

Articles [2010~2012]

1. "Electroformation of giant unilamellar vesicles from native membranes and organic lipid mixtures for the study of lipid domains under physiological ionic-strength conditions". L.R. Montes, H. Ahyayauch, M. Ibarguren, J. Sot, A. Alonso, L.A. Bagatolli and F.M. Goñi. *Liposomes: Methods and Protocols* **2**,105-114 (2010).
2. "End-products diacylglycerol and ceramide modulate membrane fusion induced by a phospholipase C/sphingomyelinase from *Pseudomonas aeruginosa*". M. Ibarguren, P.H.H. Bomans, P.M. Frederik, M. Stonehouse, A.I. Vasil, M.L. Vasil, A. Alonso and F.M. Goñi. *Biochim. Biophys. Acta* **1798**, 59-64 (2010).
3. "Transbilayer (*flip-flop*) lipid motion and lipid scrambling in membranes". F. X. Contreras, L. Sánchez-Magraner, A. Alonso and F.M. Goñi. *FEBS Lett.* **584**, 1779-86 (2010).
4. "*Bordetella* adenylate cyclase toxin promotes calcium entry into both CD11b+ and CD11b- cells through cAMP-dependent L-type-like calcium channels" C. Martín, G. Gómez-Bilbao, H. Ostolaza. *J Biol Chem.* **285**, 357-64 (2010).
5. "A peptide based on the pore-forming domain of pro-apoptotic poliovirus 2B viroporin targets mitochondria" V. Madan, S. Sánchez-Martínez, L. Carrasco and J.L. Nieva. *Biochim. Biophys. Acta* **1798** 52-58 (2010).
6. "Energetics of nucleotide-induced DnaK conformational states" S.G. Taneva, F. Moro, A. Velázquez-Campoy and A. Muga. *Biochemistry* **49**, 1338-1345 (2010).
7. "Nucleotide utilization requirements that render ClpB active as a chaperone" U. del Castillo, J.A. Fernández-Higuero, S. Pérez-Acebrón, F. Moro and A. Muga. *FEBS Lett.* **584**, 929-934 (2010).
8. "Detergent effects on membranes at subsolubilizing concentrations: transmembrane lipid motion, bilayer permeabilization, and vesicle lysis/reassembly are independent phenomena"
Langmuir. **26**, 7307-7313 (2010).
9. "Interdomain Ca²⁺ effects in *Escherichia coli* alpha-haemolysin: Ca²⁺ binding to the C-terminal domain stabilizes both C- and N-terminal domains" L. Sánchez-Magraner, A.L. Cortajarena, M. García-Pacios, J.L.R. Arrondo, J. Agirre, D.M. Guérin, F.M. Goñi, H. Ostolaza. *Biochim Biophys Acta.* **1798**, 1225-1233 (2010).
10. "A pore residue of the KCNQ3 potassium M-channel subunit controls surface expression" J.C. Gómez-Posada, A. Etxeberria, M. Roura-Ferrer; P. Areso, M. Masin, R. D. Murrell-Lagnado and A. Villarroel. *J. Neurosci.* **30**, 9316-9323 (2010).

11. "Quantitation of cholesterol incorporation into extruded lipid bilayers" M. Ibarguren, A. Alonso, B.G. Tenchov, F.M. Goñi. *Biochim. Biophys. Acta* **1798**, 1735-1738 (2010).
12. "Ablation of the CDR H3 apex of the anti-HIV-1 broadly neutralizing antibody 2F5 abrogates neutralizing capacity without affecting core epitope binding". J.P. Julien, N. Huarte, R. Maeso, S.G. Taneva, A. Cunningham, J.L. Nieva, and E.F. Pai. *J. Virol* **84**, 4136-4147 (2010).
13. "Cholesterol and peroxidized cardiolipin in mitochondrial membrane properties, permeabilization and cell death" J. Montero, M. Mari, A. Collet, A. Morales, G. Basañez, C. Garcia-Ruiz and J. C. Fernández- Checa. *Biochim. Biophys. Acta* **1797**, 1217-1224 (2010).
14. "Nucleoplasmin binds histone H2A-H2B dimers through its distal face" I. Ramos, J. Martín-Benito, R. Finn, L. Bretaña, K. Aloria, J.M. Arizmendi, J. Ausió, A. Muga, J.M. Valpuesta and A. Prado. *J. Biol. Chem.* **285**, 33771-33778 (2010).
15. "Dihydrospingomyelin impairs HIV-1 infection by Rigidifying liquid-ordered membrane domains" C. R. Vieira, J. M. Muñoz-Olaya, J. Sot, S. Jimenez-Baranda, N. Izquierdo-Useros, J.L. Abad, B. Apellániz, R. Delgado, J. Martínez- Picado, A. Alonso, J. Casas, J.L. Nieva, G. Fabriás, S. Mañes and F.M. Goñi. *Chem. Biol.* **17**, 766-775 (2010).
16. "Impact of KCNE subunits on KCNQ1 (Kv7.1) channel membrane surface targeting". M. Roura-Ferrer, L. Solé, A. Oliveras, R. Dahan, J. Bielanska, A. Villarroel, N. Comes and A. Felipe. *J. Cell. Physiol.* **225**; 692-700 (2010).
17. "Synthesis, cell-surface binding and cellular uptake of fluorescently labelled glucose-DNA conjugates with different carbohydrate presentation" B. Ugarte-Urbe, S. Pérez-Rentero, R. Lucas, A. Aviñó, J.J. Reina, I. Alkorta, R. Eritja and J. Morales. *Bioconjug Chem.* **21**, 1280-1287 (2010).
18. "Liposome-bound APO2L/TRAIL is an effective treatment in a rabbit model of rheumatoid arthritis" L. Martinez-Lostao, F. García-Alvarez, G. Basañez, E. Alegre-Aguarón, P. Desportes, L. Larrad, J. Naval, M.J. Martínez- Lorenzo, and A. Anel. *Arthritis & Rheumatism.* **62**, 2272-2282 (2010).
19. "Membrane remodeling induced by the dynamin-related protein Drp1 stimulates Bax oligomerization" S. Montessuit, S. Prakash Somasekharan, O. Terrones, S. Lucken-Ardjomande, S. Herzig, R. Schwarzenbacher, D. J. Manstein, E. Bossy-Wetzl, G. Basañez, P. Meda and J.C. Martinou. *Cell* **142**, 889-901 (2010).
20. "Open questions on the origins of life" Special issue OQOL'09. Extended abstracts. P.L. Luisi and K. Ruiz-Mirazo. *Orig Life Evol Biosph* **40**, 353-

- 355 (2010).
21. “Reconstitution in liposome bilayers enhances nucleotide binding affinity and ATP-specificity of TrwB conjugative coupling protein” A. J. Vecino, R.L. Segura, B. Ugarte-Urbe, S. Águila, I. Hormaeche, F. de la Cruz, F. M. Goñi, and I. Alkorta. *Biochim. Biophys. Acta* **1798**, 2160-2169 (2010).
 22. “Noisy-threshold control of cell death” J.M.G. Vilar. *BMC Systems Biol.* **4**, 152 (2010).
 23. “Confocal microscopy of giant vesicles supports the absence of HIV-1 neutralizing 2F5 antibody reactivity to plasma membrane phospholipids” B. Apellaniz, A.J. García-Sáez, N. Huarte, R. Kunert, K. Vorauer-Uhl, H. Katinger, P. Schwille and J.L. Nieva. *FEBS Lett.* **584**, 1591-1596 (2010).
 24. “Cholesterol displaces palmitoylceramide from its tight packing with palmitoylsphingomyelin in the absence of a liquid-disordered phase” J.V. Busto, J. Sot, J. Requejo-Isidro, F.M. Goñi, and A. Alonso. *Biophys J.* **99**, 1119-1128 (2010).
 25. “Defining life or bringing biology to life” K. Ruiz-Mirazo, J. Peretó and A. Moreno. *Orig Life Evol Biosph* **40**, 203-213 (2010).
 26. “Molecular basis of phosphatidyl-*myo*-inositol mannoside biosynthesis and regulation in mycobacteria” M.E. Guerin, J. Korduláková, P.M. Alzari, P.J. Brennan and M. Jackson. *J. Biol. Chem.* **285**, 33577-33583 (2010).
 27. “Role of DnaJ G/F-rich domain in conformational recognition and binding of protein substrates” J. Perales, A. Muga and F. Moro. *J. Biol. Chem.* **285**, 34231–34239 (2010).
 28. “CplexA: a Mathematica package to study macromolecular-assembly control of gene expression” J.M.G. Vilar and L. Saiz. *Bioinformatics* **26**, 2060-2061 (2010).
 29. “Recognition of nucleoplasmin by its nuclear transport receptor importin R/β: insights into a complete import complex” J. Falces, I. Arregi, P. V. Konarev, M.A. Urbaneja, D.I. Svergun, S.G. Taneva, and S. Bañuelos. *Biochemistry* **49**, 9756–9769 (2010).
 30. “Ciencia viva, historia viva” F.M. Goñi. *SEBBM* **163**, 47 (2010).
 31. “All-or-none vs. graded: single vesicle analysis evidences lipid composition effects on membrane permeabilization” B. Apellániz, J.L. Nieva, P. Schwille, and A.J. García-Sáez. *Biophys. J.* **99**, 3619-3628 (2010).
 32. “Excitation of the M intermediates of wild-type bacteriorhodopsin and mutant D96N: temperature dependence of absorbance, electric responses and proton movements” R. Tóth-Boconádi, A. Dér, S.G. Taneva and L. Keszthelyi. *Theor Chem. Acc.* **125**, 365–373 (2010).

33. "Accurate prediction of gene expression by integration of DNA sequence statistics with detailed modelling of transcription regulation" J.M. Vilar. *Biophys J.* **99**, 2408-2413 (2010).
34. "Un bioquímico en la cocina" F.M. Goñi. *SEBBM* **166**, 20-24 (2010).
35. "Rational design, synthesis, and evaluation of new selective inhibitors of microbial class II (Zinc dependent) fructose bis-phosphate aldolases" R. Daher, M. Coinçon, M. Fonvielle, P.M. Gest, M.E. Guerin, M. Jackson, J. Sygusch and M. Therisod. *J. Med. Chem.* **53**, 7836-7842 (2010).
36. "Fluorescence lifetime imaging reveals that the environment of the ATP binding site of myosin in muscle senses force" D. Ibañez-García, J. Requejo-Isidro, M.R. Webb, T.G. West, P. French and M.A. Ferenczi. *Biophys J.* **99**, 2163-2169 (2010).
37. "ENVIRONMENT: a computational platform to stochastically simulate reacting and self-reproducing lipid compartments" F. Mavelli and K. Ruiz-Mirazo. *Phys. Biol.* **7** 036002 (13 pp). doi:10.1088/1478-3975/7/3/036002 (2010).
38. "Toward understanding protocell mechanosensation" D. Balleza. *Orig Life Evol Biosph* (24 pp) DOI 10.1007/s11084-010-9225-y (2010).
39. "Induced perturbations and adopted conformations in membranes by the HIV-1 fusion peptide" J.L. Nieva, N. Huarte, S. Nir and D. Weliky en "*Membrane-active peptides: methods and results on structure and function*" (M. Castanho ed.) vol. 9, pp. 565-596. IUL (International University Line) Publishers, La Jolla, California, USA (2010).
40. "The lytic mechanism of *Escherichia coli* α -hemolysin associated to outer membrane vesicles. Lytic action mechanism of OMVs-associated HlyA" V. Herlax, M.F. Henning, A.M. Bernasconi, F.M. Goñi and L. Bakás. *Health* **2**, 484-492 (2010).
41. "Analysis of confiscated fireworks using Raman spectroscopy assisted with SEM-EDS and FTIR" K. Castro, S. Fernández-Ortiz de Vallejuelo, I. Astondoa, F.M. Goñi and J.M. Madariaga. *J. Raman Spectrosc.* **42**, 2000-2005 (2011).
42. "Capsid protein identification and analysis of mature Triatoma virus (TrV) virions and naturally occurring empty particles" J. Agirre, K. Aloria, J.M. Arizmendi, I. Iloro, F. Elortza, R. Sanchez-Eugenia, G.A. Marti, E. Neumann, F.A. Rey and D.M.A. Guérin. *Virology* **409**, 91-101 (2011).
43. "Effects of bilayer composition and physical properties on the phospholipase C and sphingomyelinase activities of *Clostridium perfringens* α -toxin" P. Urbina, M. Flores-Díaz, A. Alape-Girón, A. Alonso and F.M. Goñi. *Biochim. Biophys. Acta* **1808**, 279-286 (2011).

44. "Multiple stages of detergent-erythrocyte membrane interaction-A spin label study" P.S.C. Preté, C.C. Domingues, N.C. Meirelles, S.V.P. Malheiros, F.M. Goñi, E. de Paula and S. Schreier. *Biochim. Biophys. Acta* **1808**, 164-170 (2011).
45. "Structural insights into the oligomerization and architecture of eukaryotic membrane pore-forming toxins" A.E. Mechaly, A. Bellomio, D. Gil-Cartón, K. Morante, M. Valle, J.M. González Mañas and D.M.A. Guérin. *Structure* **19**, 181-191 (2011).
46. "Multiple phospholipid substrates of phospholipase C/sphingomyelinase HR₂ from *Pseudomonas aeruginosa*" D.J. López, M.I. Collado, M. Ibarguren, A.I. Vasil, M. L. Vasil, F.M. Goñi and A. Alonso. *Chem. Phys. Lipids* **164**, 78-82 (2011).
47. "Membrane insertion stabilizes the structure of TrwB, the R388 conjugative plasmid coupling protein" A.J. Vecino, I. de la Arada, R.L. Segura, F.M. Goñi, F. de Cruz, J.L. R. Arrondo and I. Alkorta. *Biochim. Biophys. Acta* **1808**, 1032-1039 (2011).
48. "Adenylate cyclase toxin promotes internalisation of integrins and raft components and decreases macrophage adhesion capacity" C. Martín, K.B. Uribe, G. Gómez-Bilbao and H. Ostolaza. *PLoS one* **6**, e17383 (2011).
49. "Reconstitution of proapoptotic BAK function in liposomes reveals a dual role for mitochondrial lipids in the BAK-driven membrane permeabilization process" O. Landeta, A. Landajuela, D. Gil, S. Taneva, C. DiPrimo, B. Sot, M. Valle, V.A. Frolov, and G. Basañez. *J. Biol. Chem.* **286**, 8213-8230 (2011).
50. "Optimal resting-growth strategies of microbial populations in fluctuating environments" N. Geisel, J.M.G. Vilar, J.M. Rubi. *PLoS one* **6**, e18622 (2011).
51. "Imaging the early stages of phospholipase C/sphingomyelinase activity on vesicles containing coexisting ordered-disordered and gel-fluid domains" M. Ibarguren, D.J. López, L.R. Montes, J. Sot, A.I. Vasil, M.L. Vasil, F.M. Goñi and A. Alonso. *J. Lipid Res.* **52**, 635-645 (2011).
52. "Control of gene expression by modulated self-assembly" J.M.G. Vilar and L. Saiz. *Nucl. Acids. Res.* **39**, 6854-6863 (2011).
53. "Glycolytic and non-glycolytic functions of the fructose-1,6-bisphosphate aldolase of *Mycobacterium tuberculosis*, and essential enzyme produced by replicating and non-replicating bacilli" M.P. Santangelo, P.M. Gest, M.E. Guerin, M. Coinçon, H. Pham, G. Ryan, S.E. Puckett, J.S. Spencer, M. Gonzalez-Juarrero, R. Daher, A.J. Lenaerts, D. Schnappinger, M. Therisod, S. Ehrt, J. Sygusch and M. Jackson. *J. Biol. Chem.* **286**, 40219-40231 (2011).

54. "Are these liquids explosive? Forensic analysis of confiscated indoor fireworks" K. Castro, S. Fdez-Ortiz de Vallejuelo, I. Astondoa, F.M. Goñi, J.M. Madariaga. *Anal. Bioanal. Chem.* **400**, 3065-3071 (2011).
55. "The nuclear transport machinery recognizes nucleoplasmin-histone complexes" I. Arregui, J. Falces, S. Bañuelos, M.A. Urbaneja and S.G. Taneva. *Biochemistry* **50**, 7104-7110 (2011).
56. "La ciencia en tiempo de crisis" F.M. Goñi. In: "La idea de la crisis revisitada: Variaciones e interferencias" (A. Davila Legeren Coord.) *Servicio Editorial de la Universidad del País Vasco*, Bilbao, Spain, 17-27 (2011).
57. "Trafficking coordinate description of intracellular transport control of signaling networks" J.M.G. Vilar and L. Sainz. *Biophys. J.* **101**, 2315-2323 (2011).
58. "Microcalorimetry of blood serum proteome: a modified interaction network in the multiple myeloma case" S. Todinova, S. Krumova, L. Gartcheva, C. Robeerst and S.G. Taneva. *Anal. Chem.* **83**, 7992-7998 (2011).
59. "Kv7 channels can function without constitutive calmodulin tethering" J.C. Gómez-Posada, P. Aivar, A. Alberdi, A. Alaimo, A. Etxeberría, J. Fernández-Orth, T. Zamalloa, M. Roura-Ferrer, P. Villace, P. Areso, O. Casis and A. Villarroel. *PLoS one*, 6(9) e25508 (2011).
60. "Stochastic simulations of mixed-lipid compartments: from self-assembling vesicles to self-producing protocells" K. Ruiz-Mirazo, G. Piedrafita, F. Ciriaco and F. Mavelli. In Arabnia H. R. (Ed.) "Software Tools and Algorithms for Biological Systems" (Book series: Advances in Experimental Medicine & Biology, AEMB). Springer. (Chapter 70: pp. 689-696) (2011).
61. "G α activity is reduced in erythrocyte membranes of patients with pseudohypoparathyroidism due to epigenetic alterations at the *GNAS* locus" C. Zazo, S. Thiele, C. Martín, E. Fernández-Rebollo, L. Martínez-Indart, R. Werner, I. Garin, Spanish PHP Group, O. Hiort and G. Perez de Nanclares. *J. Bone Miner Res.* **26**, 1864-1870 (2011).
62. "Work-Hamiltonian connection for anisoparametric processes in manipulated microsystems" J.M.G. Vilar and J.M. Rubi. *J. Non-Equilib. Thermodyn.* **36**, 123-130 (2011).
63. "The impact of the paradigm of complexity on the foundational frameworks of biology and cognitive science" A. Moreno, K. Ruiz-Mirazo, and X. Barandiaran. In: C. Hooker (ed) *Complex Systems*. Vol X of the D. Gavia, P. Thagard & J. Woods (eds) *Handbook of the Philosophy of Science*. Elsevier. (pp. 311-334) ISBN: 978-0-444-52076-0 (2011).

64. "Low-density lipoprotein density determination by electric conductivity" J.A. Fernández-Higuero, A.M. Salvador, J.L.R. Arrondo and J.C. Milicua. *Anal Biochem.* **417**, 283-285 (2011).
65. "Lipids, a missing link in prion propagation" J. Castilla and F.M. Goñi. *Chem. & Biol.* **18**, 1345-1346 (2011).
66. "El polinomio imposible" F.M. Goñi. *CIC Network* **10**, 4-5 (2011).
67. "Crystal structure of the allosteric-defective chaperonin GroELE434K mutant" A. Cabo-Bilbao, A.E. Mechaly, J. Agirre, S. Spinelli, B. Sot, A. Muga and D.M.A. Guérin. *J. Biophys. Struct. Biol.* **3**, 66-71 (2011).
68. "Interaction of anti-HIV-1 antibody 2F5 with phospholipid bilayers and its relevance for the mechanism of virus neutralization" R. Maeso, N. Huarte, J.P. Julien, R. Kunert, E.F. Pai and J.L. Nieva. *AIDS Res. Hum. Retroviruses* **27**, 863-876 (2011).
69. "Destabilization exerted by peptides derived from the membrane-proximal external region of HIV-1 gp41 in lipid vesicles supporting fluid phase co-existence" B. Apellániz, A.J. García-Sáez, S. Nir, and J.L. Nieva. *Biochim. Biophys. Acta*, **1808**, 1797-1805 (2011).
70. "A new paradigm in molecular recognition? Specific antibody binding to membrane-inserted HIV-1 epitopes" J.L. Nieva, B. Apellaniz, N. Huarte and M. Lorizate. *J. Mol. Recognit.* **24**, 642-646 (2011).
71. "Mitchell y la energía en Biología" A. Alonso. *CIC Network* **9**, 74-78 (2011).
72. "Membrane integration of Poliovirus 2B viroporin" L. Martínez-Gil, M. Bañó-Polo, N. Redondo, S. Sánchez-Martínez, J.L. Nieva, L. Carrasco and I. Mingarro. *J. Virol.* **85**, 11315-11324 (2011).
73. "Life" K. Ruiz-Mirazo and A. Moreno. In: *Encyclopedia of Astrobiology* (Gargaud, M., Amils, R., Cernicharo Quintanilla, J., Cleaves, H.J., Irvine, W.M., Pinti, D., Viso, M., Eds.). Springer. Heidelberg, Germany. Vol 2, pp. 919-921 (2011).
74. "Lipid polymorphisms and membrane shape" V.A. Frolov, A.V. Shnyrova and J. Zimmerberg. *Cold Spring Harb Perspect Biol* ;**3**:a004747 (2011).
75. "Membrane-transferring regions of gp41 as targets for HIV-1 fusion inhibition and viral neutralization" N. Huarte, M. Lorizate, E. Pérez-Payá, and J.L. Nieva. *Curr. Top. Med. Chem.* **11**, 2985-2996 (2011).
76. "Assessment of soil quality using microbiol properties and attributes of ecological relevance" C. Garbisu, I. Alkorta and L. Epelde. *Applied Soil Ecology* **49**, 1-4 (2011).

77. “Membrane-proximal external HIV-1 gp41 motif adapted for destabilizing the highly rigid viral envelope” B. Apellániz, A. Ivankin, S. Nir, D. Gidalevitz and J.L. Nieva. *Biophys J.* **101**, 2426-2435 (2011).
78. “Unexpected wide substrate specificity of *C. perfringens* α -toxin phospholipase C.” P. Urbina, M.I. Collado, A. Alonso, F.M. Goñi, M. Flores-Díaz, A. Alape-Girón, J.M. Ruyschaert and M.F. Lensink. *Biochim Biophys Acta.* **1808**, 2618-2627 (2011).
79. “Dynammin: functional design of a membrane fission catalyst” S.L. Schmid and V.A. Frolov. *Annu. Rev. Cell Dev. Biol.* **27**, 79–105 (2011).
80. “Protocell” K. Ruiz-Mirazo. In: Encyclopedia of Astrobiology (Gargaud, M., Amils, R., Cernicharo Quintanilla, J., Cleaves, H.J., Irvine, W.M., Pinti, D., Viso, M., Eds.). Springer. Heidelberg, Germany. Vol 3, pp. 1353-1354 (2011).
81. “Allosteric communication between the nucleotide binding domains of caseinolytic peptidase B “ J.A. Fernandez-Higuero, S.P. Acebron, S.G. Taneva, U. del Castillo, F. Moro and A. Muga. *J. Biol. Chem* **286**, 25547-25555 (2011).
82. “A quantitative Analysis of the effect of nucleotides and the M domain on the association equilibrium of ClpB “ U. del Castillo, C. Alfonso, S.P. Acebron, A. Martos, F. Moro, G. Rivas and A. Muga. *Biochemistry* **50**, 1991-2003 (2011).
83. “A conventional and 2DCOS infrared approach to the kinetics of protein misfolding“ I. de la Arada, N. Andraka, M. Garcia Pacios and J.L.R. Arrondo. *Current Protein & Peptide Science* **12**, 181-187 (2011).
84. “Variation of lipid membrane composition caused by strong bending” P.V. Bashkirov, K.V. Chekashkina, S.A. Akimov, P.I. Kuzmin and V.A. Frolov. *Biologicheskie Membrany* **28**, 145-152 (2011).
85. “On the transition from prebiotic to proto-biological membranes: from “Self-assembly” to “Self-production” G. Piedrafita, F. Mavelli, F. Morán and K. Ruiz-Mirazo. ECAL'09 Proceedings of the 10th European conference on Advances in artificial life: Darwin meets von Neumann - Springer-Verlag Berlin, Volume Part I pp 256-264 (2011).
86. “Conformational sampling and nucleotide-dependent transitions of the GroEL subunit probed by unbiased molecular dynamics simulations” L. Skjaerven, B. Grant, A. Muga, K. Teigen, J.A. McCammon, N. Reuter and A. Martinez. *PLoS Comput Biol.* **7**:e1002004. doi: 10.1371/journal.pcbi.1002004 (2014).
87. “Functional characterization of splicing and ligand-binding domain variants in the LDL receptor” A. Etxebarria, L. Palacios, M. Stef, D. Tejedor, K.B. Uribe, A. Oleaga, L. Irigoyen, B. Torres, H. Ostolaza and C. Martin. *Hum Mutat.* **33**, 232-43 (2012).

88. "Far-from-equilibrium processes without net thermal exchange via energy sorting" J.M.G. Vilar and J.M. Rubi. *J. Chem. Phys.* **136**, 064115 (2012).
89. "A global survey of CRM1-dependent nuclear export sequences in the human deubiquitinase family" I. García-Santisteban, S. Bañuelos and J.A. Rodríguez. *Biochem. J.* **441**, 209–217 (2012).
90. "Model systems of precursor cellular membranes: long-chain alcohols stabilize spontaneously formed oleic acid vesicles" A. Rendón, D. Gil Carton, J. Sot, M. García-Pacios, L.R. Montes, M. Valle, J.L.R. Arrondo, F.M. Goñi and K. Ruiz-Mirazo *Biophys. J.* **102**, 278–286 (2012).
91. "The Kv7.2/Kv7.3 heterotetramer assembles with a random subunit arrangement" A.P. Stewart, J.C. Gómez-Posada, J. McGeorge, M.J. Rouhani, A. Villarroel, R.D. Murrell-Lagnado and J. M. Edwardson. *J Biol Chem.* **287**, 11870-11877 (2012).
92. "Accumulated bending energy elicits neutral sphingomyelinase activity in human red blood cells" D.J. López, M. Egido-Gabas, I. López-Montero, J.V. Busto, J. Casas, M. Garnier, F. Monroy, B. Larijani, F.M. Goñi and A. Alonso. *Biophys. J.* **102** 2077–2085 (2012).
93. "In situ synthesis of fluorescent membrane lipids (ceramides) using click chemistry" M. Garrido, J.L. Abad, A. Alonso, F.M. Goñi, A. Delgado and L.R. Montes. *J Chem Biol* DOI 10.1007/s12154-012-0075-0 (2012).
94. "Lipid bilayers in the gel phase become saturated by Triton X-100 at lower surfactant concentrations than those in the fluid phase" H. Ahyayauch, M.I. Collado, A. Alonso and F.M. Goñi. *Biophys. J.* **102** 1–7 (2012).
95. "Lípidos que regulan su propio metabolismo (y el ajeno)" F.M. Goñi. *SEBBM*, **174** (2012).
96. "Recognition of membrane-bound fusion-peptide/MPER complexes by the HIV-1 neutralizing 2F5 antibody: implications for Anti-2F5 immunogenicity" N. Huarte, A. Araujo, R. Arranz, M. Lorizate, H. Quendler, R. Kunert, J.M. Valpuesta and J.L. Nieva. *PLoS One*, **7**, e52740. doi: 10.1371 (2012).
97. "Mechanistic insights into the retaining glucosyl-3-phosphoglycerate synthase from mycobacteria" S. Urresti, D. Albesa-Jové, F. Schaeffer, H.T. Pham, D. Kaur, P. Gest, M.J. van der Woerd, A. Carreras-Gonzalez, S. Lopez-Fernandez, P.M. Alzari, P.J. Brennan, M. Jackson and M. E. Guerin. *J Biol. Chem.* **287**, 24649-24661 (2012).
98. "Viroporins: structure and biological functions" J.L. Nieva, V. Madan and L. Carrasco. *Nat Rev Microbiol.* **10**, 563-74 (2012).
99. "Viability conditions for a compartmentalized protometabolic system: a semi-empirical approach" G. Piedrafita, K. Ruiz-Mirazo, P.A. Monnard, A. Cornish-Bowden and F. Montero. *PLoS One* **7**, (6) e39480 (2012).

100. "Phospholipases C and sphingomyelinases: Lipids as substrates and modulators of enzyme activity" F.M. Goñi, L.R. Montes and A. Alonso. *Prog Lipid Res* **51**, 238–266 (2012).
101. "Mechanical properties of lipid bilayers and regulation of mechanosensitive function. From biological to biomimetic channels" D. Balleza. *Channels* **6**, 1-14 (2012).
102. "Autonomy in evolution: from minimal to complex life" K. Ruiz-Mirazo and A. Moreno. *Synthese* **185**, 21-52 (2012).
103. "Regulation of Type IV secretion ATPase TrwD by magnesium: implications for the catalytic mechanism for the secretion ATPase superfamily" J. Ripoll-Rozada, A. Peña, S. Rivas, F. Moro, F. de la Cruz, E. Cabezón and I. Arechaga. *J. Biol. Chem.* **287**, 17408-17414 (2012).
104. Mechanism of membrane perturbation by the HIV-1 gp41 membrane-proximal external region and its modulation by cholesterol" A. Ivankin, B. Apellániz, D. Gidalevitz and J.L. Nieva. *Biochim Biophys Acta.* **1818**, 2521-2528 (2012).
105. "A dynamic model of long-range conformational adaptations triggered by nucleotide binding in GroEL-GroES" L. Skjaerven, A. Muga, N. Reuter and A. Martinez. *Proteins* **80**, 2333-2346 (2012).
106. "Targeting of Kv7.5 (KCNQ5)/KCNE channels to surface microdomains of cell membranes" M. Roura-Ferrer, L. Solé, A. Oliveras, Á. Villarroel, N. Comes and A. Felipe. *Muscle Nerve.* **45**, 48-54 (2012).
107. "The effect of amyloidogenic peptides on bacterial aging correlates with their intrinsic aggregation propensity" A. Villar-Pique, N.S. de Groot, R. Sabaté, S.P. Acebrón, G. Celaya, X. Fernández-Busquets, A. Muga and S. Ventura. *J. Mol. Biol.* **421**, 270-281 (2012).
108. "Membrane-active peptides derived from picornavirus 2B viroporin" S. Sánchez-Martínez, V. Madan, L. Carrasco and J.L. Nieva. *Curr Protein Pept Sci.* **13**, 1-12 (2012).
109. "Binding of β -Amyloid (1–42) peptide to negatively charged phospholipid membranes in the liquid-ordered state: modeling and experimental studies". H. Ahyayauch, M. Raab, J.V. Busto, N. Andraka, J.L. R. Arrondo, M. Masserini, I. Tvaroska and F.M. Goñi. *Biophys. J.* **103**, 453–463 (2012).
110. "A new view of the lethal apoptotic pore" G. Basañez, L. Soane and J.M. Hardwick. *PLoS Biology*, **10**, (9) e1001399 (2012).
111. "Surface expression and subunit specific control of steady protein levels by the Kv7.2 helix A-B linker" P. Aivar, J. Fernández-Orth, C. Gomis-Perez, A. Alberdi, A. Alaimo, M.S. Rodríguez, T. Giraldez, P. Miranda, P. Areso and A. Villarroel. *PLoS One* **7**, (10) e47263 (2012).

112. "Classical swine fever virus p7 protein is a viroporin involved in virulence in swine" D.P. Gladue, L.G. Holinka, E. Largo, I. Fernandez Sainz, C. Carrillo, V. O'Donnell, R. Baker-Branstetter, Z. Lu, X. Ambroggio, G.R. Risatti, J.L. Nieva and M.V. Borca. *J. Virol.* **86**, 6778-6791 (2012).
113. "Futuro, pasado, ... y memoria" F.M. Goñi. In: "Qué es Jakiunde". Servicio Editorial de la UPV/EHU, Bilbao, 75-79 (2012).
114. "Insights into sphingolipid miscibility: separate observation of sphingomyelin and ceramide N-acyl chain melting" S.S.W. Leung, J.V. Busto, A. Keyvanloo, F.M. Goñi and J. Thewalt. *Biophys J.* **103**, 2465-2474 (2012).
115. "Pores of the toxin FraC assemble into 2D hexagonal clusters in both crystal structures and model membranes" A.E. Mechaly, A. Bellomio, K. Morante, J. Agirre, D. Gil-Cartón, M. Valle, J.M. González-Mañas and D.M. Guérin. *J. Struct. Biol.* **180**, 312-317 (2012).
116. "Calorimetry-based profiling of blood plasma from colorectal cancer patients" S. Todinova, S. Krumova, P. Kurtev, V. Dimitrov, L. Djongov, Z. Dudunkov, S.G. Taneva. *Biochim. Biophys. Acta*, **1820**, 1879-1885 (2012).
117. "Sphingomyelin organization is required for vesicle biogenesis at the Golgi complex" J.M. Duran, F. Campelo, J. van Galen, T. Sachsenheimer, J. Sot, M.V. Egorov, C. Rentero, C. Enrich, R.S Polishchuk, F.M. Goñi, B. Brügger, F. Wieland and V. Malhotra. *EMBO J.* **31**, 4535-4546 (2012).
118. "Deletion of a single helix from the transmembrane domain causes large changes in membrane insertion properties and secondary structure of the bacterial conjugation protein TrwB" A.J. Vecino, R. de L. Segura, I. de la Arada, F. de la Cruz, F.M. Goñi, J.L. Arrondo and I. Alkorta. *Biochim Biophys Acta.* **1818**, 3158-3166 (2012).
119. "An engineered PII protein variant that senses a novel ligand: atomic resolution structure of the complex with citrate" K. Zeth, O. Fokina and K. Forchhammer. *Acta Crystallogr D Biol Crystallogr.* **68**, 901-908 (2012).
120. "Sphingomyelin organization is required for vesicle biogenesis at the Golgi complex" J.M. Duran, F. Campelo, J. van Galen, T. Sachsenheimer, J. Sot, M.V. Egorov, C. Rentero, C. Enrich, R.S. Polishchuk, F.M. Goñi, B. Brügger, F. Wieland and V. Malhotra. *EMBO J.* **31**, 4535-4546 (2012).
121. "Fluorescent labeling of Acanthamoeba assessed *in situ* from corneal sectioned microscopy" S. Marcos, J. Requejo-Isidro, J. Merayo-Llodes, A.U. Acuña, V. Hornillos, E. Carrillo, P. Pérez-Merino, S. del Olmo-Aguado, C. del Aguila, F. Amat-Guerri and L. Rivas. *Biomed Opt Express.* **3**, 2489-2499 (2012).
122. "Structure and uptake mechanism of bacteriocins targeting peptidoglycan renewal" K. Zeth. *Biochem. Soc. Trans.* **140**, 1560-1565 (2012).