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| --- | --- | --- | --- | --- |
| Name | Last Name | Title | Organization | Abbreviation |
| Dr. Javier | Álvarez | Director | Center for Global Change and Sustainability | CCGS |
| Dr. Carlos | Amador | Director | College of Chemistry | FQ |
| Dr. Concepción | Arenas | Director | National Institute for Higher Education - León | ENES-León |
| Dr. Thierry | Calmus | Director | Northwest Research Station and Institute of Geology | ERNO |
| Dr. Xavier | Chiappa Carrara | Director | National Institute for Higher Education- Mérida | ENES-Mérida |
| Dra. Ana | Escalante | Director | Institute of Ecology | IE |
| Dr. Alejandro | Frank | Researcher Emeritus | Center for the Study of Complexity | C3 |
| Dr. Carola | García Calderón | Director | College of Political and Social Sciences | FCPyS |
| Dr. José Ángel | Gutiérrez Pabello | Secretary for Outreach and Special Projects | College of Veterinary Medicine and Animal Science | FMVZ |
| Dr. Susana | Magallón | Director | Institute of Biology | IB |
| Dr. Fabio | Manzini | Researcher | Institute for Renewable Energy | IER |
| Dr. Ramsés | Mena | Director | Institute for Research in Applied Mathematics and Systems | IIMAS |
| Dr. Cecilia | Noguez | Past Dean | Institute of Physics | IF |
| Dr. Beatriz | Ortega | Director | National School for Earth Sciences | ENCiT |
| Dr. Blanca | Prado | Coordinator | University Program for Interdisciplinary Studies of Soils | PUEIS |
| Dr. Marina | Rincón | Director | Institute of Renewable Energy | IER |
| Dr. Francisco | Suárez Güemes | Director | College of Veterinary Medicine and Animal Science | FMVZ |

**Delegation from the National Autonomous University of Mexico (UNAM)**

**02-06 October 2023**

Agenda:

**Monday, 02 October:**

~Arrival and check-in at Marriott University Park Hotel, 880 E. 2nd St., Tucson, AZ 85719

18:00 Informal Welcome at No Anchovies, 870 E University Blvd, Tucson, AZ 85719

**Tuesday, 03 October:**

08:00 Breakfast at hotel

09:00 **Briefing and Program Overview for UNAM Delegation**

University Services Building, 312

10:30 **Formal Welcome and Presentations with University of Arizona Leadership**

-*Student Union Memorial Center, Kachina Lounge*

Program:

Dr. Ronald W. Marx, Interim Senior Vice President and Provost

Dr. Elliott Cheu, Interim Senior Vice President of Research and Innovation

Dr. Jenny Lee, Vice President for Arizona International and Dean of International Education

Mr. Rafael Barceló Durazo, Consul of Mexico, Tucson

Dr. Catalina Stern, Director, UNAM Center for Mexican Studies – Tucson

Dr. Carmala Garzione, Dean, College of Science

Dr. Jon Chorover, Interim Vice President for Research, Agriculture, Life and Veterinary Sciences, and Cooperative Extension

Dr. Lori Poloni-Staudinger, Dean, College of Social and Behavioral Sciences

Dr. Liz Petterson, Associate Director, Arizona Institute for Resilience

Dr. Joaquín Ruíz, Vice President for Global Environmental Futures and Director of Biosphere 2

12:00 **Lunch and Open Dialogue**

-*Student Union Memorial Center, Kachina Lounge*

13:00 **Working Session and Structured Dialogue with Associate Deans of Research and Counterparts**

-*Student Union Memorial Center, Kachina Lounge*

UNAM delegates will form three groups and rotate to meetings with researchers from the Colleges of Social and Behavioral Sciences; Science; and Agriculture, Life and Environmental Sciences (45 minutes for each meeting followed by a 10 minute break.)

A) College of Social and Behavioral Sciences: Dr. Jane Zavisca, Associate Dean, Research and Graduate Studies and Invited Researchers from College of SBS

B) College of Agriculture, Life, and Environmental Sciences: Dr. Jon Chorover, Interim Vice President for Research and Invited Researchers from CALES

C) College of Science: Dr. Daniel Apai, Interim Associate Dean for Research, College of Science, and Invited Researchers from College of Science

18:00 **Reception**

Agave House, 943 E. University Boulevard (TBC)

**Wednesday, 04 October:**

07:00 Breakfast at hotel

08:00 Depart hotel for Biosphere 2

09:00 Tour and program at Biosphere 2

12:00 Lunch

13:00 Program at Biosphere 2 resumes

18:00 Dinner at Biosphere 2

19:30 Return to hotel

**Thursday, 05 October:**

08:30 Tour of [Laboratory of Tree-ring Research](https://ltrr.arizona.edu/)

10:30 Tour of [Richard F. Caris Mirror Laboratory](https://mirrorlab.arizona.edu/)

~Afternoon is open for delegates to schedule 1:1 meetings or visit other points of interest.

18:00 Dinner (TBD)

**Friday, 06 October:**

~Departure

Short Bios:

**Dr. Francisco Javier Álvarez Sánchez, Director, Center for Global Change and Sustainability**



Biologist, Master and Doctor of Sciences from the Faculty of Sciences of the National Autonomous University of Mexico. He has been a professor in the Biology and Earth Sciences programs at UNAM, as well as in postgraduate courses, completing 69 courses.

He has served as Research Coordinator and General Coordinator of the Department of Biology, as well as Coordinator of the Department of Ecology and Natural Resources of the Faculty of Sciences of the UNAM. He was treasurer and president of the Botanical Society of Mexico and president of the Mexican Society of Mycorrhizal Symbiosis, also Director of the Biological Research Center of the Autonomous University of the State of Hidalgo, and Secretary of Academic Integration of the Faculty of Sciences of the UNAM. He is a member of the Botanical Society of Mexico, the Mexican Society of Mycorrhizal Symbiosis, the Ecological Society of America and the Mexican Scientific Society of Ecology.

As a result of his research on soil ecology and soil microbiota ecology, mainly in tropical ecosystems, he has published five books, three articles in peer-reviewed journals, 33 articles in indexed journals and 30 book chapters. The results of their work have been presented at 63 international conferences and 145 at national conferences. It is part of the National System of Researchers (SNI), Level I.

**Dr. Concepción Arenas Arrocena, Secretary General, Center for Studies in Higher Education, León**



Master and doctor in Engineering from the Energy Research Center (now Renewable Energy Institute-UNAM). She completed a Bachelor's degree in Chemical Engineering at the Zacatepec Morelos Technological Institute. She was an associate researcher C at the Center for Applied Physics and Advanced Technology, and since 2013 she has been a full-time tenured professor B at the National School of Higher Studies (ENES León-UNAM). She belongs to the National System of Researchers, level II, and is a member of the CONAHCYT Energy Network. She was awarded the Sor Juana Inés de la Cruz recognition. Currently, her line of research is related to the synthesis of nanostructures of non-toxic metal sulfides and oxides for applications in hybrid and organic solar cell devices.

**Dr. Carlos Amador Bedolla, Director, School of Chemistry**

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**Carlos Amador Bedolla** (Mexico City, 1960) is professor of Theoretical Chemistry at the Chemistry School, UNAM. He graduated as a Chemist and received a Doctorate Degree from the same institution. He was a Postdoctoral fellow at the Physics Department of Case Western Reserve University and at the Materials Department of UC Berkeley. He has visited the Chemistry Department at UC Berkeley, Harvard University and Universidad de Oriente (Cuba) during sabbatical leaves. He has served as director of the Chemistry School at UNAM for the period 2019-2023, and currently for a second term for the period 2023-2027. His current scientific research is centered in the quantum chemical prediction of the properties of organic molecules for applications in energy systems, particularly organic photovoltaics and organic flow batteries.

**Dr. Thierry Calmus, Dean of Northwest Regional Research Center**

**A person sitting in a chair

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Researcher, Dean of the ERNO, Instituto de Geología, UNAM, Hermosillo, Sonora.

Ph.D. in Structural Geology, University Pierre and Marie Curie, Paris.

[tcalmus@unam.mx](mailto:tcalmus@unam.mx) [arnithy@gmail.com](mailto:arnithy@gmail.com)

<http://www.erno.geologia.unam.mx/comunidad-igl/thierry-paul-rene-calmus>

ORCID: 0000-0003-4278-9487

Member of the National System of Research in Mexico

Member of the Mexican Academy of Sciences

Professor of the year (Mexican Geophysical Union, 2017)

Research topics:

- Thermochronology and apatite fission track dating and its application to the study of the cooling history and tectonic evolution of Laramide plutonic rocks during the extensional tectonics of the “Basin and Range” and the continental breakup that caused the opening of the Gulf of California.

- Geological studies of northwestern Mexico. Study of the Cretaceous-Eocene Mexican magmatism arc and associated ore deposits; Their evolution during the Basin and Range extension and the Extensional Province of the Gulf of California.

Recent and ongoing projects:

- A multi-elemental study to establish the natural background and geochemical anomalies in rocks from the Sonora River upper basin, NW Mexico. This work was part of the multi-institutional study related to the mining spill of 40,000 thousand cubic meters of acidulated copper sulfate leachate in the upper basin of the Sonora River. - Tectono-magmatic and metallogenetic study of the copper porphyries owned by Grupo México in northwestern Mexico and southern Peru: comparative analysis.

- The fault zone of the Sonoran coast in the Guaymas-San Carlos-Tastiota transect and its role in the Basin and Range–Gulf of California tectonic transition.

- Geo-thermochronology of the copper porphyries of the Cananea district (Sonora, Mexico): emplacement, exhumation and supergene enrichment.

**Dr. Xavier Chiappa Carrara, Director, National Institute for Higher Education - Mérida**

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Xavier Chiappa Carrara has a Ph.d. in Biological Oceanography. He is a full-time Professor and Dean of the the National School of Higher Education (ENES), Mérida, enesmerida.unam.mx , where he teaches both at the undergraduate and graduate levels. He leads several research projects in the field of coastal ecology, which are examples of inter-institutional collaboration at both the national and international levels. The results of his work have been published in more than ninety papers, twenty-one book chapters, and fourteen books, plus dozens of presentations and national and international meetings. He has supervised bachelor’s and master’s theses as well as doctoral dissertations in the universities of Mexico, Spain, and the United States. He belongs to four scientific societies, is a fellow of the Mexican System of Researchers (SNI) and leads one of the academic networks recognized by CONAHCYT, recorecos.unam.mx. For additional details and personal research interests please visit Biocon.unam.mx.

**Dr. Ana E. Escalante, Director, Institute of Ecology**



Born in 1977 in Mexico City, Dr. Ana Elena Escalante Hernández obtained her Bachelor's degree in Biology from the School of Sciences at UNAM (2001) with a research thesis on the genetics of pine populations. She completed her doctorate at the Institute of Ecology, UNAM (2008), with a thesis focused on research into the ecology and evolution of microorganisms in the lagoons of Cuatro Ciénegas (Coahuila). She later completed a postdoctoral stay at the University of Minnesota, USA, approaching the study of the evolution of microorganisms with questions about the evolution of microorganisms. Upon completing her studies at the University of Minnesota, she joined the Ensenada Scientific Research and Higher Education Center (CICESE) in Baja California, Mexico (2011), where she investigated the functional role of microorganism communities in arid soils. Subsequently, in 2012, she was hired as a full-time researcher at the Institute of Ecology, UNAM where she has focused on generating basic information on the link between diversity, functionality and adaptability of ecological systems in the face of environmental disturbances, with emphasis on microorganisms. In 2016 she was appointed head of the National Laboratory of Sustainability Sciences (LANCIS) of the Institute of Ecology, UNAM, where she has also ventured into research on socio-environmental systems and the impact of this research on public policy and decision-making. In 2020, Dr. Escalante was appointed director of the UNAM Institute of Ecology, a position she currently holds.

She has published more than 50 articles in top scientific journals, including PNAS, Renewable and Sustainable Energy Reviews, Frontiers in Microbiology (of which she is an associate editor), Molecular Ecology, FEMS, and Global Ecology and Biogeography. She has received international funding (UC-MexUS, NSF, IAI Global Change Research, Collaborative Research Grant U. of Arizona, Lóreal-UNESCO-AMC, USAID-UNAM-ASU) and local funding (PAPIIT, CONACyT). Her work has been recognized with honors for her bachelor´s degree dissertation and the best average of her cohort, she has been a member of the National System of Researchers (level 2) since 2021, and obtained the L'Oréal-UNESCO-AMC Scholarship for Women in Science in 2012.

**Professor Alejandro Frank Hoeflich, Researcher Emeritus**

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Dr. Frank has focused his research in the areas of Nuclear and Molecular Physics, but his scientific production has covered various other topics, such as his studies of fundamental aspects of Quantum Mechanics, optics and the algebraic theory of scattering. In the last decade he has turned his attention to complexity science, in particular the study of ecological, biological and physiological systems. He is one of the founders and first director of the Center for Complexity Sciences (C3) at UNAM.

He received the Guggenheim Fellowship and the Manuel Noriega Morales Award from the Organization of American States and is a Fellow of the American Physical Society. Among other honors, he received the Mexican Academy of Sciences Award, the National University Award, and the National Science and Arts Award. He is an Emeritus Researcher at UNAM and the National Research System (SNI) and a Member of the National College (EL Colegio Nacional).

**Dr. Carola García Calderón, Director, College of Political and Social Sciences**

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Carola García Calderón has a Bachelor's and Master’s degree in Communication Sciences. She obtained a Ph.D. in Sociology at the Political and Social Sciences Faculty (FCPyS) at UNAM, where currently she is the director.

She studied a specialization in Educational and cultural television at the National Audiovisual Institute in Paris, France. In 2016 she won the UNAM National University Award in social sciences teaching. Dr. García is a fellow of the Mexican System of Researchers (SNI) level II, and full-time Professor “C” of the Communication Studies Center in FCPyS.

Among other publications, her more recent books are: Advertising and Obesity. Myths and Realities; Advertising and Technologies in Times of Obesity; Labeling, Advertising, Technology, and… What about new Consumers?; Eating Habits, Advertising, and Health Policy; How we Gain Weight: Junk Food, Obesity, and Advertising Strategies; and The Power of the Advertising Industry in Mexico

She has focused her research on political communication, gender studies, and advertising.

**Dr. José Ángel Gutiérrez Pabello, Secretary for Outreach and Special Projects, College of Veterinary Medicine and Animal Science**



Dr. Gutiérrez-Pabello is a full-time professor and the Associate Dean for Partnership at the College of Veterinary Medicine of the National University of Mexico. He is the principal investigator of a laboratory conducting research in bovine tuberculosis. His research aims to answer basic questions related to the pathogenesis of bovine tuberculosis. In this host-pathogen interaction, an in vitro model infecting bovine macrophages with *Mycobacterium bovis* is used to interrogate this system in different areas including cell death induction, macrophage gene expression, cytokine production, phagocytosis, bacterial intracellular survival, among others. He is also interested in natural disease resistance of cattle and strategies for bovine tuberculosis control. In the partnership office, he and his team work to look for different interactions with academia, the livestock industry, policy makers, veterinary associations, and several key stakeholders related with environmental sustainability and circular economy in livestock production.

**Dr. Susana Magallón, Director, Institute of Biology**

A person taking a selfie

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Susana Magallón is interested in understanding the evolution of angiosperms, and the structural evolution of flowers. She studied Biology at the National Autonomous University of Mexico, and then obtained a M.Sc. degree from the same University in Plant Biology. She obtained her Ph.D. degree from the Department of Geophysical Sciences at the University of Chicago, and was a postdoctoral visiting scientist at the University of California, Davis. Dr. Magallón combines information from extant and fossil species to investigate the timing of radiation of angiosperms and its major lineages; differential speciation and extinction rates among lineages and through time; the evolution of floral structure and the role of fossils to estimate it; and the relationships of seed plants, especially aimed at identifying angiosperm stem relatives. She is a research scientist and current director of the Institute of Biology of the National Autonomous University of Mexico. She was recently elected to the American Academy of Arts and Sciences, and to the National Academy of Sciences of the U.S.A.

**Dr. Fabio Manzini, Researcher, Institute for Renewable Energy**

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Dr. Fabio Manzini obtained his PhD in Energy Engineering and a Master's degree in Physics of Materials at UNAM and graduated in Physics Engineering at the Metropolitan University. He has developed his career at the Renewable Energy Institute (formerly Solar Energy Laboratory in 1985-UNAM). Since 1997, he has focused on studying and assessing the sustainability of energy projects in their environmental, social, and economic dimensions. His interests have been related mainly to conducting prospective planning for the energy sector at various levels, including national, state, municipal, and project scales, to fight climate change and promote sustainable practices. In 2011, he collaborated with a multidisciplinary academic group to design the new Ministry of Sustainable Development structure in the State of Morelos. In 2012, he served as the Undersecretary of Sustainable Development Planning for two years; in this role, he successfully coordinated the development of Climate Action Plans for all municipalities in Morelos. Also, Dr. Manzini played a key role in overseeing and actively participating in the initiatives that culminated in issuing the Morelos State Program of Action against Climate. He is a tenured researcher at the Renewable Energy Institute (IER) of UNAM in Temixco, Morelos, México. Currently, he is visiting the UoA, performing a sabbatical stay at the Arizona Institute for Resilience, where he is researching a collaborative design of a binational laboratory to foster sustainability of the water-energy-food nexus, including mining resources and territorial ecological planning.

**Dr. Ramses H. Mena, Director, Institute of Research in Applied Mathematics and Systems**

A person in a striped shirt

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Ramsés H. Mena is an Actuary from the Universidad Nacional Autónoma de México (UNAM) and holds a MSc. degree in Mathematical Sciences from the same university. He obtained his degree in Statistics from the University of Bath in the UK in December 2003. Soon after he joined the Research Institute for Applied Mathematics and Systems (IIMAS) at UNAM, where he is currently a Professor in Statistics and serves as its Director since 2020.

His research topics are in Bayesian Statistics, applied Stochastic processes, simulation methods and other disciplines that interact with these. Prof. Mena has over 70 publications, has supervised students at all levels. He was President of the Mexican Statistical Association and since 2022 is an Elected Fellow of the International Society for Bayesian Analysis (ISBA). His scientific work has been awarded by UNAM (RDUNJA-2014), CONAHCyT (SNII-3), the Fulbright García Robles Foundation, the International Centre for Economical Research, and with positions such as the Global Chair Visiting Professor awarded by the University of Bath.

**Dr. Cecilia Noguez, Past Dean, Institute of Physics**

A person in a black dress

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Cecilia Noguez is a physicist from the National Autonomous University of Mexico in 1990 (UNAM), where she also obtained the degrees of master's and doctorate in science. Since 1995, she has been a researcher at the UNAM Institute of Physics, which she directed from 2019–2023. She is a Mexican Academy of Sciences (AMC) member. She has conducted research stays at the Universitá di Roma II, Ohio University, and Northwestern University.

Noguez is a pioneer in the study of nanoparticles, whose results allowed the establishment of new concepts and research lines worldwide, which have been the conceptual basis for designing nanostructures with emerging physical properties. She is the author or co-author of more than one hundred original research writings that have been widely received by the scientific community, reflected in the more than 6,700 citations and more than 200 invited lectures at prestigious conferences, universities, and research centers around the World. She has been the principal investigator for 20 research projects funded by various national and international agencies and participated in another 18 projects.

She has received important recognitions, such as the National Science Prize 2016 from Mexico's Presidency, the National Institute of the Physics of Matter of Italy, the Weizmann Prize, and the Scientific Research Prize from AMC. The Thomson Reuters Award for her outstanding scientific contribution to world literature, among others. In addition, her students have also been awarded on six different occasions.

Noguez has been a regular referee for more than 54 international journals, and she is the regional editor for Latin America of the Journal of Nanoparticle Research. She was also the associate editor of Optical Materials journal and the popular magazine Ciencia of AMC. She has participated in various local, national, and international committees and boards.

**Dr. Beatriz Ortega Guerrero, Director, National School of Earth Sciences**

A person smiling in front of a tree

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Dra. Ortega has a PhD in Geophysics and has focused her research on the analysis of lake sequences as records of environmental and climate change from different perspectives, from environmental magnetism to limnogeology. She has also carried out work in tephrachronology in volcanic fall deposits interbedded in lacustrine sediments in the Basin of Mexico (Central Mexico).

She is currently one of the PIs of the MexiDrill project, funded by ICDP, UNAM, University of Minnesota and other European universities, whose main objective is to analyze the climate recird preserved in a 300 m long lake sequence that covers the last 400,000 years in central Mexico. She is Dean of the National School of Earth Sciences of the UNAM, and was previously a researcher at the Institute of Geophysics, UNAM.

**Dr. Blanca Prado, University Program for Interdisciplinary Studies of Soils**

A person wearing glasses and a blue and white sweater

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Blanca Prado is a senior researcher at the Department of Soil and Environmental Sciences at Geology Institute of the UNAM. She got her PhD from the Joseph Fourier University and a Master of Science from École des Mines de Paris, both in France. Her research interests are urban soils, soil physics and solutes transport in the vadose zone. She currently coordinates the University Program for Interdisciplinary Soil Studies (PUEIS) of the UNAM.

The PUEIS was created in February 2021, to collaborate and join efforts between the different entities and academic groups that study soils directly or indirectly at UNAM. PUEIS’s objective is to study, preserve, and promote the sustainable management of soils, to maintain their essential functions for life on the planet, biodiversity and productivity for people’s well-being. The main challenge of the PUEIS is to place soil as a priority and transversal axis in the agenda for the sustainable development of Mexico; as well as creating collaboration networks between academia, government and society to guarantee sustainable land management and governance. [www.pueis.unam.mx](http://www.pueis.unam.mx)

**Dr. Marina Rincón, Director, Institute for Renewable Energy**

A person smiling at camera

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Marina E. Rincón is a Senior Researcher and Director of the Instituto de Energías Renovables (Renewable Energy Institute) of Universidad Nacional Autónoma de México, and level III in the Researcher National System. She has rounded professional experience in academia and industry. Her research interests include the synthesis and engineering of materials for energy and environmental applications. Her group has pioneered the use of nanocarbon materials and metal oxides as interfacial modifiers, implementing state of the art techniques to study the limiting interfacial phenomena of novel solar cells architectures and energy storage devices. She has been panellist in national and international expert commissions for project evaluations related to engineering, basic science, and energy sustainability.

**Dr. Catalina Stern, Director, UNAM Center for Mexican Studies-Tucson**

A person smiling at the camera

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Dr. Catalina Stern has a degree in Physics from the School of Science of the National University of Mexico, a 3rd cycle doctorate from the University of Paris XI (Orsay) and a PhD from the University of Houston in Fluid Mechanics. She was a professor at the National University of Cote d’Ivoire for 8 years and is currently a full-time professor at the School of Science at UNAM. Her main topics of research have been experimental methods to study different types of flows and more recently in microfluidic applications.

She has served as Secretary General (2010-2017) and Dean of the School of Science (2017-2021) of the School of Science at UNAM and she is now the director of the Center for Mexican Studies (UNAM-Tucson) located at the University of Arizona. Her mission in this new position is to enhance the collaboration between UNAM and UA.

**Dr. Francisco Suárez Güemes, Director, College of Verterinary Medicine and Animal Science**

A person in a suit and tie

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Born in Mexico, D. F., on August 17, 1951., his academic degrees: MVZ (1975), M in C. (1979), PhD. (Microbiology) (1983). He is a Permanent Full-Time Professor “C” at the FMVZ of the UNAM, with academic seniority of 43 years. He is currently Director of the Faculty of Veterinary Medicine and Zootechnics at UNAM. Among other positions, he has served as Coordinator of the Master's and Doctorate Program in Production Sciences and Animal Health at UNAM; President of the National Technical Advisory Council for Animal Health (CONASA), and Secretary of Planning of the FMVZ. He belongs to different associations, of which he presides over the Pan American Association of Veterinary Sciences (PANVET), and the National Council for Education of Veterinary Medicine and Zootechnics (CONEVET). He has supervised more than 100 Theses between Bachelor's, Master's and Doctorate degrees. He has published 84 Scientific Articles in indexed journals with an editorial board, and has obtained resources for research through the approval of 41 national and international projects.