

Curriculum Vitae

IDENTIFICATION

Name: Mario Arturo Alonso-Vanegas
 Date of Birth: December 20, 1961
 Place of Birth: Villa Constitución. Baja California Sur, B.C.S.
 Mexico
 Marital Status: Married
 Home Address: Piñones #30
 Col. Rancho los Colorines
 México City
[e-mail: alonsomario@hotmail.com](mailto:alonsomario@hotmail.com)

Bussiness Address: Centro Internacional de Cirugía de Epilepsia
 División del Norte 3395, piso 7, Consultorio 704
 Colonia El Rosario
 Coyoacán
 04380 Mexico City, Mexico

ORCID: 0000-0002-7327-7014

PROFESSIONAL EDUCATION

1981-82 Undergraduate studies in Basic Sciences at the Medical School, Autonomous University of San Luis Potosi (Universidad Autónoma de San Luis Potosí)
 1983-86 Medical School, Autonomous University of Guadalajara (Universidad Autónoma de Guadalajara (UAG)).
 1987 Internship at the General Hospital of Sonora in Hermosillo
 1988 Medical Social Service at the National Institute of Neurology and Neurosurgery Manuel Velasco Suárez (INNN MVS)
 Research project: Glycerin: Metabolic and Neurological effects of cerebral edema.
 1989 First year residency in General Surgery at the Hospital General de México
 1990-1994 Residency in Neurosurgery at the Hospital Juárez de México
 1994 Certification by the Mexican Board of Neurological Surgery. Examination February 26, 1994.
 Recertification September 29, 1999
 1994-1998 Fellowship in Epilepsy Surgery, Fuctional Neurosurgery and Research. Montreal Neurological Institute, McGill University, Canada

INSTITUTIONAL APPOINTMENTS

Attending Neurosurgeon, Division of Neurosurgery National Institute for Neurology and Neurosurgery (Instituto Nacional de Neurología y Neurocirugía Manuel Velasco Suárez, INNN MVS), Mexico City 1999- 2018

Associated Researcher “C” at the National Institute for Neurology and Neurosurgery appointed by the External Commission of Researcher of the National Health Institutes”. May 1999-April 2001

Nominal Researcher “A” at the National Institute for Neurology and Neurosurgery appointed by the External Commission of Researcher of the National Health Institutes”. April 2001-20017

National Researcher Level 1. National Researchers System, July 1, 1999-June 30, 2002.

National Researcher Level 1. National Researchers System, July 1, 2002-June 30, 2005.

National Researcher Level 1. National Researchers System, January 1, 2009-December 31, 2011

National Researcher Level 1. National Researchers System, January 1, 2012-December 31, 2015.

National Researcher Level 2. National Researchers System, January 1, 2017-December 31, 2020.

National Researcher Level 2. National Researchers System, January 1, 2021-December 31, 2025.

Chief of Biomonitoring Unit, Research Division, National Institute for Neurology and Neurosurgery, October 2002-October 2003

Professor Postgraduate Course in Epilepsy Surgery, National Institute for Neurology and Neurosurgery, Universidad Nacional Autónoma de Mexico UNAM. March 2005-March 2018

CURRENT POSITION

Director, International Center Epilepsy Surgery. Humanitas Medical Group HMG Coyoacán. Mayo 2018-

OTHER ACADEMIC APPOINTMENTS

Member of the scientific Advisory Committee of “Organogel Canada, Ltee.” dedicated to development of polymers and hydrogels for biomedical applications in tissue repair and regeneration. January 1998-October 2001

Member of the Institutional Program for Epilepsy. National Institute of Neurology and Neurosurgery, January 1999-2018

Secretary of the Functional and Stereotactic Neurosurgery Section of the Mexican Society for Neurological Surgery, May 2002-2003

Member of the Clinical File Committee at the National Institute of Neurology and Neurosurgery 1999-2017

Member of the Neuro-Radiosurgery Committee at the National Institute of Neurology and Neurosurgery 2001- 2017

Coordinator of the National Epilepsy Priority Program in its section of “Surgical Treatment of the Epilepsies” 2000-

Coordinator/Chief of the Center for Integral Treatment of Epilepsy at the National Institute of Neurology and Neurosurgery 2000-2017

Vicepresident Mexican Chapter of the International League Against Epilepsy 2014-2015

President Mexican Chapter of the International League Against Epilepsy 2015-2016

Member of the Scientific Committee for the Annual Research Reunion, National Institute of Neurology and Neurosurgery, May 19-20, 2000 , May 18-19, 2001, May 16-17, 2002, May 22-23, 2003

Member of the Scientific Committee for the II National Congress of the Mexican Association for Neuropsychiatry

Councilor Mexican Neurological Surgery Council 2005-2009

Numerary member in the area of Neurosurgery of the Surgical Department for the **National Academy of Medicine** (Academia Nacional de Medicina A.C.) , June 2006-

Numerary Member of the surgery department, neurosurgery section for the **Mexican Academy of Surgery**, (Academia Mexicana de Cirugía, A.C.) April 2006-

President Epilepsy Surgery Section of the Mexican Society of Neurological Surgery February 2016- February 2018

International Advisor for the Center for Advanced Neurology (CNA) Seville, Spain. 2017-

MEMBERSHIPS

International	International League Against Epilepsy The New York Academy of Sciences Society for Neurosciences Montreal Neurological Institute Fellow’s Society Canadian Society of Neuroscience American Epilepsy Society Latin-American Federation of Neurosurgical Societies International Network for Nanoscience and Nanotechnology
National	Mexican Chapter of the ILAE (CAMELICE) National Institute of Neurology and Neurosurgery Society Mexican Academy of Neurology Mexican Association for the Study and Treatment of Pain Society for Surgery of the Hospital Juárez de Mexico Mexican Society of Neurological Surgeons Mexican Neurological Surgery Council

PUBLICATIONS (JOURNALS)

100 articles in peer reviewed journals

Last 5:

1. Toral-Rios D, **Alonso Vanegas Mario A**, Pichardo-Rojas P, y Campos Peña Victoria. GSK-3 and Tau protein in Alzheimer Disease and epilepsy. Mini review article. *Front. Cell Neurosci.* doi: 10.3389/fncel.2020.00019
2. Rocha L, Cinar R, Guevara-Guzmán R, **Alonso Vanegas M**, San-Juan D, Martínez Juárez I, Castañeda-Cabral JL, y Carmona-Cruz F. Endocannabinoid System and Cannabinoid 1 Receptors in Patients with Pharmacoresistant Temporal Lobe Epilepsy and Comorbid Mood Disorders. *Front. Behav. Neurosci.*, 06 May 2020 | <https://doi.org/10.3389/fnbeh.2020.00052>
3. Castañeda-Cabral, J.L., Ureña-Guerrero, M.E., Beas-Zárate, C. Colunga-Durán, A, Nuñez-Lumbreras MaA, Orozco Suárez S, Alonso-Vanegas M, Guevara-Guzman R, Deli MA y Rocha L. Increased expression of proinflammatory cytokines and iNOS in the neocortical microvasculature of patients with temporal lobe epilepsy. *Immunol Res* **68**, 169–176 (2020). <https://doi.org/10.1007/s12026-020-09139-3>
4. Barbosa Ortega J, San-JuanD, Hernández Segura N, Alonso-Vanegas M, Ansel D. Effects of resective epilepsy surgery on the social determinants of health. *Epilepsy Research* Vol. 163, July 2020. <https://doi.org/10.1016/j.eplepsyres.2020.106338>
5. Castañeda-Cabral, J.L., Colunga-Durán, A, Ureña-Guerrero, M.E., Beas-Zárate, C., Nuñez-Lumbreras Ma. A., Orozco Suárez S., Alonso-Vanegas M., Guevara-Guzman R., Deli M.A., Valle-Dorado M.G., Sánchez Valle V. y Rocha L. Expression of VEGF- and tight junction-related proteins in the neocortical microvasculature of patients with drug-resistant temporal lobe epilepsy. 2020 *Microvascular Research* 132. <https://doi.org/10.1016/j.mvr.2020.104059>

BOOK CHAPTERS

48 chapters in specialty books

Last 5:

1. Senties Madrid H, **Alonso Vanegas MA**. Tratamiento médico y quirúrgico. Libro 3. Epilepsia Focal. Sistema de actualización Médica. Intersistemas SA de CV. Primera edición. 2018. ISBN 978-607-443-770-6.
2. **Alonso Vanegas Mario Arturo**, Sanjuan Orta Daniel, Ramos Palacios Gerardo. Cirugía de Epilepsia. In: Bases Fisiopatológicas de la Epilepsia. Feria Velasco AI, Gómez Plascencia J, De Celis Carillo R. (Editors) 2019. Bios Médica Editores y Diseños S.A. de C.V. Mexico. pp151-199. ISBN 698-9115-07-3
3. **Alonso Vanegas Mario Arturo**. SAM[®] Actualidades en Epilepsia / Evaluación prequirúrgica en el paciente con epilepsia refractaria a tratamiento farmacológico. Intersistemas SA de CV. Mexico. 2019 pp 1-60 ISBN 978-607-443-XXX-X

4. **Alonso Vanegas Mario Arturo.** SAM[®] Actualidades en Epilepsia /Epilepsia refractaria a tratamiento farmacológico (ERF). Intersistemas SA de CV. Mexico. 2019 pp 1-62 ISBN 978-607-443-XXX-X
5. **Alonso Vanegas MA Parahippocampectomy:** A New Surgical technique for Temporal Lobe Epilepsy. In: Gordon H Baltuch and Arthur Cukiert (Eds) *Operative Techniques in Epilepsy Surgery, Second Edition.* 2020 Thieme pp.61-65 ISBN 978-1

ABSTRACTS

100 published abstracts

Last 5

1. Alonso Vanegas MA, Castillo Montoya C, Pérez Cárdenas S, Gordillo Espinosa J, San Juan Orta D. Pilot Study of Parahippocampectomy: As effective as selective temporal resection in mesial temporal lobe epilepsy.
2. Senties Madrid H, Alonso-Vanegas MA, Castillo-Montoya C, Perez S and Rubio Donnadiu F. No infection in 100 Consecutive Cases of Vagus Nerve Stimulation for Treatment of Refractory Epilepsy.
3. González Orizaga M, Berenguer Sánchez M, Gutierrez Manjarrez F, Soto Cabrera E, Zavala Ferrer F. Campos Villareal O, Alonso Vanegas MA, Senties Madrid H, Estañol B, García Ramos G. Clinical Utility of Short term Videoelectroencephalogram Monitoring in Epilepsy.
4. Villeda Hernández J, Alonso M, Rocha L, Orozco S. Cortical Dysplasia in Patients with Temporal Lobe Epilepsy? Study of 60 cases.
5. Alfaro C, Orta D, Vanegas M, González Aragón M, Mayorga A, Cash S. The Role of Electrocorticography in tailored temporal lobe surgery due to mesial temporal sclerosis.

CURRENT PROTOCOLS / RESEARCH

- **Dopaminergic system in refractory epilepsy: possible implications in association with pharmacoresistance of epilepsy** (*Estudio del sistema dopaminérgico en pacientes con epilepsia refractaria a medicamentos: posibles implicaciones en los trastornos asociados a la epilepsia.*) National Institute of Neurology and Neurosurgery, CINVESTAV Mexico City
- **Molecular study of Gabaergic neurotransmission in tissue of surgically treated patients for mesial temporal lobe epilepsy** (Estudio molecular de las alteraciones de la neurotransmisión gabaérgica en tejido de pacientes con cirugía de epilepsia del lóbulo temporal refractarios a tratamiento médico). Main researcher: Sandra Adela Orozco Suárez. IMSS, Mexico City
- **Neuropsychological alteration of frontal type in patients with temporal lobe epilepsy** (Alteraciones neuropsicológicas de tipo frontal en pacientes con epilepsia del lóbulo temporal.) National Institute of Neurology and Neurosurgery, Mexico City, INNN 10209 Researcher: Alma Rosa Martínez R

- **Evaluation of serotonin and kynurenines in the brain of patients with pharmaco-resistant temporal lobe epilepsy.** Main researcher: Luisa Rocha, CINVESTAV, Mexico City
- **Non-Glutamatergic Communication of the Glutamatergic Granule Cells in the Epileptic Hippocampus”** Dr Rafael Gutiérrez, Departament de Fisiología, Biofísica y Neurociencias, CINVESTAV
- **Deep brain stimulation in refractory epilepsy** (Estimulación profunda en epilepsia refractaria.) Ana Luisa Velasco, Hospital General de México, Mexico
- **Potential therapeutic use of cannabinoids in the control of pharmaco-resistant epilepsy** (Estudio del potencial uso terapéutico de los cannabinoides en el control de la epilepsia resistente a fármacos) Sectorial project CINVESTAV HMG. Main researcher Luisa Rocha

TEACHING EXPERIENCE

Undergraduate Studies

Neuroanatomy Course to Residents of Neurosurgery, McGill University. Montreal Neurological Institute, Montreal, Quebec, Canada. October 10-February 17, 1998
 Professor of Neurology. Undergraduate School of Medicine. La Salle University. Mexico City. July 2000-2005

Graduate Studies

- Professor of the Basic course in Neuroscience “Epilepsy” at the National Institute of Neurology and Neurosurgery, April 30- June 1, 2001
- Professor of the Basic course in Neuroscience “Epilepsy in children and in adults” at the National Institute of Neurology and Neurosurgery, April 8- May 3, 2001
- Professor of the Basic course in Neuroscience “Epilepsy in children and in adults” at the National Institute of Neurology and Neurosurgery, May 4-28, 2001
- Course Professor: “Anatomy and physiology of the Central Nervous System”, First semester Masters in Neuropsychology. Faculty of psychology. Autonomous University of Morelos. February- July 2000
- Course Professor: “Methodological approach to the study of cerebral activity and abnormalities”, Second Semester Masters in Neuropsychology. Faculty of Psychology. Autonomous University of Morelos. August 2000-January 2001, August 2002- January 2003
- Course Professor in Neurology and Neurosurgery in the Postgraduate Course in “Human Communication”. Institute of Human Communication “Dr. Andrés Bustamante Gurria” Ministry of Health. March 2003- March 2005
- Course professor in Neurology for postgraduate students from the division of continuous medical education at the National Institute for Physical Rehabilitation, 2004-2005.
- Profesor associated to the department of psychology of the National Autonomous University for the Social Service Program “Psychological aspects involved in epilepsy”. 2005-2006 (Course 043/0004.268)

- Associate Professor for the Postgraduate Course in Radiosurgery at the National Institute of Neurology and Neurosurgery. 03/2005-02/2006, 03/2006-02/2007, 03/2007-02/2008, 03/2008-02/2009, 03/2009-02/2010, 03/2010-02/2011, 03/2012-02/2013, Head Professor for the Postgraduate Course in Radiosurgery 03/013-02/2014
- Associate Professor for the Postgraduate Course in Magnetic Resonance Imaging at the National Institute of Neurology and Neurosurgery. 03/2005-02/2006, 03/2006-02/2007, 03/2009-02/2010, 03/2010-02/2011
- Associate Professor for the Postgraduate Course in Neuropsychiatry at the National Institute of Neurology and Neurosurgery. 03/2006-02/2007, 03/2007-02/2008, 03/2009-02/2010
- Associate Professor for the Postgraduate Course in Spinal Surgery at the National Institute of Neurology and Neurosurgery. 03/2007-02/2008, 03/2010-02/2011
- **Head Professor for the Postgraduate Course in “Epilepsy Surgery” at the National Institute of Neurology and Neurosurgery/UNAM. 2005-2017.**
General objectives of program:
 - To unify in a modular and up-to-date program, teaching and acquisition of knowledge and skills that permit adequate comprehension, indication, performance and standardization of epilepsy surgery within the frame of the National Health Plan.
 - To integrate an educational program that optimizes the human, technical and infrastructural resources of the National Institute of Neurology and Neurosurgery for the preparation of specialists capable of developing and running specialized centers according to international guidelines and consideration of special Mexican needs and cost benefit issues.
 - To prepare expert medical specialists skilled in the diagnosis and surgical treatment of patients with refractory or intractable epilepsy, and who can, upon finishing their training, work in third level institutions with a significant impact on the quality of medical services, and can function as opinion leaders in the national and international communities, through encouragement of teaching and research activities in their places of origin.
 - To prepare highly qualified and efficient specialists in the field of medical assistance, with clinical knowledge and surgical skills that meet the economical and social expectations of the present and the short- and long-term future in our country.

21 Fellows (number/country of origin) successfully completed the one-year training presenting a completed thesis.

7 (Mexico)

6 (Colombia)

2 (Bolivia)

2 (Ecuador)

1 (El Salvador)

1 (Honduras)

1 (Peru)

1 (Chile)

EXPERIENCE AS REVIEWER OF SCHOLAR AND SCIENTIFIC COMMITTEES AND EDITORIALS

Synodal examiner at the Certification Exams of the Mexican Council for Neurological Surgery February 2000, 2004,2005, 2006, 2007, 2010, 2012, 2014, 2015

Peer reviewer for *Archives of Neurosciences*, journal published by the National Institute of Neurology and Neurosurgery and *Archives of Medical Research* published by the Instituto Mexicano del Seguro Social.

Associated Editor for the journal *Archivos de Neurociencias* Published by the National Institute of Neurology and Neurosurgery. October 2002-2010

Review Board International Liaison and Advisory Panel. Neurosurgery (ISSN 0140-396x) 2008-

Reviewer “Frontiers in Epilepsy“,Frontiers Research. April 2010-

Reviewer research protocols. National Institute of Neurology and Neurosurgery. 2010-2018

Reviewer, Technological and Innovation Development, National Council for Science and Technology, CONACYT 2014-

CME COURSES (ATTENDANCE)

94 courses

Last 5

1. Epilepsy Surgery Techniques Meeting. Medical University Vienna. Viena, Austria. August 31-September 2018.
2. Annual Meeting of the AES. American Epilepsy Society, AES. New Orleans, LO. November 30- December 4, 2018.
3. Regional Meeting of the Epilepsy Priority Program PPE, Sociedad Mexiquense de Neurología A.C. Toluca, EDOMEX, June 7-8, 2019.
4. 33 International Epilepsy Congress. ILAE; IBE. Bangkok, Tailand. June 22-26, 2019.
5. XXV Mexican Congress on Neurological Surgery "Science and humanism, innovation in neurosurgery ". Nuevo Vallarta, Nayarit. July 8-12, 2019

LECTURES AND SYMPOSIA BY INVITATION

246 participations

Last 5

1. Southern Regional Meeting of the Epilepsy Priority Program PPE, Hospital Regional de Alta Especialidad “Dr. Juan Graham Casassus”. October 11-12, 2019. Presentation: Imaging in epilepsy and surgical treatment.

2. Master Conference “Epilepsy Surgery” American Association of Neurological Surgeons, medical Student Chapter UNAM. Faculty of Medicine UNAM. Mexico City. November 11, 2019
3. VIII National Course on Neurosciences 2019 Integrating experimental neuroscience to clinical interventions. Centro Médico Nacional 20 de Noviembre, ISSSTE. Mexico City. November 22, 2019 Presentation: Clinical neuroscience: State of the art in epilepsy surgery.
4. Semana Neurológica 2020. Edición 15. Sociedad Mexiquense de Neurología A.C. Toluca, Mexico. September 23-26, 2020. Conference: “Epilepsy Surgery. Concepts for the General Practitioner”
5. Virtual Symposium on Pediatric Epilepsy ASCONI. Colombian Association of Pediatric Neurology. Bogota, Colombia. October 16, 2020. Conference: Surgical treatment of epileptic encephalopathies and other developmental disorders

CONGRESSES

Presenter at 107 National Congresses

Last 5

1. XVIII Congress of the Western Neurology Society. Western Chapter of the Mexican Society for Neurological Surgery, Mexican Society for Neurological Surgery and College of Neurosurgery. Puerto Vallarta, Jalisco. July 11-14, 2018. Presentation: Vagal nerve neuromodulation in epilepsy.
2. XLV Congress Doctor Juan Urrusti Sanz “From atom and molecule to clinic”. National Academy of Medicine. Monterrey, Nuevo León. October 17-18, 2018. Neurology Symposium: talk: Epilepsy
3. V International Neurosurgical Symposium ISSSTE, Hospital de Alta Especialidad ISSSTE Morelia, Sociedad Mexicana de Cirugía Neurológica A.C., Universidad Michoacana de San Nicolás de Hidalgo. Morelia, Mich. Febrero 8, 2019. Presentaion: Hemispherectomy as surgical option in refractory epilepsy
4. XXV Mexican Congress of Neurological Surgery "Science and Humanism, Innovation in Neurosurgery". Nuevo Vallarta, Nayarit. July 8-12, 2019 Presentations: Parahippocampectomy in temporal lobe epilepsy, How to proceed in extratemporal non lesional epilepsy, and Hemispherectomy
5. XLII Annual Meeting of the Mexican Chapter of ILAE (CAMELICE). Mazatlán, Sinaloa. August 28-31, 2019. Conference: "Early epilepsy surgery in adults " and workshop: Neuromodulation in pharamacoresistenteant epilepsy.

Presenter at 116 International Congresses

Last 5

- 65 33 International Epilepsy Congress. ILAE; IBE. Bangkok, Thailand. June 22-26, 2019. Debate: *Should laser interstitial thermal ablation be the treatment of first choice for patients with mesial temporal sclerosis. Chair: Management Issues (medical or surgical) Platform Session: Surgery*
- 66 Epilepsy Week in Bolivia ILAE, Liga Contra la Epilepsia de Bolivia. Santa Cruz, La Paz, Cochabamba. July 14-21, 2019 Presentation: Early surgery in hard to treat epilepsy, How and when to select a surgical candidate
- 67 Epilepsy Symposium in the frame of the “First epilepsy week in El Salvador”. Capítulo Salvadoreño de la ILAE, ILAE. San Salvador, El Salvador. September

- 7, 2019. Presentation: Temporal Epilepsy Surgery, Extratemporal Epilepsy Surgery
- 68 XIX Congress of the Peruvian Society of Neurosurgery. Lima, Perú. November 01-03, 2019. Presentations Functional neurosurgery of gliomas in eloquent areas, Epilepsy surgery in neurocysticercosis
- 69 X International Symposium on Epilepsy and Epilepsy Surgery. Meeting of the Hispanic America Epilepsy Centers “Desde el Puerto de Indias hasta las Américas”. Fundación Cerebro y Salud. Seville Spain. February 6-8, 2020. Presentation: Surgical treatment gap in Latin America.

ACKNOWLEDGMENTS

Valor Juvenil Mexicano 1976. [Mexican Youth Award 1976]

The American Creed, 1979

Best Student of the 83-86 Generation of Medical Students.

Best Intern Award, Generation '87. General Hospital of Sonora

Assistance to the special ceremony held at the presidential residence "Los Pinos" in honor of the most distinguished medical residents from the National Health System Institutions. Los Pinos, Mexico City. March 3, 1992.

Honorable Mention awarded at the end of the Residency in Neurosurgery at the Hospital Juárez de México. February 1994.

Competitive Scholarship Awarded by “Consejo Nacional de Ciencia y Tecnología” (CONACYT). June 1994

Competitive Research Assistant Award. Montreal Neurological Institute, McGill University. November 1995

Recipient of the Jeanne-Timmins Fellowship. Awarded by the Montreal Neurological Institute. January 1996, January 1997, January 1998

Professional Merritt Award, Medical and Social Assistance Direction, Delegación de Xochimilco, Mexico City Government.

Acknowledgement for his actions and decisive contribution to the funding and organization of the first Coordinated Epilepsy Surgery Program in Guatemala. May 23, 2007. Guatemala.

XVIII National Research Prize. GSK Foundation and Fundación Mexicana para la Salud. “Second place Clinical” Research: Changes in the levels of serotonin receptors in the cortex of refractory mesial temporal lobe epilepsy, 2007