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Assistant Professor
National Food Institute
Research Group for Food Production Engineering
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Qualifications

PhD visiting student, INRA-STLO, Rennes, France
2016 → 2017
PhD, Federal University of Vicosa, Vicosa, Brazil
2015 → 2017
Master, Agrocampus Ouest, Rennes, France
2009 → 2010
Master, Universitat Jaume I, Castellon, Spain
2006 → 2007
BSc Licence, Università Cattolica - Milano, Italy
2003 → 2006

Employment

Assistant Professor

National Food Institute
Technical University of Denmark
Kgs Lyngby, Denmark
1 Nov 2018 → present

Research Group for Food Production Engineering

Technical University of Denmark
Kgs Lyngby, Denmark
2 Nov 2018 → present

Junior Project Leader, Nestlé Purina North America

1 Jan 2017 → 1 Jan 2018

Engineer, CNRS, Soft Matter Group

1 Jan 2010 → 1 Jan 2014

Research outputs

Impact of emerging technologies on colloidal properties of insect proteins

Queiroz, L. S., Silva, N. F. N., de Carvalho, A. F. & Casanova, F., 2023, In: Current Opinion in Food Science. 49, 6 p., 100958.

Sonication as a Promising Technology for the Extraction of Triacylglycerols from Fruit Seeds—A Review

Jadhav, H. B., Raina, I., Gogate, P. R., Annapure, U. S. & Casanova, F., 2023, (Accepted/In press) In: Food and Bioprocess Technology. 27 p.

Sonoprocessing: mechanisms and recent applications of power ultrasound in food

Taha, A., Mehany, T., Pandiselvam, R., Siddiqui, S. A., Mir, N. A., Malik, M. A., Sujayasree, O. J., Alamuru, K. C., Khanashyam, A. C., Casanova, F., Xu, X., Pan, S. & Hu, H., 2023, (Accepted/In press) In: Critical Reviews in Food Science and Nutrition. 39 p.

Influence of non-thermal microwave radiation on emulsifying properties of sunflower protein

Gultekin Subasi, B., Yildirim-Elikoğlu, S., Altay, İ., Jafarpour, A., Casanova, F., Mohammadifar, M. A. & Capanoglu, E., 15 Mar 2022, In: Food Chemistry. 372, 9 p., 131275.

Colloidal and Acid Gelling Properties of Mixed Milk and Pea Protein Suspensions

Oliveira, I. C., de Paula Ferreira, I. E., Casanova, F., Cavallieri, A. L. F., Lima Nascimento, L. G., de Carvalho, A. F. & Silva, N. F. N., 2022, In: Foods. 11, 10, 15 p., 1383.

Gelatin from Saithe (*Pollachius virens*) Skin: Biochemical Characterization and Oxidative Stability in O/W Emulsions

Yesiltas, B., Robert, C., Petersen, H. O., Jessen, F., Ajalloueiian, F., Mohammadifar, M. A., Jacobsen, C., Sloth, J. J., Jakobsen, G. & Casanova, F., 2022, In: Marine Drugs. 20, 12, 17 p., 739.

Gelling properties of black soldier fly (*Hermetia illucens*) larvae protein after ultrasound treatment

Kumar, S., Queiroz, L. S., Marie, R., Nascimento, L. G. L., Mohammadifar, M. A., de Carvalho, A. F., Brouzes, C. M. C., Fallquist, H., Fraihi, W. & Casanova, F., 2022, In: Food Chemistry. 386, 9 p., 132826.

Interaction between Fish Skin Gelatin and Pea Protein at Air-Water Interface after Ultrasound Treatment

Odelli, D., Sarigiannidou, K., Soliani, A., Marie, R., Mohammadifar, M. A., Jessen, F., Spigno, G., Vall-Ilosera, M., Fernandes de Carvalho, A., Verni, M. & Casanova, F., 2022, In: Foods. 11, 5, 15 p., 659.

Interfacial Properties of Pea Protein Hydrolysate: The Effect of Ionic Strength

Sarigiannidou, K., Odelli, D., Jessen, F., Mohammadifar, M. A., Ajalloueiian, F., Vall-Ilosera, M., de Carvalho, A. F. & Casanova, F., 2022, In: Colloids and Interfaces. 6, 4, 17 p., 76.

Pulsed Electric Field: Fundamentals and Effects on the Structural and Techno-Functional Properties of Dairy and Plant Proteins

Taha, A., Casanova, F., Šimonis, P., Stankevič, V., Gomaa, M. A. E. & Stirkè, A., 2022, In: Foods. 11, 11, 20 p., 1556.

Pulsed electric field-assisted glycation of bovine serum albumin/starch conjugates improved their emulsifying properties

Taha, A., Casanova, F., Šimonis, P., Jonikaitė-Švėgždienė, J., Jurkūnas, M., Gomaa, M. A. E. & Stirkè, A., 2022, In: Innovative Food Science and Emerging Technologies. 82, 11 p., 103190.

Structural and foaming properties of whey and soy protein isolates in mixed systems before and after heat treatment

Alves, A. C., Martha, L., Casanova, F. & Tavares, G. M., 2022, In: Food Science and Technology International. 28, 6, p. 545-553 9 p.

The Potential of Food By-Products: Bioprocessing, Bioactive Compounds Extraction and Functional Ingredients Utilization

Verni, M. & Casanova, F., 2022, In: Foods. 11, 24, 3 p., 4092.

Physico-chemical and colloidal properties of protein extracted from black soldier fly (*Hermetia illucens*) larvae

Queiroz, L. S., Regnard, M., Jessen, F., Mohammadifar, M. A., Sloth, J. J., Petersen, H. O., Ajalloueiian, F., Brouzes, C. M. C., Fraihi, W., Fallquist, H., de Carvalho, A. F. & Casanova, F., 1 Sep 2021, In: International Journal of Biological Macromolecules. 186, p. 714-723

Effect of moderate electric field on structural and thermo-physical properties of sunflower protein and sodium caseinate

Subaşı, B. G., Jahromi, M., Casanova, F., Capanoglu, E., Ajalloueiian, F. & Mohammadifar, M. A., 2021, In: Innovative Food Science and Emerging Technologies. 67, 102593.

Interactions between caseins and food-derived bioactive molecules:A Review

Casanova, F., Gustavo Lima Nascimento, L., F. N. Silva, N., de Carvalho, A. F. & Gaucheron, F., 2021, In: Food Chemistry. 359, 129820.

Physical and Oxidative Stability of Low-Fat Fish Oil-in-Water Emulsions Stabilized with Black Soldier Fly (*Hermetia illucens*) Larvae Protein Concentrate

Queiroz, L. S., Casanova, F., Feyissa, A. H., Jessen, F., Ajalloueian, F., Perrone, I. T., de Carvalho, A. F., Mohammadifar, M. A., Jacobsen, C. & Yesiltas, B., 2021, In: *Foods*. 10, 12, 20 p., 2977.

Physical Stability and Interfacial Properties of Oil in Water Emulsion Stabilized with Pea Protein and Fish Skin Gelatin

Vall-Ilosera, M., Jessen, F., Henriët, P., Marie, R., Jahromi, M., Sloth, J. J., Mohammadifar, M. A., Olander Petersen, H., Jørgensen, B. M. & Casanova, F., 2021, In: *Food Biophysics*. 16, p. 139–151

Casein-based hydrogels: A mini-review

Nascimento, L. G. L., Casanova, F., Nogueira Silva, N. F., de Carvalho Teixeira, A. V. N. & de Carvalho, A. F., 2020, In: *Food Chemistry*. 314, 126063.

Cross-linked casein micelle used as encapsulating agent for jaboticaba (*Plinia jaboticaba*) phenolic compounds by spray drying

Nogueira, M. H., Tavares, G. M., Casanova, F., Silva, C. R. J., Rocha, J. C. G., Stringheta, P. C., Stephani, R., Perrone, Í. T. & de Carvalho, A. F., 2020, In: *International Journal of Dairy Technology*. 73, 4, p. 765-770

Physical Stability of Oil-In-Water Emulsion Stabilized by Gelatin from Saithe (*Pollachius virens*) Skin

Henriët, P., Jessen, F., Vall-Llosera, M., Marie, R., Jahromi, M., Mohammadifar, M. A., Stampe-Villadsen, H. L., Olander Petersen, H., Sloth, J. J., Loft Eybye, K., Jakobsen, G. & Casanova, F., 2020, In: *Foods*. 9, 11, 16 p., 1718.

Physico-chemical, structural and techno-functional properties of gelatin from saithe (*Pollachius virens*) skin

Casanova, F., Mohammadifar, M. A., Jahromi, M., Olander Petersen, H., Eybye, K. L., Kobbelgaard, S., Jakobsen, G. & Jessen, F., 2020, In: *International Journal of Biological Macromolecules*. 156, p. 918-927

Protein extracts from de-oiled sunflower cake: Structural, physico-chemical and functional properties after removal of phenolics

Subaşı, B. G., Casanova, F., Capanoglu, E., Ajalloueian, F., Sloth, J. J. & Mohammadifar, M. A., 2020, In: *Food Bioscience*. 38, 100749.

Use of a crosslinked casein micelle hydrogel as a carrier for jaboticaba (*Myrciaria cauliflora*) extract

Lima Nascimento, L. G., Casanova, F., Nogueira Silva, N. F., Novaes de Carvalho Teixeira, Á. V., Peres de Sá Peixoto Júnior, P., Teixeira Ribeiro Vidigal, M. C., Stringheta, P. C. & Fernandes de Carvalho, A., 2020, In: *Food Hydrocolloids*. 106, 105872.

Casein micelles as encapsulating material and delivery system for jaboticaba extract

Martins, E., Nascimento, L. G. L., Casanova, F., Silva, N. F. N. & Carvalho, A. F., 2019. 1 p.

Comparação físico-química entre caseínas micelares liofilizada e seca por atomização

Lima Nascimento, L. G., Devaud dos Santos, A., Francisquini, J., Gama Netto, G., Bruni de Souza, L., Goncalves Teixeira, C., Casanova, F. & Fernandes de Carvalho, A., 2019. 1 p.

Cross-linked casein micelles hydrogel as carrier for jaboticaba (*Myrciaria cauliflora*)

Lima Nascimento, L. G., Casanova, F., Nogueira Silva, N. F., de Carvalho Teixeira, Á. V. N., Teixeira Ribeiro Vidigal, M. C., Stringheta, P. C. & Fernandes de Carvalho, A., 2019

Effect of removing phenolic compounds on interfacial behavior of protein isolated from de-oiled sunflower cake

Gültekin Subaşı, B., Casanova, F., Çapanoğlu Güven, E. & Mohammadifar, M. A., 2019. 1 p.

Foam based on fish skin collagen by-product: a colloidal approach

Casanova, F., Mohammadifar, M. A., Kobbelgaard, S., Jakobsen, G. & Jessen, F., 2019. 1 p.

Foaming and interfacial properties of gelatin from fish skin

Casanova, F., Mohammadifar, M. A. & Jessen, F., 2019. 1 p.

Micelas de caseína: dos monômeros à estrutura supramolecular

Silva, N. N., Casanova, F., Pinto, M. D. S., Carvalho, A. F. D. & Gaucheron, F., 2019, In: Brazilian Journal of Food Technology. 22, 15 p., e2018185.

Activities

Food Proteins

Federico Casanova (Guest lecturer)
23 Oct 2022 → 30 Oct 2022

Alternative food proteins

Federico Casanova (Guest lecturer)
23 Sep 2022 → 30 Sep 2022

Food proteins

Federico Casanova (Guest lecturer)
12 Jan 2022 → 15 Jan 2022

DTU Strategy and goals 2020 - 2025

Federico Casanova (Guest lecturer)
26 May 2021

Foaming properties of whey and soy protein isolates in mixed systems before and after heat treatment

Federico Casanova (Guest lecturer)
21 Oct 2020 → 22 Oct 2020

NIZO Plant Protein Functionality Conference

Federico Casanova (Guest lecturer)
21 Oct 2020 → 22 Oct 2020

Cross-linked casein micelle hydrogel as nanocarrier for jaboticaba (*Myrciaria cauliflora*) extract: Release properties and protection against UV-light exposure.

Luis Gustavo L Nascimento (Other), Federico Casanova (Guest lecturer), Naaman F N Silva (Other), V N Paiva (Other), L T Paes (Other) & Antonio F Carvalho (Other)
3 Mar 2020

Effect of ultrasound treatment on the foaming properties of higher mineral content gelatin from saithe (*Pollachius virens*) skin.

Federico Casanova (Guest lecturer), Alberto Soliani (Other), Mohammad Amin Mohammadifar (Other), Sara Kobbelgaard (Other), Greta Jakobsen (Other), Giorgia Spigno (Other) & Flemming Jessen (Other)
2 Mar 2020 → 5 Mar 2020

Potential application of gelatin from fish skin in food products: physico-chemical and colloidal approach

Federico Casanova (Guest lecturer), Mohammad Amin Mohammadifar (Other), Sara Kobbelgaard (Other), Greta Jakobsen (Other) & Flemming Jessen (Other)
14 Oct 2019 → 18 Oct 2019

Cross-linked casein micelles hydrogel as carrier for jaboticaba (*Myrciaria cauliflora*) polyphenolic extract

Federico Casanova (Guest lecturer), Luis Gustavo Lima Nascimento (Other), Naaman Francisco Nogueira Silva (Other), Álvaro Viana Novaes de Carvalho Teixeira (Other), Márcia Cristina Teixeira Ribeiro Vidigal (Other), Paulo César Stringheta (Other) & Antônio Fernandes de Carvalho (Other)

12 Sep 2019 → 14 Sep 2019

Food Protein Functionality: technological and colloidal approach

Federico Casanova (Guest lecturer)

8 May 2019

Cross-linked casein micelles hydrogel as nanocarriers for anthocyanins from açai and jaboticaba fruits

Federico Casanova (External examiner)

20 Feb 2019

Foaming properties of casein micelles cross-linked with transglutaminase at neutral and acid pH

Federico Casanova (External examiner)

20 Feb 2019

Projects

Colloidal properties of proteins from Black Soldier fly (BSF) flour

Casanova, F., Jessen, F., Mohammadifar, M. A., Fallquist, H., Folz, J., Brouzes, C. & Fraihi, W.

01/09/2020 → 30/06/2022

Effect of pulsed electric field processing on colloidal properties of dairy proteins"

Casanova, F., Stirke, A. & Taha, A.

01/10/2020 → 30/09/2024

Foaming and physicochemical properties of casein micelles cross-linked by transglutaminase

Casanova, F., Nogueira Silva, N. F., de Carvalho, A. F. & Trindade, L.

01/02/2019 → 31/07/2020

New techno-functional properties of fish skin gelatin: InnoSkinD project

Casanova, F., Jessen, F. & Mohammadifar, M. A.

01/11/2018 → 31/10/2021

Resource effective multi-extraction of sustainable high-value compounds from shrimp production side-stream

Gringer, N., Jacobsen, H. V. S., Jacobsen, C., Casanova, F., Jessen, F., Petersen, H. O., Sloth, J. J., Lund, Y. O., Stampe-Villadsen, H. L. & Jafarpour, A.

01/04/2021 → 31/03/2024

Responsive milk proteins hydrogel as nanocarriers for bioactive molecules

Casanova, F., Silva, N., Fernandes de Carvalho, A., Martins, E. & Nascimento, L. G.

01/03/2019 → 01/03/2021

Strategies to increase the sustainability of plant-based proteins

Casanova, F., Spigno, G., Puglisi, E. & Tabaglio, V.

10/01/2022 → 12/01/2025

Sustainable extraction of bioactive insect fractions as techno-functional ingredients for food applications.

Casanova, F., Feyissa, A. H., Lesmes, U. & Dahal, S.

01/11/2022 → 31/10/2025