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Semblanza

El Dr. Juan Carlos Mateos-Díaz es profesor-investigador en CIATEJ-México. Tiene un doctorado en química molecular y moléculas bioactivas por la Universidad de Aix-Marsella, Francia. Es miembro del sistema nacional de investigadores nivel 2 y tiene más de 18 años trabajando en la búsqueda de biocatalizadores homogéneos y heterogéneos para la obtención de compuestos bioactivos de alto valor agregado, bajo el concepto de economía circular. A lo largo de su trayectoria, ha participado en más de 90 proyectos científico-tecnológicos, formado a 50 estudiantes de posgrado, publicado más de 85 artículos internacionales arbitrados, 11 capítulos de libro y cuenta con más de 1600 citas en Scopus, con un h-index de 22. Es editor invitado para la revista de “Frontiers in Catalysis” y otras revistas de prestigio internacional. Es inventor/coinventor en 25 patentes entre otorgadas y en solicitud, en temas relacionados con agricultura, medio ambiente y salud.

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Redes de colaboración	

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Proyectos de investigación	21 proyectos como responsable técnico y 69 proyectos como colaborador (Fondos públicos y privados).
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12. *Luis Enrique Puga-Galván, Erika Nahomy Marino-Marmolejo, Flor Yohana Flores-Hernández, Darwin Eduardo Elizondo-Quiroga,* ***Juan C. Mateos-Díaz,*** *Ana Daniela Vega-Rodríguez, Ernesto Prado-Montes de Oca, Jorge Gaona-Bernal y Jorge Bravo-Madrigal*. "**Evaluación in vitro del efecto antiviral del Litocoiloleato frente al Virus de Herpes Simplex"** Enfoques Transdisciplinarios: Ciencia y Sociedad, 2023 1(1), 83-91. ISSN. 3061-709X. https://doi.org/10.5281/zenodo.12810177
13. Alma Zúñiga-Lerma, Alfonso Méndez-Tenorio, **Juan C. Mateos-Díaz**, Alba Adriana Vallejo-Cardona, Flor Yohana Flores-Hernandez, Erika Nahomy Marino-Marmolejo y Jorge Bravo-Madrigal. **"Acoplamientos moleculares de proteínas cristalográficas y modelos construidos de hemaglutinina"** Enfoques Transdisciplinarios: Ciencia y Sociedad, 2023 1(1), 55-66. ISSN. 3061-709X. https://doi.org/10.5281/zenodo.12809846
14. *Gustavo Castillo-Herrera, Mario Alberto Ochoa-Becerra,* ***Juan Carlos Mateos-Díaz*** *y Ever Sánchez.* **"Café: rompiendo el paradigma de su potencial en la salud, más allá de la bebida"** Enfoques Transdisciplinarios: Ciencia y Sociedad, 2023 1(1), 177-189. ISSN. 3061-709X. https://doi.org/10.5281/zenodo.12812011
15. *Martin Del Campo M, Gómez-Secundino O, Camacho-Ruíz RM,* ***Mateos Díaz JC****, Müller-Santos M, Rodríguez JA*. "**Effects of kosmotropic, chaotropic, and neutral salts on *Candida antarctica* B lipase: An analysis of the secondary structure and its hydrolytic activity on triglycerides."** Biochim Biophys Acta Mol Cell Biol Lipids. 2023 Oct;1868(10):159380. https://doi.org/10.1016/j.bbalip.2023.159380
16. *Delgado-Garcia, Mariana, Osvaldo Gómez-Secundino, Jorge A. Rodríguez,* ***Juan Carlos Mateos-Díaz****, Marcelo Muller-Santos, Cristobal N. Aguilar, and Rosa Maria Camacho-Ruiz*. 2023. "**Identification, Antioxidant Capacity, and Matrix Metallopeptidase 9 (MMP-9) In Silico Inhibition of Haloarchaeal Carotenoids from *Natronococcus sp.* and *Halorubrum tebenquichense***" Microorganisms 11, no. 9: 2344, 2023. https://doi.org/10.3390/microorganisms11092344
17. *David Alejandro Curiel-Pedraza, Elda Cristina Villaseñor-Tapia, Ana Laura Márquez-Aguirre, Claudia Elizabeth Morales-Martínez, Tania Diaz-Vidal, Georgina Cristina Basulto-Padilla,* ***Juan Carlos Mateos-Díaz****, Agustín López-Munguía, Alejandro Canales-Aguirre, Jorge A. Rodríguez*, **"Olvanil inhibits adipocyte differentiation in 3T3-L1 cells, reduces fat accumulation and improves lipidic profile on mice with diet-induced obesity"** Food Chemistry Advances, Volume 3, 100438, 2023 https://doi.org/10.1016/j.focha.2023.100438.
18. *Márquez-Villa, J.M.;* ***Mateos-Díaz, J.C.****; Rodríguez, J.A.; Camacho-Ruíz, R.M.* "**Lipase B from *Candida antarctica* in Highly Saline AOT-Water-Isooctane Reverse Micelle Systems for Enhanced Esterification Reaction.**" Catalysts 2023, 13, 492. https://doi.org/10.3390/catal13030492
19. *Doddy Denise Ojeda-Hernández, Ana Daniela Vega-Rodríguez, Ali Asaff-Torres,* ***Juan Carlos Mateos-Díaz****.* "**Screening, synthesis optimization, and scaling-up of phytopathogen antifungals derived from natural hydroxycinnamic acids.**" 3 Biotech 13, 13 (2023). https://doi.org/10.1007/s13205-022-03425-7
20. *Ojeda-Hernández, D.D.; Canales-Aguirre, A.A.; Matias-Guiu, J.A.; Matias-Guiu, J.; Gómez-Pinedo, U.;* ***Mateos-Díaz, J.C***. **"Chitosan–Hydroxycinnamic Acids Conjugates: Emerging Biomaterials with Rising Applications in Biomedicine."** Int. J. Mol. Sci. 2022, 23, 12473. https://doi.org/10.3390/ijms232012473
21. *Villar-Gómez, N.; Ojeda-Hernandez, D.D.; López-Muguruza, E.; García-Flores, S.; Bonel-García, N.; Benito-Martín, M.S.; Selma-Calvo, B.; Canales-Aguirre, A.A.;* ***Mateos-Díaz, J.C****.; Montero-Escribano, P.; Matias-Guiu, J.A.; Matías-Guiu, J.; Gómez-Pinedo, U.* "**Nose-to-Brain: The Next Step for Stem Cell and Biomaterial Therapy in Neurological Disorders"** Cells 2022, 11, 3095. https://doi.org/10.3390/cells11193095
22. *Ojeda-Hernández, Doddy Denise, Mercedes A. Hernández-Sapiéns, Edwin E. Reza-Zaldívar, Alejandro Canales-Aguirre, Jordi A. Matías-Guiu, Jorge Matías-Guiu,* ***Juan Carlos Mateos-Díaz****, Ulises Gómez-Pinedo, and Francisco Sancho-Bielsa*. "**Exosomes and Biomaterials: In Search of a New Therapeutic Strategy for Multiple Sclerosis**" 2022, Life 12, no. 9: 1417. https://doi.org/10.3390/life12091417
23. *Victor Contreras-Jácquez, Josep M. Virgo-Cruz, Jorge García-Fajardo, Efraín Obregón-Solís,* ***Juan Carlos Mateos-Díaz****, Ali Asaff-Torres,* "**Pilot-scale nanofiltration vibratory shear enhanced processing (NF-VSEP) for the improvement of the separation and concentration of compounds of biotechnological interest from tortilla industry wastewater (nejayote)**", Separation and Purification Technology, 2022, Volume 300, 121921, ISSN 1383-5866, https://doi.org/10.1016/j.seppur.2022.121921
24. *Vega-Rodríguez AD, Rodríguez-González JA, Armendáriz-Ruiz MA, Asaff-Torres A, Sotelo-Mundo RR, Velasco-Lozano S,* ***Mateos-Díaz JC***. "**Feruloyl Esterases Protein Engineering to**

Enhance Their Performance as Biocatalysts: A Review." Chembiochem. 2022 Jul 4:e202200354. doi: 10.1002/cbic.202200354. Epub ahead of print. PMID: 35781918.

25. *Márquez-Villa JM,* ***Mateos-Díaz JC****, Rodríguez-González JA, Camacho-Ruíz RM.* "**Optimization of Lipopeptide Biosurfactant Production by *Salibacterium sp.* 4CTb in Batch Stirred-Tank Bioreactors**" Microorganisms, 2022; 10(5):983. https://doi.org/10.3390/microorganisms10050983
26. *Rosa Ledesma, Raúl B. Martínez-Pérez, David A. Curiel, Laura M. Fernández, María L. Silva, Alejandro A. Canales-Aguirre, Jorge A. Rodríguez,* ***Juan C. Mateos-Díaz****, Ana M. Preza y Lerma, Miguel Madrigal* "**Potential benefits of structured lipids in bulk compound chocolate: Insights on bioavailability and effect on serum lipids**" Food Chemistry, 2022, 375, 131824, https://doi.org/10.1016/j.foodchem.2021.131824
27. *Y.K. Gutiérrez Mercado,* ***J.C. Mateos Díaz****, D.D. Ojeda Hernández, F.J. López Gonzalez, E.E. Reza Zaldivar, M.A. Hernández Sapiens, U.A. Gómez Pinedo, R.S. Estrada, M. Macías Carballo, A.A. Canales Aguirre* **"Ortho-coumaric acid derivatives with therapeutic potential in a three-dimensional culture of the immortalised U-138 MG glioblastoma multiforme cell line"** Neurology Perspectives, 2, Supplement 1, 2022, https://doi.org/10.1016/j.neurop.2021.09.006
28. *Alejandro Torres-Haro,Melchor Arellano-Plaza,* ***Juan C. Mateos-Díaz****,Hugo Espinosa-Andrews,Gustavo A. Castillo-Herrera* **"Non-conventional high-pressure extraction process: A comparative study for astaxanthin recovery from *Xanthophyllomyces dendrorhous*"** International Journal of Food Science and Technology 2021,57, 1040–1049 https://doi.org/10.1111/ijfs.15466
29. *Hernandez-Sapiens Mercedes A, Reza-Zaldívar Edwin E, Márquez-Aguirre Ana L, Gómez-Pinedo Ulises, Matias-Guiu Jorge, Cevallos Ricardo R,* ***Mateos-Díaz Juan C****, Sánchez-González Víctor J, Canales-Aguirre Alejandro A* **"Presenilin mutations and their impact on neuronal differentiation in Alzheimer's disease"** Neural Regeneration Research 2022, 17 (1), 31-37 https://doi.org/10.4103/1673-5374.313016
30. *Daniel A. Grajales-Hernández, Mariana A. Armendáriz Ruiz, Victor Contreras-Jácquez,* ***Juan Carlos Mateos-Díaz*** **"Biotransformation of phenolic acids from by-products using heterogeneous biocatalysts: one more step toward a circular economy"** Current Opinion in Green and Sustainable Chemistry, 2021, 32, 100550, https://doi.org/10.1016/j.cogsc.2021.100550
31. *Victor Contreras-Jácquez, Daniel A. Grajales-Hernández, Mariana Armendáriz-Ruiz, Jorge Rodríguez-González, Elisa M. Valenzuela-Soto, Ali Asaff-Torres,* ***Juan Carlos Mateos-Díaz*** **"In-Cell Crosslinked Enzymes: Improving *Bacillus megaterium* whole-cell biocatalyst stability for the decarboxylation of ferulic acid"** Process Biochemistry, 2021, 110, 71-84, https://doi.org/10.1016/j.procbio.2021.07.020
32. *Gómez-Pinedo, U.; Matías-Guiu, J.A.; Benito-Martín, M.S.; Moreno-Jiménez, L.; Sanclemente-Alamán, I.; Selma-Calvo, B.; Pérez-Suarez, S.; Sancho-Bielsa, F.; Canales-Aguirre, A.;* ***Mateos-Díaz, J.C.****; Hernández-Sapiéns, M.A.; Reza-Zaldívar, E.E.; Ojeda-Hernández, D.D.; Vidorreta-Ballesteros, L.; Montero-Escribano, P.; Matías-Guiu, J.* **Intranasal Administration of Undifferentiated Oligodendrocyte Lineage Cells as a Potential Approach to Deliver Oligodendrocyte Precursor Cells into Brain.** International Journal of Molecular Sciences. 2021; 22(19):10738. https://doi.org/10.3390/ijms221910738
33. *L. Moreno-Jiménez, M.S. Benito-Martín, I. Sanclemente-Alamán, J.A. Matías-Guiu, F. Sancho-Bielsa, A. Canales-Aguirre,* ***J.C. Mateos-Díaz****, J. Matías-Guiu, J. Aguilar, U. Gómez-Pinedo* "**Modelos experimentales murinos en la esclerosis lateral amiotrófica. Puesta al día"** Neurología, 2021, https://doi.org/10.1016/j.nrl.2021.07.007
34. *Daniela Vega-Rodríguez, Mariana Antonieta Armendáriz-Ruiza, Daniel Alberto Grajales-Hernándeza, Jorge Alberto Rodríguez-González, AliAsaff-Torres.* ***Juan Carlos Mateos-Díaz*** **"Improved synthesis of the antifungal isobutyl o-coumarate catalyzed by the *Aspergillus terreus* type B feruloyl esterase"** Electronic Journal of Biotechnology 2021, 54, November, 17-25 https://doi.org/10.1016/j.ejbt.2021.08.001
35. *Victor Contreras-Jácquez, Uri Valenzuela-Vázquez, Daniel A. Grajales-Hernández,* ***Juan Carlos Mateos-Díaz****, Melchor Arrellano-Plaza, Martín E. Jara-Marini & Ali Asaff-Torres* **"Pilot-Scale Integrated Membrane System for the Separation and Concentration of Compounds of Industrial Interest from Tortilla Industry Wastewater (Nejayote)"** Waste Biomass Valor 2021. https://doi.org/10.1007/s12649-021-01530-x
36. *Daniel A. Grajales-Hernández, Mariana A. Armendáriz-Ruiz, Fernando López Gallego,* ***Juan Carlos Mateos-Díaz*** "**Approaches for the enzymatic synthesis of alkyl hydroxycinnamates and applications thereof**" Appl Microbiol Biotechnol, 2021, 105 (10), 3901-3917 https://doi.org/10.1007/s00253-021-11285-z

37. *Claudia Berlanga-Reyes, Hiram Y. Guerrero-Elias, Moisés Ignacio-Pacheco, Victor Contreras-Jácquez, Rosa Camacho-Ruíz,* ***Juan Carlos Mateos-Díaz****, Virginia Nevárez-Moorillón, Ali Asaff-Torres* **"Effect of drying method and process conditions on physicochemical and rheological properties of arabinoxylans extracted from corn-lime-cooking-liquor on a pilot plant scale"** Food Hydrocolloids, 2021, 119:106819, https://doi.org/10.1016/j.foodhyd.2021.106819

38. *Torres-Haro, A.; Gschaedler, A.;* ***Mateos-Díaz, J.C****.; Herrera-López, E.J.; Camacho-Ruíz, R.M.; Arellano-Plaza, M.* **"Improvement of a Specific Culture Medium Based on Industrial Glucose for Carotenoid Production by *Xanthophyllomyces dendrorhous*"** Processes 2021, 9, 429. https://doi.org/10.3390/pr9030429

39. *Reza-Zaldívar Edwin Estefan, Hernández-Sapiéns Mercedes Azucena, Minjarez Benito, Gómez-Pinedo Ulises, Márquez-Aguirre Ana Laura,* ***Mateos-Díaz Juan Carlos****, Matias-Guiu Jorge, Canales-Aguirre Alejandro Arturo "***Infection Mechanism of SARS-COV-2 and Its Implication on the Nervous System"** Frontiers in Immunology 2021, 11:3738 https://doi.org/10.3389/fimmu.2020.621735

40. *Alejandra Anahi Martínez-Delgado, José de Anda, Janet María León-Morales,* ***Juan Carlos Mateos-Díaz****, Antonia Gutiérrez-Mora, José Juvencio Castañeda-Nava* **"Argemone species: Potential source of biofuel and high-value biological active compounds"** Environ Eng Res, 2022, 27(2). https://doi.org/10.4491/eer.2020.619

41. *Doddy D. Ojeda-Hernández, Ulises Gómez-Pinedo, Mercedes A. Hernández-Sapiéns, Alejandro A. Canales-Aguirre, Hugo Espinosa-Andrews, Jorge Matias-Guiu, Yolanda González-García,* ***Juan C. Mateos-Díaz*** **"Biocompatibility of ferulic/succinic acid-grafted chitosan hydrogels for implantation after brain injury: A preliminary study"** Materials Science & Engineering C, 2021, 121:111806 https://doi.org/10.1016/j.msec.2020.111806

42. *Daniel Grajales-Hernández, Mariana Armendáriz-Ruiz, Susana Velasco-Lozano, Fernando López-Gallego &* ***Juan Carlos Mateos-Díaz.*** *"***Chitosan-based CLEAs from *Aspergillus niger* type A feruloyl esterase: high-productivity biocatalyst for alkyl ferulate synthesis"**. Applied Microbiology and Biotechnology, 2020, 104, 10033–10045. https://doi.org/10.1007/s00253-020-10907-2

43. *Jorge Matias-Guiu, Jordi A. Matias-Guiu, Paloma Montero, Juan A. Barcia, Alejandro A. Canales-Aguirre,* ***Juan C. Mateos-Diaz****, Ulises Gomez-Pinedo.* **"Particles containing cells as a strategy to promote remyelination in patients with multiple sclerosis"**, Frontiers in Neurology, 2020,11: 638 | https://doi.org/10.3389/fneur.2020.00638

44. *Daniel A. Grajales-Hernández, Susana Velasco-Lozano, Mariana A. Armendáriz-Ruiz, Jorge A. Rodríguez-González, Rosa María Camacho-Ruíz, Ali Asaff-Torres, Fernando López-Gallego,* ***Juan Carlos Mateos-Díaz.*** *"***Carrier-bound and carrier-free immobilization of type A feruloyl esterase from *Aspergillus niger*: Searching for an operationally stable heterogeneous biocatalyst for the synthesis of butyl hydroxycinnamates"**, Journal of Biotechnology, 2020, 316: 6-16. https://doi.org/10.1016/j.jbiotec.2020.04.004.

45. *Ojeda-Hernández Doddy Denise, Canales-Aguirre Alejandro A., Matias-Guiu Jorge, Gomez-Pinedo Ulises,* ***Mateos-Díaz Juan C****.* **"Potential of Chitosan and Its Derivatives for Biomedical Applications in the Central Nervous System"** Frontiers in Bioengineering and Biotechnology**,** *2020*,8: 389 *https://doi.org/10.3389/fbioe.2020.00389*

46. *Contreras-Jácquez, V., Rodríguez-González, J.,* ***Mateos-Díaz, J.C****. Valenzuela-Soto EM, Asaff-Torres A.* **"Differential Activation of Ferulic Acid Catabolic Pathways of *Amycolatopsis* sp. ATCC 39116 in Submerged and Surface Cultures."** Applied Biochemistry and Biotechnology, 2020, https://doi.org/10.1007/s12010-020-03336-4

47. *Maria Angeles Camacho-Ruiz, Enrique Ordaz, Manuel R. Kirchmayr, Hugo Esquivel-Solís, Ali Asaff-Torres,* ***Juan Carlos Mateos-Díaz****, Frédéric Carrière & Jorge A. Rodríguez."* **Screening of Gastrointestinal Lipase Inhibitors Produced by Microorganisms Isolated from Soil and Lake Sediments"** International Microbiology, 2020, 23: 335–343 https://doi.org/10.1007/s10123-019-00107-y

48. *Mario Ochoa Becerra, Luis Mojica Contreras, Ming Hsieh Lo,* ***Juan C. Mateos Díaz,*** *Gustavo Castillo Herrera,* **"Lutein as a functional food ingredient: Stability and bioavailability"** Journal of Functional Foods, 2020, 66: 103771**,** https://doi.org/10.1016/j.jff.2019.103771.

49. *Tania Diaz-Vidal, Luis Carlos Rosales-Rivera,* ***Juan C. Mateos-Díaz*** *& Jorge A. Rodríguez* **"A Series of Novel Esters of Capsaicin Analogues Catalyzed by *Candida antarctica* Lipases"** Biotechnology and Bioprocess Engineering, 2020, 25: 94–103 https://doi.org/10.1007/s12257-019-0290-4

50. *Baqueiro-Peña I, Contreras-Jácquez V, Kirchmayr MR,* ***Mateos-Díaz JC****, Valenzuela-Soto EM, Asaff-Torres A. "***Isolation and Characterization of a New Ferulic-Acid-Biotransforming

***Bacillus megaterium* from Maize Alkaline Wastewater (Nejayote)**" Current Microbiology, 2019, 76 (10):1215-1224.

51. *Mariana Delgado-García, Adriana C. Flores-Gallegos, Manuel Kirchmayr, Jorge Rodríguez-González,* ***Juan C. Mateos-Díaz****, Cristobal N. Aguilar, Marcelo Muller, Rosa M. Camacho-Ruíz.* "**Bioprospection of proteases from *Halobacillus andaensis* for bioactive peptide production from fish muscle protein**". Electronic Journal of Biotechnology, 2019, 39:52-60. https://doi.org/10.1016/j.ejbt.2019.03.001.

52. *Tania Diaz-Vidal, Vicente Paul Armenta-Perez, Luis Carlos Rosales-Rivera,* ***Juan C. Mateos-Díaz****, Jorge A. Rodríguez.* "**Cross-linked enzyme aggregates of recombinant *Candida antarctica* lipase B for the efficient synthesis of olvanil, a nonpungent capsaicin analogue**". Biotechnology progress, 2019, https://doi.org/10.1002/btpr.2807

53. *Mariana Delgado-García, Silvia Maribel Contreras-Ramos, Jorge Alberto Rodríguez,* ***Juan Carlos Mateos-Díaz****, Cristobal Noe Aguilar, Rosa María Camacho-Ruíz.* "**Isolation of halophilic bacteria associated with saline and alkaline-sodic soils by culture dependent approach**". Heliyon, 2018, 4 e00954, DOI: 10.1016/j.heliyon.2018.e00954.

54. *Evelyn Romero Borbón, Daniel Grajales Hernández, Lorena Ramírez Velasco, Mariana Armendáriz Ruiz, Jorge Alberto Rodríguez González, Luis Alberto Cira Chávez, María Isabel Estrada Alvarado,* ***Juan Carlos Mateos-Díaz****.* "**Type C feruloyl esterase from *Aspergillus ochraceus*: A butanol specific biocatalyst for the synthesis of hydroxycinnamates in a ternary solvent system**" Electronic Journal of Biotechnology, 2018, 35: 1-9.

55. *Daniel Grajales,* ***Juan Carlos Mateos****, Daniel Padro, Pedro Ramos-Cabrer, Fernando López-Gallego.* "**In-flow protein immobilization monitored by magnetic resonance imaging**" New Biotechnology, 2018; 47:25-30.

56. *Grajales Hernández, D.,* ***Mateos-Díaz, J.C.****, López Gallego, F.* "**Immobilization of feruloyl esterases: Novel heterogeneous biocatalysts towards bioeconomy**", Chemistry Today, 2018; 36(3):55–58.

57. *Priscila Sutto-Ortiz, María de los Ángeles Camacho-Ruíz, Manuel R. Kirchmayr, Rosa María Camacho-Ruíz,* ***Juan Carlos Mateos-Díaz****, Alexandre Noiriel, Frédéric Carrière, Abdelkarim Abousalham, Jorge A. Rodríguez.* "**Screening of phospholipase A activity and its production by new actinomycete strains cultivated by solid-state fermentation**" Peer J, 2017, doi: 10.7717/peerj.3524.

58. *Ali Asaff-Torres, Mariana Armendáriz-Ruiz, Manuel Kirchmayr, Ricardo Rodríguez, Heredia, Marcos Orozco,* ***Juan Carlos Mateos-Díaz****, Luis Figueroa, Itzamna Baqueiro-Peña, Jorge Verdín.* "**Rhizospheric microbiome profiling of *Capsicum annuum* L. cultivated in amended soils by 16S and ITS2 rRNA amplicon metagenome sequencing**". Genome Announcements; 5:e00626-17, doi.org/10.1128/genomeA.00626-17.

59. *Ivanna Rivera, Marcela Robles,* ***Juan Carlos Mateos-Díaz****, Abel Gutiérrez-Ortega, Georgina Sandoval.* "**Functional expression, extracellular production, purification, structure modeling and biochemical characterization of Carica papaya lipase 1**" Process Biochemistry, 2017; 57:109–116.

60. *Claudia E Morales-Martínez, Ana L Márquez-Aguirre, Emmanuel Díaz-Martínez, Jorge A Rodríguez-González,* ***Juan C Mateos-Díaz****, Hugo Esquivel-Solís, Carlos Alvarez-Moya, Alejandro A Canales-Aguirre.* **"The Prospective Antiobesity Effect of Capsaicin Synthetic Analogs: A Matter of Weight".** Medicinal chemistry, *2016; 6 (5): 365–371.*

61. *Lorena Ramírez-Velasco, Mariana Armendáriz-Ruiz, Jorge Alberto Rodríguez-González, Marcelo Müller-Santos, Ali Asaff-Torres and* ***Juan Carlos Mateos-Díaz.*** "**From Classical to High Throughput Screening Methods for Feruloyl Esterases: A Review"**. Combinatorial Chemistry & High Throughput Screening, 2016, 19(8): 616 – 626.

62. *L. Ramírez-Velasco, M. Armendáriz-Ruiz, J.P. Arrizon J. A. Rodríguez-González,* ***J.C. Mateos-Díaz****.* "**Liberation of caffeic acid from coffee pulp using an extract with chlorogenate esterase activity of *Aspergillus ochraceus* produced by solid state fermentation***"* Revista Mexicana de Ingeniería Química, 2016; 15(2): 503-512.

63. *Susana Velasco-Lozano, Fernando López-Gallego,* ***Juan C. Mateos-Díaz****, Ernesto Favela-Torres.* "**Cross-linked enzyme aggregates (CLEA) in enzyme improvement – a review**". Biocatalysis, 2016; 1(1):166–177.

64. *M.A. Camacho-Ruíz, R.M. Camacho-Ruiz, M. Armendáriz, L. Ramirez-Velasco, A. Asaff Torres, A. Levasseur,* ***J.C. Mateos-Díaz*** *and J.A. Rodríguez* "**Corn bran as potential**

substrate for high production of feruloyl and acetylxylan esterases by solid state fermentation" 2016, Revista Mexicana de Ingeniería Química, 2016; 15(1):11–21.

65. *Mariana Armendáriz-Ruiz, Eduardo Mateos-Diaz, Jorge Alberto Rodríguez González, Rosa María Camacho-Ruiz, Antonia Gutiérrez-Mora, Georgina Sandoval-Fabian, Santiago Gallegos-Tintoré,* ***Juan Carlos Mateos-Díaz*** **"*Carica papaya* by-products as new biocatalysts for the synthesis of oleic acid esters"**, Biocatalysis and Biotransformation, 2015; 33(4):216–223.
66. *Martha Martin del Campo, Rosa M. Camacho,* ***Juan C. Mateos-Díaz****, Marcelo Müller‑Santos, Jesus Córdova, Jorge A. Rodríguez* "**Solid‑state fermentation as a potential technique for esterase/lipase production by halophilic archaea**", Extremophiles, 2015, 19: 1121–1132.
67. *M.A. Camacho-Ruiz,* ***J. C. Mateos-Díaz,*** *F. Carrière, and Jorge A. Rodriguez* "**A broad pH range indicator-based spectrophotometric assay for true lipases using tributyrin and tricaprylin**", Journal of Lipid Research, 2015, 56: 1057-1067.
68. *Pliego, J.;* ***Mateos, J.C.;*** *Rodriguez, J.; Valero, F.; Baeza, M.; Femat, R.; Camacho, R.; Sandoval, G.; Herrera-López, E.J.* **Monitoring Lipase/Esterase Activity by Stopped Flow in a Sequential Injection Analysis System Using p-Nitrophenyl Butyrate.** Sensors 2015, 15: 2798-2811.
69. *Francisco J Bacame-Valenzuela, Jorge A Rodriguez,* ***Juan C Mateos-Díaz****, Manuel Kirchmayr, Elisa M Valenzuela-Soto, Yolanda Reyes-Vidal, Martin Esqueda and Ali Asaff* "**Screening of Sonoran Desert Fungal Strains for feruloyl Esterase Activity**", Journal of Pure and Applied Microbiology, 2015, 9: 131-138.
70. *Susana Velasco-Lozano, Fernando López Gallego, Rafael Vázquez-Duhalt,* ***Juan Carlos Mateos-Díaz****, José Manuel Guisán, Ernesto Favela-Torres*, **"Carrier-free immobilization of lipase from *Candida rugosa* with polyethyleneimines by carboxyl-activated cross-linking**", Biomacromolecules, 2014, 15 (5): 1896–1903.
71. *Camacho Cordova D.I., Camacho-Ruiz R.M., Rodriguez-Gonzalez J.A.,* ***Mateos-Diaz J.C****., Cordova-Lopez J.A.* "***Haloarcula marismortui*, eighty-four years after its discovery in the Dead Sea"** International Journal of Engineering Research & Technology, 2014, 3(6): 1257-1267.
72. *Rivera, Ivanna,* ***Juan Carlos Mateos****, Alain Marty, Georgina Sandoval, and Sophie Duquesne*. "**Lipase from *Carica Papaya* Latex Presents High Enantioselectivity toward the Resolution of Prodrug (*R,S*)-2-Bromophenylacetic Acid Octyl Ester**." *Tetrahedron Letters,* 2013, 54, no. 40: 5523-5526.
73. *Espino-Sevilla, Ma T., Maria E. Jaramillo-Flores, Rodolfo Hernández-Gutiérrez,* ***Juan C. Mateos-Díaz****, Hugo Espinosa-Andrews, Ana P. Barba de la Rosa, Jose O. Rodiles-López, Socorro Villanueva-Rodríguez, and Eugenia C. Lugo-Cervantes*. "**Functional Properties of *Ditaxis Heterantha* Proteins."** Food Science & Nutrition, 2013, 1, no. 3: 254-65.
74. *Edgar Vinicio Villalpando-Arteaga, Edgar Mendieta-Condado, Hugo Esquivel-Solís, Arturo Alejandro Canales-Aguirre, Francisco Javier Gálvez-Gastélum,* ***Juan Carlos Mateos-Díaz****, Jorge Alberto Rodríguez-González, Ana Laura Márquez-Aguirre* **"*Hibiscus sabdariffa* L aqueous extract attenuates hepatic steatosis through down-regulation of PPAR-γ and SREBP-1c in diet-induced obese mice"**, Food and Function, 2013, 25, 4(4): 618-626.
75. *Velasco-Lozano, S., Rodríguez-González, J.,* ***Mateos-Diaz, J.C****., Reyes-Duarte, D., Favela-Torres, E.* **"Catalytic Profiles of Lipolytic Biocatalysts Produced by Filamentous Fungi"**, Biocatalysis and Biotransformation, 2012, (30), 5-6: 459-468.
76. *Jorge Pliego-Sandoval, Lorena Amaya-Delgado,* ***Juan C. Mateos-Díaz****, Jorge Rodríguez-González, Abiel Alba-Rangel, Sergio Jaubert-Garibay, Jesus Cordova-López, Enrique Herrera-López*. "**Multiplex gas sampler for monitoring respirometry in column-type bioreactors used in solid-state fermentation**", Biotechnology and Biotechnological equipment, 2012 (26), 3: 3031-3038.
77. *J. Arrizon,* ***J.C. MateosDíaz****, G. Sandoval, B. Aguilar, J. Solis, M.G. Aguilar* **"Bioethanol and xylitol production from different lignocellulosic hydrolysates by sequential fermentation"** Journal of Food Process Engineering, 2012, (35) 3: 437-454
78. *Jorge Villalpando-Guzman, Lorena Amaya-Delgado,* ***Juan C. Mateos-Díaz****, Jorge Rodríguez-González, Enrique Herrera-López and Sergio Jaubert-Garibay* **"Effect of Complementary**

Microwave Drying Over Different Mango Slices Geometries" Revista Mexicana de Ingeniería Química. 2011, (10), 2: 281-290.

79. *Etienne Waleckx, **Juan Carlos Mateos-Díaz**, Anne Gschaedler, Benoît Colonna-Ceccaldi, Nicolas Brin, Guadalupe García-Quezada, Socorro Villanueva-Rodríguez, Pierre Monsan* **"Use of inulinases to improve fermentable carbohydrate recovery during tequila production"** Food Chemistry, 2011, (124) 4,:1533-1542.

80. *Ana M Preza, María E Jaramillo, Ana M Puebla, **Juan C Mateos**, Rodolfo Hernández, Eugenia Lugo* **"Antitumor activity against murine lymphoma L5178Y model of proteins from cacao (*Theobroma cacao* L.) seeds in relation with in vitro antioxidant activity"** BMC Complementary and Alternative Medicine, 2010, (10): 61.

81. *Rosa María Camacho, **Juan Carlos Mateos Díaz**, Dulce María Díaz-Montaño, Orfil González Reynosoa, Jesús Córdova.* **"Carboxyl ester hydrolases production and growth of a halophilic archaeon, *Halobacterium* sp. NRC-1"** Extremophiles, 2010, (14): 99-106.

82. *Galindo-Estrella Thomás, Hernández-Gutiérrez Rodolfo, **Mateos-Díaz Juan Carlos,** Sandoval-Fabián Georgina, Chel-Guerrero Luis, Rodríguez-Buenfil Ingrid and Gallegos-Tintoré Santiago.***"Proteolytic activity in enzymatic extracts from *Carica papaya* L. cv. Maradol harvest byproducts"** Process Biochemistry, 2009, (44): 77-82.

83. *Rosa María Camacho, **Juan Carlos Mateos Díaz**, Orfil González Reynosoa, Jesús Córdova.***"Production and characterization of esterase and lipase from *Haloarcula marismortui*,"** Journal of Industrial Microbiology and Biotechnology, 2009, (36): 901-909.

84. *L. Ramírez, J. Arrizon A. Cardador, R. Bello-Mendoza G. Sandoval, **J.C. Mateos-Díaz**.* **"A New Microplate Screening Method for the Simultaneous Activity Quantification of Feruloyl Esterases Tannases and Chlorogenate Esterases"** Applied Biochemistry and Biotechnology, 2008, (151): 711–723.

85. *I. Rivera, J.C. Mateos-Díaz, G. Sandoval.* **"Efficient immobilized lipases for biodiesel synthesis from waste lipids"** Journal of Biotechnology, *2007, (131): 265.*

86. ***J.C. Mateos Díaz**, J. Cordova, J. Baratti, F. Carrière, A. Abousalham.* **"Effect of non ionic surfactants on *Rhizopus homothallicus* lipase activity: A comparative kinetic study,"** Molecular Biotechnology, 2007, (35) 3: 205 -214.

87. ***J.C. Mateos Díaz**, J.A. Rodriguez, K. Ruiz, J. Cordova, F. Carrière, J. Baratti.* **"Mapping substrate selectivity of lipases from thermophilic and thermolerant fungi"** Journal of molecular catalysis B enzymatic, 2007, (49): 104–112.

88. ***J.C. Mateos Díaz**, J.A. Rodríguez, S. Roussos, J. Cordova, A. Abousalham, F. Carrière, J. Baratti .*"**Lipase from the thermotolerant fungus *Rhizopus homothallicus* is more thermostable when produced using solid state fermentation than liquid fermentation procedures"** Enzyme and Microbial Technology, 2006, (39): 1042-1050.

89. *J.A. Rodriguez, **J.C. Mateos Díaz**, J. Nungaray, V. González, T. Bhagnagar, S. Roussos, J. Cordova and J. Baratti.* **"Improving lipase production by nutrient source modification using *Rhizopus homothallicus* cultured in solid-state fermentation"** Process Biochemistry, 2006, (41): 2264-2269.

Patentes	Otorgadas: 1. MX/a/2021/015143 **Uso de (N-vanillil)-9-oleamida para el tratamiento de ateroesclerosis** (Tít 417590 B) 2. MX/a/2020/013637 **Uso de compuestos ortho-cumáricos para el tratamiento de gliobla multiforme.** (Título MX 413161 B) 3. MX/a/2020/011139 **Proceso de síntesis de un hidrogel a base de quitosano funcionalizad ácido carboxílico y entrecruzado con ácido dicarboxílico**. (Título MX 419439 B) 4. MX/a/2020/007426 **Proceso para la producción y purificación de un biosurfactante a pa *Salibacterium* sp. y su aplicación como emulgente en sistemas con elevada sal temperatura y pH** (Título MX 418658 B) 5. MX/a/2019/013814 **Proceso para la producción de un exopolisacarido microbiano y su apli como emulgente y viscosificante** (Título MX 413162 B) 6. MX/a/2018/013494 **Proceso para la producción y estabilización de astaxantina produci *Xanthophyllomyces dendrorhous*** (Título MX 410022 B) 7. MX/a/2017/016579 **Proceso de producción de β-fructofuranosidasa en el cultivo en co utilizando *Kluyveromuces marxianus* y glucosa para diversos procesos de interés ind** (Título MX 396619 B) 8. MX/a/2017/016584 **Proceso para la producción de bioetanol, biomasa celular y otros meta a partir de la fracción insoluble de nejayote**. (Título: MX 399216 B) 9. MX/a/2015/016461 **Proceso biotecnológico para la detoxificación y obtención concomita biocarburantes/biolubricantes a partir de pastas de oleaginosas**. (Título: MX 371823 B) 10. MX/a/2015/014001 **Proceso de estabilización de colorante de laca soluble de ácido carr** (Título: MX 386173 B) 11. MX/a/2015/014003 **Uso de un análogo no pungente de la capsaicina para el control y tratam de la obesidad y complicaciones relacionadas.** (Título: MX 387109 B) 12. MX/a/2014/004496 **Proceso para obtener una molécula que sirve como inhibidor de péptidos antimicrobianos** (Título: MX 358788 B) 13. MX/a/2013/012160 **Proceso para obtener una molécula que sirve como elicitor de péptidos antimicrobianos** (Título: MX 356006 B) 14. MX/a/2013/004903 **Fructanos fraccionados de agave, proceso de obtención y uso de los mismos** (Título: MX 367976 B) 15. MX/a/2013/004901 **Proceso de obtención de fructanos de agave joven y uso como ingrediente funcional** (Título: MX 363029 B) 16. MX/a/2009/013997 **Proceso para la obtención de polvo enzimático con actividad proteolítica a partir de subproductos de cosecha de papaya** (Título: MX 329593 B) 17. MX/a/2007/014257 **Proceso de producción de etanol y xilitol a partir de hidrolizados lignocelulósicos mediante fermentaciones secuenciadas utilizando levaduras del género *Candida***. (Título: MX 325040 B)
Principales logros y distinciones	
Experiencia académica	Más de 18 años impartiendo cátedra en • Bioquímica • Biocatálisis • Química orgánica • Bioprocesos

Formación de recursos humanos	• Innovación Biotecnológica • 5 postdoctorantes • 22 Alumnos de doctorado • 40 Alumnos de maestría • 12 Alumnos de licenciatura
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Brief Bibliography

Dr. Juan Carlos Mateos-Díaz is a professor-researcher at CIATEJ-Mexico. He holds a PhD in molecular chemistry and bioactive molecules from the University of Aix-Marseille, France. He is a member of the National System of Researchers, level 2, and has more than 18 years of experience in the search for homogeneous and heterogeneous biocatalysts for the production of high-value bioactive compounds, under the concept of circular economy. Throughout his career, he has participated in more than 90 scientific-technological projects, trained 50 graduate students, published over 85 peer-reviewed international articles, 11 book chapters, and has more than 1,600 citations in Scopus, with an h-index of 22. He is an invited editor for the journal “Frontiers in Catalysis” and other prestigious international journals. He is an inventor/co-inventor in 25 patents, both granted and pending, related to agriculture, the environment, and health.

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Industry fields related to the research line	Production and use of enzymes
Academic groups	
Collaboration networks	

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Research projects	21 research projects as responsible and 69 research projects as collaborator
Relevant publications	**1.** *María del Sol Cuellar Espejel, Evangelina Esmeralda Quiñones Aguilar, Gabriel Rincón Enríquez*, Rodolfo Hernández Gutiérrez,* ***Juan Carlos Mateos Díaz****, Sergio David Valerio Landa* **"Hrp proteins as bioinducers for the biocontrol of bacterial diseases in tomato and pepper plants in greenhouse"** Mexican Journal of Phytopathology, 43(4): 54. (2025) https://doi.org/10.18781/R.MEX.FIT.2024-25 **2.** *Enrique Ordaz, Osvaldo Gómez-Secundino, Hiram Y. Guerrero-Elias, M. Angeles Camacho-Ruiz, Ruben Espinosa-Salgado, Antonio Escobedo-Reyes,* ***Juan C. Mateos-Díaz****, Jorge A. Rodríguez* "**Microplate spectrophotometric method for regioselective lipase screening using structured triglycerides with punicic acid as probe**" Analytical Biochemistry, Vol. 700, (2025), 115769, ISSN 0003-2697. https://doi.org/10.1016/j.ab.2025.115769 **3.** *Marcela Robles-Machuca, Tania Diaz-Vidal, M. Angeles Camacho-Ruiz, Raúl B. Martínez-Pérez, Martha Martin del Campo,* ***Juan Carlos Mateos-Díaz****, Jorge A. Rodríguez* "**Further Characterization of Lipase B from *Ustilago maydis* Expressed in *Pichia pastoris*: a Member of the *Candida antarctica* Lipase B-like Superfamily**". Appl Biochem Biotechnol (2025). https://doi.org/10.1007/s12010-024-05166-0 **4.** *Daniel A. Grajales-Hernández, Mariana A. Armendáriz-Ruiz, Jorge A. Rodríguez, Susana Velasco-Lozano, Fernando López-Gallego,* ***Juan Carlos Mateos-Díaz*** "**Substrate bio-imprinted CLEAs of type B feruloyl esterase from *Aspergillus terreus*: A selective heterogeneous biocatalyst towards butyl caffeate**" Process Biochemistry, Vol. 150, (2025), Pages 168-179, ISSN 1359-5113, https://doi.org/10.1016/j.procbio.2025.01.004. **5.** *Hiram Y. Guerrero-Elias, M. Angeles Camacho-Ruiz, Ruben Espinosa-Salgado,* ***Juan Carlos Mateos-Díaz****, Rosa María Camacho-Ruiz, Ali Asaff-Torres, Jorge A. Rodríguez* "**Spectrophotometric assay for the screening of selective enzymes towards DHA and EPA ethyl esters hydrolysis**" Enzyme and Microbial Technology, Vol. 182, (2025), 110531, ISSN 0141-0229, https://doi.org/10.1016/j.enzmictec.2024.110531 **6.** *Doddy Denise Ojeda-Hernández, Susana Velasco-Lozano, José M. Fraile,* ***J.C. Mateos-Díaz****, Francisco J. Rojo, María Soledad Benito-Martín, Belén Selma-Calvo, Sarah de la Fuente-Martín, Marina García-Martín, María Teresa Larriba-González, Mercedes Azucena Hernández-Sapiéns, Alejandro A. Canales-Aguirre, Jordi A. Matias-Guiu, Jorge Matias-Guiu, Ulises Gomez-Pinedo* **"Thermosensitive chitosan-based hydrogel: A vehicle for overcoming the limitations of nose-to-brain cell therapy"**, Acta Biomaterialia, 2024, ISSN 1742-7061, https://doi.org/10.1016/j.actbio.2024.09.002 **7.** *María del Sol Cuellar-Espejel, Evangelina Esmeralda Quiñones-Aguilar, Rodolfo Hernández-Gutiérrez,* ***Juan Carlos Mateos-Díaz****, Sergio David Valerio-Landa, Gabriel Rincón-Enríquez* **"Elicitores para mejorar la producción vegetal: vacunas vegetales"** Enfoques Transdisciplinarios: Ciencia y Sociedad, 2024, 2(2), 163-171. ISSN: 3061-709X. https://doi.org/10.5281/zenodo.12773668 **8.** *Luis Francisco García-Manríquez,* ***Juan Carlos Mateos-Díaz*** *y Hugo Esquivel-Solis* **"Análisis *in silico* del agonismo de ácidos hidroxicinámicos al Receptor Gamma Activado por Proliferador de Peroxisomas"** Horizontes Transdiciplinarios, 2024, 2(1), 31-41 **9.** *Estefany Chavarria-Quicaño, Lorena Amaya-Delgado, Melchor Arellano-Plaza,* ***Juan Carlos Mateos-Díaz****, Ali Asaff-Torres,* **"Improvement of agave bagasse hydrolysates processing under a biorefinery approach"**, Separation and Purification Technology, Volume 347, 2024,127392, ISSN 1383-5866, https://doi.org/10.1016/j.seppur.2024.127392 **10.** *Tania Diaz-Vidal, Vicente Paúl Armenta-Pérez, Luis Carlos Rosales-Rivera, Georgina Cristina Basulto-Padilla, Raúl Balam Martínez-Pérez,* ***Juan Carlos Mateos-Díaz****, Yanet K. Gutiérrez-Mercado, Alejandro A. Canales-Aguirre & Jorge A. Rodríguez* **"Long chain capsaicin analogues synthetized by CALB-CLEAs show cytotoxicity on glioblastoma cell lines."** Appl Microbiol Biotechnol 108, 106 (2024). https://doi.org/10.1007/s00253-023-12856-y ***11.*** *A. Torres-Haro;* ***J.C. Mateos-Díaz****; H. Espinosa-Andrews; G.A. Castillo-Herrera; M. Arellano-Plaza.* **"Improving *Xanthophyllomyces dendrorhous* astaxanthin stability by encapsulation using a fructan matrix"** Revista Mexicana de Ingeniería Química. Vol. 23, No. 1 (2024) *https://doi.org/10.24275/rmiq/Alim24140* **12.** *Luis Enrique Puga-Galván, Erika Nahomy Marino-Marmolejo, Flor Yohana Flores-Hernández, Darwin Eduardo Elizondo-Quiroga,* ***Juan C. Mateos-Díaz,*** *Ana Daniela Vega-Rodríguez, Ernesto Prado-Montes de Oca, Jorge Gaona-Bernal y Jorge Bravo-Madrigal.* "**Evaluación in**

vitro del efecto antiviral del Litocoiloleato frente al Virus de Herpes Simplex"** Enfoques Transdisciplinarios: Ciencia y Sociedad, 2023 1(1), 83-91. ISSN. 3061-709X. https://doi.org/10.5281/zenodo.12810177

13. Alma Zúñiga-Lerma, Alfonso Méndez-Tenorio, **Juan C. Mateos-Díaz**, Alba Adriana Vallejo-Cardona, Flor Yohana Flores-Hernandez, Erika Nahomy Marino-Marmolejo y Jorge Bravo-Madrigal. **"Acoplamientos moleculares de proteínas cristalográficas y modelos construidos de hemaglutinina"** Enfoques Transdisciplinarios: Ciencia y Sociedad, 2023 1(1), 55-66. ISSN. 3061-709X. https://doi.org/10.5281/zenodo.12809846
14. *Gustavo Castillo-Herrera, Mario Alberto Ochoa-Becerra,* ***Juan Carlos Mateos-Díaz*** *y Ever Sánchez.* **"Café: rompiendo el paradigma de su potencial en la salud, más allá de la bebida"** Enfoques Transdisciplinarios: Ciencia y Sociedad, 2023 1(1), 177-189. ISSN. 3061-709X. https://doi.org/10.5281/zenodo.12812011
15. *Martin Del Campo M, Gómez-Secundino O, Camacho-Ruíz RM,* ***Mateos Díaz JC****, Müller-Santos M, Rodríguez JA.* "**Effects of kosmotropic, chaotropic, and neutral salts on *Candida antarctica* B lipase: An analysis of the secondary structure and its hydrolytic activity on triglycerides."** Biochim Biophys Acta Mol Cell Biol Lipids. 2023 Oct;1868(10):159380. https://doi.org/10.1016/j.bbalip.2023.159380
16. *Delgado-Garcia, Mariana, Osvaldo Gómez-Secundino, Jorge A. Rodríguez,* ***Juan Carlos Mateos-Díaz****, Marcelo Muller-Santos, Cristobal N. Aguilar, and Rosa Maria Camacho-Ruiz.* 2023. "**Identification, Antioxidant Capacity, and Matrix Metallopeptidase 9 (MMP-9) In Silico Inhibition of Haloarchaeal Carotenoids from *Natronococcus sp.* and *Halorubrum tebenquichense***" Microorganisms 11, no. 9: 2344, 2023. https://doi.org/10.3390/microorganisms11092344
17. *David Alejandro Curiel-Pedraza, Elda Cristina Villaseñor-Tapia, Ana Laura Márquez-Aguirre, Claudia Elizabeth Morales-Martínez, Tania Diaz-Vidal, Georgina Cristina Basulto-Padilla,* ***Juan Carlos Mateos-Díaz****, Agustín López-Munguía, Alejandro Canales-Aguirre, Jorge A. Rodríguez,* **"Olvanil inhibits adipocyte differentiation in 3T3-L1 cells, reduces fat accumulation and improves lipidic profile on mice with diet-induced obesity"** Food Chemistry Advances, Volume 3, 100438, 2023 https://doi.org/10.1016/j.focha.2023.100438.
18. *Márquez-Villa, J.M.;* ***Mateos-Díaz, J.C.****; Rodríguez, J.A.; Camacho-Ruíz, R.M.* "**Lipase B from *Candida antarctica* in Highly Saline AOT-Water-Isooctane Reverse Micelle Systems for Enhanced Esterification Reaction.**" Catalysts 2023, 13, 492. https://doi.org/10.3390/catal13030492
19. *Doddy Denise Ojeda-Hernández, Ana Daniela Vega-Rodríguez, Ali Asaff-Torres,* ***Juan Carlos Mateos-Díaz****.* "**Screening, synthesis optimization, and scaling-up of phytopathogen antifungals derived from natural hydroxycinnamic acids.**" 3 Biotech 13, 13 (2023). https://doi.org/10.1007/s13205-022-03425-7
20. *Ojeda-Hernández, D.D.; Canales-Aguirre, A.A.; Matias-Guiu, J.A.; Matias-Guiu, J.; Gómez-Pinedo, U.;* ***Mateos-Díaz, J.C***. **"Chitosan–Hydroxycinnamic Acids Conjugates: Emerging Biomaterials with Rising Applications in Biomedicine."** Int. J. Mol. Sci. 2022, 23, 12473. https://doi.org/10.3390/ijms232012473
21. *Villar-Gómez, N.; Ojeda-Hernandez, D.D.; López-Muguruza, E.; García-Flores, S.; Bonel-García, N.; Benito-Martín, M.S.; Selma-Calvo, B.; Canales-Aguirre, A.A.;* ***Mateos-Díaz, J.C****.; Montero-Escribano, P.; Matias-Guiu, J.A.; Matías-Guiu, J.; Gómez-Pinedo, U.* "**Nose-to-Brain: The Next Step for Stem Cell and Biomaterial Therapy in Neurological Disorders"** Cells 2022, 11, 3095. https://doi.org/10.3390/cells11193095
22. *Ojeda-Hernández, Doddy Denise, Mercedes A. Hernández-Sapiéns, Edwin E. Reza-Zaldívar, Alejandro Canales-Aguirre, Jordi A. Matías-Guiu, Jorge Matías-Guiu,* ***Juan Carlos Mateos-Díaz****, Ulises Gómez-Pinedo, and Francisco Sancho-Bielsa*. "**Exosomes and Biomaterials: In Search of a New Therapeutic Strategy for Multiple Sclerosis**" 2022, Life 12, no. 9: 1417. https://doi.org/10.3390/life12091417
23. *Victor Contreras-Jácquez, Josep M. Virgo-Cruz, Jorge García-Fajardo, Efraín Obregón-Solís,* ***Juan Carlos Mateos-Díaz****, Ali Asaff-Torres,* "**Pilot-scale nanofiltration vibratory shear enhanced processing (NF-VSEP) for the improvement of the separation and concentration of compounds of biotechnological interest from tortilla industry wastewater (nejayote)**", Separation and Purification Technology, 2022, Volume 300, 121921, ISSN 1383-5866, https://doi.org/10.1016/j.seppur.2022.121921
24. *Vega-Rodríguez AD, Rodríguez-González JA, Armendáriz-Ruiz MA, Asaff-Torres A, Sotelo-Mundo RR, Velasco-Lozano S,* ***Mateos-Díaz JC***. "**Feruloyl Esterases Protein Engineering to Enhance Their Performance as Biocatalysts: A Review.**" Chembiochem. 2022 Jul 4:e202200354. doi: 10.1002/cbic.202200354. Epub ahead of print. PMID: 35781918.

25. *Márquez-Villa JM, **Mateos-Díaz JC**, Rodríguez-González JA, Camacho-Ruíz RM.* "**Optimization of Lipopeptide Biosurfactant Production by *Salibacterium sp.* 4CTb in Batch Stirred-Tank Bioreactors**" Microorganisms, 2022; 10(5):983. https://doi.org/10.3390/microorganisms10050983

26. *Rosa Ledesma, Raúl B. Martínez-Pérez, David A. Curiel, Laura M. Fernández, María L. Silva, Alejandro A. Canales-Aguirre, Jorge A. Rodríguez, **Juan C. Mateos-Díaz**, Ana M. Preza y Lerma, Miguel Madrigal* "**Potential benefits of structured lipids in bulk compound chocolate: Insights on bioavailability and effect on serum lipids**" Food Chemistry, 2022, 375, 131824, https://doi.org/10.1016/j.foodchem.2021.131824

27. *Y.K. Gutiérrez Mercado, **J.C. Mateos Díaz**, D.D. Ojeda Hernández, F.J. López Gonzalez, E.E. Reza Zaldivar, M.A. Hernández Sapiens, U.A. Gómez Pinedo, R.S. Estrada, M. Macías Carballo, A.A. Canales Aguirre* **"Ortho-coumaric acid derivatives with therapeutic potential in a three-dimensional culture of the immortalised U-138 MG glioblastoma multiforme cell line"** Neurology Perspectives, 2, Supplement 1, 2022, https://doi.org/10.1016/j.neurop.2021.09.006

28. *Alejandro Torres-Haro,Melchor Arellano-Plaza, **Juan C. Mateos-Díaz**,Hugo Espinosa-Andrews,Gustavo A. Castillo-Herrera* "**Non-conventional high-pressure extraction process: A comparative study for astaxanthin recovery from *Xanthophyllomyces dendrorhous***" International Journal of Food Science and Technology 2021,57, 1040–1049 https://doi.org/10.1111/ijfs.15466

29. *Hernandez-Sapiens Mercedes A, Reza-Zaldívar Edwin E, Márquez-Aguirre Ana L, Gómez-Pinedo Ulises, Matias-Guiu Jorge, Cevallos Ricardo R, **Mateos-Díaz Juan C**, Sánchez-González Víctor J, Canales-Aguirre Alejandro A* **"Presenilin mutations and their impact on neuronal differentiation in Alzheimer's disease"** Neural Regeneration Research 2022, 17 (1), 31-37 https://doi.org/10.4103/1673-5374.313016

30. *Daniel A. Grajales-Hernández, Mariana A. Armendáriz Ruiz, Victor Contreras-Jácquez, **Juan Carlos Mateos-Díaz** "***Biotransformation of phenolic acids from by-products using heterogeneous biocatalysts: one more step toward a circular economy"*** Current Opinion in Green and Sustainable Chemistry, 2021, 32, 100550, https://doi.org/10.1016/j.cogsc.2021.100550

31. *Victor Contreras-Jácquez, Daniel A. Grajales-Hernández, Mariana Armendáriz-Ruiz, Jorge Rodríguez-González, Elisa M. Valenzuela-Soto, Ali Asaff-Torres, **Juan Carlos Mateos-Díaz*** **"In-Cell Crosslinked Enzymes: Improving *Bacillus megaterium* whole-cell biocatalyst stability for the decarboxylation of ferulic acid"** Process Biochemistry, 2021, 110, 71-84, https://doi.org/10.1016/j.procbio.2021.07.020

32. *Gómez-Pinedo, U.; Matías-Guiu, J.A.; Benito-Martín, M.S.; Moreno-Jiménez, L.; Sanclemente-Alamán, I.; Selma-Calvo, B.; Pérez-Suarez, S.; Sancho-Bielsa, F.; Canales-Aguirre, A.; **Mateos-Díaz, J.C**.; Hernández-Sapiéns, M.A.; Reza-Zaldívar, E.E.; Ojeda-Hernández, D.D.; Vidorreta-Ballesteros, L.; Montero-Escribano, P.; Matías-Guiu, J.* **Intranasal Administration of Undifferentiated Oligodendrocyte Lineage Cells as a Potential Approach to Deliver Oligodendrocyte Precursor Cells into Brain.** International Journal of Molecular Sciences. 2021; 22(19):10738. https://doi.org/10.3390/ijms221910738

33. *L. Moreno-Jiménez, M.S. Benito-Martín, I. Sanclemente-Alamán, J.A. Matías-Guiu, F. Sancho-Bielsa, A. Canales-Aguirre, **J.C. Mateos-Díaz**, J. Matías-Guiu, J. Aguilar, U. Gómez-Pinedo* "**Modelos experimentales murinos en la esclerosis lateral amiotrófica. Puesta al día"** Neurología, 2021, https://doi.org/10.1016/j.nrl.2021.07.007

34. *Daniela Vega-Rodríguez, Mariana Antonieta Armendáriz-Ruiza, Daniel Alberto Grajales-Hernándeza, Jorge Alberto Rodríguez-González, AliAsaff-Torres. **Juan Carlos Mateos-Díaz*** **"Improved synthesis of the antifungal isobutyl o-coumarate catalyzed by the *Aspergillus terreus* type B feruloyl esterase"** Electronic Journal of Biotechnology 2021, 54, November, 17-25 https://doi.org/10.1016/j.ejbt.2021.08.001

35. *Victor Contreras-Jácquez, Uri Valenzuela-Vázquez, Daniel A. Grajales-Hernández, **Juan Carlos Mateos-Díaz**, Melchor Arrellano-Plaza, Martín E. Jara-Marini & Ali Asaff-Torres* **"Pilot-Scale Integrated Membrane System for the Separation and Concentration of Compounds of Industrial Interest from Tortilla Industry Wastewater (Nejayote)"** Waste Biomass Valor 2021. https://doi.org/10.1007/s12649-021-01530-x

36. *Daniel A. Grajales-Hernández, Mariana A. Armendáriz-Ruiz, Fernando López Gallego, **Juan Carlos Mateos-Díaz*** "**Approaches for the enzymatic synthesis of alkyl hydroxycinnamates and applications thereof**" Appl Microbiol Biotechnol, 2021, 105 (10), 3901-3917 https://doi.org/10.1007/s00253-021-11285-z

37. *Claudia Berlanga-Reyes, Hiram Y. Guerrero-Elias, Moisés Ignacio-Pacheco, Victor Contreras-Jácquez, Rosa Camacho-Ruíz, **Juan Carlos Mateos-Díaz**, Virginia Nevárez-Moorillón, Ali Asaff-Torres* **"Effect of drying method and process conditions on physicochemical and**

rheological properties of arabinoxylans extracted from corn-lime-cooking-liquor on a pilot plant scale" Food Hydrocolloids, 2021, 119:106819, https://doi.org/10.1016/j.foodhyd.2021.106819

38. *Torres-Haro, A.; Gschaedler, A.;* ***Mateos-Díaz, J.C.****; Herrera-López, E.J.; Camacho-Ruíz, R.M.; Arellano-Plaza, M.* **"Improvement of a Specific Culture Medium Based on Industrial Glucose for Carotenoid Production by *Xanthophyllomyces dendrorhous*"** Processes 2021, 9, 429. https://doi.org/10.3390/pr9030429
39. *Reza-Zaldívar Edwin Estefan, Hernández-Sapiéns Mercedes Azucena, Minjarez Benito, Gómez-Pinedo Ulises, Márquez-Aguirre Ana Laura,* ***Mateos-Díaz Juan Carlos****, Matias-Guiu Jorge, Canales-Aguirre Alejandro Arturo "***Infection Mechanism of SARS-COV-2 and Its Implication on the Nervous System"** Frontiers in Immunology 2021, 11:3738 https://doi.org/10.3389/fimmu.2020.621735
40. *Alejandra Anahi Martínez-Delgado, José de Anda, Janet María León-Morales,* ***Juan Carlos Mateos-Díaz****, Antonia Gutiérrez-Mora, José Juvencio Castañeda-Nava* **"Argemone species: Potential source of biofuel and high-value biological active compounds"** Environ Eng Res, 2022, 27(2). https://doi.org/10.4491/eer.2020.619
41. *Doddy D. Ojeda-Hernández, Ulises Gómez-Pinedo, Mercedes A. Hernández-Sapiéns, Alejandro A. Canales-Aguirre, Hugo Espinosa-Andrews, Jorge Matias-Guiu, Yolanda González-García,* ***Juan C. Mateos-Díaz*** **"Biocompatibility of ferulic/succinic acid-grafted chitosan hydrogels for implantation after brain injury: A preliminary study"** Materials Science & Engineering C, 2021, 121:111806 https://doi.org/10.1016/j.msec.2020.111806
42. *Daniel Grajales-Hernández, Mariana Armendáriz-Ruiz, Susana Velasco-Lozano, Fernando López-Gallego &* ***Juan Carlos Mateos-Díaz.*** *"***Chitosan-based CLEAs from *Aspergillus niger* type A feruloyl esterase: high-productivity biocatalyst for alkyl ferulate synthesis"**. Applied Microbiology and Biotechnology, 2020, 104, 10033–10045. https://doi.org/10.1007/s00253-020-10907-2
43. *Jorge Matias-Guiu, Jordi A. Matias-Guiu, Paloma Montero, Juan A. Barcia, Alejandro A. Canales-Aguirre,* ***Juan C. Mateos-Diaz****, Ulises Gomez-Pinedo.* **"Particles containing cells as a strategy to promote remyelination in patients with multiple sclerosis"**, Frontiers in Neurology, 2020,11: 638 | https://doi.org/10.3389/fneur.2020.00638
44. *Daniel A. Grajales-Hernández, Susana Velasco-Lozano, Mariana A. Armendáriz-Ruiz, Jorge A. Rodríguez-González, Rosa María Camacho-Ruíz, Ali Asaff-Torres, Fernando López-Gallego,* ***Juan Carlos Mateos-Díaz.*** *"***Carrier-bound and carrier-free immobilization of type A feruloyl esterase from *Aspergillus niger*: Searching for an operationally stable heterogeneous biocatalyst for the synthesis of butyl hydroxycinnamates"**, Journal of Biotechnology, 2020, 316: 6-16. https://doi.org/10.1016/j.jbiotec.2020.04.004.
45. *Ojeda-Hernández Doddy Denise, Canales-Aguirre Alejandro A., Matias-Guiu Jorge, Gomez-Pinedo Ulises,* ***Mateos-Díaz Juan C****.* **"Potential of Chitosan and Its Derivatives for Biomedical Applications in the Central Nervous System"** Frontiers in Bioengineering and Biotechnology**,** *2020*,8: 389 *https://doi.org/10.3389/fbioe.2020.00389*
46. *Contreras-Jácquez, V., Rodríguez-González, J.,* ***Mateos-Díaz, J.C****. Valenzuela-Soto EM, Asaff-Torres A.* **"Differential Activation of Ferulic Acid Catabolic Pathways of *Amycolatopsis sp.* ATCC 39116 in Submerged and Surface Cultures."** Applied Biochemistry and Biotechnology, 2020, https://doi.org/10.1007/s12010-020-03336-4
47. *Maria Angeles Camacho-Ruiz, Enrique Ordaz, Manuel R. Kirchmayr, Hugo Esquivel-Solís, Ali Asaff-Torres,* ***Juan Carlos Mateos-Díaz****, Frédéric Carrière & Jorge A. Rodríguez."* **Screening of Gastrointestinal Lipase Inhibitors Produced by Microorganisms Isolated from Soil and Lake Sediments"** International Microbiology, 2020, 23: 335–343 https://doi.org/10.1007/s10123-019-00107-y
48. *Mario Ochoa Becerra, Luis Mojica Contreras, Ming Hsieh Lo,* ***Juan C. Mateos Díaz,*** *Gustavo Castillo Herrera,* **"Lutein as a functional food ingredient: Stability and bioavailability"** Journal of Functional Foods, 2020, 66: 103771**,** https://doi.org/10.1016/j.jff.2019.103771.
49. *Tania Diaz-Vidal, Luis Carlos Rosales-Rivera,* ***Juan C. Mateos-Díaz*** *& Jorge A. Rodríguez* **"A Series of Novel Esters of Capsaicin Analogues Catalyzed by *Candida antarctica* Lipases"** Biotechnology and Bioprocess Engineering, 2020, 25: 94–103 https://doi.org/10.1007/s12257-019-0290-4
50. *Baqueiro-Peña I, Contreras-Jácquez V, Kirchmayr MR,* ***Mateos-Díaz JC****, Valenzuela-Soto EM, Asaff-Torres A. "***Isolation and Characterization of a New Ferulic-Acid-Biotransforming *Bacillus megaterium* from Maize Alkaline Wastewater (Nejayote)**" Current Microbiology, 2019, 76 (10):1215-1224.

51. *Mariana Delgado-García, Adriana C. Flores-Gallegos, Manuel Kirchmayr, Jorge Rodríguez-González,* ***Juan C. Mateos-Díaz****, Cristobal N. Aguilar, Marcelo Muller, Rosa M. Camacho-Ruíz.* "**Bioprospection of proteases from *Halobacillus andaensis* for bioactive peptide production from fish muscle protein**". Electronic Journal of Biotechnology, 2019, 39:52-60. https://doi.org/10.1016/j.ejbt.2019.03.001.

52. *Tania Diaz-Vidal, Vicente Paul Armenta-Perez, Luis Carlos Rosales-Rivera,* ***Juan C. Mateos-Díaz****, Jorge A. Rodríguez.* "**Cross-linked enzyme aggregates of recombinant *Candida antarctica* lipase B for the efficient synthesis of olvanil, a nonpungent capsaicin analogue**". Biotechnology progress, 2019, https://doi.org/10.1002/btpr.2807

53. *Mariana Delgado-García, Silvia Maribel Contreras-Ramos, Jorge Alberto Rodríguez,* ***Juan Carlos Mateos-Díaz****, Cristobal Noe Aguilar, Rosa María Camacho-Ruíz.* "**Isolation of halophilic bacteria associated with saline and alkaline-sodic soils by culture dependent approach**". Heliyon, 2018, 4 e00954, DOI: 10.1016/j.heliyon.2018.e00954.

54. *Evelyn Romero Borbón, Daniel Grajales Hernández, Lorena Ramírez Velasco, Mariana Armendáriz Ruiz, Jorge Alberto Rodríguez González, Luis Alberto Cira Chávez, María Isabel Estrada Alvarado,* ***Juan Carlos Mateos-Díaz****.* "**Type C feruloyl esterase from *Aspergillus ochraceus*: A butanol specific biocatalyst for the synthesis of hydroxycinnamates in a ternary solvent system**" Electronic Journal of Biotechnology, 2018, 35: 1-9.

55. *Daniel Grajales,* ***Juan Carlos Mateos****, Daniel Padro, Pedro Ramos-Cabrer, Fernando López-Gallego.* "**In-flow protein immobilization monitored by magnetic resonance imaging**" New Biotechnology, 2018; 47:25-30.

56. *Grajales Hernández, D.,* ***Mateos-Díaz, J.C.****, López Gallego, F.* "**Immobilization of feruloyl esterases: Novel heterogeneous biocatalysts towards bioeconomy**", Chemistry Today, 2018; 36(3):55–58.

57. *Priscila Sutto-Ortiz, María de los Ángeles Camacho-Ruíz, Manuel R. Kirchmayr, Rosa María Camacho-Ruíz,* ***Juan Carlos Mateos-Díaz****, Alexandre Noiriel, Frédéric Carrière, Abdelkarim Abousalham, Jorge A. Rodríguez.* "**Screening of phospholipase A activity and its production by new actinomycete strains cultivated by solid-state fermentation**" Peer J, 2017, doi: 10.7717/peerj.3524.

58. *Ali Asaff-Torres, Mariana Armendáriz-Ruiz, Manuel Kirchmayr, Ricardo Rodríguez, Heredia, Marcos Orozco,* ***Juan Carlos Mateos-Díaz****, Luis Figueroa, Itzamna Baqueiro-Peña, Jorge Verdín.* "**Rhizospheric microbiome profiling of *Capsicum annuum* L. cultivated in amended soils by 16S and ITS2 rRNA amplicon metagenome sequencing**". Genome Announcements; 5:e00626-17, doi.org/10.1128/genomeA.00626-17.

59. *Ivanna Rivera, Marcela Robles,* ***Juan Carlos Mateos-Díaz****, Abel Gutiérrez-Ortega, Georgina Sandoval.* "**Functional expression, extracellular production, purification, structure modeling and biochemical characterization of Carica papaya lipase 1**" Process Biochemistry, 2017; 57:109–116.

60. *Claudia E Morales-Martínez, Ana L Márquez-Aguirre, Emmanuel Díaz-Martínez, Jorge A Rodríguez-González,* ***Juan C Mateos-Díaz****, Hugo Esquivel-Solís, Carlos Alvarez-Moya, Alejandro A Canales-Aguirre.* **"The Prospective Antiobesity Effect of Capsaicin Synthetic Analogs: A Matter of Weight".** Medicinal chemistry, *2016; 6 (5): 365–371.*

61. *Lorena Ramírez-Velasco, Mariana Armendáriz-Ruiz, Jorge Alberto Rodríguez-González, Marcelo Müller-Santos, Ali Asaff-Torres and* ***Juan Carlos Mateos-Díaz.*** *"***From Classical to High Throughput Screening Methods for Feruloyl Esterases: A Review"**. Combinatorial Chemistry & High Throughput Screening, 2016, 19(8): 616 – 626.

62. *L. Ramírez-Velasco, M. Armendáriz-Ruiz, J.P. Arrizon J. A. Rodríguez-González,* ***J.C. Mateos-Díaz****.* "**Liberation of caffeic acid from coffee pulp using an extract with chlorogenate esterase activity of *Aspergillus ochraceus* produced by solid state fermentation***"* Revista Mexicana de Ingeniería Química, 2016; 15(2): 503-512.

63. *Susana Velasco-Lozano, Fernando López-Gallego,* ***Juan C. Mateos-Díaz****, Ernesto Favela-Torres.* "**Cross-linked enzyme aggregates (CLEA) in enzyme improvement – a review**". Biocatalysis, 2016; 1(1):166–177.

64. *M.A. Camacho-Ruíz, R.M. Camacho-Ruiz, M. Armendáriz, L. Ramirez-Velasco, A. Asaff Torres, A. Levasseur,* ***J.C. Mateos-Díaz*** *and J.A. Rodríguez* "**Corn bran as potential substrate for high production of feruloyl and acetylxylan esterases by solid state fermentation"** 2016, Revista Mexicana de Ingeniería Química, 2016; 15(1):11–21.

65. *Mariana Armendáriz-Ruiz, Eduardo Mateos-Diaz, Jorge Alberto Rodríguez González, Rosa María Camacho-Ruiz, Antonia Gutiérrez-Mora, Georgina Sandoval-Fabian, Santiago Gallegos-Tintoré,* ***Juan Carlos Mateos-Díaz*** **"*Carica papaya* by-products as new biocatalysts for the synthesis of oleic acid esters"**, Biocatalysis and Biotransformation, 2015; 33(4):216–223.

66. *Martha Martin del Campo, Rosa M. Camacho,* ***Juan C. Mateos-Díaz****, Marcelo Müller‑Santos, Jesus Córdova, Jorge A. Rodríguez* "**Solid‑state fermentation as a potential technique for esterase/lipase production by halophilic archaea**", Extremophiles, 2015, 19: 1121–1132.

67. *M.A. Camacho-Ruiz,* ***J. C. Mateos-Díaz,*** *F. Carrière, and Jorge A. Rodriguez* "**A broad pH range indicator-based spectrophotometric assay for true lipases using tributyrin and tricaprylin**", Journal of Lipid Research, 2015, 56: 1057-1067.

68. *Pliego, J.;* ***Mateos, J.C.;*** *Rodriguez, J.; Valero, F.; Baeza, M.; Femat, R.; Camacho, R.; Sandoval, G.; Herrera-López, E.J.* **Monitoring Lipase/Esterase Activity by Stopped Flow in a Sequential Injection Analysis System Using p-Nitrophenyl Butyrate.** Sensors 2015, 15: 2798-2811.

69. *Francisco J Bacame-Valenzuela, Jorge A Rodriguez,* ***Juan C Mateos-Díaz****, Manuel Kirchmayr, Elisa M Valenzuela-Soto, Yolanda Reyes-Vidal, Martin Esqueda and Ali Asaff* "**Screening of Sonoran Desert Fungal Strains for feruloyl Esterase Activity**", Journal of Pure and Applied Microbiology, 2015, 9: 131-138.

70. *Susana Velasco-Lozano, Fernando López Gallego, Rafael Vázquez-Duhalt,* ***Juan Carlos Mateos-Díaz****, José Manuel Guisán, Ernesto Favela-Torres*, **"Carrier-free immobilization of lipase from *Candida rugosa* with polyethyleneimines by carboxyl-activated cross-linking**", Biomacromolecules, 2014, 15 (5): 1896–1903.

71. *Camacho Cordova D.I., Camacho-Ruiz R.M., Rodriguez-Gonzalez J.A.,* ***Mateos-Diaz J.C.****, Cordova-Lopez J.A.* **"*Haloarcula marismortui*, eighty-four years after its discovery in the Dead Sea"** International Journal of Engineering Research & Technology, 2014, 3(6): 1257-1267.

72. *Rivera, Ivanna,* ***Juan Carlos Mateos****, Alain Marty, Georgina Sandoval, and Sophie Duquesne*. "**Lipase from *Carica Papaya* Latex Presents High Enantioselectivity toward the Resolution of Prodrug (*R,S*)-2-Bromophenylacetic Acid Octyl Ester**." *Tetrahedron Letters,* 2013, 54, no. 40: 5523-5526.

73. *Espino-Sevilla, Ma T., Maria E. Jaramillo-Flores, Rodolfo Hernández-Gutiérrez,* ***Juan C. Mateos-Díaz****, Hugo Espinosa-Andrews, Ana P. Barba de la Rosa, Jose O. Rodiles-López, Socorro Villanueva-Rodríguez, and Eugenia C. Lugo-Cervantes*. "**Functional Properties of *Ditaxis Heterantha* Proteins."** Food Science & Nutrition, 2013, 1, no. 3: 254-65.

74. *Edgar Vinicio Villalpando-Arteaga, Edgar Mendieta-Condado, Hugo Esquivel-Solís, Arturo Alejandro Canales-Aguirre, Francisco Javier Gálvez-Gastélum,* ***Juan Carlos Mateos-Díaz****, Jorge Alberto Rodríguez-González, Ana Laura Márquez-Aguirre* **"*Hibiscus sabdariffa* L aqueous extract attenuates hepatic steatosis through down-regulation of PPAR-γ and SREBP-1c in diet-induced obese mice"**, Food and Function, 2013, 25, 4(4): 618-626.

75. *Velasco-Lozano, S., Rodríguez-González, J.,* ***Mateos-Diaz, J.C.****, Reyes-Duarte, D., Favela-Torres, E.* **"Catalytic Profiles of Lipolytic Biocatalysts Produced by Filamentous Fungi"**, Biocatalysis and Biotransformation, 2012, (30), 5-6: 459-468.

76. *Jorge Pliego-Sandoval, Lorena Amaya-Delgado,* ***Juan C. Mateos-Díaz****, Jorge Rodríguez-González, Abiel Alba-Rangel, Sergio Jaubert-Garibay, Jesus Cordova-López, Enrique Herrera-López*. "**Multiplex gas sampler for monitoring respirometry in column-type bioreactors used in solid-state fermentation**", Biotechnology and Biotechnological equipment, 2012 (26), 3: 3031-3038.

77. *J. Arrizon,* ***J.C. MateosDíaz****, G. Sandoval, B. Aguilar, J. Solis, M.G. Aguilar* **"Bioethanol and xylitol production from different lignocellulosic hydrolysates by sequential fermentation"** Journal of Food Process Engineering, 2012, (35) 3: 437-454

78. *Jorge Villalpando-Guzman, Lorena Amaya-Delgado,* ***Juan C. Mateos-Díaz****, Jorge Rodríguez-González, Enrique Herrera-López and Sergio Jaubert-Garibay* **"Effect of Complementary Microwave Drying Over Different Mango Slices Geometries***"* Revista Mexicana de Ingeniería Química. 2011, (10), 2: 281-290.

	79. *Etienne Waleckx, **Juan Carlos Mateos-Díaz**, Anne Gschaedler, Benoît Colonna-Ceccaldi, Nicolas Brin, Guadalupe García-Quezada, Socorro Villanueva-Rodríguez, Pierre Monsan* **"Use of inulinases to improve fermentable carbohydrate recovery during tequila production"** Food Chemistry, 2011, (124) 4,:1533-1542. **80.** *Ana M Preza, María E Jaramillo, Ana M Puebla, **Juan C Mateos**, Rodolfo Hernández, Eugenia Lugo* **"Antitumor activity against murine lymphoma L5178Y model of proteins from cacao (*Theobroma cacao* L.) seeds in relation with in vitro antioxidant activity"** BMC Complementary and Alternative Medicine, 2010, (10): 61. **81.** *Rosa María Camacho, **Juan Carlos Mateos Díaz**, Dulce María Díaz-Montaño, Orfil González Reynosoa, Jesús Córdova.* **"Carboxyl ester hydrolases production and growth of a halophilic archaeon, *Halobacterium* sp. NRC-1"** Extremophiles, 2010, (14): 99-106. **82.** *Galindo-Estrella Thomás, Hernández-Gutiérrez Rodolfo, **Mateos-Díaz Juan Carlos,** Sandoval-Fabián Georgina, Chel-Guerrero Luis, Rodríguez-Buenfil Ingrid and Gallegos-Tintoré Santiago.***"Proteolytic activity in enzymatic extracts from *Carica papaya* L. cv. Maradol harvest byproducts"** Process Biochemistry, 2009, (44): 77-82. **83.** *Rosa María Camacho, **Juan Carlos Mateos Díaz**, Orfil González Reynosoa, Jesús Córdova.***"Production and characterization of esterase and lipase from *Haloarcula marismortui*,"** Journal of Industrial Microbiology and Biotechnology, 2009, (36): 901-909. **84.** *L. Ramírez, J. Arrizon A. Cardador, R. Bello-Mendoza G. Sandoval, **J.C. Mateos-Díaz**.* **"A New Microplate Screening Method for the Simultaneous Activity Quantification of Feruloyl Esterases Tannases and Chlorogenate Esterases"** Applied Biochemistry and Biotechnology, 2008, (151): 711–723. ***85.*** *I. Rivera, J.C. Mateos-Díaz, G. Sandoval.* **"Efficient immobilized lipases for biodiesel synthesis from waste lipids"** Journal of Biotechnology, *2007, (131): 265.* **86.** ***J.C. Mateos Díaz**, J. Cordova, J. Baratti, F. Carrière, A. Abousalham.* **"Effect of non ionic surfactants on *Rhizopus homothallicus* lipase activity: A comparative kinetic study,"** Molecular Biotechnology, 2007, (35) 3: 205 -214. **87.** ***J.C. Mateos Díaz**, J.A. Rodriguez, K. Ruiz, J. Cordova, F. Carrière, J. Baratti.* **"Mapping substrate selectivity of lipases from thermophilic and thermolerant fungi"** Journal of molecular catalysis B enzymatic, 2007, (49): 104–112. **88.** ***J.C. Mateos Díaz**, J.A. Rodríguez, S. Roussos, J. Cordova, A. Abousalham, F. Carrière, J. Baratti .*"**Lipase from the thermotolerant fungus *Rhizopus homothallicus* is more thermostable when produced using solid state fermentation than liquid fermentation procedures"** Enzyme and Microbial Technology, 2006, (39): 1042-1050. **89.** *J.A. Rodriguez, **J.C. Mateos Díaz**, J. Nungaray, V. González, T. Bhagnagar, S. Roussos, J. Cordova and J. Baratti.* **"Improving lipase production by nutrient source modification using *Rhizopus homothallicus* cultured in solid-state fermentation"** Process Biochemistry, 2006, (41): 2264-2269.
Patent	**Granted**: 1. MX/a/2021/015143 **Use of (N-vanillyl)-9-oleamide for the treatment of atherosclerosis** (Title MX 417590 B) 2. MX/a/2020/013637 **Use of ortho-coumaric compounds for the treatment of glioblastoma multiforme** (Title MX 413161 B) 3. MX/a/2020/011139 **Synthesis process of a chitosan-based hydrogel functionalized with carboxylic acid and cross-linked with dicarboxylic acid** (Title MX 419439 B) 4. MX/a/2020/007426 **Process for the production and purification of a biosurfactant from *Salibacterium* sp. and its application as an emulsifier in systems with high salinity, temperature, and pH** (Title MX 418658 B) 5. MX/a/2019/013814 **Process for the production of a microbial exopolysaccharide and its application as an emulsifier and viscosifier** (Title MX 413162 B)

	6. MX/a/2018/013494 **Process for the production and stabilization of astaxanthin produced by *Xanthophyllomyces dendrorhous*** (Title MX 410022 B) 7. MX/a/2017/016579 **Production process of β-fructofuranosidase in continuous culture using *Kluyveromyces marxianus* and glucose for various industrial processes** (Title MX 396619 B) 8. MX/a/2017/016584 **Process for the production of bioethanol, cellular biomass, and other metabolites from the insoluble fraction of nejayote** (Title: MX 399216 B) 9. MX/a/2015/016461 **Biotechnological process for detoxification and concomitant production of biofuels/biolubricants from oilseed pastes** (Title: MX 371823 B) 10. MX/a/2015/014001 **Process for the stabilization of carmine lake dye** (Title: MX 386173 B) 11. MX/a/2015/014003 **Use of a non-pungent capsaicin analog for the control and treatment of obesity and related complications** (Title: MX 387109 B) 12. MX/a/2014/004496 **Process for obtaining a molecule that serves as an inhibitor of antimicrobial peptides** (Title: MX 358788 B) 13. MX/a/2013/012160 **Process for obtaining a molecule that serves as an elicitor of antimicrobial peptides** (Title: MX 356006 B) 14. MX/a/2013/004903 **Fractionated agave fructans, process for obtaining them, and their use** (Title: MX 367976 B) 15. MX/a/2013/004901 **Process for obtaining young agave fructans and their use as a functional ingredient** (Title: MX 363029 B) 16. MX/a/2009/013997 **Process for obtaining enzymatic powder with proteolytic activity from papaya harvest by-products** (Title: MX 329593 B) 17. MX/a/2007/014257 **Process for the production of ethanol and xylitol from lignocellulosic hydrolysates using sequential fermentations with *Candida* yeast species** (Title: MX 325040 B)
Main achievements and distinctions	
Teaching experience,	More than 18 years of teaching in: • Biochemistry • Biocatalysis • Organic Chemistry • Bioprocesses • Biotechnological Innovation
Graduated students	• 5 postdoctoral researchers • 22 doctoral students • 40 master's students • 12 undergraduate students
Thesis topics available	Carrier bound and carrier free enzyme immobilization to be used as heterogeneous biocatalysts

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Research Gate	https://www.researchgate.net/profile/Juan_Mateos-Diaz
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LinkedIn	www.linkedin.com/in/juan-carlos-mateos-díaz-1b09bb68