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BIOTECNOLOGÍA DE RECURSOS BIÓTICOS
Departamento de Investigaciones Científicas y Tecnológicas
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Research Interests

Research scientist experienced in starch, antioxidant dietary fiber, bioactive compounds, and bioaccessibility and bioavailability of these compounds. Nowadays I am studying the bioaccessibility and bioavailability of *Capsicum annum* L. var. *glabriusculum* (chiltepin) bioactive compounds from the Northwest of Mexico using the Caco-2 cell line. One of my concerns is about how the bioactive compounds present in chiltepin are released from the food matrix and distributed in different target tissues on the human body. This kind of research topic is interesting to increase the knowledge about the human health related benefits associated to the consumption of chiltepin.

Employment

BIOTECNOLOGÍA DE RECURSOS BIÓTICOS

Universidad de Sonora

Mexico

1 Jan 1942 → present

Departamento de Investigaciones Científicas y Tecnológicas

Universidad de Sonora

Mexico

1 Jan 1942 → present

Research outputs

Encapsulation of Sardine Oil by Electro spraying with Gliadins and Pecan Nutshell Extracts for its Stabilization

Dórame-Miranda, R. F., Gámez-Meza, N., Ovando-Martínez, M., Medina-Juárez, L. A., Cárdenas-López, J. L., Ramírez-Bon, R., Santos-Sauceda, I., Castro-Enríquez, D. D. & Burruel-Ibarra, S. E., 1 Mar 2021, In: *Food and Bioprocess Technology*. 14, 3, p. 457-470 14 p.

Physical, Barrier, Mechanical, and Biodegradability Properties of Modified Starch Films with Nut By-Products Extracts

Marcos Leon, B., Durmus, Y., Ovando-Martínez, M. & Simsek, S., 20 Feb 2020, In: *Foods*. 9, p. 226

Cereal Grains By-products

Norma Julieta, S. L., Ovando-Martínez, M. & Domínguez-Avila, J. A., 5 Feb 2020, *Food Wastes and By-products: Nutraceutical and Health Potential*. Campos Vega, R., Oomah, R. D. & Vergara Castaneda, H. A. (eds.). 1 ed. Wiley-Blackwell, p. 1 34 p.

Physical, barrier, mechanical, and biodegradability properties of modified starch films with nut by-products extracts

Leon-Bejarano, M., Durmus, Y., Ovando-Martínez, M. & Simsek, S., 1 Jan 2020, In: *Foods*.

Starch digestibility properties of bread from hard red spring wheat cultivars released in the last 100 years

Simsek, S., Budak, B., Schwebach, C. S. & Ovando-Martínez, M., 1 Jan 2020, In: *Cereal Chemistry*. 97, 1, p. 138-148 11 p.

Starch digestibility properties of bread from hard red spring wheat cultivars released in the last 100 years

Simsek, S., Budak, B., Schwebach, C. S. & Ovando-Martínez, M., 1 Jan 2020, In: *Cereal Chemistry*. p. 138-148 11 p.

Historical vs. modern hard red spring wheat: Analysis of the chemical composition: Analysis of the chemical composition
Simsek, S., Budak, B., Schwebach, C. S. & Ovando-Martínez, M., 1 Sep 2019, In: *Cereal Chemistry*. 96, 5, p. 937-949 13 p.

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Simsek, S., Budak, B., Schwebach, C. S. & Ovando-Martínez, M., 1 Sep 2019, In: *Cereal Chemistry*. 96, 5, p. 937-949 13 p.

Bacterial Cellulose Production by *Gluconacetobacter entanii* Using Pecan Nutshell as Carbon Source and its Chemical Functionalization

Dórame-Miranda, R. F., Gámez Meza, N., Medina Juárez, L. A., Ezquerra Brauer, J. M., Ovando Martínez, M. & Lizardi-Mendoza, J., 2019, In: *Carbohydrate Polymers*. 207, p. 91-99

Effect of ripening on physico-chemical properties and bioactive compounds in papaya pulp, skin and seeds

Ovando-Martínez, M., López-Teros V., M., Tortoledo-Ortiz, O., Astiazarán-García, H., Ayala-Zavala, J. F., Villegas-Ochoa, M. A. & González-Aguilar, G. A., 1 Mar 2018, In: *Indian Journal of Natural Products and Resources*. p. 47-59 13 p.

Phenolic Compounds in Fruits

Domínguez Avila, J. A., Velderrain-Rodríguez, G. R., Ovando-Martínez, M. & Quirós-Sauceda, A. E., 13 Feb 2018, *Phenolic Compounds in Food: Characterization and Analysis*. Nollet, L. M. L. & Gutierrez Uribe, J. A. (eds.). 1 ed. CRC Press, p. 355 374 p.

Simulated Gastrointestinal Digestion, Bioaccessibility and Antioxidant Capacity of Polyphenols from Red Chiltepin (*Capsicum annuum* L. Var. *glabriusculum*) Grown in Northwest Mexico

Ovando-Martínez, M., Gámez-Meza, N., Molina-Domínguez, C. C., Hayano-Kanashiro, C. & Medina-Juárez, L. A., 2018, In: *Plant Foods for Human Nutrition*.

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Patocka, J., Navratilova, Z. & Ovando-Martínez, M., 10 Mar 2017, In: *Military Medical Science Letters*. 86, 1, p. 17 31 p.

Tecnologías de transformación de frijol bajo un enfoque sustentable: Comunidad indígena, Xiliapa, SLP.

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Physicochemical Properties of Octenyl Succinic Esters of Cereal, Tuber and Root Starches

Ovando-Martínez, M., Whitney, K., Ozsisli, B. & Simsek, S., 1 Feb 2017, In: *Journal of Food Processing and Preservation*.

Salicylic acid treatments

Goñi, M. G., Quirós-Sauceda, A. E., Velderrain-Rodríguez, G. R., Ovando-Martínez, M., Roura, S. I., González-Aguilar, G. A. & Pareek, S., 1 Jan 2017, *Novel Postharvest Treatments of Fresh Produce*. CRC Press, p. 119-148 30 p.

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Goñi, M. G., Quirós-Sauceda, A. E., Velderrain-Rodríguez, G. R., Ovando-Martínez, M., Roura, S. I., González-Aguilar, G. A. & Pareek, S., 1 Jan 2017, *Novel Postharvest Treatments of Fresh Produce*. 30 p.

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Ovando-Martínez, M., Whitney, K., Ozsisli, B. & Simsek, S., 2017, In: *Journal of Food Processing and Preservation*.

Analysis of octenylsuccinate rice and tapioca starches: Distribution of octenylsuccinic anhydride groups in starch granules

Whitney, K., Reuhs, B. L., Ovando Martínez, M. & Simsek, S., 15 Nov 2016, In: *Food Chemistry*. p. 608-615 8 p.

Chemical composition, nutritional value and in vitro starch digestibility of roasted chickpeas

Simsek, S., Herken, E. N. & Ovando-Martínez, M., 1 Jun 2016, In: *Journal of the Science of Food and Agriculture*. p. 2896-2905 10 p.

Chemical composition, nutritional value and in vitro starch digestibility of roasted chickpeas

Simsek, S., Herken, E. N. & Ovando-Martinez, M., 1 Jun 2016, In: *Journal of the Science of Food and Agriculture*. 96, 8, p. 2896-2905 10 p.

Hydrogen sulfide

Quirós-Sauceda, A. E., Velderrain-Rodríguez, G. R., Ovando-Martínez, M., Goñi, M. G., González-Aguilar, G. A. & Ayala-Zavala, J. F., 1 Jan 2016, *Postharvest Management Approaches for Maintaining Quality of Fresh Produce*. 14 p.

Licorice (Glycyrrhiza glabra Linn.) oils

Quirós-Sauceda, A. E., Ovando-Martínez, M., Velderrain-Rodríguez, G. R., González-Aguilar, G. A. & Ayala-Zavala, J. F., 1 Jan 2016, *Essential Oils in Food Preservation, Flavor and Safety*. 8 p.

Oxygen, carbon dioxide, and nitrogen

Ovando-Martínez, M., Ruiz-Pardo, C. A., Quirós-Sauceda, A. E., Velderrain-Rodríguez, G. R., González-Aguilar, G. A. & Ayala-Zavala, J. F., 1 Jan 2016, *Postharvest Management Approaches for Maintaining Quality of Fresh Produce*. 16 p.

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Chemical composition, digestibility and emulsification properties of octenyl succinic esters of various starches

Simsek, S., Ovando-Martinez, M., Marefati, A., Sj, M. & Rayner, M., 1 Sep 2015, In: *Food Research International*. p. 41-49 9 p.

Antioxidant Capacity and Bioaccessibility of Synergic Mango (cv. Ataulfo) Peel Phenolic Compounds in Edible Coatings Applied to Fresh-Cut Papaya

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Quality of Dough and Bread Prepared with Sea Salt or Sodium Chloride

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Quirós-Sauceda, A. E., Ovando-Martínez, M., Velderrain-Rodríguez, G. R., González-Aguilar, G. A. & Ayala-Zavala, J. F., 2015

Analysis of the Fatty Acids and Phenolic Compounds in a Cereal-Based Fermented Food (Tarhana)

Ovando-Martínez, M., Daglioglu, O. & Simsek, S., 13 Jul 2014, In: *Food and Nutrition Sciences*. 5, p. 1177 1184 p.

Effect of Water Regimes on Dietary Fiber, Polyphenols and Antioxidant Capacity of Black and Pinto Beans

Ovando-Martínez, M., Guzmán Maldonado, S. H., Simsek, S., Bello Pérez, L. A. & Osorio Díaz, P., 11 Mar 2014, *Agricultural Sciences*, 5, p. 342-352 p.

Physicochemical Properties of Starch from a Cereal-Based Fermented Food (Tarhana)

Simsek, S., Ovando-Martínez, M., Daglioglu, O., Guner, K. G. & Gecgel, U., 24 Feb 2014, In: *Journal of Nutrition and Food Sciences*. 4, p. 263

Analysis of deoxynivalenol and deoxynivalenol-3-glucoside in hard red spring wheat inoculated with *Fusarium Graminearum*

Ovando-Martínez, M., Ozsisli, B., Anderson, J., Whitney, K., Ohm, J. B. & Simsek, S., 1 Dec 2013, In: *Toxins*. p. 2522-2532 11 p.

Occurrence of deoxynivalenol and deoxynivalenol-3-glucoside in hard red spring wheat grown in the USA

Simsek, S., Ovando-Martínez, M., Ozsisli, B., Whitney, K. & Ohm, J. B., 1 Dec 2013, In: *Toxins*. p. 2656-2670 15 p.

Effect of hydrothermal treatment on physicochemical and digestibility properties of oat starch

Ovando-Martínez, M., Whitney, K., Reuhs, B. L., Doehlert, D. C. & Simsek, S., 1 Jun 2013, In: *Food Research International*. p. 17-25 9 p.

Analysis of Starch in Food Systems by High-Performance Size Exclusion Chromatography

Ovando-Martínez, M., Whitney, K. & Simsek, S., 1 Feb 2013, In: *Journal of Food Science*.

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Effect of acetylation, oxidation and annealing on physicochemical properties of bean starch

Simsek, S., Ovando-Martínez, M., Whitney, K. & Bello-Pérez, L. A., 15 Oct 2012, In: *Food Chemistry*. p. 1796-1803 8 p.

Effect of acetylation, oxidation and annealing on physicochemical properties of bean starch

Simsek, S., Ovando-Martínez, M., Whitney, K. & Bello-Pérez, L. A., 2012, In: *Food Chemistry*.

Effect of the cooking on physicochemical and starch digestibility properties of two varieties of common bean (*Phaseolus vulgaris* L.) grown under different water regimes

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Starch characteristics of bean (*Phaseolus vulgaris* L.) grown in different localities

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Ovando-Martínez, M., Bello-Pérez, L. A., Whitney, K., Osorio-Díaz, P. & Simsek, S., 2011, In: Carbohydrate Polymers.

Unripe banana flour as an ingredient to increase the undigestible carbohydrates of pasta

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