). Investigation of the factors influencing the survival of *Bifidobacterium longum* in model acidic solutions and fruit juices. *Food Chemistry* 129 (3) pp. 1037-1044.
4. Sorbhi Rathore, Ivan Salmeron, Severino S. Pandiella (2012). Production of potentially probiotic beverages using single and mixed cereal substrates fermented with lactic acid bacteria cultures. *Food Microbiology*. 30, pp. 239-244. doi:10.1016/j.fm.2011.09.001.
5. Perez-Vega S., Ortega-Rivas E., Salmeron-Ochoa I., Sharratt P.N. (2012). A system view of solvent selection in the pharmaceutical industry: towards a sustainable choice. *Environ Dev Sustain*. DOI 10.1007/s10668-012-9365-5
6. Enrique Ortega-Rivas, Iván Salmerón-Ochoa (2014). Non-thermal Food Processing Alternatives and their Effects on Taste and Flavor Compounds of Beverages. *Critical Reviews in Food Science and Nutrition*. 54(2):190-207. ISSN 1040-8398. DOI:10.1080/10408398.2011.579362.
7. Ivan Salmerón, Raquel Rozada, Keith Thomas, Enrique Ortega-Rivas, Severino S Pandiella (2014). Sensory characteristics and volatile composition of a cereal beverage fermented with *Bifidobacterium breve* NCIMB 702257. *Food Science and Technology International*. Apr.;20(3):205-13. Print ISSN: 1082-0132 . DOI:10.1177/1082013213481466.
8. Ivan Salmerón, Keith Thomas, Severino S. Pandiella (2014). Effect of substrate composition and inoculum on the fermentation kinetics and flavour compound profiles of potentially non-dairy probiotic formulations, *LWT - Food Science and Technology*. Volume 55, Issue 1, January, Pages 240–247. ISSN 0023-6438, <http://dx.doi.org/10.1016/j.lwt.2013.07.008>.



9. Herrera-Ponce, G. Nevárez-Morillón, E. Ortega-Rívas, S. Pérez-Vega and I. Salmerón. (2014). Fermentation adaptability of three probiotic *Lactobacillus* strains to oat, germinated oat and malted oat substrates. Letters in Applied Microbiology. Oct; 59(4): 449-56. DOI: 10.1111/lam.12302
10. F Almeida- Trasviña, S Medina- González, E Ortega- Rivas, I Salmerón- Ochoa, S Pérez- Vega (2014). Vacuum Drying Optimization and Simulation as a Preservation Method of Antioxidants in Apple Pomace. Journal of Food Process Engineering. 37(6): 575-587. DOI: 10.1111/jfpe.12112
11. Raul Orozco-Mena, Iván Salmerón-Ochoa, Enrique Ortega-Rivas, Samuel Perez-Vega (2014). Development of a Sustainable Process for the Solid-Liquid Extraction of Antioxidants from Oat. Sustainability. 6(3): 1504-1520. doi:[10.3390/su6031504](https://doi.org/10.3390/su6031504)
12. E. Juarez-Enriquez, I. Salmeron-Ochoa, N. Gutierrez-Mendez, H.S. Ramaswamy, E. Ortega-Rivas (2015) Shelf life studies on apple juice pasteurised by ultrahigh hydrostatic pressure. LWT - Food Science and Technology. 62: 915-919. <http://dx.doi.org/10.1016/j.lwt.2014.07.041>
13. Ivan Salmerón, Keith Thomas, Severino S. Pandiella (2015). Effect of potentially probiotic lactic acid bacteria on the physicochemical composition and acceptance of fermented cereal beverages. Journal of Functional Foods 15; 106–115. <http://dx.doi.org/10.1016/j.jff.2015.03.012>
14. Ivan Salmerón, Sergio Loeza-Serrano, Samuel Pérez-Vega, and Severino S. Pandiella (2015) Headspace Gas Chromatography (HS-GC) Analysis of Imperative Flavor Compounds in Lactobacilli-fermented Barley and Malt Substrates. Food Science and Biotechnology. 24(4): 1363-1371. DOI 10.1007/s10068-015-0175-z
15. José L. Almanza-Rubio, Nestor Gutiérrez-Méndez, Martha Y. Leal-Ramos, David Sepulveda, Ivan Salmeron. (2015). Modification of the textural and rheological properties of cream cheese using thermosonicated milk. Journal of Food Engineering. 168: 223–230. <http://dx.doi.org/10.1016/j.jfoodeng.2015.08.002>
16. Edmundo Juarez-Enriquez, Ivan Salmerón, Nestor Gutierrez-Mendez, Enrique Ortega-Rivas. (2016). Ultraviolet Irradiation Effect on Apple Juice Bioactive Compounds during Shelf Storage. Foods. 5(10): 1-8. doi:10.3390/foods5010010.



## FUNDED PROJECTS – SCIENCE AND TECHNOLOGY

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Salmerón, I, “Evaluation of the hypoglycemic effect of the extracts of *Rhus virens* Lindh (Lambrisco) and the characterization of its volatile and non-volatile compounds,” PRODEP, UACH-PTC-240, 2011.

Salmerón, I, “Study of the application of cheese whey as a platform for the development of a biorefinery”, CONACYT-FOMIX, CHIH-2012-C03-169179, 2012.

Salmerón, I, “Strengthening in the capacity of research of biosynthetic compounds with aroma and flavour properties”, CONACYT-INFRAESTRUCTURE, INFRA-2012-01-188331, 2012.

Salmerón, I, “Development of nutritional and energetic gels and development of a flexible packing process like”, CONACYT-INNOVATION, PROINNOVA-2013-198814, 2013.

Salmerón, I, “Research and development of a prototype of instant dried food of high nutritional value”, CONACYT-INNOVATION, PROINNOVA-2014-211075, 2015.

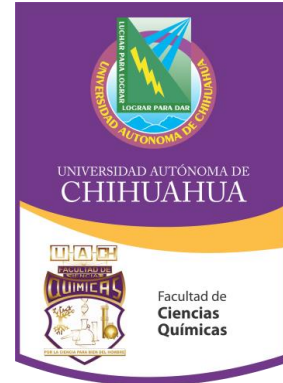
Salmerón, I, “Identification, characterization and determination of the importance of yeast and lactic acid bacteria during the fermentation and production of Sotol from the state of Chihuahua”, CONACYT- BASIC SCIENCE RESEARCH, 2016.

Salmerón, I, “Consolidation of the research capacity for the development of sustainable bioprocesses in order to obtain products of added value from agro-industrial wastes”, CONACYT-INFRAESTRUCTURE, INFRA-2016-01-00268372, 2016.

## PRESENTATIONS AND INVITED LECTURES

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**Total Food 2014 Conference** “Development of a bioprocess for the production of lactic acid from a dairy industry wastewater”, Institute of Food Research, Norwich Research Park, 11-13 November 2014, Norwich, UK.



**Workshop: Scale-up of Bioprocesses** “Production of lactic acid from a dairy industry wastewater and feasibility of its Scale-up”, Autonomous University of Chihuahua, 29 June, Chihuahua, Mexico.

**4<sup>th</sup> Congress of The Faculty of Chemical Engineering: Actual Trends in Research and Innovation** “ Study of the feasibility in the use of cheese whey as a platform for the design of a biorefinery ”, Autonomous University of Merida, 15 of June 2016, Merida Mexico.

## PROFESSIONAL TRAINING

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### **Workshop: Scale-up of Bioprocesses**

Autonomous University of Chihuahua, Chihuahua, Mexico 29 June to 02 July 2015  
Description: Hands on the main topics in the Scale-up of bioprocesses.

### **Workshop: Scale Up of Bioreactor for the Production of Pharmaceuticals and Food Towards Quality-By-Design**

Under the Researcher Links scheme offered within the Newton Fund, the British Council together with Loughborough University and CONACYT together with the Autonomous University of Guadalajara.

## PROFESSIONAL AFFILIATIONS

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Member of the National Council of Science and Technology of Mexico (CONACYT), 2015-2017; Level 1

Scheme for the professional development of higher education lecturers (PRODEP) 2016-2019; Recognized PRODEP member

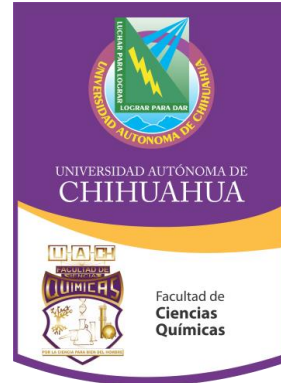
## PROFESSIONAL SERVICE

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### **Peer-Reviewed Articles for:**

- Applied Biochemistry and Biotechnology.
- Applied Microbiology and Biotechnology.
- African Journal of Microbiology Research.

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- Beverages
- European Food Research and Technology.
- Food Reviews International.
- Food Science and Technology International.
- Journal of the Science of Food and Agriculture
- Journal of Agricultural Science and Technology
- Journal of Food Biochemistry.
- Journal of Food Composition and Analysis.
- Journal of Food Science.
- Process Biochemistry.
- Trends in Food Science & Technology.

## LANGUAGES

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**Spanish:** Native Language

**English:** Exam Toefl 605 and/or Trinity College London; Grade 10 Graded Examination in Spoken English.

## AVAILABLE THESIS PROJECTS

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### For bachelor, master and Ph. D. in sciences students

At the current time there is budget to support research work in the following key areas:

- Study of the application of cheese whey as a platform for the development of a biorefinery.
- Strengthening in the capacity of research of biosynthetic compounds with aroma and flavour properties.
- Identification, characterization and determination of the importance of yeast and lactic acid bacteria during the fermentation and production of Sotol from the state of Chihuahua.
- Development of sustainable bioprocesses in order to obtain products of added value from agro-industrial wastes.