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Coordinación de Planeación, Evaluación y
Simplificación de la Gestión Institucional
Reporte individual



FRANCISCO ELIZANDRO MOLINA FREANER

Datos Generales

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Antigüedad académica en la UNAM: 32 años

Nombramientos

Vigente: INVESTIGADOR TITULAR C TC Definitivo
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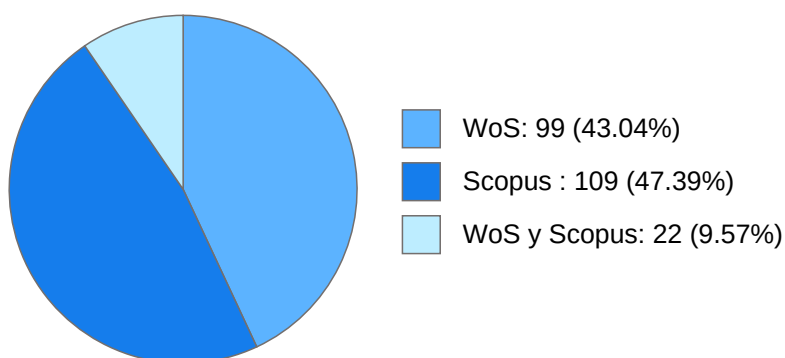
Estímulos, programas, premios y reconocimientos

SNI III 2018 - VIGENTE
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DOCUMENTOS EN REVISTAS

Histórico de Documentos



#	Título	Autores	Revista	Año
1	Seasonal variation in the ant-plant interaction network mediated by extrafloral nectaries in the southern Sonoran Desert	FRANCISCO ELIZANDRO MOLINA FREANER Luis Fernando Valdez-Ojeda Miguel Vasquez-Bolanos	ARTHROPOD-PLANT INTERACTIONS	2025
2	Plant mycorrhization is resilient to land use change in a thornscrub in northwestern Mexico	FRANCISCO ELIZANDRO MOLINA FREANER CLARA LEONOR TINOCO OJANGUREN Blanco-Valenzuela G. et al.	JOURNAL OF ARID ENVIRONMENTS	2025
3	Agricultural Practices and Environmental Factors Drive Microbial Communities in the Mezcal-Producing Agave angustifolia Haw	GONZALO CONTRERAS NEGRETE ALFONSO VALIENTE BANUET FRANCISCO ELIZANDRO MOLINA FREANER et al.	MICROBIAL ECOLOGY	2024
4	Yeast diversity in open agave fermentations across Mexico	JESUS ABRAHAM AVELAR RIVAS FRANCISCO ELIZANDRO MOLINA FREANER LUIS JOSE DELAYE ARREDONDO et al.	Yeast	2024
5	Potentially toxic elements in soil?plant?water-animal continuum in a mining area from Northwestern Mexico: animal exposure pathways and health risks for children	DENISSE ARCHUNDIA PERALTA BLANCA LUCIA PRADO PANO FRANCISCO ELIZANDRO MOLINA FREANER	ENVIRONMENTAL GEOCHEMISTRY AND HEALTH	2024

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6	Evolutionary and ecological trends in the Neotropical cycad genus <i>Dioon</i> (Zamiaceae): An example of success of evolutionary stasis	FRANCISCO ELIZANDRO MOLINA FREANER Gutiérrez-Ortega J.S. Pérez-Farrera M.A. et al.	ECOLOGICAL RESEARCH	2024
7	Phytostabilization alternatives for an abandoned mine tailing deposit in northwestern Mexico	BLANCA GONZALEZ MENDEZ RENE LOREDO PORTALES CLARA LEONOR TINOCO OJANGUREN et al.	PLANT AND SOIL	2024
8	Insights into mistletoe seed germination: A study of hemiparasitic <i>Psittacanthus</i> Mart. (Santalales: Loranthaceae) mistletoes	SADDAN MORALES SALDAÑA FRANCISCO ELIZANDRO MOLINA FREANER VIANEY EUNISE SOSA KOH et al.	FLORA	2024
9	Comparative fruit morphology of nine <i>Psittacanthus</i> Mart. (Santalales: Loranthaceae) mistletoe species occurring in Mexico	FRANCISCO ELIZANDRO MOLINA FREANER Ornelas J.F. Galicia S. et al.	FLORA	2024
10	Pollination biology of <i>Gossypium turneri</i> : Autonomous selfing provides reproductive assurance in an endangered wild cotton from Sonora, Mexico	FRANCISCO ELIZANDRO MOLINA FREANER Yescas-Romo K.F. Hayano-Kanashiro C.	PLANT SPECIES BIOLOGY	2024
11	Geographic isolation and long-distance gene flow influence the genetic structure of the blue fan palm <i>Brahea armata</i> (Arecaceae)	JESSICA PEREZ ALQUICIRA CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA JOSE RUBEN PEREZ ISHIWARA et al.	JOURNAL OF PLANT RESEARCH	2023
12	Biochar application on mine tailings from arid zones: Prospects for mine reclamation	ELIZABETH CHAVEZ GARCIA BLANCA GONZALEZ MENDEZ FRANCISCO ELIZANDRO MOLINA FREANER	JOURNAL OF ARID ENVIRONMENTS	2023
13	Can legume seeds establish after land degradation by buffelgrass? Evidence to initiate restoration in Central Sonora, Mexico	FRANCISCO ELIZANDRO MOLINA FREANER Morales-Romero D. Rosas-Becerra R. et al.	Land Degradation & Development	2023
14	A Change in Conservation Status of <i>Pachyphytum caesium</i> (Crassulaceae), a Threatened Species from Central Mexico Based on Genetic Studies	JORGE EDUARDO CAMPOS CONTRERAS FRANCISCO ELIZANDRO MOLINA FREANER NELLY JAZMIN PACHECO CRUZ et al.	BIOLOGY-BASEL	2022
15	Distribution of heavy metals polluting the soil near an abandoned mine in Northwestern Mexico	BLANCA GONZALEZ MENDEZ RENE LOREDO PORTALES FRANCISCO ELIZANDRO MOLINA FREANER et al.	ENVIRONMENTAL EARTH SCIENCES	2022
16	Microstructure and Hydrophobicity of the External Surface of a Sonoran Desert Beetle	FRANCISCO ELIZANDRO MOLINA FREANER Tellechea-Robles L.E. Méndez-Alonzo R. et al.	Biomimetics	2022

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17	Genomic Analyses of Wild and Cultivated Bacanora Agave (Agave angustifolia var. pacifica) Reveal Inbreeding, Few Signs of Cultivation History and Shallow Population Structure	FRANCISCO ELIZANDRO MOLINA FREANER ERIKA AGUIRRE PLANTER LUIS ENRIQUE EGUIARTE FRUNS et al.	PLANTS-BASEL	2022
18	Patterns of plant mortality caused by a copper mine spill	FRANCISCO ELIZANDRO MOLINA FREANER JOSE FULGENCIO MARTINEZ RODRIGUEZ	Anthropocene	2022
19	Incorporating remote sensing techniques to the DRASTIC index to assess groundwater vulnerability at mining areas: application to Sonora river aquifer, northwestern Mexico	FRANCISCO ELIZANDRO MOLINA FREANER Denisse Archundia Victor Vidana-Guillen et al.	REVISTA MEXICANA DE CIENCIAS GEOLOGICAS	2022
20	Unraveling the mechanisms of lead adsorption and ageing process on high-temperature biochar	FRANCISCO JAVIER CERVANTES CARRILLO CARLOS ALBERTO PEREZ RABAGO FRANCISCO ELIZANDRO MOLINA FREANER et al.	JOURNAL OF CHEMICAL TECHNOLOGY AND BIOTECHNOLOG Y	2021
21	Metagenomics of mine tailing rhizospheric communities and its selection for plant establishment towards bioremediation	JOSE FULGENCIO MARTINEZ RODRIGUEZ HUGO RAFAEL BARAJAS DE LA TORRE MARIA DEL ROCIO CRUZ ORTEGA et al.	MICROBIOLOGIC AL RESEARCH	2021
22	Geochemical changes of Mn in contaminated agricultural soils nearby historical mine tailings: Insights from XAS, XRD and, SEP	RAFAEL EDUARDO DEL RIO SALAS BLANCA GONZALEZ MENDEZ TERESA PI PUIG et al.	CHEMICAL GEOLOGY	2021
23	Water resources affected by potentially toxic elements in an area under current and historical mining in northwestern Mexico	BLANCA LUCIA PRADO PANO RENE LOREDO PORTALES FRANCISCO ELIZANDRO MOLINA FREANER et al.	ENVIRONMENTA L MONITORING AND ASSESSMENT	2021
24	Speciation along a latitudinal gradient: The origin of the Neotropical cycad sister pair Dioon sonorensis-D. vovidesii (Zamiaceae)	FRANCISCO ELIZANDRO MOLINA FREANER JOSE FULGENCIO MARTINEZ RODRIGUEZ ANTONIO HERNANDEZ LOPEZ et al.	ECOLOGY AND EVOLUTION	2021
25	Response of four species of Sonoran Desert trees to buffel grass removal treatments	FRANCISCO ELIZANDRO MOLINA FREANER CLARA LEONOR TINOCO OJANGUREN Dulce O. Espinoza	PLANT ECOLOGY	2020

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26	Assessment of Geogenic and Anthropogenic Pollution Sources Using an Aquatic Plant Along the Sonora River Basin: Insights from Elemental Concentrations and Pb Isotope Signatures	FRANCISCO ELIZANDRO MOLINA FREANER MARTIN ANDRES VALENCIA MORENO ERNESTO HERNANDEZ MENDIOLA et al.	Natural Resources Research	2020
27	Mobility and accessibility of Zn, Pb, and As in abandoned mine tailings of northwestern Mexico	RENE LOREDO PORTALES RAFAEL EDUARDO DEL RIO SALAS FRANCISCO ELIZANDRO MOLINA FREANER et al.	ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH	2020
28	Stabilization of potentially toxic elements contained in mine waste: A microbiological approach for the environmental management of mine tailings	FRANCISCO ELIZANDRO MOLINA FREANER AURORA MARGARITA PAT ESPADAS I Valenzuela et al.	JOURNAL OF ENVIRONMENTAL MANAGEMENT	2020
29	Niche conservatism promotes speciation in cycads: the case of Dioon merolae (Zamiaceae) in Mexico	JOSE FULGENCIO MARTINEZ RODRIGUEZ FRANCISCO ELIZANDRO MOLINA FREANER ANTONIO HERNANDEZ LOPEZ et al.	NEW PHYTOLOGIST	2020
30	Barriers for plant establishment in the abandoned tailings of Nacozari, Sonora, Mexico: the influence of compost addition on seedling performance and tailing properties	MARIA DEL ROCIO CRUZ ORTEGA DIANA MARIA MEZA FIGUEROA RENE LOREDO PORTALES et al.	ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH	2020
31	Tracking host trees: The phylogeography of endemic psittacanthus sonorae (loranthaceae) mistletoe in the sonoran desert	FRANCISCO ELIZANDRO MOLINA FREANER Ornelas J.F. García J.M. et al.	JOURNAL OF HEREDITY	2019
32	Mineralogy and Geochemistry of Rural Road Dust and Nearby Mine Tailings: A Case of Ignored Pollution Hazard from an Abandoned Mining Site in Semi-arid Zone	RAFAEL EDUARDO DEL RIO SALAS RENE LOREDO PORTALES FRANCISCO MARTIN ROMERO et al.	Natural Resources Research	2019
33	Documenting a plant invasion: The influence of land use on buffelgrass invasion along roadsides in Sonora, Mexico	JOSE FULGENCIO MARTINEZ RODRIGUEZ FRANCISCO ELIZANDRO MOLINA FREANER Daniel Morales-Romero et al.	JOURNAL OF ARID ENVIRONMENTS	2019
34	Environmental assessment and historic erosion calculation of abandoned mine tailings from a semi-arid zone of northwestern Mexico: insights from geochemistry and unmanned aerial vehicles	RAFAEL EDUARDO DEL RIO SALAS HECTOR MENDIVIL QUIJADA FRANCISCO ELIZANDRO MOLINA FREANER et al.	ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH	2019

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35	Aridification as a driver of biodiversity: A case study for the cycad genus <i>Dioon</i> (Zamiaceae)	JOSE FULGENCIO MARTINEZ RODRIGUEZ FRANCISCO ELIZANDRO MOLINA FREANER Gutiérrez-Ortega J.S. et al.	ANNALS OF BOTANY	2018
36	The phylogeography of the cycad genus <i>Dioon</i> (Zamiaceae) clarifies its Cenozoic expansion and diversification in the Mexican transition zone	JOSE FULGENCIO MARTINEZ RODRIGUEZ FRANCISCO ELIZANDRO MOLINA FREANER Jose Said Gutierrez-Ortega et al.	ANNALS OF BOTANY	2018
37	The role of hybridization during ecological divergence of southwestern white pine (<i>Pinus strobiformis</i>) and limber pine (<i>P. flexilis</i>)	FRANCISCO ELIZANDRO MOLINA FREANER LLUVIA HILDA FLORES RENTERIA Menon M. et al.	MOLECULAR ECOLOGY	2018
38	Different patterns of colonization of <i>Oxalis alpina</i> in the Sky Islands of the Sonoran desert via pollen and seed flow	JESSICA PEREZ ALQUICIRA CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA FRANCISCO ELIZANDRO MOLINA FREANER et al.	ECOLOGY AND EVOLUTION	2018
39	Reproductive ecology of <i>Agave colorata</i> : the importance of nectar-feeding bats and the germination consequences of self-pollination	CLARA LEONOR TINOCO OJANGUREN MARIA IVONNE REYES ORTEGA FRANCISCO ELIZANDRO MOLINA FREANER et al.	PLANT ECOLOGY	2018
40	Species definition of <i>Dioon sonorensis</i> (Zamiaceae, Cycadales), and description of <i>D. vovidesii</i> , a new cycad species from northwestern Mexico	JOSE FULGENCIO MARTINEZ RODRIGUEZ FRANCISCO ELIZANDRO MOLINA FREANER Gutiérrez-Ortega J.S. et al.	Phytotaxa	2018
41	Considering evolutionary processes in cycad conservation: identification of evolutionarily significant units within <i>Dioon sonorensis</i> (Zamiaceae) in northwestern Mexico	JOSE FULGENCIO MARTINEZ RODRIGUEZ FRANCISCO ELIZANDRO MOLINA FREANER Jose Said Gutierrez-Ortega et al.	CONSERVATION GENETICS	2018
42	Plants from the abandoned Nacozari mine tailings: evaluation of their phytostabilization potential	MARIA DEL ROCIO CRUZ ORTEGA LUIS DAVID ALCARAZ PERAZA FRANCISCO ELIZANDRO MOLINA FREANER et al.	PEERJ	2017
43	Germination requirements and the influence of buffelgrass invasion on a population of <i>Mammillaria grahamii</i> in the Sonoran Desert	CLARA LEONOR TINOCO OJANGUREN MARIA ESTHER SANCHEZ CORONADO FRANCISCO ELIZANDRO MOLINA FREANER et al.	JOURNAL OF ARID ENVIRONMENTS	2017
44	Genetic Diversity of the Chloroplast (TrnI-F) Region Among Populations of <i>Pholisma culiacanum</i> Y.	FRANCISCO ELIZANDRO MOLINA FREANER Omer Linares-Holguin, O. Sanchez-Pena, Pedro	Agrociencia	2016
45	Unique haplotypes of cacao trees as revealed by trnH-psbA chloroplast DNA	FRANCISCO ELIZANDRO MOLINA FREANER Gutierrez-Lopez, Nidia Ovando-Medina, Isidro et al.	PEERJ	2016

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46	Germination of an invasive <i>Cenchrus ciliaris</i> L. (buffel grass) population of the Sonoran Desert under various environmental conditions	CLARA LEONOR TINOCO OJANGUREN MARIA IVONNE REYES ORTEGA MARIA ESTHER SANCHEZ CORONADO et al.	SOUTH AFRICAN JOURNAL OF BOTANY	2016
47	Conversion of thornscrub to buffelgrass pasture in northwestern Mexico: Microclimatic consequences	FRANCISCO ELIZANDRO MOLINA FREANER Morales-Romero, Daniel	JOURNAL OF ARID ENVIRONMENTS	2016
48	Variation in heterostylous breeding systems in neighbouring populations of <i>Oxalis alpina</i> (Oxalidaceae)	CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA JUAN ENRIQUE FORNONI AGNELLI FRANCISCO ELIZANDRO MOLINA FREANER et al.	Plant Biology	2016
49	Classification of cacao beans (<i>Theobroma cacao</i> L.) of southern Mexico based on chemometric analysis with multivariate approach	Alfredo VazquezOvando FRANCISCO ELIZANDRO MOLINA FREANER JUAN SERVANDO NUÑEZ FARFAN et al.	EUROPEAN FOOD RESEARCH AND TECHNOLOGY	2015
50	Genetic basis of tristyl in tetraploid <i>Oxalis alpina</i> (Oxalidaceae)	CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA FRANCISCO ELIZANDRO MOLINA FREANER Weller, Stephen G. et al.	BOTANICAL JOURNAL OF THE LINNEAN SOCIETY	2015
51	Soil carbon, nitrogen and phosphorus changes from conversion of thornscrub to buffelgrass pasture in northwestern Mexico	Daniel MoralesRomero HOMERO JULIO EUDES CAMPO ALVES HECTOR OCTAVIO GODINEZ ALVAREZ et al.	AGRICULTURE ECOSYSTEMS & ENVIRONMENT	2015
52	Orientation of flowers from two northern populations of <i>Pachycereus pecten-aboriginum</i> (Cactaceae)	FRANCISCO ELIZANDRO MOLINA FREANER Aguilar-Gastelum I.	Botanical Sciences	2015
53	Conservation genetics of an endangered cycad, <i>Dioon sonorense</i> (Zamiaceae): Implications from variation of chloroplast DNA	FRANCISCO ELIZANDRO MOLINA FREANER Gutiérrez-Ortega J.S. Kajita T.	Botanical Sciences	2014
54	Genetic identification of theobroma cacao L. Trees with high Criollo ancestry in Soconusco, Chiapas, Mexico	J. A. Vazquez Ovando FRANCISCO ELIZANDRO MOLINA FREANER JUAN SERVANDO NUÑEZ FARFAN et al.	GENETICS AND MOLECULAR RESEARCH	2014
55	A comparative study of the reproductive traits and floral morphology of a genus of geophytic cacti	CONCEPCION MARTINEZ PERALTA FRANCISCO ELIZANDRO MOLINA FREANER ALEJANDRA VAZQUEZ LOBO YUREN et al.	INTERNATIONAL JOURNAL OF PLANT SCIENCES	2014
56	Sexual stability in the nearly dioecious <i>Pinus johannis</i> (Pinaceae)	Lluvia Flores Renteria FRANCISCO ELIZANDRO MOLINA FREANER CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA et al.	AMERICAN JOURNAL OF BOTANY	2013

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57	THE ROLE OF INBREEDING DEPRESSION AND MATING SYSTEM IN THE EVOLUTION OF HETEROSTYLY	CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA FRANCISCO ELIZANDRO MOLINA FREANER JUAN ENRIQUE FORNONI AGNELLI et al.	Evolution	2013
58	Hierarchical effects of rainfall, nurse plants, granivory and seed banks on cactus recruitment	FRANCISCO ELIZANDRO MOLINA FREANER Holland, J. Nathaniel	JOURNAL OF VEGETATION SCIENCE	2013
59	Species diversity and regeneration of native species in Pennisetum ciliare (buffelgrass) pastures from the thornscrub of Sonora, México	CLARA LEONOR TINOCO OJANGUREN Anabel Diaz JOSE FULGENCIO MARTINEZ RODRIGUEZ et al.	JOURNAL OF ARID ENVIRONMENTS	2013
60	Genetic, morphological, geographical and ecological approaches reveal phylogenetic relationships in complex groups, an example of recently diverged pinyon pine species (Subsection Cembroides)	Lluvia Flores Renteria ANA LAURA WEGIER BRIUOLO Diego Ortega Del Vecchyo et al.	MOLECULAR PHYLOGENETICS AND EVOLUTION	2013
61	Effects of land conversion on the regeneration of Pachycereus pecten-aboriginum and its consequences on the population dynamics in northwestern Mexico	D. Morales Romero HOMERO JULIO EUDES CAMPO ALVES FRANCISCO ELIZANDRO MOLINA FREANER et al.	JOURNAL OF ARID ENVIRONMENTS	2012
62	Changes in reciprocal herkogamy during the tristylly-distylly transition in Oxalis alpina increase efficiency in pollen transfer	F. Baena Diaz JUAN ENRIQUE FORNONI AGNELLI PAULA SOSENSKI CORREA et al.	JOURNAL OF EVOLUTIONARY BIOLOGY	2012
63	PURGING OF INBREEDING DEPRESSION WITHIN A POPULATION OF OXALIS ALPINA (OXALIDACEAE)	CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA FRANCISCO ELIZANDRO MOLINA FREANER Weber, Jennifer J. et al.	AMERICAN JOURNAL OF BOTANY	2012
64	FEMALE AND MALE MEDIATION OF INCOMPATIBILITY MODIFICATIONS DURING THE TRISTYLY-DISTYLY TRANSITION IN OXALIS ALPINA	CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA FRANCISCO ELIZANDRO MOLINA FREANER PAULA SOSENSKI CORREA et al.	INTERNATIONAL JOURNAL OF PLANT SCIENCES	2011
65	Changes in sexual organ reciprocity and phenotypic floral integration during the tristylly-distylly transition in Oxalis alpina	PAULA SOSENSKI CORREA JUAN ENRIQUE FORNONI AGNELLI FRANCISCO ELIZANDRO MOLINA FREANER et al.	NEW PHYTOLOGIST	2010
66	The role of historical factors and natural selection in the evolution of breeding systems of Oxalis alpina in the Sonoran desert 'Sky Islands'	JESSICA PEREZ ALQUICIRA FRANCISCO ELIZANDRO MOLINA FREANER DANIEL IGNACIO PIÑERO DALMAU et al.	JOURNAL OF EVOLUTIONARY BIOLOGY	2010

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67	Consequences of Buffelgrass Pasture Development for Primary Productivity, Perennial Plant Richness, and Vegetation Structure in the Drylands of Sonora, Mexico	FRANCISCO ELIZANDRO MOLINA FREANER Franklin, Kimberly	Conservation Biology	2010
68	Genotypic diversity among pasture and roadside populations of the invasive buffelgrass (<i>Pennisetum ciliare</i> L. Link) in north-western Mexico	R. Gutierrez Ozuna LUIS ENRIQUE EGUIARTE FRUNS FRANCISCO ELIZANDRO MOLINA FREANER	JOURNAL OF ARID ENVIRONMENTS	2009
69	Using phylogenetic, genetic and demographic evidence for setting conservation priorities for Mexican rare pines	Luis Enrique Eguarte FRANCISCO ELIZANDRO MOLINA FREANER MARIA ELENA ALVAREZ BUYLLA ROCES et al.	BIODIVERSITY AND CONSERVATION	2008
70	Influence of buffelgrass pasture conversion on the regeneration and reproduction of the columnar cactus, <i>Pachycereus pecten-aboriginum</i> , in northwestern Mexico	D. Morales Romero FRANCISCO ELIZANDRO MOLINA FREANER	JOURNAL OF ARID ENVIRONMENTS	2008
71	The genetic consequences of evolving two sexes: the genetic structure of distylous and dioecious species of <i>Erythroxylum</i>	Cesar A. Abarca Angelica Martinez Bauer FRANCISCO ELIZANDRO MOLINA FREANER et al.	EVOLUTIONARY ECOLOGY RESEARCH	2008
72	Variation in sex ratio, morph-specific reproductive ecology and an experimental test of frequency-dependence in the gynodioecious <i>Kallstroemia grandiflora</i> (Zygophyllaceae)	ELVIS YANE CUEVAS MARTINEZ FRANCISCO ELIZANDRO MOLINA FREANER Parker, I. M.	JOURNAL OF EVOLUTIONARY BIOLOGY	2008
73	Weed population dynamics in a rain-fed maize field from the valley of México	FRANCISCO ELIZANDRO MOLINA FREANER FRANCISCO JAVIER ESPINOSA GARCIA JOSE ARISTEO SARU-KHAN KERMEZ	Agrociencia	2008
74	The evolution of distyly from tristily in populations of <i>Oxalis alpina</i> (Oxalidaceae) in the Sky Islands of the Sonoran Desert	CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA FRANCISCO ELIZANDRO MOLINA FREANER JUAN ENRIQUE FORNONI AGNELLI et al.	AMERICAN JOURNAL OF BOTANY	2007
75	Resource availability, population dynamics and diet of the nectar-feeding bat <i>Leptonycteris curasoae</i> in Guaymas, Sonora, Mexico	FRANCISCO ELIZANDRO MOLINA FREANER Peñalba M.C. Rodríguez L.L.	BIODIVERSITY AND CONSERVATION	2006

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76	Patterns of abundance and population structure of <i>Pachycereus pringlei</i> (Cactaceae), a columnar cactus of the Sonoran Desert	FRANCISCO ELIZANDRO MOLINA FREANER Medel-Narvaez A. Luis Leon De La Luz J. et al.	PLANT ECOLOGY	2006
77	Buffelgrass (<i>Pennisetum ciliare</i>) land conversion and productivity in the plains of Sonora, Mexico	FRANCISCO ELIZANDRO MOLINA FREANER Franklin K.A. Lyons K. et al.	BIOLOGICAL CONSERVATION	2006
78	Reproductive consequences of clonal growth in <i>Stenocereus eruca</i> , a rare clonal cactus of the Sonoran desert	MARIA DEL CARMEN MANDUJANO SANCHEZ FRANCISCO ELIZANDRO MOLINA FREANER Ricardo C.T. et al.	EVOLUTIONARY ECOLOGY	2006
79	The genetic structure of the gynodioecious <i>Kallstroemia grandiflora</i> (Zygophyllaceae): The role of male sterility and colonization history	CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA FRANCISCO ELIZANDRO MOLINA FREANER Cuevas E. et al.	Heredity	2006
80	Clonal diversity and distribution in <i>Stenocereus eruca</i> (Cactaceae), a narrow endemic cactus of the Sonoran Desert	LUIS ENRIQUE EGUIARTE FRUNS FRANCISCO ELIZANDRO MOLINA FREANER Clark-Tapia R. et al.	AMERICAN JOURNAL OF BOTANY	2005
81	How important is clonal recruitment for population maintenance in rare plant species?: The case of the narrow endemic cactus, <i>Stenocereus eruca</i> , in Baja California, México	MARIA DEL CARMEN MANDUJANO SANCHEZ MARIA TERESA VALVERDE VALDES ANA ELENA MENDOZA OCHOA et al.	BIOLOGICAL CONSERVATION	2005
82	Clonal diversity and allelic relationships between two closely related species of columnar cacti from the sonoran desert: <i>Stenocereus eruca</i> and <i>Stenocereus gummosus</i>	FRANCISCO ELIZANDRO MOLINA FREANER Clark-Tapia R.	INTERNATIONAL JOURNAL OF PLANT SCIENCES	2005
83	Local genetic differentiation among populations of the mass-flowering tropical shrub <i>Erythroxylum havanense</i> (Erythroxylaceae)	CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA LUIS ENRIQUE EGUIARTE FRUNS FRANCISCO ELIZANDRO MOLINA FREANER et al.	NEW PHYTOLOGIST	2005
84	Evidence of gynodioecy in <i>Kallstroemia grandiflora</i> (Zygophyllaceae): Microsporogenesis in hermaphrodite and female plants and lack of reproductive compensation	GUADALUPE JUDITH MARQUEZ GUZMAN CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA FRANCISCO ELIZANDRO MOLINA FREANER et al.	INTERNATIONAL JOURNAL OF PLANT SCIENCES	2005
85	Patterns of male sterility within and among populations of the distylous shrub <i>Erythroxylum havanense</i> (erythroxylaceae)	FRANCISCO ELIZANDRO MOLINA FREANER LUIS ENRIQUE EGUIARTE FRUNS CESAR AUGUSTO DOMINGUEZ PEREZ TEJADA et al.	PLANT ECOLOGY	2005

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86	Geographic differentiation in the pollination system of the columnar cactus <i>Pachycereus pecten-aboriginum</i>	ALFONSO VALIENTE BANUET FRANCISCO ELIZANDRO MOLINA FREANER ALFONSO FELIX TORRES ROQUEÑI et al.	AMERICAN JOURNAL OF BOTANY	2004
87	Vine species diversity across environmental gradients in northwestern México	FRANCISCO ELIZANDRO MOLINA FREANER CLARA LEONOR TINOCO OJANGUREN Castillo Gámez R. et al.	BIODIVERSITY AND CONSERVATION	2004
88	Pollination biology of the columnar cactus <i>Pachycereus pecten-aboriginum</i> in north-western México	FRANCISCO ELIZANDRO MOLINA FREANER ALFONSO VALIENTE BANUET Rojas-Martínez A. et al.	JOURNAL OF ARID ENVIRONMENTS	2004
89	Reproductive ecology of the rare clonal cactus <i>Stenocereus eruca</i> in the Sonoran desert	FRANCISCO ELIZANDRO MOLINA FREANER Clark-Tapia R.	PLANT SYSTEMATICS AND EVOLUTION	2004
90	Genetic differentiation in the Agave deserti (Agavaceae) complex of the Sonoran desert	FRANCISCO ELIZANDRO MOLINA FREANER LUIS ENRIQUE EGUIARTE FRUNS Navarro-Quezada A. et al.	Heredity	2003
91	The genetic structure of a columnar cactus with a disjunct distribution: <i>Stenocereus gummosus</i> in the Sonoran desert	FRANCISCO ELIZANDRO MOLINA FREANER Clark-Tapia R.	Heredity	2003
92	On the mechanical properties of the rare endemic cactus <i>Stenocereus eruca</i> and the related species <i>S. gummosus</i>	FRANCISCO ELIZANDRO MOLINA FREANER CLARA LEONOR TINOCO OJANGUREN Niklas K.J. et al.	AMERICAN JOURNAL OF BOTANY	2003
93	The pollination biology of two paniculate agaves (Agavaceae) from northwestern Mexico: Contrasting roles of bats as pollinators	FRANCISCO ELIZANDRO MOLINA FREANER LUIS ENRIQUE EGUIARTE FRUNS	AMERICAN JOURNAL OF BOTANY	2003
94	Does the pollinator abundance hypothesis explain geographic variation in the breeding system of <i>Pachycereus pringlei</i> ?	FRANCISCO ELIZANDRO MOLINA FREANER MAURICIO PABLO CERVANTES SALAS Morales-Romero D. et al.	INTERNATIONAL JOURNAL OF PLANT SCIENCES	2003
95	The biomechanics of <i>Pachycereus pringlei</i> root systems	FRANCISCO ELIZANDRO MOLINA FREANER CLARA LEONOR TINOCO OJANGUREN Niklas K.J. et al.	AMERICAN JOURNAL OF BOTANY	2002
96	Comparative genetic structure in pines: Evolutionary and conservation consequences	ANA ELENA ESCALANTE HERNANDEZ FRANCISCO ELIZANDRO MOLINA FREANER DANIEL IGNACIO PIÑERO DALMAU et al.	Revista Chilena De Historia Natural	2002
97	Do rare pines need different conservation strategies? Evidence from three Mexican species	FRANCISCO ELIZANDRO MOLINA FREANER DANIEL IGNACIO PIÑERO DALMAU NIDIA PEREZ NASSER et al.	CAN J BOT	2001

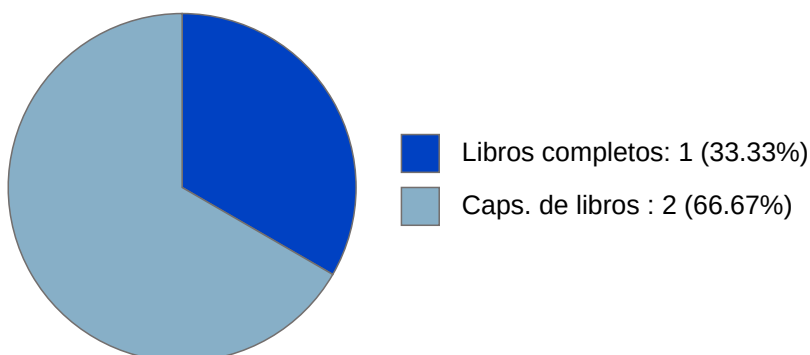
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98	Proximate composition, protein quality and oil composition in seeds of columnar cacti from the Sonoran desert	FRANCISCO ELIZANDRO MOLINA FREANER Ortega-Nieblas M. Robles-Burguenño M.D.R. et al.	JOURNAL OF FOOD COMPOSITION AND ANALYSIS	2001
99	Flower orientation in Pachycereus pringlei	CLARA LEONOR TINOCO OJANGUREN FRANCISCO ELIZANDRO MOLINA FREANER	CAN J BOT	2000
100	Wood biomechanics and anatomy of Pachycereus pringlei	FRANCISCO ELIZANDRO MOLINA FREANER CLARA LEONOR TINOCO OJANGUREN Niklas K.J. et al.	AMERICAN JOURNAL OF BOTANY	2000
101	Biomechanics of the columnar cactus Pachycereus pringlei	FRANCISCO ELIZANDRO MOLINA FREANER CLARA LEONOR TINOCO OJANGUREN Niklas K.J.	AMERICAN JOURNAL OF BOTANY	1999
102	Microenvironmental heterogeneity and space utilization by desert vines within their host trees	CLARA LEONOR TINOCO OJANGUREN FRANCISCO ELIZANDRO MOLINA FREANER Castellanos A.E.	ANNALS OF BOTANY	1999
103	Stem biomechanics of three columnar cacti from the Sonoran Desert	FRANCISCO ELIZANDRO MOLINA FREANER CLARA LEONOR TINOCO OJANGUREN Niklas K.J.	AMERICAN JOURNAL OF BOTANY	1998
104	Vines of a desert plant community in Central Sonora, México	FRANCISCO ELIZANDRO MOLINA FREANER CLARA LEONOR TINOCO OJANGUREN	Biotropica	1997
105	Inbreeding effects in a gynodioecious population of the colonizing species Trifolium hirtum All.	FRANCISCO ELIZANDRO MOLINA FREANER Jain S.K.	Evolution	1993
106	Breeding systems of hermaphroditic and gynodioecious populations of the colonizing species Trifolium hirtum All. in California	FRANCISCO ELIZANDRO MOLINA FREANER Jain S.K.	THEORETICAL AND APPLIED GENETICS	1992
107	Inheritance of male sterility in Trifolium hirtum All	FRANCISCO ELIZANDRO MOLINA FREANER Jain S.K.	Genetica	1992
108	Female frequencies and fitness components between sex phenotypes among gynodioecious populations of the colonizing species Trifolium hirtum All. in California	FRANCISCO ELIZANDRO MOLINA FREANER Jain S.K.	Oecologia	1992
109	Isozyme variaton in californian and turkish population of the colonizing species Trifolium hirtum	FRANCISCO ELIZANDRO MOLINA FREANER Jain S.K.	JOURNAL OF HEREDITY	1992

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LIBROS Y CAPITULOS CON ISBN

Obras con registro ISBN

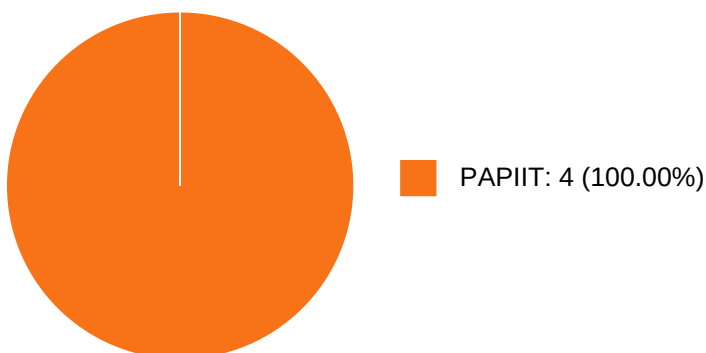


#	Título	Autores	Alcance	Año	ISBN
1	Diversidad biológica de Sonora	FRANCISCO ELIZANDRO MOLINA FREANER	Libro Completo	2010	9786070204272
2	Biodiversidad de las plantas vasculares	FRANCISCO ELIZANDRO MOLINA FREANER	Capítulo de un Libro	2010	9786070204272
3	Diversidad genética de la biota	FRANCISCO ELIZANDRO MOLINA FREANER	Capítulo de un Libro	2010	9786070204272

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PARTICIPACIÓN EN PROYECTOS

Histórico de participación en proyectos

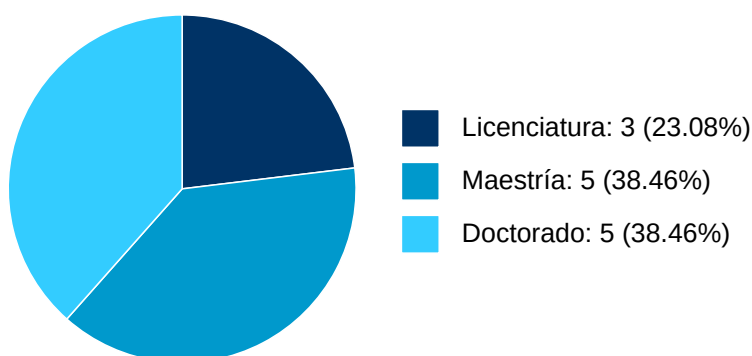


#	Nombre	Participantes	Fuente	Fecha inicio	Fecha fin
1	Evaluación del impacto ambiental de los jales mineros de San Felipe de Jesús, Sonora: propuesta de estrategias de biorremediación	FRANCISCO ELIZANDRO MOLINA FREANER	Recursos PAPIIT	01-01-2018	31-12-2019
2	Diagnóstico de la calidad del suelo en un sitio impactado por residuos de la minería: San Felipe de Jesús, Sonora.	FRANCISCO ELIZANDRO MOLINA FREANER	Recursos PAPIIT	01-01-2020	01-12-2021
3	Análisis espacial del riesgo por metales pesados en un sitio impactado por la minería: San Felipe de Jesús, Sonora	FRANCISCO ELIZANDRO MOLINA FREANER	Recursos PAPIIT	01-01-2022	10-12-2025
4	Evaluación de la lixiviación de Elementos Potencialmente Tóxicos en entornos Mineros de San Felipe de Jesús, Sonora: el papel de los biomateriales en la protección de la zona saturada	FRANCISCO ELIZANDRO MOLINA FREANER	Recursos PAPIIT	01-01-2024	31-12-2025

FRANCISCO ELIZANDRO MOLINA FREANER

PARTICIPACIÓN EN TESIS

Histórico de Colaboraciones en Tesis



#	Título del documento	Tipo de Tesis	Sinodales	Autores	Entidad	Año
1	Evaluación del potencial de cinco especies de plantas en la fitoestabilización de los jales mineros abandonados de San Felipe de Jesús, Sonora	Tesis de Maestría	FRANCISCO ELIZANDRO MOLINA FREANER,	Borbón Palomares, Dalía Berenice,	Instituto de Ecología,	2020
2	Limitantes ecológicas en el establecimiento de plantas en los jales abandonados de Nacozari, Sonora	Tesis de Maestría	FRANCISCO ELIZANDRO MOLINA FREANER,	Arvizu Valenzuela, Laura Verónica,	Instituto de Ecología,	2018
3	Relaciones entre marcadores moleculares y las características de calidad de grano de theobroma cacao l. cv. criollo cultivado en el Soconusco, Chiapas	Tesis de Doctorado	FRANCISCO ELIZANDRO MOLINA FREANER,	JUAN SERVANDO NUÑEZ FARFAN, Vázquez Ovando, José Alfredo,	Facultad de Ciencias, Instituto de Ecología,	2015

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4	Flujo génico e hibridación de poblaciones de sauromalus (iguanae) en Isla Alcatraz, Sonora, México	Tesis de Maestría	FRANCISCO ELIZANDRO MOLINA FREANER,	JUAN SERVANDO NUÑEZ FARFAN, VICTOR HUGO REYNOSO ROSALES, et al.	Facultad de Ciencias, Instituto de Biología, Instituto de Ecología,	2015
5	Influencia de la conversión de matorral a pradera de buffel en el suelo y la demografía de una cactácea columnar del noroeste de México	Tesis de Doctorado	FRANCISCO ELIZANDRO MOLINA FREANER,	Morales Romero, Daniel,	Instituto de Ecología,	2013
6	Efecto de la estructura clonal sobre la dinámica poblacional y la reproducción de Opuntia microdasys	Tesis de Doctorado	MARIA DEL CARMEN MANDUJANO SANCHEZ,	FRANCISCO ELIZANDRO MOLINA FREANER, MARIA TERESA VALVERDE VALDES, et al.	Facultad de Ciencias, Instituto de Ecología,	2011
7	El efecto de la conversión de matorral a praderas de buffel en la reproducción y regeneración de la cactácea columnar Pachycereus pecten-aboriginum (Engelm) Britton & Rose	Tesis de Maestría	FRANCISCO ELIZANDRO MOLINA FREANER,	Morales Romero, Daniel,		2006
8	Esterilidad masculina en Kallstroemia grandiflora y sus consecuencias en componentes reproductivos y en la estructura genética	Tesis de Doctorado	FRANCISCO ELIZANDRO MOLINA FREANER,	Cuevas García, Eduardo,		2005

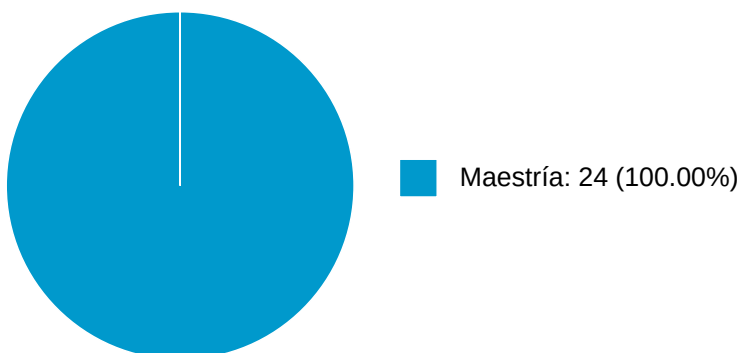
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9	Estructura clonal, demografía y biología reproductiva de <i>stenocereus eruca</i> (Cactacea) en las planicies de Magdalena, B.C.S.	Tesis de Doctorado	FRANCISCO ELIZANDRO MOLINA FREANER,	Clark Tapia, Ricardo,	2004
10	Biología reproductiva de la cactacea <i>Pachycereus pringlei</i> (una planta trioica del desierto sonorense) en cuatro poblaciones con frecuencias contrastantes de sexos	Tesis de Licenciatura	FRANCISCO ELIZANDRO MOLINA FREANER,	Cervantes Salas, Mauricio Pablo,	2001
11	Estructura genetica de dos cactaceas columnares del desierto sonorense : <i>Stenocereus Gummosus</i> y <i>S. eruca</i> (Cactaceae)	Tesis de Maestría	FRANCISCO ELIZANDRO MOLINA FREANER,	Clark Tapia, Ricardo,	2000
12	Impacto de la formacion de la Peninsula de Baja California sobre la estructura genetica de <i>Bursera hindsiana</i>	Tesis de Licenciatura	FRANCISCO ELIZANDRO MOLINA FREANER,	JUAN SERVANDO NUÑEZ FARFAN, Vargas García, Jesus,	2000
13	Consecuencias geneticas y evolutivas del surgimiento del Golfo de California en poblaciones de <i>Bursera microphylla</i> (Burseraceae) en el desierto sonorense	Tesis de Licenciatura	FRANCISCO ELIZANDRO MOLINA FREANER,	JUAN SERVANDO NUÑEZ FARFAN, Hernandez López, Antonio,	1999

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DOCENCIA IMPARTIDA

Histórico de docencia



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Maestría	ACTIVIDAD ACADÉMICA PARA LA OBTENCIÓN DEL GRADO	Instituto de Geología	1	2020-1
2	Maestría	TRABAJO DE INVESTIGACIÓN I	Facultad de Ciencias	1	2020-1
3	Maestría	SEMINARIO DE INVESTIGACIÓN	Instituto de Geología	1	2019-2
4	Maestría	TEMA SELECTO DE GEOLOGIA, RECURSOS NATURALES Y MEDIO AMBIENTE	Instituto de Geología	2	2018-2
5	Maestría	TEMA SELECTO DE GEOLOGÍA, TÉCNICAS DE REMEDIACIÓN SOSTENIBLES PARA LA REMOCIÓN DE METALES PESADOS	Instituto de Geología	2	2018-2
6	Maestría	TRABAJO DE INVESTIGACIÓN IV	Facultad de Ciencias	1	2017-2
7	Maestría	TRABAJO DE INVESTIGACIÓN IV	Facultad de Ciencias	1	2017-2
8	Maestría	ACTIVIDAD ACADÉMICA PARA LA OBTENCIÓN DEL GRADO	Instituto de Geología	1	2017-2
9	Maestría	SEMINARIO DE INVESTIGACION-394095	Instituto de Geología	1	2017-1
10	Maestría	ACTIVIDAD ACADEMICA PARA LA OBTENCION DEL GRADO-394127	Instituto de Geología	1	2017-1
11	Maestría	TRABAJO DE INVESTIGACION III-393886	Facultad de Ciencias	1	2017-1
12	Maestría	TRABAJO DE INVESTIGACION III-393986	Facultad de Ciencias	1	2017-1
13	Maestría	TRABAJO DE INVESTIGACION II	Facultad de Ciencias	1	2016-2
14	Maestría	TRABAJO DE INVESTIGACION II	Facultad de Ciencias	1	2016-2
15	Maestría	SEMINARIO DE INVESTIGACION	Instituto de Geología	1	2016-2
16	Maestría	TEMA SELECTO DE CIENCIAS AMBIENTALES Y RIESGO	Instituto de Geología	2	2016-2
17	Maestría	TEMA SELECTO DE GEOLOGIA	Instituto de Geología	3	2016-1

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18	Maestría	TRABAJO DE INVESTIGACION I	Facultad de Ciencias	1	2016-1
19	Maestría	TRABAJO DE INVESTIGACION I	Facultad de Ciencias	1	2016-1
20	Maestría	TEMA SELECTO DE GEOLOGIA	Instituto de Geología	4	2015-2
21	Maestría	SEMINARIO DE INVESTIGACION	Instituto de Geología	1	2014-2
22	Maestría	ACTIVIDAD ACADEMICA PARA LA OBTENCION DEL GRADO	Instituto de Geología	1	2014-2
23	Maestría	TEMA SELECTO DE GEOLOGIA	Instituto de Geología	1	2013-2
24	Maestría	TEMA SELECTO DE GEOLOGIA	Instituto de Geología	1	2013-1



Sistema Integral de Información Académica
Coordinación de Planeación, Evaluación y
Simplificación de la Gestión Institucional
Reporte individual



FRANCISCO ELIZANDRO MOLINA FREANER

PATENTES

No se encuentran registros en la base de datos de patentes asociados a:

FRANCISCO ELIZANDRO MOLINA FREANER

FRANCISCO ELIZANDRO MOLINA FREANER

FUENTES DE INFORMACIÓN

Internos

#	Información	Fuente	Sistema	Periodo
1	Grupos ordinarios y resumen de historias académicas	DGAE	SIAE	2008-2025
2	Nombramientos, datos generales, estímulos, premios y reconocimientos	DGAPA	RUPA	2008-2025
3	Producción Académica	CH	Humanindex	2008-2021
4	Producción Académica	CIC	SCIC	2000-2017
5	Proyectos	DGPO	SISEPRO	2018-2022
6	Tesis	DGB	TESIUNAM	2008-2025
7	Tutorías en Posgrado	CGEP	SIIPosgrado	2008-2021

Externos

#	Información	Fuente	Sistema	Periodo
8	Documentos Indexados	Elsevier	Scopus	2008-2025
9	Documentos Indexados	Thomson Reuters	WoS	2008-2025
10	Obras con registro ISBN	INDAUTOR	Agencia ISBN	2008-2025
11	Patentes	IMPI	SIGA	2008-2024