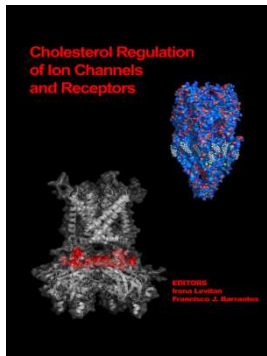


Publications:

1) Books



Barrantes, F.J. (1998). *The nicotinic acetylcholine receptor: Current views and future trends*. Neuroscience Intelligence Unit. Springer Verlag, Berlin/Heidelberg and Landes Publishing Co., Georgetown, TX 226 pp.



Levitan, I. & Barrantes, F.J. Eds. (2012) *Cholesterol Regulation of Ion Channels and Receptors*. John Wiley & Sons. 289 pp. ISBN-13: **978-0470874325**

1. Barrantes, F.J. (1971). Biomembranas: Enfoques actuales en el estudio de su estructura. *Ciencia e Invest.* 28 111-124.
2. Barrantes, F.J. (1979). Endogenous chemical receptors: Some physical aspects. *Annu. Rev. Biophys. Bioeng.* 8 287-321.
3. Tan, Y.P., Stender, W., Harvey, A.L., Soria, B. and Barrantes, F.J. (1980). Interactions of fluorescent cholinergic antagonists with the membrane-bound acetylcholine receptor. In: *Molecular Aspects of Bioelectricity* (E. Schoffeniels and E. Neumann, eds.). Pergamon Press, Oxford, Nueva York, p. 257.
4. Zingsheim, H.P., Neugebauer, D.-Ch., Barrantes, F.J. and Frank, J. (1980). Image averaging of membrane-bound acetylcholine receptor from *Torpedo marmorata*. In: *Electron Microscopy at Molecular Dimensions* (W. Baumeister and W. Vogell, eds.) Springer-Verlag, Berlin, pp. 161-169.
5. Zingsheim, H.P., Barrantes, F.J., Haenicke, W., Neugebauer, D.-Ch. and Frank, J. (1980). Single particle image averaging of the acetylcholine receptor from *Torpedo marmorata*. In: *Electron Microscopy*, vol. 2 (P. Braderoo and W. De Priester, eds.), pp. 592-593.
6. Neugebauer, D.-Ch., Barrantes, F.J. and Zingsheim, H.P. (1980). Oxidation-dependent clustering of the acetylcholine receptor from *Torpedo marmorata*. In: *Electron Microscopy*, vol. 2 (P. Braderoo and W. De Priester, eds.), pp. 614-615.
7. Barrantes, F.J. (1982). Interactions between the acetylcholine receptor and the non-receptor, peripheral nu-peptide (Mr 43,000). In: *Neuroreceptors* (F. Hucho, ed.). W. de Gruyter, Berlin, Nueva York, pp. 315-328.

8. Barrantes, F.J. (1983). Structural, dynamic and functional aspects of the acetylcholine receptor: current state and open problems. *Period. Biol.* 85 Suppl. 2 61-66.
9. Barrantes, F.J. (1983). Recent developments in the structure and function of the acetylcholine receptor. *Int. Rev. Neurobiol.* 24 258-341.
10. Walzthoeny, D., Barrantes, F.J., Eppenberger, H.M. and Wallimann, T. (1984). Localization of B-creatine kinase on acetylcholine receptor rich membrane vesicles with the immuno-gold technique. In: *Electron Microscopy* (A. Csanady, P. Roehlich and D. Szabo, eds.). Progr. Com. 8th Eur. Congr. Electron Microscopy, Budapest, Hungria, pp. 1609-1610.
11. Barrantes, F.J. (1986). Correlation of molecular structure with functional properties of the acetylcholine receptor protein. In: *Ionic Channels in Cells and Model Systems* (R. Latorre, ed.), Plenum Publ. Corp., Nueva York, EEUU, 385-400.
12. Barrantes, F.J. (1988). The acetylcholine receptor and its membrane environment. In: *Physical properties of biological membranes and their functional implications* (C. Hidalgo, ed.) Plenum Publishing Corp. Nueva York, 147-175.
13. Barrantes, F.J. (1988). Muscle Endplate Receptors. In: *Pharmacology & Therapeutics* 38 331-385.
14. Barrantes, F.J. (1989). The lipid environment of the nicotinic receptor in native and reconstituted membranes. In: *Crit. Rev. Biochem. Molec. Biol.* 24 (G. Fassman, ed.) (CRC Press, Boca Raton, Fl., EEUU), pp. 437-489.
15. Barrantes, F.J. (1992). Structural and functional crosstalk between the acetylcholine receptor and its membrane environment. *Molec. Neurobiol.* 6, 463-482.
16. Ortells, M.O., Cockroft, V.B., Lunt, G.G., Marsh, D. and Barrantes, F.J. (1992). The nicotinic acetylcholine receptor and its lipid microenvironment. *Membrane Proteins: Structures, Interactions, and Models.* (A. Pullman, B. Pullman, and J. Jortner, eds.), Kluwer Academic Publishers, pp. 185-198.
17. Barrantes, F.J. (1993). Lipid effects on nicotinic acetylcholine receptor gating and kinetics: a structural-functional correlation. *Braz. J. Med. Biol. Res.* 26 553-571.
18. Barrantes, F.J. (1993). The lipid annulus of the nicotinic acetylcholine receptor as a locus of structural-functional interactions. In: *Protein-Lipid Interactions. New Comprehensive Biochemistry*, vol. 26 (Watts, A., ed.) Elsevier, Amsterdam, pp. 231-257.
19. Barrantes, F.J. (1993). Structural-functional correlates of the nicotinic acetylcholine receptor and its lipid microenvironment. *FASEB J.* 7 1460-1467 [cover].
20. Barrantes, F.J. (1995). Pharmacological sites for some local anaesthetic and steroid ligands at the nicotinic acetylcholine receptor-lipid interface. Proc. 24th Central European Congress on Anesthesiology. Viena, Austria. Monduzzi Editore S.p.A., Bologna, Italia, pp. 487-492.
21. Barrantes, F.J. (1995). Learning about channel-forming proteins from an archetype cell membrane macromolecule: The acetylcholine receptor. In: *Science in Latin America and the Caribbean and its Role in Regional Development.* (A. Hamende, M.H.A. Hassan, J.L. Villaveces and G. Violini, eds.). Editora Guadalupe Ltda., Vol. II, pp. 682-725.
22. Bouzat, C.B. and Barrantes, F.J. (1995). Identification of functional domains of the nicotinic acetylcholine receptor. *Comunic. Biol.* 13 1-34.
23. Barrantes, F.J. (1996). Canales activados por ligandos. Capitulo 13 In: *Biofísica and Fisiología Celular* (R. Latorre, J. López-Barneo, F. Bezanilla and R. Llinás, eds.), Ediciones Univ. Sevilla, España, pp. 337-351.



24. Barrantes, F.J. (1997). The acetylcholine receptor ligand-gated channel as a molecular target of disease and therapeutic agents. *Neurochem. Res.* 22 391-400.
25. Barrantes, F.J. Physical state of the nicotinic acetylcholine receptor membrane and modulation of the receptor channel by lipid effectors. In: *From Ion Channel to Cell-to-Cell Conversations.* (R. Latorre and J.C. Saenz, ed). Plenum Press, New York, (1997) pp. 199-216.
26. Barrantes, F.J. (1998). Introduction: Structure meets function at the acetylcholine receptor. In: *The nicotinic acetylcholine receptor: Current views and future trends* (F.J. Barrantes, ed.). Springer Verlag, Berlin/Heidelberg and Landes Publishing Co., Georgetown, TX, pp. 1-10.
27. Ortells, M.O., G.E. Barrantes and F.J. Barrantes (1998). Molecular modelling of the nicotinic acetylcholine receptor. In: *The nicotinic acetylcholine receptor: Current views and future trends* (F.J. Barrantes, ed.). Springer Verlag, Berlin/Heidelberg and Landes Publishing Co., Georgetown, TX. pp. 85-108.
28. Barrantes, F.J. (1998). Molecular pathology of the acetylcholine receptor. In: *The nicotinic acetylcholine receptor: Current views and future trends* (F.J. Barrantes, ed.). Springer Verlag, Berlin/Heidelberg and Landes Publishing Co., Georgetown, TX pp. 175-212.
29. Barrantes, F.J., Antollini, S.S. and Massol, R. (1999). Fluorescence studies of the nicotinic acetylcholine receptor in its membrane environment. *Bioscience Report* 19 335-344.
30. Barrantes, F.J., Antollini, S.S., Bouzat, C.B., Garbus, I. and Massol, R.H. (2000). Nongenomic effects of steroids on the nicotinic acetylcholine receptor. *Kidney Internat.* 57 1382-1389.

31. 31. Massol, R.H. and Barrantes, F.J. (2001). Organochlorine insecticides: Ligand-gated ion channels as potential targets? *Anal. Pharmacology* 2, 9-21 **[selected cover page article]**.



32. 32. Barrantes, F.J. (2001). Cholinergic neurotransmission in health and disease. *Boletin Acad. Med.* 78 297-314.

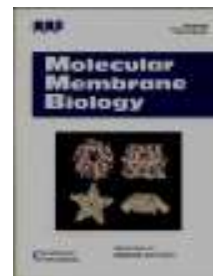
33. 33.

Ba

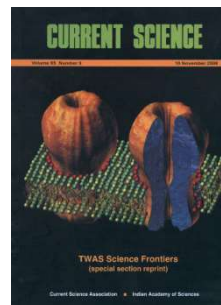
rantes, F.J. (2001). Structural studies of the acetylcholine receptor in the membrane environment. *Current Science* 81 983-991.

34. 34. Barrantes, F.J. (2001). Fluorescence studies of the acetylcholine receptor: Structure and dynamics in the membrane environment. *J. Fluoresc.* 11 273-285.

35. 35. Barrantes, F.J. (2002). Lipid matters: nicotinic acetylcholine receptor-lipid interactions. *Molec. Memb. Biol.* 19 277-284 **[cover page article]**.

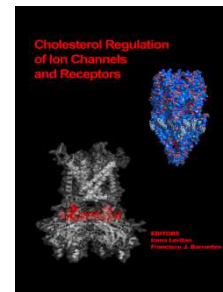


36. 36. Barrantes, F.J. (2003). Modulation of nicotinic acetylcholine receptor function through the outer and middle rings of transmembrane domains. *Current Opinion in Drug Discovery & Development* 6, 620-632.
37. 37. Antollini, S., Baier, J., Blanton, M., Bonini, I., De los Santos, B., Gallegos, M.C., Garbus, I., Pediconi, M.F., Prieto, M., Roccamo, A.M., Wenz, J. and Barrantes, F.J. (2004). Structure and dynamics of acetylcholine receptor and its lipid microenvironment: from molecule to the cell. In: *Cholinergic Mechanisms*. Editorial: Taylor & Francis Group, London, U.K., pp. 33-38 (ISBN 1841840750).
38. 38. Barrantes, F. J. (2004). Structural basis for lipid modulation of nicotinic acetylcholine receptor function. *Brain Res. Rev.* 47, 71-95. [**cover page article**]
39. 39. Garbus, I., Wenz, J. and Barrantes, F.J. (2005). Nongenomic effects of steroids on the nicotinic acetylcholine receptor. *Current Topics in Neurochem.* 4, 21-34.
40. 40. Antollini, S. and Barrantes, F.J. (2007). Laurdan Studies of Membrane Lipid-Acetylcholine Receptor Protein Interactions. Cap. 36. In: *Methods in Membrane Lipids* (A.M. Dopico, ed.). Humana Press Inc., Totowa, New Jersey, EEUU, pp. 531-542. ISBN 978-1-58829-662-7. ISSN 1064-3745.
41. 41. Barrantes, F.J. (2007). Cholesterol effects on nicotinic acetylcholine receptor. *J. Neurochem.* 103 (Suppl. 1), 72-80.
42. 42. Barrantes, F.J. (2008). Dialogue between membrane lipids and acetylcholine receptor. Science Frontiers, TWAS Silver Jubilee, D. Balasubramanian, Ed. *Current Science* 95, 1150-1164. [**cover page article**]
43. 43. Antollini, S.S., Wenz, J.J. and Barrantes, F.J. (2009). Cholesterol, fatty acids and nicotinic acetylcholine receptors. In: *Signal Transduction in Nervous Cells*. Ed. S.V. Fedorovich. Research Signpost, Kerala, India, Cap. 3, pp. 39-61.
44. 44.

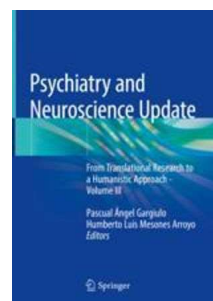
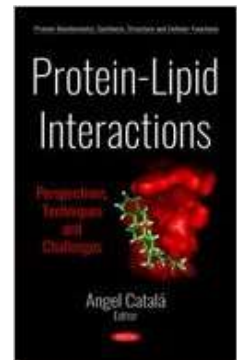


45. 45. Barra ntes, F.J., Bermúdez, V., Borroni, M.V., Antollini, S.S., Pediconi, M.F., Baier, C.J., Bonini, I., Gallegos, M.C., Roccamo, A.M., Vallés, A.S., Ayala, V., and Kamerbeek, C. (2009). Boundary lipids in the nicotinic acetylcholine receptor microenvironment. *J. Mol. Neurosci.* 40:87–90. doi: 10.1007/s12031-009-9262-z.
46. 46. Fantini, J. and Barrantes, F.J. (2009). Sphingolipid/cholesterol regulation of neurotransmitter receptor conformation and function. *Biochim Biophys. Acta Biomemb.* 1788, 2345–2361.
47. 47. Barrantes, F.J. (2009). The “nano-environment” of a neurotransmitter receptor (El “nano-ambiente” de un receptor de neurotransmisor). *Anales de la Academia Nacional de Ciencias Exactas Físicas and Naturales* 61, 55-68.
48. 48. Barrantes, F.J., Borroni, V. and Vallés, S. (2010). Neuronal acetylcholine receptor-cholesterol crosstalk in Alzheimer’s disease. *FEBS Lett.* 584, 1856-1863. [doi:10.1016-j.febslet.2009.11.036](https://doi.org/10.1016/j.febslet.2009.11.036)

49. 48. Barrantes, F.J. (2010). Cholesterol effects on nicotinic acetylcholine receptor: Cellular aspects. In: *Cholesterol binding proteins and cholesterol transport*. Chapter 17. Ed. R. Harris. Springer Verlag. ISSN: 0306-0225 *Subcell Biochem.* 51, 467-487.
50. 49. Borroni, M.V. and Barrantes, F.J. (2011). Amyloid precursor protein in central and peripheral cholinergic synaptopathies. *Alzheimer's Dis. Res. Journal* 3:11-28.
51. 50. Vallés, A.S. and Barrantes, F.J. (2012). Chaperoning $\alpha 7$ neuronal nicotinic acetylcholine receptors. *Biochim. Biophys. Acta –Biomembranes* 1818, 718-729. DOI [10.1016/j.bbamem.2011.10.012](https://doi.org/10.1016/j.bbamem.2011.10.012)
52. 51. Barrantes, F.J. (2011) España and Argentina: Un fecundo lazo en la Biofísica. pp. 97-106. In: Veinticinco años de la Sociedad de Biofísica de España (1986-2011). *XXV Anniversary of Spanish Biophysical Society (1986-2011)*, Ed. Manuel Cortijo Mérida, Campobell SL, Murcia.
53. 52. Levitan I. and Barrantes F.J. Preface to the book “Cholesterol Regulation of Ion Channels and Receptors” John Wiley & Sons. pp IX-X. (2012)
54. 53. Barrantes, F.J. Regulation of the nicotinic acetylcholine receptor by cholesterol as a boundary lipid. In Levitan, I. and Barrantes, F.J. Eds. (2012) *Cholesterol Regulation of Ion Channels and Receptors*. John Wiley & Sons. pp. 183-204.
55. 54. Barrantes, F.J. (2012) 5th Special Conference of the International Society for Neurochemistry ‘Synapses and Dendritic Spines in Health and Disease’. *Adv. Clin. Neurol. & Rehabilitation* 10 (13): 30.
56. 55. Fantini, J and Barrantes, F.J. (2013) How cholesterol interacts with membrane proteins: an exploration of cholesterol-binding sites including CRAC, CARC, and tilted domains. *Front. Physiol.* 4:31. 1-9. doi: 10.3389/fphys.2013.00031 1664-042X
57. 56. Barrantes, F.J. (2013). Synapses Tango to the Rhythm of Buenos Aires: Advances and Outlooks, 5th ISN Special Conference "Synapses and dendritic spines in health and disease. *J. Neurochemistry* (0022-3042) 126:145.
58. 57. Eggeling, C., Willig, K.I. & Barrantes, F. (2013). STED microscopy of living cells – New frontiers in Membrane and Neurobiology. *J. Neurochemistry* (0022.3042) 126: 203-212. DOI: [10.1111/jnc.12243](https://doi.org/10.1111/jnc.12243).
59. 58. Willig, K.I. & Barrantes, F.J. (2014). Recent Applications of Superresolution Microscopy in Neurobiology. *Current Opin. Chem. Biol.* 20:16-21.
60. 59. Vallés, A.S., Borroni, M.V. and Barrantes, F.J. (2014). Targeting $\alpha 7$ brain nicotinic acetylcholine receptors in Alzheimer disease: Rationale and current status. *CNS Drugs* 28(11):975-987. doi: [10.1007/s40263-014-0201-3](https://doi.org/10.1007/s40263-014-0201-3).
61. 60. Barrantes F.J. (2014) Cell-surface translational dynamics of nicotinic acetylcholine receptors. *Front. Synaptic Neurosci.* 6:25, 1-16. doi:[10.3389/fnsyn.2014.00025](https://doi.org/10.3389/fnsyn.2014.00025)
62. 61. Barrantes, F.J. (2015). Phylogenetic conservation of protein-lipid motifs in pentameric ligand-gated ion channels. *Biochim. Biophys. Acta. Biomembr.* 1848: 1796–1805. <http://dx.doi.org/10.1016/j.bbamem.2015.03.028>.
63. 62. Barrantes, F.J. (2015). Sinapsis y sinaptopatías. *La Prensa Médica Argentina.* 101: 311-319.
64. 63. Barrantes, F. J. (2015). The world’s most complex puzzle. *TWAS Newsletter* 27 (1) 19.
65. 64. Perez-Lloret, S. & Barrantes, F.J. (2016). Deficits in cholinergic neurotransmission and their clinical correlates in Parkinson’s disease. *Nature Parkinson’s Disease* 2, 16001, <http://dx.doi.org/10.1038/npjparkd.2016.1>.



66. 65. Barrantes, F.J. (2016). Gregorio Weber's Roots in Argentina. In: D.M. Jameson (ed.), *Perspectives on Fluorescence: A Tribute to Gregorio Weber*, Springer Ser. Fluoresc. 17: 17–40, DOI [10.1007/4243_2016_9](https://doi.org/10.1007/4243_2016_9), Springer International Publishing Switzerland.
67. 66. Barrantes, F.J. & Fantini, J. (2016). From hopanoids to cholesterol: molecular clocks of pentameric ligand-gated ion channels. *Prog Lipid Res.* 63:1-13. [doi: 10.1016/j.plipres.2016.03.003](https://doi.org/10.1016/j.plipres.2016.03.003).
68. 67. Borroni, M.V., Vallés, A.S. and Barrantes, F.J. (2016). The lipid habitats of neurotransmitter receptors in brain. *Biochim. Biophys. Acta Biomembr.* 1858: 2662–2670.
69. 68. Perez-Lloret, S., Peralta, M.C. and Barrantes, F. J. (2017). Neuropsychiatric symptoms related to cholinergic deficits in Parkinson's disease. In: "Psychiatry and Neuroscience Update." Gargiulo, P.A. and Mesones, H.L. (Editors). Springer International Publishing AG. New York. (ISBN: 978-3-319-53125-0). pp. 375-388.
70. 69. Di Scala, C., Baier, C.J., Evans, L.S., Williams, P.T.F., Fantini, J. & Barrantes, F.J. (2017). Relevance of CARC and CRAC cholesterol-recognition motifs in the nicotinic acetylcholine receptor and other membrane-bound receptors. In: "Sterol Regulation of Ion Channels", Levitan, I. Ed. *Curr. Top. Membr.* 80:3-23. [doi: 10.1016/bs.ctm.2017.05.001](https://doi.org/10.1016/bs.ctm.2017.05.001).
71. 70. Barrantes, F.J. (2017). Spatiotemporal dynamics of nicotinic acetylcholine receptors and lipid platforms. In: A. Chattopadhyay, Ed. *Springer series in Biophysics: Membrane Organization and Dynamics* 20, 195-217. [doi 10.1007/978-3-319-66601-3_9](https://doi.org/10.1007/978-3-319-66601-3_9).
72. 71. Barrantes, F.J. (2018). The effects of cholesterol on the nicotinic acetylcholine receptor: An update. pp. 1-23. In: *Protein-Lipid Interactions: Perspectives, Techniques and Challenges*. Catalá, A. (Ed.) Nova Science Publishers ISBN 978-1-53613-125-3. **(Book cover from my chapter)**.
73. 72. Di Scala, C., Fantini, J., Yahi, N., Barrantes, F.J. and Chahinian, H. (2018). Anandamide revisited: How cholesterol and ceramides control receptor-dependent and receptor-independent signal transmission pathways of a lipid neurotransmitter. *Biomolecules* 8, 31; 1-22. [doi:10.3390/biom8020031](https://doi.org/10.3390/biom8020031).
74. 73. Sanz, P.G., Grasso, L and Barrantes, F.J. (2018). Transdisciplinary assistance and translational research strategies to improve the quality of life of older adults at early stages of Alzheimer disease. *Psychol. Behav. Sci. Int. J.* 9(2) PBSIJ. MS. ID. 555757. [doi: 10.19080/PBSIJ.2018.09.555758](https://doi.org/10.19080/PBSIJ.2018.09.555758).
75. 74. Perez-Lloret, S., Bernath, V. and Barrantes, F. J. (2019). Genetic factors influencing the development and treatment of cognitive impairment and psychosis in Parkinson's Disease. pp. 359-370. In: "Psychiatry and Neuroscience Update." Gargiulo, P.A. and Mesones Arroyo, H.L. (Eds.). Springer New York. New York. ISBN 978-3-319-95359-5. [doi: https://doi.org/10.1007/978-3-319-95360-1_29](https://doi.org/10.1007/978-3-319-95360-1_29)
76. 75. Barrantes, F.J. (2018). Jugando con el Microcosmos. *Ciencia e Investigación Reseñas* 6(4), 7-22.
77. 76. Antollini, S.S. and Barrantes, F.J. (2019). Fatty acid regulation of voltage- and ligand-gated ion channel function. In: *Modulation of Ion Channels and Ionic Pumps by Fatty Acids: Implications in Physiology and Pathology*. pp. 87-103. Diaz, M. and Retamal, M.A., eds. Lausanne: Frontiers Media. [doi: 10.3389/978-2-88945-755-7](https://doi.org/10.3389/978-2-88945-755-7).



78. 77. Paz, M.L. & Barrantes, F.J. (2019). Autoimmune attack of the neuromuscular junction in myasthenia gravis: nicotinic acetylcholine receptors and other targets. *ACS Chem. Neurosci.* 10, 2186-2194. [doi: 10.1021/acchemneuro.9b00041](https://doi.org/10.1021/acchemneuro.9b00041).
79. 78. Quintá, H.R. and Barrantes, F.J. (2019). Damage and repair of the axolemmal membrane: From neural development to axonal trauma and restoration. *Current Topics in Membranes*, 84, 169-185. L.O. Andrade, Ed. Elsevier Inc. ISSN 1063-5823. doi.org/10.1016/bs.ctm.2019.07.007169
80. 79. Fantini, J., Epand, R. and Barrantes, F.J. (2019). Cholesterol-recognition motifs in membrane proteins. In: A Rosenhouse-Dantsker, A.N. Bukiya (eds.), *Direct Mechanisms in Cholesterol Modulation of Protein Function*. *Adv. Exp. Med. Biol.* 1135: 3-25. https://doi.org/10.1007/978-3-030-14265-0_1
81. 80. Sodero, A.O. & Barrantes F.J. (2020). Pleiotropic effects of statins on brain cells. *BBA Biomembr.* 1862, 18340. [doi: 10.1016/j.bbamem.2020.183340](https://doi.org/10.1016/j.bbamem.2020.183340)
82. 81. Caton, M. Ochoa, E.L.M. and Barrantes, F.J. (2020). The role of nicotinic cholinergic neurotransmission in delusional thinking. *Npj Schizophrenia* 6:16. [doi: 10.1038/s41537-020-0105-9](https://doi.org/10.1038/s41537-020-0105-9).
83. 82. Barrantes, F.J. (2020). While we wait for a vaccine: Why not think about available drugs?. *Frontiers in Physiol.* 11:820. [10.3389/fphys.2020.00820](https://doi.org/10.3389/fphys.2020.00820).
84. 83. Barrantes, F.J. (2020). La pandemia covid-19: una singularidad que brinda la oportunidad de reformular estrategias. In: *Pospandemia. 53 políticas públicas para el mundo que viene*. CEPE. Univ. Torcuato Di Tella. pp. 25-28.
85. 84. Barrantes, F.J. (2020). Central nervous system targets and routes for SARS-CoV-2: Current views and new hypotheses. *ACS Chem. Neurosci.* 11:2793-2803. [10.1021/acchemneuro.0c00434](https://doi.org/10.1021/acchemneuro.0c00434).
86. 85. Barrantes, F.J. (2021). Possible implications of dysregulated nicotinic acetylcholine receptor diffusion and nanocluster formation in myasthenia gravis. *Neural Regen. Res.* 16(2):242-246.
87. 86. Paz, M.L. & Barrantes, F.J. (2021). Cholesterol in myasthenia gravis. *Archiv. Biochem. Biophys.* 701:108788. [doi: https://doi.org/10.1016/j.abb.2021.108788](https://doi.org/10.1016/j.abb.2021.108788).
88. 87. Serrano, E., Sanz, P.G. & Barrantes, F.J. (2021). The Impact of Apolipoprotein E Allelic Variants on Alzheimer's Disease. Chapt. 29. In: *Psychiatry and Neuroscience*, P. Á. Gargiulo, H. L. Mesones Arroyo (eds.), Springer Nature Switzerland AG. pp. 397-417. https://doi.org/10.1007/978-3-030-61721-9_29.
89. 88. Barrantes, F.J. (2021). Structural biology of coronavirus ion channels. *Acta Cryst. D* 77, 391-402. <https://doi.org/10.1107/S2059798321001431>.
90. 89. Barrantes, F.J. (2021). The unfolding palette of COVID-19 multisystemic syndrome and its neurological manifestations. *Brain Behav. Immun.-Health* 14:100251. <https://doi.org/10.1016/j.bbih.2021.100251>
91. 89. Barrantes, F.J. (2021) The contribution of biophysics and structural biology to current advances in COVID-19. *Annu. Rev. Biophys.* 50:493–523. <https://doi.org/10.1146/annurev-biophys-102620-080956>.
92. 90. Borroni, M.V. & Barrantes, F.J. (2021). Homomeric and Heteromeric $\alpha 7$ Nicotinic Acetylcholine Receptors in Health and Some Central Nervous System Diseases. *Membranes* (in press).
93. 91. Azzaz, F., Chahinian, H., Yahi, N., Di Scala, C., Baier, C.J., Barrantes, F.J. & Fantini, J. (2021). Cholesterol recognition motifs in proteins: comparative analysis of in silico studies and structural data. In: *“Cholesterol: from Biophysics to the Clinics”*, A. Bukiya & A. Dopico, Eds. Series in Biochemistry Elsevier (in press)

94. 92. Vallés, A.S. & Barrantes, F.J. (2021). Dendritic spine membrane proteome and its alterations in autistic spectrum disorder. *Membrane Proteins* vol. 128, R. Donev, Ed. *Advances in Protein Chemistry and Structural Biology (APCSB)*, Elsevier. (in press)
95. 93. Barrantes, F. J. (2021). Fluorescent probes for microscopy visualization of cholesterol topography and dynamics in membranes In: *Cholesterol: from Biophysics to the Clinics*, A. Bukiya & A. Dopico, Eds. Series in Biochemistry Elsevier (in press)
96. 94. Barrantes, F.J. (2021). Fluorescence sensors for imaging membrane lipid domains and cholesterol In: *New Methods and Sensors for Membrane and Cell Volume Research* 88. I. Levitan Ed., Elsevier (in press)
97. Barrantes, F.J. (1970). The neuromuscular junction of a pulmonate mollusc. I. Ultrastructural study. *Z. Zellforsch.* 104, 205-212.
98. Barrantes, F.J. and Lunt, G.G. (1970). Enzymic dissection of cerebral cortex synapses. *Brain Res.* 23, 305-313. DOI: [10.1016/0006-8993\(70\)90058-2](https://doi.org/10.1016/0006-8993(70)90058-2)
99. Vásquez, C., Barrantes, F.J., La Torre, J.L. and De Robertis, E. (1970). Electron microscopy of proteolipid macromolecules from cerebral cortex. *J. Mol. Biol.* 52, 221-226. DOI: [10.1016/0022-2836\(70\)90026-4](https://doi.org/10.1016/0022-2836(70)90026-4)
100. Weber, G., Borris, D., De Robertis, E., Barrantes, F.J., La Torre, J.L. and de Carlin, M.C.L. (1971). The use of a cholinergic fluorescent probe for the study of the cholinergic proteolipid. *Molec. Pharmac.* 7, 530-537.
101. De Robertis, E. and Barrantes, F.J. (1972). Blocking by alpha-bungarotoxin of the high affinity binding site of the cholinergic receptor proteolipid. *Eur. J. Pharmac.* 17, 303-305. DOI: [10.1016/0014-2999\(72\)90176-8](https://doi.org/10.1016/0014-2999(72)90176-8)
102. Barrantes, F.J., Vasquez, C., La Torre, J.L. and De Robertis, E. (1972). Structural changes in proteolipid proteins from electric tissue. *J. Microscopie* 13, 391-400.
103. Barrantes, F.J., La Torre, J., de Carlin, M.C.L. and De Robertis, E. (1972). Studies on proteolipid proteins from cerebral cortex. -I- Preparation and some properties. *Biochim. Biophys. Acta* 263, 368-381. DOI: [10.1016/0005-2795\(72\)90089-X](https://doi.org/10.1016/0005-2795(72)90089-X)
104. Barrantes, F.J. (1973). A comparative study of several membrane proteins from the nervous system. *Biochim. Biophys. Res. Commun.* 54, 395-402. DOI: [10.1016/0006-291X\(73\)90935-2](https://doi.org/10.1016/0006-291X(73)90935-2)
105. Barrantes, F.J. (1972). Studies on proteolipid proteins from cerebral cortex. -II- Liquid-crystalline phases in protein fraction II. *Rev. Micr. Electr.* 1 161-162.
106. Vásquez, C., de Palma, E. and Barrantes, F.J. (1973). Foot-and-mouth disease virus. Capsid fine structure. *J. Microscopie* 14, 147-154.
107. Barrantes, F.J., Sakmann, B., Bonner, R., Eibl, H. and Jovin, T.M. (1975). 1-pyrenebutyrylcholine: A fluorescent probe for the cholinergic system. *Proc. Natl. Acad. Sci. U.S.A.* 72, 3097-4001. DOI: [10.1073/pnas.72.8.3097](https://doi.org/10.1073/pnas.72.8.3097)
108. Barrantes, F.J. (1975). The nicotinic cholinergic receptor: Different compositions evidenced by statistical analysis. *Biochem. Biophys. Res. Commun.* 62, 407-414. DOI: [10.1016/S0006-291X\(75\)80153-7](https://doi.org/10.1016/S0006-291X(75)80153-7)
109. Barrantes, F.J., Arbilla, S., de Carlin, M.C.L. and De Robertis, E. (1975). Purification by affinity chromatography of nicotinic and muscarinic hydrophobic proteins separated by Sephadex LH 20. *Biochim. Biophys. Res. Commun.* 63, 325-327. DOI: [10.1016/S0006-291X\(75\)80029-5](https://doi.org/10.1016/S0006-291X(75)80029-5)
110. Barrantes, F.J., Changeux, J.P., Lunt, G.G. and Sobel, A. (1975). Differences between the detergent-extracted acetylcholine receptor and the cholinergic proteolipid. *Nature* 256, 325- 327. DOI: [10.1038/256325a0](https://doi.org/10.1038/256325a0)

111. Barrantes, F.J. (1976). Intrinsic fluorescence of the membrane-bound acetylcholine receptor: Its quenching by suberyldicholine. *Biochem. Biophys. Res. Commun.* 72, 479-488. DOI: [10.1016/S0006-291X\(76\)80067-8](https://doi.org/10.1016/S0006-291X(76)80067-8)
112. Barrantes, F.J., Changeux, J.P., Lunt, G.G. and Sobel, A. (1976). Similarities between cholinergic proteolipids and detergent-extracted acetylcholine receptor. *Nature* 259, 605-606.
113. Bonner, R., Barrantes, F.J., and Jovin, T.M. (1976). Kinetics of agonist-induced intrinsic fluorescence changes in the membrane-bound acetylcholine receptor. *Nature* 263, 429-431. DOI: [10.1038/263429a0](https://doi.org/10.1038/263429a0)
114. Dowdall, M.J., Barrantes, F.J., Stender, W. and Jovin, T.M. (1976). Inhibitory action of 1-pyrene butyrylcholine and related compounds on choline uptake by cholinergic nerve endings. *J. Neurochem.* 27, 1253- 1255.
115. Barrantes, F.J. (1978). Agonist-mediated changes of the acetylcholine receptor in its membrane environment. *J. Mol. Biol.* 124, 1-26. DOI: [10.1016/0022-2836\(78\)90144-4](https://doi.org/10.1016/0022-2836(78)90144-4)
116. Marsh, D. and Barrantes, F.J. (1978). Immobilized lipid in acetylcholine receptor-rich membranes from *T. marmorata*. *Proc. Natl. Acad. Sci. USA.* 75 4329-4333.
117. Macchi, E. and Barrantes, F.J. (1979). Structural characterization of ordered domains in a hydrophobic membrane protein. *Biopolymers* 18, 2979-2992.
118. Tan, Y. and Barrantes, F.J. (1980). Fast kinetics of antagonist-acetylcholine receptor interactions: A temperature-jump relaxation study. *Biochim. Biophys. Res. Commun.* 92, 766-774. DOI: [10.1016/0006-291X\(80\)90769-X](https://doi.org/10.1016/0006-291X(80)90769-X)
119. Tan, Y.P., Stender, W., Harvey, A.L., Soria, B. and Barrantes, F.J. (1980). Interactions of fluorescent cholinergic antagonists with the membrane-bound acetylcholine receptor. *Neurochem. Int.* 2, 257-267. DOI: [10.1016/0197-0186\(80\)90033-9](https://doi.org/10.1016/0197-0186(80)90033-9)
120. Barrantes, F.J. (1980). Modulation of acetylcholine receptor states by thiol modification. *Biochemistry* 19, 2957-2965.
121. Barrantes, F.J. (1980). Altered physical states of the acetylcholine receptor after affinity alkylation. *Eur. J. Pharmac.* 65, 49-53.
122. Zingsheim, H.P., Neugebauer, D.-Ch., Barrantes, F.J. and Frank, J. (1980). Structural details of membrane-bound acetylcholine receptor from *Torpedo marmorata*. *Proc. Natl. Acad. Sci. USA* 77, 952-956.
123. Barrantes, F.J., Neugebauer, D.-Ch. and Zingsheim, H.P. (1980). Peptide extraction by alkaline treatment is accompanied by rearrangement of the membrane-bound acetylcholine receptor. *FEBS Lett.* 112, 73-78. DOI: [10.1016/0014-5793\(80\)80131-1](https://doi.org/10.1016/0014-5793(80)80131-1)
124. Macchi, E.M., Barrantes, F.J. and Rigotti, G.E. (1980). Molecular motions in a solid-solid transition of sodium dodecylsulphate. *J. Appl. Cryst.* 13, 165-168.
125. Marsh, D., Watts, A. and Barrantes, F.J. (1981). Phospholipid chain immobilization and steroid rotational immobilization in acetylcholine receptor-rich membranes from *Torpedo marmorata*. *Biochim. Biophys. Acta* 645, 97-101. DOI: [10.1016/0005-2736\(81\)90516-2](https://doi.org/10.1016/0005-2736(81)90516-2)
126. Boheim, G., Hanke, W., Barrantes, F.J., Eibl, H., Sakmann, B., Fels, G. and Maelicke, A. (1981). Agonist-activated ionic channels in acetylcholine receptor reconstituted into planar lipid bilayers. *Proc. Natl. Acad. Sci. USA* 78, 3586-3590.
127. Bartholdi, M., Barrantes, F.J., and Jovin, T.M. (1981). Rotational molecular dynamics of the membrane-bound acetylcholine receptor revealed by phosphorescence spectroscopy. *FEBS Lett.* 120, 389-397.
128. Barrantes, F.J. (1982). Oligomeric forms of the membrane-bound acetylcholine receptor disclosed upon extraction of the Mr 43,000 nonreceptor peptide. *J. Cell Biol.* 92, 60-68.

129. Criado, M. and Barrantes, F.J. (1982). Effects of periodate oxidation and glycosidases on structural and functional properties of the acetylcholine receptor and the non-receptor, peripheral nu-polypeptide (Mr 43,000). *Neurochem. Int.* 4 298-302. DOI: [10.1016/0197-0186\(82\)90066-3](https://doi.org/10.1016/0197-0186(82)90066-3)
130. Zingsheim, H.P., Neugebauer, D.-Ch., Frank, J., Haenicke, W. and Barrantes, F.J. (1982). Dimeric arrangement and structure of the membrane-bound acetylcholine receptor protein studied by electron microscopy. *EMBO J.* 1 541-547.
131. Criado, M., Eibl, H. and Barrantes, F.J. (1982). Effects of lipids on acetylcholine receptor. Essential need of cholesterol for the maintenance of agonist-induced state transitions in lipid vesicles. *Biochemistry* 21 3622-3629. DOI: [10.1016/0197-0186\(82\)90066-3](https://doi.org/10.1016/0197-0186(82)90066-3)
132. Zingsheim, H.P., Barrantes, F.J., Frank, J., Haenicke, W. and Neugebauer, D.-Ch. (1982). Direct structural localization of two toxin-recognition sites on an acetylcholine receptor protein. *Nature* 299 81-84. DOI: [10.1038/299081a0](https://doi.org/10.1038/299081a0)
133. Criado, M., Vaz, W.L.C., Barrantes, F.J. and Jovin, T.M. (1982). Translational diffusion of acetylcholine receptor (monomeric and dimeric forms) of *Torpedo marmorata* studied by fluorescence recovery after photobleaching. *Biochemistry* 21, 5750-5755.
134. Barrantes, F.J., Mieskes, G. and Wallimann, T. (1983). A membrane-associated creatine kinase (EC 2.7.3.2) identified as an acidic species of the non-receptor, peripheral nu-proteins in *Torpedo* receptor membranes. *FEBS Lett.* 152, 270-276. DOI: [10.1016/0014-5793\(83\)80394-9](https://doi.org/10.1016/0014-5793(83)80394-9)
135. Barrantes, F.J. (1983). Structural, dynamic and functional aspects of the acetylcholine receptor: current state and open problems. *Period. Biol.* 85 Suppl. 2, 61-66.
136. Barrantes, F.J., Mieskes, G. and Wallimann, T. (1983). Creatine kinase activity in the *Torpedo* electrocyte and in the nonreceptor, peripheral nu-proteins from acetylcholine receptor-rich membranes. *Proc. Natl. Acad. Sci. U.S.A.* 80, 5440-5444.
137. Criado, M. and Barrantes, F.J. (1984). Conversion of acetylcholine receptor dimers to monomers upon depletion of non-receptor peripheral proteins. *Biochim. Biophys. Acta* 798, 374- 381. DOI: [10.1016/0304-4165\(84\)90112-0](https://doi.org/10.1016/0304-4165(84)90112-0)
138. Criado, M., Eibl, H. and Barrantes, F.J. (1984). Functional properties of the acetylcholine receptor incorporated in model lipid membranes. Differential effects of chain length and head group of phospholipids on receptor affinity states and receptor-mediated ion translocation. *J. Biol. Chem.* 259, 9188-9198.
139. Regenfuss, P., Clegg, R.M., Fulwyler, M.J., Barrantes, F.J. and Jovin, T.M. (1985). Mixing liquids in microseconds. *Rev. Sci. Instrum.* 56, 283-290. DOI: [10.1063/1.1138345](https://doi.org/10.1063/1.1138345)
140. Wallimann, T., Walzthony, D., Wegmann, G., Moser, H., Eppenberger, H.M. and Barrantes, F.J. (1985). Subcellular localization of creatine kinase in *Torpedo* electrocytes. Association of brain-type isoenzyme with acetylcholine receptor-rich membranes. *J. Cell Biol.* 100, 1063-1072. DOI: [10.1083/jcb.100.4.1063](https://doi.org/10.1083/jcb.100.4.1063)
141. Barrantes, F.J., Braceras, A., Caldironi, H.A., Mieskes, G., Moser, H., Toren, E.C. Jr., Roque, M.E., Wallimann, T., and Zechel, A. (1985). Isolation and characterization of acetylcholine receptor membrane-associated (nonreceptor v2-protein) and soluble electrocyte creatine kinases (EC 2.7.3.2.). *J. Biol. Chem.* 260, 3024-3034.
142. Ginóbili de Martínez, M.S., Rodríguez de Turco, E.B. and Barrantes, F.J. (1985). Endogenous asymmetry of rat brain lipids and dominance of the right cerebral hemisphere in free fatty acid response to electroconvulsive shock. *Brain Res.* 339, 315-322. DOI: [10.1016/0006-8993\(85\)90097-6](https://doi.org/10.1016/0006-8993(85)90097-6)

143. Ginóbili de Martínez, M.S., Rodríguez de Turco, E.B., and Barrantes, F.J. (1986). Asymmetry of diacylglycerol metabolism in rat cerebral hemispheres. *J. Neurochem.* *46*, 1382-1386.
144. Bonini de Romanelli, I.C., Roccamo de Fernández A.M. and Barrantes, F.J. (1986). Endogenous phosphorylation of protein and lipid components in nicotinic acetylcholine receptor membranes. I. Polyphosphoinositides, main substrates among postsynaptic membrane glycerophospholipids. *Comunic. Biol.* *5*, 143-157.
145. Roccamo de Fernández, A.M., Bonini de Romanelli, I. and Barrantes, F.J. (1986). Endogenous phosphorylation of protein and lipid components in nicotinic acetylcholine receptor membranes. II. Modulation of phosphorylation in receptor and nonreceptor peripheral proteins. *Comunic. Biol.* *5*, 159-168.
146. Arias, H. and Barrantes, F.J. (1987). *In vitro* turnover of oleate and arachidonate in lipids of *Discopyge tschudii* electrocyte membranes. *Comp. Biochem. Physiol.* *86B*, 623-627. DOI: [10.1016/0305-0491\(87\)90458-5](https://doi.org/10.1016/0305-0491(87)90458-5)
147. Bonini de Romanelli, I., Roccamo de Fernández, A.M. and Barrantes, F.J. (1987). Extraction of peripheral proteins is accompanied by selective depletion of certain glycerophospholipid classes and changes in the phosphorylation pattern of acetylcholine receptor membrane proteins. *Biochem. J.* *245*, 111-118.
148. Arias, H.R. & Barrantes, F.J. (1987). High levels of phosphorylation in minor phospholipids of *Discopyge tschudii* electrocyte membranes. *Neurochem. Int.* *11*, 101-106. DOI: [10.1016/0197-0186\(87\)90155-0](https://doi.org/10.1016/0197-0186(87)90155-0)
149. Pediconi, M.F., Donoso, P., Hidalgo, C. & Barrantes, F.J. (1987). Lipid composition of purified transverse tubule membranes isolated from amphibian skeletal muscle. *Biochim. Biophys. Acta* *921*, 398-404. DOI: [10.1016/0005-2760\(87\)90042-7](https://doi.org/10.1016/0005-2760(87)90042-7)
150. Rotstein, N.P., Arias, H.R., Barrantes, F.J. & Aveldaño, M.I. (1987). Composition of lipids in elasmobranch electric organ and acetylcholine receptor membranes. *J. Neurochem.* *49*, 1333-1340.
151. Rotstein, N.P., Arias, H.R., Aveldaño, M.I. and Barrantes, F.J. (1987). Lipid metabolism in electroplax. *J. Neurochem.* *49*, 1341-1347.
152. Alperin, D.M., Bouzat, C.B. and Barrantes, F.J. (1988). Distance between the propylbenzilylcholine mustard attachment site and carbohydrates and thiol groups in muscarinic acetylcholine receptor protein from rat cerebral cortex. *Biochem. J.* *251*, 657-665.
153. Ginóbili de Martínez, M.S. and Barrantes, F.J. (1988). Ca²⁺ and phospholipid-dependent protein kinase activity in rat cerebral hemispheres. *Brain Res.* *440*, 386-390. DOI: [10.1016/0006-8993\(88\)91013-X](https://doi.org/10.1016/0006-8993(88)91013-X)
154. Zanello, L.P., Curvetto, N.R. and Barrantes, F.J. (1988). A rapid method for isolation and purification of protoplasts from epidermal tissue of *Vicia faba L.* *MIRCEN J. Appl. Microbiol. Biotechnol.* *4*, 275-283. DOI: [10.1007/BF01096133](https://doi.org/10.1007/BF01096133)
155. Bouzat, C. B., Barrantes, F. J. and Alperin D.M. (1989). Muscarinic cholinergic receptor of rat cerebral cortex. Location and characterization of ligand binding site-carrying peptides in synaptosomal membranes and neuronal perikarya. *Biochem. J.* *263*, 921-928.
156. Prado Figueroa, M. and Barrantes, F.J. (1989). Ultrastructure of the electric organ from *D. tschudii*. *Micr. Electr. Biol. Cel.* *13*, 19-38.
157. Vidal, A., Prado Figueroa, M. and Barrantes, F.J. (1989). Polarization of different actin isoforms in *Discopyge tschudii* electrocytes. *Micr. Electr. Biol. Cel.* *13*, 39-52.
158. Pediconi, M.F. and Barrantes, F.J. (1990). Brain asymmetry in phospholipid polar head group metabolism: parallel *in vivo* and *in vitro* studies. *Neurochem. Res.* *15*, 25-32.

159. Bonini de Romanelli, I., Aveldaño, M.I. and Barrantes, F.J. (1990). Asymmetric distribution of phospholipids in acetylcholine receptor-rich membranes from *Torpedo marmorata* electric organ. *Int. J. Biochem.* 22, 785-789.
160. Horváth, L.I., Arias, H.R., Hankowszky, H.O., Hideg, K., Barrantes, F.J. and Marsh, D. (1990). Association of spin-labeled anesthetics at the hydrophobic surface of acetylcholine receptor in native membranes from *Torpedo marmorata*. *Biochemistry* 29, 8707-8713.
161. Arias, H.R., Sankaram, M.B., Marsh, D. and Barrantes, F.J. (1990). Effect of local anaesthetics on steroid-nicotinic acetylcholine receptor interactions in native membranes of *Torpedo marmorata* electric organ. *Biochim. Biophys. Acta* 1027, 287-294. DOI: [10.1016/0005-2736\(90\)90320-N](https://doi.org/10.1016/0005-2736(90)90320-N)
162. Arias, H.R. and Barrantes, F.J. (1990). Phosphoinositides and inositol phosphates in *Discopyge tschudii* electrocyte membranes. *Int. J. Biochem.* 22, 1387-1392. DOI: [10.1016/0020-711X\(90\)90227-T](https://doi.org/10.1016/0020-711X(90)90227-T)
163. Bouzat, C., Barrantes, F.J. and Sigworth, F.J. (1991). Changes in channel properties of acetylcholine receptors during the time course of thiol chemical modifications. *Pflügers Arch.* 418, 51-61.
164. Bouzat, C. and Barrantes, F.J. (1991). Acetylcholine receptor channel properties are modified by benzyl alcohol. *Neuroreport* 2, 681-684.
165. Vidal, A., Prado-Figueroa, M. and Barrantes, F.J. (1991). Distribution of actin-binding proteins, 43K protein and spectrin in *D. tschudii* electrocytes. *Microsc. Electr. Biol. Cel.* 15, 193-205.
166. Alonso, T.S., Bonini de Romanelli, I.C., Roccamo de Fernández, A.M. and Barrantes, F.J. (1992). Polyphosphoinositide synthesis and protein phosphorylation in the plasma membrane from full-grown *Bufo Arenarum* oocytes. *Comp. Biochem. Physiol.* 102B, 585-590.
167. Pediconi, M.F., Politi, L.E., Bouzat, C.B., de los Santos, E.B. and Barrantes, F.J. (1992). Myogenic differentiation of the muscle clonal cell line BC3H-1 is accompanied by changes in its lipid composition. *Lipids* 27, 669-672.
168. Zanello, L.P. and Barrantes, F.J. (1992). Blockade of the K⁺-channel of *Chara contraria* by Cs⁺ and tetraethylammonium resembles that of K⁺ channels in animal cells. *Plant Science* 86, 49-58.
169. Pediconi, M.F. and Barrantes, F.J. (1993). Phospholipid metabolism under muscarinic cholinergic stimulation exhibits brain asymmetry. *Neurochem. Res.* 18, 559-563.
170. Pediconi, M.F., Roccamo de Fernández, A.M. and Barrantes, F.J. (1993). Asymmetric distribution and down-regulation of muscarinic acetylcholine receptor in rat cerebral cortex. *Neurochem. Res.* 18, 565-572.
171. Marcheselli, V. Daniotti, J.L., Vidal, A., Maccioni, H.J.F., Marsh, D. and Barrantes, F.J. (1993). Gangliosides in acetylcholine receptor-rich membranes from *Torpedo marmorata* and *Discopyge tschudii*. *Neurochem. Res.* 18, 599-603.
172. Bouzat, C.B. and Barrantes, F.J. (1993). Hydrocortisone and 11-desoxycortisone modify acetylcholine receptor channel gating. *NeuroReport* 4, 143-146.
173. Bouzat, C.B. and Barrantes, F.J. (1993) Acute exposure of nicotinic acetylcholine receptor to the synthetic glucocorticoid dexamethasone alters single-channel gating properties. *Molec. Neuropharm.* 3, 109-116.
174. Bouzat, C. B., Lacorazza, H.D., Biscoglio de Jiménez Bonino, M. and Barrantes, F.J. (1993). Effect of chemical modification of extracellular histidyl residues on the channel properties of the nicotinic acetylcholine receptor. *Pflügers Arch. (Eur. J. Physiol.)* 423, 365-371.

175. Bouzat, C.B. and Barrantes, F.J. (1993). Effects of long-chain fatty acids on the channel activity of the nicotinic acetylcholine receptor. *Receptors & Channels 1*, 251-258.
176. Arias, H.R., Alonso-Romanowski, S., Disalvo, E.A. and Barrantes, F.J. (1994). Interaction of merocyanine 540 with nicotinic acetylcholine receptor membranes from *Discopyge tschudii* electric organ. *Biochim. Biophys. Acta 1190*, 393-401.
177. Zanello, L.P. and Barrantes, F.J. (1994). Temperature sensitivity of the K⁺ channel of *Chara*. A thermodynamic analysis. *Plant Cell Physiol. 35*, 243-255.
178. Gutiérrez-Merino, C., Bonini de Romanelli, I., Pietrasanta, L. and Barrantes, F.J. (1995). Preferential distribution of the fluorescent phospholipid probes NBD-phosphatidylcholine and rhodamine-phosphatidylethanolamine in the exofacial leaflet of acetylcholine receptor-rich membranes from *Torpedo marmorata*. *Biochemistry 34*, 4847-4855.
179. Prado Figueroa, M., Vidal, A.C. and Barrantes, F.J. (1995). Ultrastructure of *Psammobatis extenta* (Rajidae) electrocytes and cytochemical localization of acetylcholinesterase, acetylcholine receptor and F-actin. *Biocell 19*, 113-123.
180. Pediconi, M.F. and Barrantes, F.J. (1995). Down-regulation of brain muscarinic cholinergic receptor promoted by diacylglycerols and phorbol ester. *Neurochem. Res. 20*, 1225-1231.
181. Antollini, S.S., Soto, M.A., Bonini de Romanelli, I., Gutiérrez Merino, C., Sotomayor, P. and Barrantes, F.J. (1996). Physical state of bulk and protein-associated lipid in nicotinic acetylcholine receptor-rich membrane studied by Laurdan generalized polarization and fluorescence energy transfer. *Biophys. J. 70*, 1275-1284.
182. Politi, L.E., Bouzat, C., de los Santos, E.B. and Barrantes, F.J. (1996). Heterologous retinal cultured neurons and cell-attachment molecules induce clustering of acetylcholine receptors and polynucleation in the mouse muscle BC3H-1 cell line. *J. Neurosci. Res. 4*, 639-651.
183. Rotstein, N.P., Aveldaño, M.I., Barrantes, F.J. and Politi, L.E. (1996). Docosahexaenoic acid is required for the survival factor of rat retinal photoreceptors *in vitro*. *J. Neurochem. 66*, 1851-1859.
184. Zanello, L.P., Aztiria, E., Antollini, S. and Barrantes, F.J. (1996). Nicotinic acetylcholine receptor channels are influenced by the physical state of their membrane environment. *Biophys. J. 70*, 2155-2164.
185. Pietrasanta, L.I., Schaper, A., Fox, G.Q., Barrantes, F.J. and Jovin, T.M. (1998). Imaging the electrocyte of *Torpedo Marmorata* by scanning force microscopy. *Scanning Microsc. Internat. 10*, 963-974.
186. Bouzat, C. and Barrantes, F.J. (1996) Modulation of muscle nicotinic acetylcholine receptors by the glucocorticoid hydrocortisone. Possible allosteric mechanism of channel blockade. *J. Biol. Chem. 271*, 25835-25841.
187. Vidal, A., Prado Figueroa, M., Eberwein, M.E., Kreda, S. and Barrantes, F.J. (1997). Co-distribution of tropomyosin and α -actinin with actin *Psammobatis extenta* electrocytes brings out their similarity with muscle fiber cytoplasm. *Comp. Biochem. and Physiol. 116A*, 113-118.
188. Barrantes, G.E., Ortells, M.O. and Barrantes, F.J. (1997). Screening structural-functional relationships of neuropharmacologically active organic compounds. *Neuropharmacology 36*, 269-279.
189. Barrantes, F.J. (1997). The acetylcholine receptor ligand-gated channel as molecular target of disease and therapeutic agents. *Neurochem. Res. 22*, 391-400.

190. Bouzat, C.B. and Barrantes, F.J. (1997). Assigning functions to residues in the acetylcholine receptor channel region. *Mol. Memb. Biol.* 14, 167-177.
191. Ortells, M.O., Barrantes, G.E., Wood, C., Lunt, G.G. and Barrantes, F.J. (1997). Molecular modelling of the nicotinic acetylcholine receptor transmembrane region in the open state. *Protein Eng.* 10, 511-517.
192. Rotstein, N.P., Aveldaño, M.I., Barrantes, F.J., Roccamo, A.M. and Politi, L.E. (1997). Apoptosis of retinal photoreceptors during development *in vitro*: Protective effect of docosahexaenoic acid. *J. Neurochem.* 69, 504-513.
193. Bouzat, C., Roccamo, A.M., Garbus, I. and Barrantes, F.J. (1998). Mutations at lipid-exposed residues of the acetylcholine receptor affect its gating kinetics. *Molec. Pharmacol.* 54, 146-153.
194. Antollini, S.S. and Barrantes, F.J. (1998). Disclosure of discrete sites for different lipids at the protein-lipid interface in native acetylcholine receptor-rich membrane. *Biochem.* 37, 16653-16662.
195. Roccamo, A.M., Pediconi, M.F., Aztiria, E., Zanello, L., Wolstenholme, A. and Barrantes, F.J. (1999). Cells defective in sphingolipid biosynthesis express low amounts of muscle nicotinic acetylcholine receptor. *Eur. J. Neurosci.* 11, 1615-1623.
196. Bouzat, C. and Barrantes, F.J. (1999). Inherited and experimentally-induced changes in gating kinetics of muscle nicotinic acetylcholine receptor. *J. Mol. Neurosci.* 13 1-13.
197. Massol, R., Antollini, S.S. and Barrantes, F.J. (2000). Effect of organochlorine insecticides on nicotinic acetylcholine receptor membrane. *Neuropharmacology* 39, 1095-1106.
198. Aztiria, E.M., Armelin, M.C. and Barrantes, F.J. (2000). Expression of a neuronal nicotinic acetylcholine receptor in insect and mammalian host cell systems. *Neurochem. Res.* 25 171-180.
199. Bouzat, C., Barrantes, F.J. and Sine, S. (2000). Nicotinic receptor M4 domain: Hydrogen bonding by conserved threonine contributes to the channel gating kinetics. *J. Gen. Physiol.* 115 663-671.
200. Barrantes, F.J., Aztiria, E., Rauschemberger, M.B. and Vasconsuelo, A. (2000). The neuronal nicotinic acetylcholine receptor in some hereditary epilepsies. *Neurochem. Res.* 25 583-590.
201. Massol, R., Antollini, S.S. and Barrantes, F.J. (2000). Effect of organochlorine insecticides on nicotinic acetylcholine receptor membrane. *Neuropharmacol.* 39 1095-1106.
202. Barrantes, F.J., Antollini, S.S., Blanton, M.P. and Prieto, M. (2000). Topography of nicotinic acetylcholine receptor membrane-embedded domains. *J. Biol. Chem.* 275, 37333-37339. [**“key paper” en Biochemistry, Stryer L. 5ta Ed., The Molecular Design of Life 13. Membrane Channels and Pumps. Ligand-gated ion channels**].
203. Garbus, I., Bouzat, C. and Barrantes, F.J. (2001). Steroids differentially inhibit the nicotinic acetylcholine receptor. *Neuroreport* 12, 227-231.
204. Garbus, I., Roccamo, A.M. and Barrantes, F.J. (2002). Identification of threonine422 in transmembrane domain alphaM4 of the nicotinic acetylcholine receptor as a possible site of interaction with hydrocortisone. *Neuropharmacol.* 43, 65-73.
205. Bonini, I.C., Antollini, S.S., Gutiérrez-Merino, C. and Barrantes, F.J. (2002). Sphingomyelin composition and physical asymmetries in native acetylcholine receptor-rich membranes. *Eur. Biophys. J.* 31, 417-427.

206. Rauschemberger, M.B., Vecchi, C. and Barrantes, F.J. (2002). Search for $\alpha 4$ and $\alpha 7$ nicotinic acetylcholine receptor markers in a pedigree of benign familial infantile convulsions (BFIC). *Neurochem. Res.* 27, 1555-1560.
207. Antollini, S.S. and Barrantes, F.J. (2002). Unique effects of different fatty acid species on the physical properties of the *Torpedo* acetylcholine receptor membrane. *J. Biol. Chem.* 277, 1249-1254.
208. Mantipragada, S.B., Horváth, L.I., Arias, H.R., Schwarzmann, G, Sandhoff, K., Barrantes, F.J. and Marsh, D. (2003). Lipid-protein interactions and effect of local anesthetics in acetylcholine receptor-rich membranes from *Torpedo marmorata* electric organ. *Biochemistry* 42, 9167-9175.
209. Wenz, J. and Barrantes, F.J. (2003). Steroid structural requirements for stabilizing or disrupting lipid domains. *Biochemistry* 42, 14267-14276.
210. de Almeida, R.F.M., Loura, L.M.S., Prieto, M., Watts, A. Fedorov, A. and Barrantes, F.J. (2004). Cholesterol modulates the organization of the γ M4 transmembrane domain of the muscle nicotinic acetylcholine receptor. *Biophys. J.* 86, 2261-2272.
211. Pediconi, M.F., Gallegos, C.E., De los Santos, E.B. and Barrantes, F.J. (2004). Metabolic cholesterol depletion hinders cell-surface trafficking of the nicotinic acetylcholine receptor. *Neuroscience* 128, 239-249.
212. Wenz, J. and Barrantes, F.J. (2005). Nicotinic acetylcholine receptor induces lateral segregation of phosphatidic acid and phosphatidylcholine in reconstituted membranes. *Biochemistry* 44, 398-410.
213. Xu, Y., Barrantes, F.J., Luo, X., Chen, K., Shen, J. and Jiang, H. (2005). Conformation dynamic of the nicotinic acetylcholine receptor channel: A 35-ns molecular dynamics simulation study. *J. Am. Chem. Soc. (JACS)* 127, 1291-1299.
214. Williamson, P.T.F., Zandomenighi, G., Barrantes, F.J., Watts, A. and Meier, B.H. (2005). Structural and dynamic studies of the γ -M4 transmembrane domain of the nicotinic acetylcholine receptor. *Mol. Membr. Biol.* 22, 485-496.
215. Antollini, S.S., Xu, Y., Jiang, H. and Barrantes, F.J. (2005). Fluorescence and molecular dynamics studies of the acetylcholine receptor γ M4 transmembrane peptide in reconstituted systems. *Mol. Membr. Biol.* 22, 471-483. **[tapa de revista]**
216. de Almeida, R. F. M., Loura, M. S., Prieto, M., Watts, A., Fedorov, A. and Barrantes, F.J. (2006). Structure and dynamics of the γ M4 transmembrane domain of the acetylcholine receptor in lipid bilayers: insights into receptor assembly and function. *Mol. Membr. Biol.* 23(4), 305-315.
217. Xu, Y., Barrantes, F.J., Shen, J., Luo, X., Zhu, W., Chen, K. and Jiang, H. (2006). Blocking of the nicotinic acetylcholine receptor ion channel by chlorpromazine, a noncompetitive inhibitor: A molecular dynamics simulation study. *J. Phys. Chem. B* 110, 20640-20648. doi: 10.1021/jp0604591 (J. Phys. Chem. B Condens Matter Mater Surf Interfaces Biophys.).
218. Kellner, R. Baier, J., Willig, K.I., Hell, S.W. and Barrantes, F.J. (2007). Nanoscale organization of nicotinic acetylcholine receptors revealed by STED microscopy. *Neuroscience* 144, 135–143. doi: 10.1016/neuroscience.2006.08.071/
219. Roccamo, A.M. and Barrantes, F.J. (2007). Charged amino acid motif flanking each extreme of the α M4 transmembrane domain are involved in assembly and cell-surface



- targeting of the muscle nicotinic acetylcholine receptor. *J. Neurosci Res.* 85, 285-293. doi: 10.1002/jnr.21123
220. Valles, A.S., Garbus I. and Barrantes F.J. (2007). Lamotrigine is an open-channel blocker of the nicotinic acetylcholine receptor. *Neuroreport* 18, 45-50.
221. Fernández Nievas, G.A., Barrantes, F.J. and Antollini, S.S. (2007). Conformation-sensitive steroid and fatty acid sites in the transmembrane domain of the nicotinic acetylcholine receptor. *Biochemistry* 46, 3503-3512. doi.org/10.1021/bi061388z
222. Borroni, V. Baier, C.J., Lang, T., Bonini, I. White, M.W., Garbus, I., and Barrantes, F.J. (2007). Cholesterol depletion activates rapid internalization of diffraction-limited acetylcholine receptor domains at the cell membrane. *Molec. Membr. Biol.* 24, 1-15. doi: 10.1080/09687860600903387
223. Baier, C.J. and Barrantes, F.J. (2007). Sphingolipids are necessary for nicotinic acetylcholine receptor export in the early secretory pathway. *J. Neurochem.* 101, 1072-1084. doi:10.1111/j.1471-4159.2007.04561.x
224. Farías, G.G., Vallés, A.S, Colombres, M., Godoy, J.A., Toledo, E.M., Lukas, R., Barrantes, F.J. e Inestrosa, N.C. (2007). Wnt-7a induces presynaptic colocalization of $\alpha 7$ -nicotinic acetylcholine receptors and adenomatous polyposis coli in hippocampal neurons. *J. Neurosci.* 27, 5313-5325.
225. Gall egos, C.E., Pediconi, M.F. and Barrantes, F.J. (2008). Ceramides modulate cell-surface acetylcholine receptor levels. *Biochim. Biophys. Acta Biomembr.* 1778: 917-930.
226. Liu, X., Xu, Y., Li, H., Wang, X., Jiang, H. and Barrantes, F. J. (2008). Mechanics of channel gating of the nicotinic acetylcholine receptor. *PLoS Computat. Biol.* 4:100-110. *[tapa de revista]*
227. Liu, X., Xu, Y., Wang, X., Barrantes, F.J. and Jiang, H. (2008). Unbinding of nicotine from the acetylcholine binding protein: Steered molecular dynamics simulations *J. Phys. Chem. B* 112, 4087-4093. DOI: 10.1021/jpc0716738
228. Kumari, S., Borroni, V., Chaudhry, A., Chanda, B., Massol, R., Mayor, S. and Barrantes, F.J. (2008). Nicotinic acetylcholine receptor is internalized via a Rac-dependent dynamin-independent endocytic pathway. *J. Cell Biol.* 181, 1179-1193.
229. Fernandez Nievas, G.A., Barrantes, F.J. and Antollini, S.S. (2008). Modulation of nicotinic acetylcholine receptor conformational state by free fatty acids and steroids. *J. Biol. Chem.* 283, 21478-21486.
230. Vallés, A.S., Garbus, I., Antollini, S.S. and Barrantes, F.J. (2008). A novel agonist effect on the nicotinic acetylcholine receptor exerted by the anticonvulsive drug Lamotrigine. *Biochim. Biophys. Acta Biomembr.* 1778, 2395-2404.
231. Wenz, J. and Barrantes, F.J. (2008). Resolution of complex fluorescence spectra of lipids and nicotinic acetylcholine receptor by multivariate analysis reveals protein-mediated effects on the receptor's immediate lipid microenvironment. *PMC Biophysics* 1:6, 1-17. <http://www.physmathcentral.com/1757-5036/1/6>.
232. Vallés, A.S., Roccamo, A.M. and Barrantes, F.J. (2009). Ric-3 chaperone-mediated stable cell-surface expresión of the neuronal $\alpha 7$ nicotinic acetylcholine receptor in mammalian cells. *Acta Pharmacol. Sin.* 30, 818-827.
233. Baier, C.J., Gallegos, C.E., Levi, V. and Barrantes, F.J. (2010). Cholesterol modulation of nicotinic acetylcholine receptor surface mobility. *Eur. Biophys. J.* 39, 213-227.



234. Roccamo, A.M., Cervellini, P.M., Piccolo, M.C. and Barrantes, F.J. (2010), Optimización de una técnica para la detección de patologías virales en *Pleoticus muelleri* (Bate, 1988) en el estuario de Bahía Blanca, Argentina. *Geoacta* 35, 40-47.
235. Wenz, J.J., Borroni, V. and Barrantes, F.J. (2010). Statistical analysis of high-resolution light microscope images reveals effects of cytoskeleton-disrupting drugs on the membrane organization of the nicotinic acetylcholine receptor. *J. Membr. Biol.* 235,163-175.
236. Bermúdez, V., Antollini, S.S., Fernández Nieves, G.A., Aveldaño, M.I. and Barrantes, F.J. (2010). Partition profile of the nicotinic acetylcholine receptor in lipid domains upon reconstitution. *J. Lipid Res.* 51, 2629-2641.
237. Zheng, C., Yang, K., Wang M.-Y., Vallés, S., Lukas, R.J., Barrantes, F.J. and Wu, J. (2010). The anticonvulsive drug lamotrigine blocks neuronal α 4 β 2-nicotinic acetylcholine receptors. *J. Pharmacol. & Exptl. Therapeut.* 335, 401–408.
238. Borroni, V. and Barrantes, F.J. (2011). Cholesterol modulates the rate and mechanism of acetylcholine receptor internalization. *J. Biol. Chem.* 286, 17122-17132.
239. Baier, C. J., Fantini, J. and Barrantes, F.J. (2011). Disclosure of cholesterol recognition motifs in transmembrane domains of the human nicotinic acetylcholine receptor. *Sci. Reports* 1:0069.
240. Ayala Peña, V.B. Bonini, I.C., Antollini., S.S., Kobayashi, T. and Barrantes, F.J. (2011). α 7-type acetylcholine receptor localization and its modulation by nicotine and cholesterol in vascular endothelial cells. *J. Cell. Biochem.* 112:3276–3288.
241. Perillo, V.L., G.A. Fernández-Nieves, A.S. Vallés, F.J. Barrantes, and S.S. Antollini (2012). The position of the double bond in monounsaturated free fatty acids is essential for the inhibition of the nicotinic acetylcholine receptor. *Biochimica et biophysica acta. Biomembranes* 1818(11):2511-20.
242. Kamerbeek, C., Borroni, V., Pediconi, M.F., Sato, S.B., Kobayashi, T. and Barrantes, F.J. (2013). Antibody-induced acetylcholine receptor clusters inhabit liquid-ordered and liquid-disordered domains. *Biophys. J.* 105:1601-1611. <http://dx.doi.org/10.1016/j.bpj.2013.08.039>.
243. Baier, C. J., Franco, D. L., Gallegos, C. E., Mongiat, L. A., Dionisio, L., Bouzat, C., Caviedes, P., and Barrantes, F.J. (2014). Corticosterone affects the differentiation of a neuronal cerebral cortex-derived cell line through modulation of the nicotinic acetylcholine receptor. *Neuroscience* 274:369–382. [doi:10.1016/j.neuroscience.2014.05.049](https://doi.org/10.1016/j.neuroscience.2014.05.049).
244. Almarza, G., Sánchez, F. and Barrantes, F.J. (2014). Transient cholesterol effects on nicotinic acetylcholine receptor surface mobility. *PloS One* 9:e100346. [doi: 10.1371/journal.pone.0100346](https://doi.org/10.1371/journal.pone.0100346)
245. Posada, I.M.D., Fantini, J., Contreras, F.X., Barrantes, F.J., Alonso, A. and Goñi, F.M. (2014). A cholesterol recognition motif in human phospholipid scramblase 1. *Biophys. J.* 107: 1383-1392. [doi: 10.1016/j.bpj.2014.07.039](https://doi.org/10.1016/j.bpj.2014.07.039).
246. Baier C.J., Pallarés M.E., Adrover E., Monteleone M. C., Brocco M.A., Barrantes F.J. and Antonelli M.C. (2015). Prenatal restraint stress decreases the expression of alpha-7 nicotinic receptor in the brain of adult rat. *Stress* 18(4):435-445. [doi: 10.3109/10253890.2015.1022148](https://doi.org/10.3109/10253890.2015.1022148)
247. Xu Y, Barrantes FJ, Luo X, Chen K, Shen J, Jiang H. (2015). Correction to Conformational dynamics of the nicotinic acetylcholine receptor channel: a 35-ns molecular dynamics simulation study. *J Am. Chem. Soc.* 137(11):3992. [doi: 10.1021/jacs.5b02329](https://doi.org/10.1021/jacs.5b02329).
248. Mulcahy, M.J., Blattman, S.B., Barrantes, F.J., Lukas, R.J. and Hawrot, E. (2015). Resistance to inhibitors of cholinesterase 3 (Ric-3) expression promotes selective protein

- associations with the human $\alpha 7$ -nicotinic acetylcholine receptor interactome. *PLoS One*. 10(8):e0134409. [DOI:10.1371/journal.pone.0134409](https://doi.org/10.1371/journal.pone.0134409)
249. García, A.P., Aitta-aho, T., Schaaf, L., Heeley, N., Heuschmid, L., Bai, Y., Barrantes, F.J. & Aperia-Schoute, J. (2015). The cholinergic regulation of feeding-related hypothalamic networks. Distribution of the nicotinic acetylcholine receptor $\alpha 4$ subunit and $\alpha 4$ -mediated influences on food intake and activity patterns in neurochemically-distinct hypothalamic circuits. *PloS One* 10(8):e0133327. [doi: 10.1371/journal.pone.0133327](https://doi.org/10.1371/journal.pone.0133327)
250. Pissinis, D.E., Díaz, C., Maza, E., Bonini, I.C., Barrantes, F.J., Salvarezza, R.C. and Schilardi, P.L. (2015). Functional nicotinic acetylcholine receptor reconstitution in Au(111)-supported thiolipid monolayers. *Nanoscale* 7: 15789-15797. [DOI: 10.1039/c5nr04109k](https://doi.org/10.1039/c5nr04109k).
251. Perillo, V.L., Peñalva, D.A., Vitale, A.J., Barrantes, F.J. and Antollini, S.S. (2016). Transbilayer asymmetry and sphingomyelin composition modulate the preferential membrane partitioning of the nicotinic acetylcholine receptor in Lo domains. *Arch. Biochem. Biophys.* 591: 76-86. [doi: 10.1016/j.abb.2015.12.003](https://doi.org/10.1016/j.abb.2015.12.003).
252. Fantini, J., Di Scala, C., Evans, L.S., Williamson, P.T.S. & Barrantes, F.J. (2016). A mirror code for protein-cholesterol interactions in the two leaflets of biological membranes. *Sci. Reports* 6:21907. [doi: 10.1038/srep21907](https://doi.org/10.1038/srep21907).
253. Kamerbeek, C.B., Mateos, M.A., Vallés, A.S., Pediconi, M.F., Barrantes, F.J. and Borroni, M.V. (2016). Diacylglycerol levels modulate the cellular distribution of the nicotinic acetylcholine receptor. *Int J Biochem Cell Biol.* 74:1-11. <http://dx.doi.org/10.1016/j.biocel.2016.02.010>.
254. Fantini, J., Di Scala, C., Baier, C.J., Barrantes, F.J. (2016). Molecular mechanisms of protein-cholesterol interactions in plasma membranes: Functional distinction between topological (tilted) and consensus (CARC/CRAC) domains. *Chem Phys Lipids* 199: 52-60. [doi: 10.1016/j.chemphyslip.2016.02.009](https://doi.org/10.1016/j.chemphyslip.2016.02.009).
255. Barrantes, F.J. (2016). Single-molecule localization superresolution microscopy of synaptic proteins. A.K. Shukla (ed.), *Membrane Proteins: Chemical and Synthetic Approaches*, Springer Protocols Handbooks, [DOI 10.1007/8623_2016_10](https://doi.org/10.1007/8623_2016_10), © Springer Science+Business Media, pp. 1-42.
256. Antollini, S.S. and Barrantes, F.J. (2016). Fatty acid effects on ion channels. *Frontiers in Physiol.* 7:1-17. [doi:10.3389/fphys.2016.00573](https://doi.org/10.3389/fphys.2016.00573)
257. Perez-Lloret, S., Peralta, M.C. & Barrantes, F.J. (2016). Pharmacotherapies for Parkinson's disease symptoms related to cholinergic degeneration. *Expert Opinion on Pharmacotherapy.* 17:2405-2415. <http://dx.doi.org/10.1080/14656566.2016.1254189>.
258. Barrantes, F.J. (2016). Cholesterol and nicotinic acetylcholine receptor: An intimate nanometer-scale spatial relationship spanning the billion year time-scale. *Biomed. Spectroscopy and Imaging* 5, S67–S86.
259. Pasquini, J.M., Barrantes, F.J. and Quintá, H.R. (2017). Normal development of spinal axons in early embryo stages and posterior locomotor function is independent of GAL-1. *J Comp. Neurol.* 525:1–15. <https://doi.org/10.1002/cne.24243>.
260. Barrantes, F. J. (2017). Reingeniería en Investigación y Desarrollo. En: 100 Políticas para la Argentina 2030. Carlos Abeledo ... [et al.]; compilado por Eduardo Levy Yeyati. - 1a ed. Ciudad Autónoma de Buenos Aires: Ciudad de Lectores, 2017. ISBN 978-987-3883-05-7. pp. 378-381.
261. Barrantes, F.J., Grasso, L. & Sanz, P.G. (2017). Estrategias para mejorar la calidad de vida del adulto mayor con enfermedad de Alzheimer (EA) mediante asistencia transdisciplinaria e investigación traslacional. En: Vivir



- mejor en medio de los límites. Aportes transdisciplinarios. V.M. Fernández & M.C. Zamora, Eds., Editorial Univ. Católica Argentina, p. 13-41.
262. Fantini, J. & Barrantes, F.J. (2018). How membrane lipids control the 3D structure and function of receptors. *AIMS Biophysics* 5: 22-35. [doi: 10.3934/biophy.2018.1.22](https://doi.org/10.3934/biophy.2018.1.22).
263. Paz, M.L., Manuelli, P.N., González Maglio, D.H., Aguirre, F., Villa, A., Leoni, J. and Barrantes, F.J. (2018). Nueva prueba diagnóstica para autoanticuerpos en miastenia gravis basado en un sistema de micropartículas fluorescentes libre de células". *Rev. Bioquím. & Patol. Clínica* 82(3): 12-17.
264. Mosqueira, A., Camino, P.A. & Barrantes, F.J. (2018). Cholesterol modulates acetylcholine receptor diffusion by tuning confinement sojourns and nanocluster stability. *Sci. Reports* 8, 11974, <https://doi.org/10.1038/s41598-018-30384-y>.
265. Mosqueira, A., Camino P.A. and Barrantes, F.J. (2020) Antibody-induced crosslinking and cholesterol-sensitive, anomalous diffusion of nicotinic acetylcholine receptors. *J. Neurochem.* 152, 663-674. [doi: 10.1111/jnc.14905](https://doi.org/10.1111/jnc.14905).
266. Barrantes, F.J. (2020). Nanoscopy in the Neurosciences. *Microscopy & Microanal.* 26, S1, 127-128. [DOI: https://doi.org/10.1017/S1431927620000859](https://doi.org/10.1017/S1431927620000859).
267. Delmont, I., Buena-Maizon, H., Mosqueira, A. and Barrantes, F.J. (2020). Application of Artificial Intelligence Strategies to the Analysis of Neurotransmitter Receptor Dynamics in Living Cells. *Microscopy & Microanal.* 26, S1, 17-18. [DOI: https://doi.org/10.1017/S143192762000032X](https://doi.org/10.1017/S143192762000032X).
268. Borroni, V., Kamerbeek, C., Pediconi, M.F. and Barrantes, F.J. (2020). Lovastatin Differentially Regulates $\alpha 7$ and $\alpha 4$ Neuronal Nicotinic Acetylcholine Receptor Levels in Rat Hippocampal Neurons. *Molecules* 25, 4838; 1-16. [doi:10.3390/molecules25204838](https://doi.org/10.3390/molecules25204838).
269. Corrêa Leite, P.E., de Araujo Portes, J., Rodrigues Pereira, M., Baldino Russo, F., Martins-Duarte, E.S., Almeida dos Santos, N., Attias, M., Barrantes, F.J., Baleeiro Beltrão-Braga, P.C., & de Souza, W. (2021). Morphological and biochemical repercussions of *Toxoplasma gondii* infection in a 3D human brain neurospheres model. *Brain, Behavior, & Immunity-Health* 11: 100190. [doi:/10.1016/j.bbih.2020.100190](https://doi.org/10.1016/j.bbih.2020.100190)