



CV for: **PEDRO JESUS GARCIA MORENO**

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### Academic degrees

2009-2013 Ph.D. Chemical Engineering, University of Granada (defended on 7th November, 2013)  
2009-2010 M.Sc. Food Technology and Quality, University of Granada  
2008-2009 M.Eng. Chemical Engineering, University College London (Erasmus student)  
2003-2009 M.Eng. Chemical Engineering, University of Granada

### Positions

04/2019-present Assistant Professor, Department of Chemical Engineering, University of Granada  
01/2018-03/2019 Researcher, National Food Institute, Technical University of Denmark (DTU)  
2015-2017 Post doc, National Food Institute, Technical University of Denmark  
2013- 2015 Post doc, Department of Chemical Engineering, University of Granada  
2009-2013 PhD student, Department of Chemical Engineering, University of Granada

### Research area

- **Development of omega-3 delivery systems:** emulsions and encapsulates. Key finding: modified emulsifiers with antioxidants covalently attached enhance oxidative stability of high-fat emulsions. Type of emulsification process affects oxidative stability of final powder encapsulates.
- **Lipid oxidation in delivery systems and heterogeneous food.** Key finding: the oxygen permeability of the shell material used to produce fish oil-loaded electrospayed capsules determine the oxidative stability of the encapsulate.
- **Biorefining of protein containing biomass** (e.g. potato, fish) **for obtaining bioactive** (e.g. antioxidants) **and functional peptides** (e.g. emulsifiers). Key finding: the length as well as the secondary structure of peptides at the oil-water interface determine its emulsifying property.

### Distinctions, fellowships and awards

2017 PhD Thesis award in Sciences at the University of Granada (2013-2014)  
2015 European Young Lipid Scientist Award by European Federation for the Science and Technology of Lipids (EuroFed Lipid)  
2015 Outstanding young researcher award by European Section of American Oil Chemists' Society (AOCS)  
2014 PhD Thesis award, 3rd position (ANQUE-ICCE)

### Membership of scientific committees, reviewer of major journals, etc.

2017 - Associate Editor in Journal of American Oil Chemists' Society (JAOCS)  
2017 - External evaluator of 3 International PhD thesis  
2016 - 2018 Scientific committee member and co-chair in Sustain Conference  
2017 - 2018 Guest editor of special issue "Biochemistry: Production of High-Added Value Biomolecules for Industrial Uses" in BioMed Research International.  
2017 - 2019 Board member of the Marie Curie Alumni Danish Chapter  
2016 Co-chair in 1st International Symposium on Lipid Oxidation and Antioxidants  
2014 - Reviewer in 12 international peer reviewed scientific journals (incl. Food Chemistry and Food Hydrocolloids).

### Grants, 2014 – present (ongoing or finished in 2014 or later)

2015 - 2017 ELECTRONANOMEGA / Development of omega-3 nanodelivery systems using electrospinning processing, PI, European Commission (Marie Skłodowska-Curie Individual Fellowships), 1,494,054 DKK (1,494,054 DKK)

### Supervision of PhDs, 2014 – present:

*Finished* (name (year)): Betül Yesiltas (2019). Title of PhD thesis: Lipid oxidation in high fat omega-3 delivery emulsions.

### Supervision of bachelor and master students, 2014 – present

Supervisor of 9 master students and 3 bachelor students

### Innovation, 2014 - present (patents, patent applications, other innovation activities)

One potential patent application on potato emulsifiers that was not finally filed by DTU due to lack of support by industry.

### Research-based public sector consultancy, 2014 – present (describe consultancy activities (if any) in 1-3 lines)

### Web of Science (27/05/2019)

Total publications: 35	Sum of Times Cited: 364	Citing articles: 293
<i>h</i> -index: 11	Without self citation: 301	Without self citation: 263

### Other publications (book chapters)

1. **P.J. García-Moreno**, A.C. Mendes, C. Jacobsen, I.S. Chronakis. (2018). Biopolymers for the nano-microencapsulation of bioactive ingredients by electrohydrodynamic processing. In: *Polymers for Food applications* (447–479). Springer.
2. **P.J. García-Moreno**, R. Pérez-Gálvez (2016). Pressing in the Food Industry: Example of Fish Discards Processing. Reference Module in Food Sciences. Elsevier, pp. 1–4. doi: <http://dx.doi.org/10.1016/B978-0-08-100596-5.21241-9>
3. R Pérez-Gálvez, F. J. Espejo-Carpio, R. Morales-Medina, **P. J. García-Moreno**, A. Guadix, E. M. Guadix. (2017). Fish discards as a source of health promoting biopeptides. In: *Handbook of Food Biotechnology: Progress of Biotechnology in Food Industry-Volume 17*. Elsevier, Cambridge, In press.
4. R. Pérez Gálvez, F.J. Espejo Carpio, **P.J. García Moreno**, A. Guadix, E.M. Guadix (2013). ACE inhibitory peptides from fish by-products. In: *Utilization of Fish Wastes: New Perspectives*. Science Publishers (CRC Press), Boca Raton, Florida. ISBN: 978-1466585799

### Major international research collaborations (list names, affiliation and collaboration field)

1. *Prof. Charlotte Jacobsen* from DTU on the development of omega-3 delivery systems and novel emulsifiers.
2. *Prof. Casimir Akoh* from University of Georgia (USA) on the development of omega-3 delivery systems.
3. *Prof. Jose M. Lagaron* from IATA-CSIC (Spain) on the production of electrosprayed capsules loaded with omega-3.
4. *Prof. Mogens L. Andersen* from University of Copenhagen on the use of ESR to study the oxidative stability of omega-3 delivery systems.
5. *Prof. Matti Knaapila* from DTU Physics on the use of SAXS and SANS to characterize oil/water interfaces.

### Research collaboration with industry (list names, affiliation and collaboration field)

1. José M. Lagaron, Bioinicia, S.L. (Spain), encapsulation of omega-3 by electrospraying.
2. Takano Higashiyama, HAYASHIBARA CO., LTD./NAGASE Group (Japan), use of novel polysaccharides as shell materials in omega-3 encapsulates.
3. Ole Bandsholm Sørensen, KMC (Denmark), use of potato peptides as emulsifiers and antioxidants.

### Selected publications (include the titles of 5 selected publications)

1. Boerekamp, D. M. W., Andersen, M. L., Jacobsen, C., Chronakis, I. S., & **García-Moreno, P. J.** (2019). Oxygen permeability and oxidative stability of fish oil-loaded electrosprayed capsules measured by electron spin resonance: Effect of dextran and glucose syrup as main encapsulating materials. *Food Chemistry*, 287, 287-294.
2. **García-Moreno, P. J.**, Pelayo, A., Yu, S., Busolo, M., Lagaron, J. M., Chronakis, I. S., & Jacobsen, C. (2018). Physicochemical characterization and oxidative stability of fish oil-loaded electrosprayed capsules: Combined use of whey protein and carbohydrates as wall materials. *Journal of Food Engineering*, 231, 42-53.
3. Jacobsen, C., **García-Moreno, P. J.**, Mendes, A. C., Mateiu, R. V., & Chronakis, I. S. (2018). Use of electrohydrodynamic processing for encapsulation of sensitive bioactive compounds and applications in food. *Annual Review of Food Science and Technology*, 9, 525-549.
4. Hajfathalian, M., Ghelichi, S., **García-Moreno, P. J.**, Moltke Sørensen, A. -, & Jacobsen, C. (2018). Peptides: Production, bioactivity, functionality, and applications. *Critical Reviews in Food Science and Nutrition*, 58(18), 3097-3129.
5. **García-Moreno, P. J.**, Guadix, A., Guadix, E. M., & Jacobsen, C. (2016). Physical and oxidative stability of fish oil-in-water emulsions stabilized with fish protein hydrolysates. *Food Chemistry*, 203, 124-135.