REFERENCIAS

Acconcia,F., Bocedi,A., Ascenzi,P. y Marino,M. (2003). Does palmitoylation target estrogen receptors to plasma membrane caveolae? IUBMB. Life *55*, 33-35.

Alonso,T.S. (1989). Yolk platelets have the ability to synthesize glicerolipids in unfertilized eggs from Bufo arenarum Hensel. Comunicaciones Biológicas. Vol 8 No *1*, 37-47.

Alonso,T.S. (2000). Lipid involvement in meiotic maturation of amphibian oocytes. Recent Res. Devel. Lipids *4*, 181-193.

Alonso,T.S. y Bonini de Romanelli, I.C.(1986). Glycerolipid metabolism during early amphibian embryogenesis. Neutral lipid involvement in fertilization triggered events. Int. J.Biochem. *18*, 293–296.

Alonso,T.S., Bonini de Romanelli,I.C. y Bazan,N.G. (1982). Membrane lipids composition and metabolism during early embryonic development. Phospholipid subcellular distribution and 32P labeling. Biochim. Biophys. Acta *688*, 145-151.

Alonso,T.S., Bonini de Romanelli,I.C. y Bazan,N.G. (1986). Changes in triacylglycerol, diacylglycerol and free fatty acids after fertilization in developing toad embryos. Biochim. Biophys. Acta *875*, 465-472.

Allende,I.L.C. de (1938). Ciclo sexual de Bufo arenarum hembra. Rv. So. Argent. Biol., XIV.

Anderson,R.G. (1993). Caveolae: where incoming and outgoing messengers meet. Proc. Natl. Acad. Sci. U. S. A *90*, 10909-10913.

Andersson,F.C. y Gustafsson,L.E. (1985). Cytochemical localization of 5'-nucleotidase in the enteric ganglia and in smooth muscle cells of the guinea-pig. J. Neurocytol. *14*, 551-562.

Antollini,S.S. y Barrantes,F.J. (1998). Disclosure of discrete sites for phospholipid and sterols at the protein-lipid interface in native acetylcholine receptor-rich membrane. Biochemistry *37*, 16653-16662.

Antollini,S.S., Soto,M.A., Bonini,d.R., I, Gutierrez-Merino,C., Sotomayor,P. y 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.

Arozarena,I., Matallanas,D., Berciano,M.T., Sanz-Moreno,V., Calvo,F., Munoz,M.T., Egea,G., Lafarga,M. y Crespo,P. (2004). Activation of H-Ras in the endoplasmic

reticulum by the RasGRF family guanine nucleotide exchange factors. Mol. Cell Biol. *24*, 1516-1530.

Asano,A., Selvaraj,V., Buttke,D.E., Nelson,J.L., Green,K.M., Evans,J.E. y Travis,A.J. (2009). Biochemical characterization of membrane fractions in murine sperm: identification of three distinct sub-types of membrane rafts. J. Cell Physiol *218*, 537-548.

Aybar,M.J., Genta,S.B., Sanchez Riera,A.N. y Sanchez,S.S. (2000). Participation of the GM1 ganglioside in the gastrulation of anuran amphibian Bufo arenarum. J. Exp. Zool. *286*, 457-472.

Bagowski,C.P., Myers,J.W. y Ferrell,J.E., Jr. (2001). The classical progesterone receptor associates with p42 MAPK and is involved in phosphatidylinositol 3-kinase signaling in Xenopus oocytes. J. Biol. Chem. *276*, 37708-37714.

Ballard-Croft,C., Locklar,A.C., Keith,B.J., Mentzer,R.M., Jr. y Lasley,R.D. (2008). Oxidative stress and adenosine A1 receptor activation differentially modulate subcellular cardiomyocyte MAPKs. Am. J. Physiol Heart Circ. Physiol *294*, H263-H271.

Baran,J., Mundy,D.I., Vasanji,A. y Parat,M.O. (2007). Altered localization of H-Ras in caveolin-1-null cells is palmitoylation-independent. J. Cell Commun. Signal. *1*, 195-204.

Barbieri, F.D., Raisman, J.S. y Albarracín, C. (1968). Amilasa y glucogenólisis en el desarrollo de anfibios. Arch. Bioq. Quim. Farm. Tucumán, *tomo XIV 1-2*, 179-194.

Barylko,B., Jung,G. y Albanesi,J.P. (2005). Structure, function, and regulation of myosin 1C. Acta Biochim. Pol. *52*, 373-380.

Bayaa,M., Booth,R.A., Sheng,Y. y Liu,X.J. (2000). The classical progesterone receptor mediates Xenopus oocyte maturation through a nongenomic mechanism. Proc. Natl. Acad. Sci. U. S. A *97*, 12607-12612.

Belton,R.J., Jr., Adams,N.L. y Foltz,K.R. (2001). Isolation and characterization of sea urchin egg lipid rafts and their possible function during fertilization. Mol. Reprod. Dev. *59*, 294-305.

Beyo,R.S., Divya,L., Oommen,O.V. y Akbarsha,M.A. (2008). Accumulation of yolk in a caecilian (Gegeneophis ramaswamii) oocyte: a light and transmission electron microscopic study. J. Morphol. *269*, 1412-1424.

Bhuyan,A.K., Varshney,A. y Mathew,M.K. (2001). Resting membrane potential as a marker of apoptosis: studies on Xenopus oocytes microinjected with cytochrome c. Cell Death. Differ. *8*, 63-69.

Blondeau,J.P. y Baulieu,E.E. (1985). Progesterone-inhibited phosphorylation of an unique Mr 48,000 protein in the plasma membrane of Xenopus laevis oocytes. J. Biol. Chem. *260*, 3617-3625.

Bonini de Romanelli, I.C., Alonso, T.S. y Bazán, N.G. (1981). Phosphatidic acid, phosphatidylinositol, phosphatidylserine and cardiolipin in the course of early embryonic development. Fatty acid composition and content in whole toad embryos and in mitochondrial fractions. Biochim. Biophys. Acta. *664*,561–571.

Boonyaratanakornkit,V., Bi,Y., Rudd,M. y Edwards,D.P. (2008). The role and mechanism of progesterone receptor activation of extra-nuclear signaling pathways in regulating gene transcription and cell cycle progression. Steroids *73*, 922-928.

Boonyaratanakornkit,V., McGowan,E., Sherman,L., Mancini,M.A., Cheskis,B.J. y Edwards,D.P. (2007). The role of extranuclear signaling actions of progesterone receptor in mediating progesterone regulation of gene expression and the cell cycle. Mol. Endocrinol. *21*, 359-375.

Boonyaratanakornkit,V., Scott,M.P., Ribon,V., Sherman,L., Anderson,S.M., Maller,J.L., Miller,W.T. y Edwards,D.P. (2001). Progesterone receptor contains a proline-rich motif that directly interacts with SH3 domains and activates c-Src family tyrosine kinases. Mol. Cell *8*, 269-280.

Brown,D.A. (2007). Analysis of raft affinity of membrane proteins by detergent-insolubility. Methods Mol. Biol. *398*, 9-20.

Brown,D.A. y London,E. (2000). Structure and function of sphingolipid- and cholesterol-rich membrane rafts. J. Biol. Chem. *275*, 17221-17224.

Brown,D.A. y Rose,J.K. (1992). Sorting of GPI-anchored proteins to glycolipid-enriched membrane subdomains during transport to the apical cell surface. Cell *68*, 533-544.

Buschiazzo,J., Bruzzone,A. y Alonso,T.S. (2003). Detailed lipid analysis of yolk platelets of amphibian (Bufo arenarum) oocytes. J. Exp. Zool. A Comp Exp. Biol. *297*, 189-195.

Chang,T.Y., Chang,C.C., Ohgami,N. y Yamauchi,Y. (2006). Cholesterol sensing, trafficking, and esterification. Annu. Rev. Cell Dev. Biol. *22*, 129-157.

Chasserot-Golaz,S., Vitale,N., Umbrecht-Jenck,E., Knight,D., Gerke,V. y Bader,M.F. (2005). Annexin 2 promotes the formation of lipid microdomains required for calcium-regulated exocytosis of dense-core vesicles. Mol. Biol. Cell *16*, 1108-1119.

Chen,Y., Qin,J., Cai,J. y Chen,Z.W. (2009). Cold induces micro- and nano-scale reorganization of lipid raft markers at mounds of T-cell membrane fluctuations. PLoS. One. *4*, e5386.

Chen,Y., Takizawa,N., Crowley,J.L., Oh,S.W., Gatto,C.L., Kambara,T., Sato,O., Li,X.D., Ikebe,M. y Luna,E.J. (2003). F-actin and myosin II binding domains in supervillin. J. Biol. Chem. *278*, 46094-46106.

Chiu,V.K., Bivona,T., Hach,A., Sajous,J.B., Silletti,J., Wiener,H., Johnson,R.L., Cox,A.D. y Philips,M.R. (2002). Ras signalling on the endoplasmic reticulum and the Golgi. Nat. Cell Biol. *4*, 343-350.

Christian A.E., Haynes M.P., Phillips M.C., Rothblat G.H. (1997). Use of cyclodextrins for manipulating cellular cholesterol content. J. Lipid Res. 38, 2264-2272.

Cei, J. M. (1956). Nueva lista sistemática de los Batracios de Argentina y breves notas sobre su biología y ecología. Invest. Zool. Chilenas, III, 3.

Close,B. *y col.* (1997). Recommendations for euthanasia of experimental animals: Part 2. DGXT of the European Commission. Lab Anim *31*, 1-32.

Coll,O., Morales,A., Fernandez-Checa,J.C. y Garcia-Ruiz,C. (2007). Neutral sphingomyelinase-induced ceramide triggers germinal vesicle breakdown and oxidant-dependent apoptosis in Xenopus laevis oocytes. J. Lipid Res. *48*, 1924-1935.

Companyo,M., Iborra,A., Villaverde,J., Martinez,P. y Morros,A. (2007). Membrane fluidity changes in goat sperm induced by cholesterol depletion using beta-cyclodextrin. Biochim. Biophys. Acta *1768*, 2246-2255.

Conti,M.A. y Adelstein,R.S. (2008). Nonmuscle myosin II moves in new directions. J. Cell Sci. *121*, 11-18.

Crespo,P.M., von,M.N., Iglesias-Bartolome,R. y Daniotti,J.L. (2008). Complex gangliosides are apically sorted in polarized MDCK cells and internalized by clathrin-independent endocytosis. FEBS J. *275*, 6043-6056.

DeBruin,L.S., Haines,J.D., Wellhauser,L.A., Radeva,G., Schonmann,V., Bienzle,D. y Harauz,G. (2005). Developmental partitioning of myelin basic protein into membrane microdomains. J. Neurosci. Res. *80*, 211-225.

Deng,J., Carbajal,L., Evaul,K., Rasar,M., Jamnongjit,M. y Hammes,S.R. (2009). Nongenomic steroid-triggered oocyte maturation: of mice and frogs. Steroids *74*, 595-601.

Deng,J., Lang,S., Wylie,C. y Hammes,S.R. (2008). The Xenopus laevis isoform of G protein-coupled receptor 3 (GPR3) is a constitutively active cell surface receptor that participates in maintaining meiotic arrest in X. laevis oocytes. Mol. Endocrinol. *22*, 1853-1865.

DePina,A.S., Wollert,T. y Langford,G.M. (2007). Membrane associated nonmuscle myosin II functions as a motor for actin-based vesicle transport in clam oocyte extracts. Cell Motil. Cytoskeleton *64*, 739-755.

Dietrich,C., Yang,B., Fujiwara,T., Kusumi,A. y Jacobson,K. (2002). Relationship of lipid rafts to transient confinement zones detected by single particle tracking. Biophys. J. *82*, 274-284.

Draeger,A., Wray,S. y Babiychuk,E.B. (2005). Domain architecture of the smooth-muscle plasma membrane: regulation by annexins. Biochem. J. *387*, 309-314.

Duellman,W.E. y Trueb,L. (1994) Biology of Amphibians.The Quarterly Review of Biology. Published in Association with Stony Brook University.

Elola,M.T., Cabada,M.O., Barisone,G.A. y Fink,N.E. (1998). Immunohistochemical localisation of a galectin from Bufo arenarum ovary. Zygote. *6*, 1-9.

Fabra,M., Raldua,D., Bozzo,M.G., Deen,P.M., Lubzens,E. y Cerda,J. (2006). Yolk proteolysis and aquaporin-1o play essential roles to regulate fish oocyte hydration during meiosis resumption. Dev. Biol. *295*, 250-262.

Fagotto,F. y Maxfield,F.R. (1994). Changes in yolk platelet pH during Xenopus laevis development correlate with yolk utilization. A quantitative confocal microscopy study. J. Cell Sci. *107 (Pt 12)*, 3325-3337.

Falchuk,K.H., Contin,J.M., Dziedzic,T.S., Feng,Z., French,T.C., Heffron,G.J. y Montorzi,M. (2002). A role for biliverdin IXalpha in dorsal axis development of Xenopus laevis embryos. Proc. Natl. Acad. Sci. U. S. A *99*, 251-256.

Favard,P. y Favard-Sereno,C. (1969). Electron microscope study of polysaccharides in the amphibian oocytes. J. Submicrosc. Cytol. *1*, 91–111.

Ferrell,J.E., Jr. (1999). Xenopus oocyte maturation: new lessons from a good egg. Bioessays *21*, 833-842.

Folch,J., Lees,M.B. y Sloane-Stanley,G.H. (1957). A simple method for the isolation and purification of total lipids from animal tissues. J.Biol. Chem. *226*,497–509.

Fukano,T., Sawano,A., Ohba,Y., Matsuda,M. y Miyawaki,A. (2007). Differential Ras activation between caveolae/raft and non-raft microdomains. Cell Struct. Funct. *32*, 9-15.

Furland,N.E., Zanetti,S.R., Oresti,G.M., Maldonado,E.N. y Aveldano,M.I. (2007). Ceramides and sphingomyelins with high proportions of very long-chain polyunsaturated fatty acids in mammalian germ cells. J. Biol. Chem. *282*, 18141-18150.

Gaffre,M., Dupre,A., Valuckaite,R., Suziedelis,K., Jessus,C. y Haccard,O. (2006). Deciphering the H-Ras pathway in Xenopus oocyte. Oncogene *25*, 5155-5162.

Gallardo,J.(1987). Anfibios argentinos. Guía para su identificación. Librería Agropecuaria S.A.

Gallo,C.J., Hand,A.R., Jones,T.L. y Jaffe,L.A. (1995). Stimulation of Xenopus oocyte maturation by inhibition of the G-protein alpha S subunit, a component of the plasma membrane and yolk platelet membranes. J. Cell Biol. *130*, 275-284.

Giusto,N.M., Pasquare,S.J., Salvador,G.A. y Ilincheta de Boschero,M.G. (2009). Lipid second messengers and related enzymes in vertebrate rod outer segments. J. Lipid Res.

Glenney,J.R., Jr. y Zokas,L. (1989). Novel tyrosine kinase substrates from Rous sarcoma virus-transformed cells are present in the membrane skeleton. J. Cell Biol. *108*, 2401-2408.

Gomez,G.A. y Daniotti,J.L. (2005). H-Ras dynamically interacts with recycling endosomes in CHO-K1 cells: involvement of Rab5 and Rab11 in the trafficking of H-Ras to this pericentriolar endocytic compartment. J. Biol. Chem. *280*, 34997-35010.

Grazide,S., Maestre,N., Veldman,R.J., Bezombes,C., Maddens,S., Levade,T., Laurent,G. y Jaffrezou,J.P. (2002). Ara-C- and daunorubicin-induced recruitment of Lyn in sphingomyelinase-enriched membrane rafts. FASEB J. *16*, 1685-1687.

Gustincich,S., Vatta,P., Goruppi,S., Wolf,M., Saccone,S., Della,V.G., Baggiolini,M. y Schneider,C. (1999). The human serum deprivation response gene (SDPR) maps to 2q32-q33 and codes for a phosphatidylserine-binding protein. Genomics *57*, 120-129.

Haccard,O. y Jessus,C. (2006). Redundant pathways for Cdc2 activation in Xenopus oocyte: either cyclin B or Mos synthesis. EMBO Rep. *7*, 321-325.

Hakomori,S.I. (2008). Structure and function of glycosphingolipids and sphingolipids: recollections and future trends. Biochim. Biophys. Acta *1780*, 325-346.

Hannun,Y.A. y Obeid,L.M. (2008). Principles of bioactive lipid signalling: lessons from sphingolipids. Nat. Rev. Mol. Cell Biol. *9*, 139-150.

Hausen P. y Riebesell M. (1991).The early development of Xenopus laevis: an atlas of the histology. Berlin: Springer-Verlag.

Heberden,C., Reine,F., Grosse,B., Henry,C., Zagar,Y., Chaumaz,G. y Lieberherr,M. (2006). Detection of a raft-located estrogen receptor-like protein distinct from ER alpha. Int. J. Biochem. Cell Biol. *38*, 376-391.

Heerklotz,H. (2002). Triton promotes domain formation in lipid raft mixtures. Biophys. J. *83*, 2693-2701.

Heider,J.G. y Boyett,R.L. (1978). The picomole determination of free and total cholesterol in cells in culture. J. Lipid Res. *19*, 514-518.

Hellman, U. (1997) Protein Structure Analysis: Preparation, Characterization and Microsequencing, Springer-Verlag, Heidelberg.

Hickman,R.(1990) Zoología. Principios integrales. Interamericana Mcgraw-Hill.

Howe,A.G. y McMaster,C.R. (2001). Regulation of vesicle trafficking, transcription, and meiosis: lessons learned from yeast regarding the disparate biologies of phosphatidylcholine. Biochim. Biophys. Acta *1534*, 65-77.

Howe,A.G. y McMaster,C.R. (2006). Regulation of phosphatidylcholine homeostasis by Sec14. Can. J. Physiol Pharmacol. *84*, 29-38.

Ingelmo-Torres,M., Gaus,K., Herms,A., Gonzalez-Moreno,E., Kassan,A., Bosch,M., Grewal,T., Tebar,F., Enrich,C. y Pol,A. (2009). Triton X-100 promotes a cholesterol-dependent condensation of the plasma membrane. Biochem. J. *420*, 373-381.

Ishmael,J.E., Safic,M., Amparan,D., Vogel,W.K., Pham,T., Marley,K., Filtz,T.M. y Maier,C.S. (2007). Nonmuscle myosins II-B and Va are components of detergent-resistant membrane skeletons derived from mouse forebrain. Brain Res. *1143*, 46-59.

Jaffe,L.A. y Terasaki,M. (1994). Structural changes in the endoplasmic reticulum of starfish oocytes during meiotic maturation and fertilization. Dev. Biol. *164*, 579-587.

Jessus,C., Rime,H., Haccard,O., Van,L.J., Goris,J., Merlevede,W. y Ozon,R. (1991). Tyrosine phosphorylation of p34cdc2 and p42 during meiotic maturation of Xenopus oocyte. Antagonistic action of okadaic acid and 6-DMAP. Development *111*, 813-820.

Jorgensen,P. (2008). Yolk. Curr. Biol. *18*, R103-R104.

Jorgensen,P., Steen,J.A., Steen,H. y Kirschner,M.W. (2009). The mechanism and pattern of yolk consumption provide insight into embryonic nutrition in Xenopus. Development *136*, 1539-1548.

Josefsberg Ben-Yehoshua,L., Lewellyn,A.L., Thomas,P. y Maller,J.L. (2007). The role of Xenopus membrane progesterone receptor beta in mediating the effect of progesterone on oocyte maturation. Mol. Endocrinol. *21*, 664-673.

Kadam,K.M., D'Souza,S.J., Bandivdekar,A.H. y Natraj,U. (2006). Identification and characterization of oviductal glycoprotein-binding protein partner on gametes: epitopic similarity to non-muscle myosin IIA, MYH 9. Mol. Hum. Reprod. *12*, 275-282.

Kadam,K.M., D'Souza,S.J. y Natraj,U. (2007). Identification of cellular isoform of oviduct-specific glycoprotein: role in oviduct tissue remodeling? Cell Tissue Res. *330*, 545-556.

Karasaki,S. (1963). Studies on amphibian yolk 1. The ultrastructure of the yolk platelet. J. Cell Biol. *18*, 135-151.

Kelley,C.A., Oberman,F., Yisraeli,J.K. y Adelstein,R.S. (1995). A Xenopus nonmuscle myosin heavy chain isoform is phosphorylated by cyclin-p34cdc2 kinase during meiosis. J. Biol. Chem. *270*, 1395-1401.

Kelley,R.O., Nakai,G.S. y Guganig,M.E. (1971). A biochemical and ultrastructural study of RNA in yolk platelets of Xenopus gastrulae. J. Embryol. Exp. Morphol. *26*, 181-193.

Kielbowna,L. (1975). Utilization of yolk platelets and lipid bodies during the myogenesis of Xenopus laevis (Daudin). Cell Tissue Res. *159*, 279-286.

Kirkham,M. *y col.* (2008). Evolutionary analysis and molecular dissection of caveola biogenesis. J. Cell Sci. *121*, 2075-2086.

Kishimoto,T. (2003). Cell-cycle control during meiotic maturation. Curr. Opin. Cell Biol. *15*, 654-663.

Kittel,A. y Bacsy,E. (1994). Ecto-ATPases and 5'-nucleotidases in the caveolae of smooth muscle. Enzyme-histochemical evidence may indicate a role for caveolae in neurotransmission. Cell Biol. Int. *18*, 875-879.

Kittel,A., Csapo,Z.S., Csizmadia,E., Jackson,S.W. y Robson,S.C. (2004). Co-localization of P2Y1 receptor and NTPDase1/CD39 within caveolae in human placenta. Eur. J. Histochem. *48*, 253-259.

Kittel,A., Kiss,A.L., Mullner,N., Matko,I. y Sperlagh,B. (2005). Expression of NTPDase1 and caveolins in human cardiovascular disease. Histochem. Cell Biol. *124*, 51-59.

Kluck,R.M., Martin,S.J., Hoffman,B.M., Zhou,J.S., Green,D.R. y Newmeyer,D.D. (1997). Cytochrome c activation of CPP32-like proteolysis plays a critical role in a Xenopus cell-free apoptosis system. EMBO J. *16*, 4639-4649.

Kobrinsky,E., Spielman,A.I., Rosenzweig,S. y Marks,A.R. (1999). Ceramide triggers intracellular calcium release via the IP3 receptor in Xenopus laevis oocytes. Am. J. Physiol. Cell. Physiol. *277*, 665-672.

Komatsu,J., Yamano,S., Kuwahara,A., Tokumura,A. y Irahara,M. (2006). The signaling pathways linking to lysophosphatidic acid-promoted meiotic maturation in mice. Life Sci. *79*, 506-511.

Komazaki,S. y Hiruma,T. (1999). Degradation of yolk platelets in the early amphibian embryo is regulated by fusion with late endosomes. Dev. Growth Differ. *41*, 173-181.

Komazaki,S., Tanaka,N. y Nakamura,H. (2002). Regional differences in yolk platelet degradation activity and in types of yolk platelets degraded during early amphibian embryogenesis. Cells Tissues. Organs *172*, 13-20.

Kostellow,A.B., Ma,G.Y. y Morrill,G.A. (1996). Progesterone triggers the rapid activation of phospholipase D in the amphibian oocyte plasma membrane when initiating the G2/M transition. Biochim. Biophys. Acta *1304*, 263-271.

Kostellow,A.B., Ma,G.Y. y Morrill,G.A. (2001). The first product of phospholipid N-methylation, phosphatidylmonomethylethanolamine, is a lipid mediator for progesterone action at the amphibian oocyte plasma membrane. Steroids *66*, 849-856.

Kranenburg,O., Verlaan,I. y Moolenaar,W.H. (2001). Regulating c-Ras function. cholesterol depletion affects caveolin association, GTP loading, and signaling. Curr. Biol. *11*, 1880-1884.

Laemmli,U.K. (1970). Cleavage of structural proteins during the assembly of the head of bacteriophage T4. Nature *227*, 680-685.

LaFleur,G.J., Jr., Raldua,D., Fabra,M., Carnevali,O., Denslow,N., Wallace,R.A. y Cerda,J. (2005). Derivation of major yolk proteins from parental vitellogenins and alternative processing during oocyte maturation in Fundulus heteroclitus. Biol. Reprod. *73*, 815-824.

Lakowicz,J.R., Gryczynski,I., Gryczynski,Z. y Dattelbaum,J.D. (1999). Anisotropy-based sensing with reference fluorophores. Anal. Biochem. *267*, 397-405.

Lange,C.A. (2007). Editorial: membrane and nuclear steroid hormone receptors: two integrated arms of the same signaling pathway? Steroids *72*, 105-106.

Le,L.S., Hajduch,E., Lindsay,M.R., Le,L., X, Thiele,C., Ferre,P., Parton,R.G., Kurzchalia,T., Simons,K. y Dugail,I. (2006). Cholesterol-induced caveolin targeting to lipid droplets in adipocytes: a role for caveolar endocytosis. Traffic. *7*, 549-561.

Le,P.U., Guay,G., Altschuler,Y. y Nabi,I.R. (2002). Caveolin-1 is a negative regulator of caveolae-mediated endocytosis to the endoplasmic reticulum. J. Biol. Chem. *277*, 3371-3379.

Lentini,D., Guzzi,F., Pimpinelli,F., Zaninetti,R., Cassetti,A., Coco,S., Maggi,R. y Parenti,M. (2008). Polarization of caveolins and caveolae during migration of immortalized neurons. J. Neurochem. *104*, 514-523.

Lessman,C.A. (2009). Oocyte maturation: converting the zebrafish oocyte to the fertilizable egg. Gen. Comp Endocrinol. *161*, 53-57.

Levin,E.R. (2005). Integration of the extranuclear and nuclear actions of estrogen. Mol. Endocrinol. *19*, 1951-1959.

Levitan,I. y Gooch,K.J. (2007). Lipid rafts in membrane-cytoskeleton interactions and control of cellular biomechanics: actions of oxLDL. Antioxid. Redox. Signal. *9*, 1519-1534.

Li,S., Couet,J. y Lisanti,M.P. (1996). Src tyrosine kinases, Galpha subunits, and H-Ras share a common membrane-anchored scaffolding protein, caveolin. Caveolin binding negatively regulates the auto-activation of Src tyrosine kinases. J. Biol. Chem. *271*, 29182-29190.

Liang,C.G., Su,Y.Q., Fan,H.Y., Schatten,H. y Sun,Q.Y. (2007). Mechanisms regulating oocyte meiotic resumption: roles of mitogen-activated protein kinase. Mol. Endocrinol. *21*, 2037-2055.

Liao,W.X., Feng,L., Zhang,H., Zheng,J., Moore,T.R. y Chen,D.B. (2009). Compartmentalizing VEGF-induced ERK2/1 signaling in placental artery endothelial cell caveolae: a paradoxical role of caveolin-1 in placental angiogenesis in vitro. Mol. Endocrinol. *23*, 1428-1444.

Lichtenberg,D., Goni,F.M. y Heerklotz,H. (2005). Detergent-resistant membranes should not be identified with membrane rafts. Trends Biochem. Sci. *30*, 430-436.

Lisanti,M.P., Sargiacomo,M. y Scherer,P.E. (1999). Purification of caveolae-derived membrane microdomains containing lipid-anchored signaling molecules, such as GPI-anchored proteins, H-Ras, Src-family tyrosine kinases, eNOS, and G-protein alpha-, beta-, and gamma-subunits. Methods Mol. Biol. *116*, 51-60.

Liu,X.S., Ma,C., Hamam,A.W. y Liu,X.J. (2005). Transcription-dependent and transcription-independent functions of the classical progesterone receptor in Xenopus ovaries. Dev. Biol. *283*, 180-190.

Loewen,C.J., Gaspar,M.L., Jesch,S.A., Delon,C., Ktistakis,N.T., Henry,S.A. y Levine,T.P. (2004). Phospholipid metabolism regulated by a transcription factor sensing phosphatidic acid. Science *304*, 1644-1647.

Lowry,O.H., Rosebrough,N.J., Farr,A.L. y Randall,R.J. (1951). Protein measurement with the Folin phenol reagent. J. Biol. Chem. *193*, 265-275.

Luque,M.E., Crespo,P.M., Monaco,M.E., Aybar,M.J., Daniotti,J.L. y Sanchez,S.S. (2008). Cloning and functional characterization of two key enzymes of glycosphingolipid biosynthesis in the amphibian Xenopus laevis. Dev. Dyn. *237*, 112-123.

Luria,A., Vegelyte-Avery,V., Stith,B., Tsvetkova,N.M., Wolkers,W.F., Crowe,J.H., Tablin,F. y Nuccitelli,R. (2002). Detergent-free domain isolated from Xenopus egg plasma membrane with properties similar to those of detergent-resistant membranes. Biochemistry *41*, 13189-13197.

Lutz,L.B., Cole,L.M., Gupta,M.K., Kwist,K.W., Auchus,R.J. y Hammes,S.R. (2001). Evidence that androgens are the primary steroids produced by Xenopus laevis ovaries and may signal through the classical androgen receptor to promote oocyte maturation. Proc. Natl. Acad. Sci. U. S. A *98*, 13728-13733.

Macdonald,J.L. y Pike,L.J. (2005). A simplified method for the preparation of detergent-free lipid rafts. J. Lipid Res. *46*, 1061-1067.

Mahbub Hasan,A.K., Ou,Z., Sakakibara,K., Hirahara,S., Iwasaki,T., Sato,K. y Fukami,Y. (2007). Characterization of Xenopus egg membrane microdomains containing uroplakin Ib/III complex: roles of their molecular interactions for subcellular localization and signal transduction. Genes Cells *12*, 251-267.

Mahbub Hasan,A.K., Sato,K., Sakakibara,K., Ou,Z., Iwasaki,T., Ueda,Y. y Fukami,Y. (2005). Uroplakin III, a novel Src substrate in Xenopus egg rafts, is a target for sperm protease essential for fertilization. Dev. Biol. *286*, 483-492.

Maller,J.L. y Koontz,J.W. (1981). A study of the induction of cell division in amphibian oocytes by insulin. Dev. Biol. *85*, 309-316.

Massover,W.H. (1971). Intramitochondrial yolk-crystals of frog oocytes. I. Formation of yolk-crystal inclusions by mitochondria during bullfrog oogenesis. J. Cell Biol. *48*, 266-279.

Matten,W.T., Copeland,T.D., Ahn,N.G. y Vande Woude,G.F. (1996). Positive feedback between MAP kinase and Mos during Xenopus oocyte maturation. Dev. Biol. *179*, 485-492.

Mayor,S. y Pagano,R.E. (2007). Pathways of clathrin-independent endocytosis. Nat. Rev. Mol. Cell Biol. *8*, 603-612.

Mayor,S., Viola,A., Stan,R.V. y del Pozo,M.A. (2006). Flying kites on slippery slopes at Keystone. Symposium on Lipid Rafts and Cell Function. EMBO Rep. *7*, 1089-1093.

Mazzoco,P. (1940). Variaciones estacionales del peso y composición química del ovario y testículos del sapo Bufo arenarum. Rev So. Agent. Biol. XVI (a).

Meijer,L., Guerrier,P. y Maclouf,J. (1984). Arachidonic acid, 12- and 15-hydroxyeicosatetraenoic acids, eicosapentaenoic acid, and phospholipase A2 induce starfish oocyte maturation. Dev. Biol. *106*, 368-378.

Middlebrook,J.L. y Dorland,R.B. (1984). Bacterial toxins: cellular mechanisms of action. Microbiol. Rev. *48*, 199-221.

Monaco,M.E., Villecco,E.I. y Sanchez,S.S. (2007). Implication of gap junction coupling in amphibian vitellogenin uptake. Zygote. *15*, 149-157.

Monier,S., Parton,R.G., Vogel,F., Behlke,J., Henske,A. y Kurzchalia,T.V. (1995). VIP21-caveolin, a membrane protein constituent of the caveolar coat, oligomerizes in vivo and in vitro. Mol. Biol. Cell *6*, 911-927.

Monneron,A. y d'Alayer,J. (1978a). Isolation of plasma and nuclear membranes of thymocytes. I. Enzymatic composition and ultrastructure. J. Cell Biol. *77*, 211-231.

Monneron,A. y d'Alayer,J. (1978b). Isolation of plasma and nuclear membranes of thymocytes. II. Biochemical composition. J. Cell Biol. *77*, 232-245.

Montorzi,M., Dziedzic,T.S. y Falchuk,K.H. (2002). Biliverdin during Xenopus laevis oogenesis and early embryogenesis. Biochemistry *41*, 10115-10122.

Montorzi,M., Falchuk,K.H. y Vallee,B.L. (1995). Vitellogenin and lipovitellin: zinc proteins of Xenopus laevis oocytes. Biochemistry *34*, 10851-10858.

Mora,R., Bonilha,V.L., Marmorstein,A., Scherer,P.E., Brown,D., Lisanti,M.P. y Rodriguez-Boulan,E. (1999). Caveolin-2 localizes to the golgi complex but redistributes to plasma membrane, caveolae, and rafts when co-expressed with caveolin-1. J. Biol. Chem. *274*, 25708-25717.

Morrill,G.A., Doi,K., Erlichman,J. y Kostellow,A.B. (1993). Cyclic AMP binding to the amphibian oocyte plasma membrane: possible interrelationship between meiotic arrest and membrane fluidity. Biochim. Biophys. Acta *1158*, 146-154.

Morrill,G.A., Doi,K. y Kostellow,A.B. (1989). Progesterone induces transient changes in plasma membrane fluidity of amphibian oocytes during the first meiotic division. Arch. Biochem. Biophys. *269*, 690-694.

Morrill,G.A., Erlichman,J., Gutierrez-Juarez,R. y Kostellow,A.B. (2005). The steroid-binding subunit of the Na/K-ATPase as a progesterone receptor on the amphibian oocyte plasma membrane. Steroids *70*, 933-945.

Morrill,G.A. y Kostellow,A.B. (1998). Progesterone release of lipid second messengers at the amphibian oocyte plasma membrane: role of ceramide in initiating the G2/M transition. Biochem. Biophys. Res. Commun. *246*, 359-363.

Morrill,G.A. y Kostellow,A.B. (1999). Progesterone induces meiotic division in the amphibian oocyte by releasing lipid second messengers from the plasma membrane. Steroids *64*, 157-167.

Morrill,G.A., Kostellow,A.B. y Askari,A. (2008). Progesterone binding to the alpha1-subunit of the Na/K-ATPase on the cell surface: insights from computational modeling. Steroids *73*, 27-40.

Morrill,G.A., Ma,G. y Kostellow,A. (2000). Molecular species analysis of 1,2-diacylglycerol released in response to progesterone binding to the amphibian oocyte plasma membrane. Cell Signal. *12*, 787-796.

Morrison,T., Waggoner,L., Whitworth-Langley,L. y Stith,B.J. (2000). Nongenomic action of progesterone: activation of Xenopus oocyte phospholipase C through a plasma membrane-associated tyrosine kinase. Endocrinology *141*, 2145-2152.

Morrison,W.R. y Smith,L.M. (1964). Preparation of fatty acid methyl esters and dimethylacetals from lipids with boron fluoride--methanol. J. Lipid Res. *5*, 600-608.

Murata,M., Peranen,J., Schreiner,R., Wieland,F., Kurzchalia,T.V. y Simons,K. (1995). VIP21/caveolin is a cholesterol-binding protein. Proc. Natl. Acad. Sci. U. S. A *92*, 10339-10343.

Nebl,T., Pestonjamasp,K.N., Leszyk,J.D., Crowley,J.L., Oh,S.W. y Luna,E.J. (2002). Proteomic analysis of a detergent-resistant membrane skeleton from neutrophil plasma membranes. J. Biol. Chem. *277*, 43399-43409.

Nebreda,A.R. y Ferby,I. (2000). Regulation of the meiotic cell cycle in oocytes. Curr. Opin. Cell Biol. *12*, 666-675.

Norris,R.P., Freudzon,L., Freudzon,M., Hand,A.R., Mehlmann,L.M. y Jaffe,L.A. (2007). A G(s)-linked receptor maintains meiotic arrest in mouse oocytes, but luteinizing hormone does not cause meiotic resumption by terminating receptor-G(s) signaling. Dev. Biol. *310*, 240-249.

Oh,P. y Schnitzer,J.E. (2001). Segregation of heterotrimeric G proteins in cell surface microdomains. G(q) binds caveolin to concentrate in caveolae, whereas G(i) and G(s) target lipid rafts by default. Mol. Biol. Cell *12*, 685-698.

Opresko,L.K. y Wiley,H.S. (1987). Receptor-mediated endocytosis in Xenopus oocytes. I. Characterization of the vitellogenin receptor system. J. Biol. Chem. *262*, 4109-4115.

Oresti, G.M. (2008) Lípidos con ácidos grasos poliinsaturados de larga y muy larga cadena en células del epitelio seminífero y espermatozoides. Tesis Doctoral.

Ostrom,R.S., Gregorian,C., Drenan,R.M., Xiang,Y., Regan,J.W. y Insel,P.A. (2001). Receptor number and caveolar co-localization determine receptor coupling efficiency to adenylyl cyclase. J. Biol. Chem. *276*, 42063-42069.

Palade,G.E.(1953). Fine structure of blood capillaries. J. Appl. Phys. *24*, 1424.

Pang,H., Le,P.U. y Nabi,I.R. (2004). Ganglioside GM1 levels are a determinant of the extent of caveolae/raft-dependent endocytosis of cholera toxin to the Golgi apparatus. J. Cell Sci. *117*, 1421-1430.

Pantaler,E., Kamp,D. y Haest,C.W. (2000). Acceleration of phospholipid flip-flop in the erythrocyte membrane by detergents differing in polar head group and alkyl chain length. Biochim. Biophys. Acta *1509*, 397-408.

Parasassi,T., De,S.G., d'Ubaldo,A. y Gratton,E. (1990). Phase fluctuation in phospholipid membranes revealed by Laurdan fluorescence. Biophys. J. *57*, 1179-1186.

Parasassi,T., De,S.G., Ravagnan,G., Rusch,R.M. y Gratton,E. (1991). Quantitation of lipid phases in phospholipid vesicles by the generalized polarization of Laurdan fluorescence. Biophys. J. *60*, 179-189.

Park,E.K. *y col.* (2009). Cholesterol depletion induces anoikis-like apoptosis via FAK down-regulation and caveolae internalization. J. Pathol. *218*, 337-349.

Patel,H.H., Murray,F. y Insel,P.A. (2008). Caveolae as organizers of pharmacologically relevant signal transduction molecules. Annu. Rev. Pharmacol. Toxicol. *48*, 359-391.

Perez,G.I., Jurisicova,A., Matikainen,T., Moriyama,T., Kim,M.R., Takai,Y., Pru,J.K., Kolesnick,R.N. y Tilly,J.L. (2005). A central role for ceramide in the age-related acceleration of apoptosis in the female germline. FASEB J. *19*, 860-862.

Persaud-Sawin,D.A., Lightcap,S. y Harry,G.J. (2009). Isolation of rafts from mouse brain tissue by a detergent-free method. J. Lipid Res. *50*, 759-767.

Pike,L.J. (2003). Lipid rafts: bringing order to chaos. J. Lipid Res. *44*, 655-667.

Pike,L.J. (2006). Rafts defined: a report on the Keystone Symposium on Lipid Rafts and Cell Function. J. Lipid Res. *47*, 1597-1598.

Pike,L.J. (2009). The challenge of lipid rafts. J. Lipid Res. *50 Suppl*, S323-S328.

Pike,L.J. y Casey,L. (1996). Localization and turnover of phosphatidylinositol 4,5-bisphosphate in caveolin-enriched membrane domains. J. Biol. Chem. *271*, 26453-26456.

Pike,L.J., Han,X. y Gross,R.W. (2005). Epidermal growth factor receptors are localized to lipid rafts that contain a balance of inner and outer leaflet lipids: a shotgun lipidomics study. J. Biol. Chem. *280*, 26796-26804.

Posada,J. y Cooper,J.A. (1992). Requirements for phosphorylation of MAP kinase during meiosis in Xenopus oocytes. Science *255*, 212-215.

Posada,J., Sanghera,J., Pelech,S., Aebersold,R. y Cooper,J.A. (1991). Tyrosine phosphorylation and activation of homologous protein kinases during oocyte maturation and mitogenic activation of fibroblasts. Mol. Cell Biol. *11*, 2517-2528.

Prior,I.A., Harding,A., Yan,J., Sluimer,J., Parton,R.G. y Hancock,J.F. (2001). GTP-dependent segregation of H-ras from lipid rafts is required for biological activity. Nat. Cell Biol. *3*, 368-375.

Qian,Y.W., Erikson,E. y Maller,J.L. (1998). Purification and cloning of a protein kinase that phosphorylates and activates the polo-like kinase Plx1. Science *282*, 1701-1704.

Rasar,M., DeFranco,D.B. y Hammes,S.R. (2006). Paxillin regulates steroid-triggered meiotic resumption in oocytes by enhancing an all-or-none positive feedback kinase loop. J. Biol. Chem. *281*, 39455-39464.

Rasband, W.S. (1997–2007). ImageJ, U S National Institutes of Health, Bethesda, Maryland, U. S. A. (URL: http://rsb.info.nih.gov/ij/).

Resing,K.A., Mansour,S.J., Hermann,A.S., Johnson,R.S., Candia,J.M., Fukasawa,K., Vande Woude,G.F. y Ahn,N.G. (1995). Determination of v-Mos-catalyzed phosphorylation sites and autophosphorylation sites on MAP kinase kinase by ESI/MS. Biochemistry *34*, 2610-2620.

Rice,A., Parrington,J., Jones,K.T. y Swann,K. (2000). Mammalian sperm contain a Ca(2+)-sensitive phospholipase C activity that can generate InsP(3) from PIP(2) associated with intracellular organelles. Dev. Biol. *228*, 125-135.

Richter,T., Floetenmeyer,M., Ferguson,C., Galea,J., Goh,J., Lindsay,M.R., Morgan,G.P., Marsh,B.J. y Parton,R.G. (2008). High-resolution 3D quantitative analysis of caveolar ultrastructure and caveola-cytoskeleton interactions. Traffic. *9*, 893-909.

Rios-Cardona,D., Ricardo-Gonzalez,R.R., Chawla,A. y Ferrell,J.E., Jr. (2008). A role for GPRx, a novel GPR3/6/12-related G-protein coupled receptor, in the maintenance of meiotic arrest in Xenopus laevis oocytes. Dev. Biol. *317*, 380-388.

Rodriguez de Turco,E.B. y Bazan,N.G. (1977). Simple preparative and analytical thin-layer chromatographic method for the rapid isolation of phosphatidic acid from tissue lipid extracts. J. Chromatogr. *137*, 194-197.

Romano,M., Rosanova,P., Anteo,C. y Limatola,E. (2004). Vertebrate yolk proteins: a review. Mol. Reprod. Dev. *69*, 109-116.

Rose,K., Rudge,S.A., Frohman,M.A., Morris,A.J. y Engebrecht,J. (1995). Phospholipase D signaling is essential for meiosis. Proc. Natl. Acad. Sci. U. S. A *92*, 12151-12155.

Rouser,G., Fkeischer,S. y Yamamoto,A. (1970). Two dimensional then layer chromatographic separation of polar lipids and determination of phospholipids by phosphorus analysis of spots. Lipids *5*, 494-496.

Rudge,S.A., Morris,A.J. y Engebrecht,J. (1998). Relocalization of phospholipase D activity mediates membrane formation during meiosis. J. Cell Biol. *140*, 81-90.

Rudge,S.A., Zhou,C. y Engebrecht,J. (2002). Differential regulation of Saccharomyces cerevisiae phospholipase D in sporulation and Sec14-independent secretion. Genetics *160*, 1353-1361.

Sabourin,T., Bastien,L., Bachvarov,D.R. y Marceau,F. (2002). Agonist-induced translocation of the kinin B(1) receptor to caveolae-related rafts. Mol. Pharmacol. *61*, 546-553.

Sadler,S.E. (2001). Low-density caveolae-like membrane from Xenopus laevis oocytes is enriched in Ras. J. Cell Biochem. *83*, 21-32.

Sadler,S.E., Archer,M.R. y Spellman,K.M. (2008). Activation of the progesterone-signaling pathway by methyl-beta-cyclodextrin or steroid in Xenopus laevis oocytes involves release of 45-kDa Galphas. Dev. Biol. *322*, 199-207.

Sadler,S.E. y Jacobs,N.D. (2004). Stimulation of Xenopus laevis oocyte maturation by methyl-beta-cyclodextrin. Biol. Reprod. *70*, 1685-1692.

Sadler,S.E. y Maller,J.L. (1981). Progesterone inhibits adenylate cyclase in Xenopus oocytes. Action on the guanine nucleotide regulatory protein. J. Biol. Chem. *256*, 6368-6373.

Sagata,N. (1996). [The roles of the Mos-MAPK pathway in oocyte meiosis and cellular transformation]. Tanpakushitsu Kakusan Koso *41*, 1847-1855.

Sagata,N. (1997). What does Mos do in oocytes and somatic cells? Bioessays *19*, 13-21.

Sakakibara,K. *y col.* (2005). Molecular identification and characterization of Xenopus egg uroplakin III, an egg raft-associated transmembrane protein that is tyrosine-phosphorylated upon fertilization. J. Biol. Chem. *280*, 15029-15037.

Sandilands,E., Brunton,V.G. y Frame,M.C. (2007). The membrane targeting and spatial activation of Src, Yes and Fyn is influenced by palmitoylation and distinct RhoB/RhoD endosome requirements. J. Cell Sci. *120*, 2555-2564.

Sargiacomo,M., Scherer,P.E., Tang,Z., Kubler,E., Song,K.S., Sanders,M.C. y Lisanti,M.P. (1995). Oligomeric structure of caveolin: implications for caveolae membrane organization. Proc. Natl. Acad. Sci. U. S. A *92*, 9407-9411.

Sato,K., Iwasaki,T., Ogawa,K., Konishi,M., Tokmakov,A.A. y Fukami,Y. (2002). Low density detergent-insoluble membrane of Xenopus eggs: subcellular microdomain for tyrosine kinase signaling in fertilization. Development *129*, 885-896.

Sato,K., Tokmakov,A.A., He,C.L., Kurokawa,M., Iwasaki,T., Shirouzu,M., Fissore,R.A., Yokoyama,S. y Fukami,Y. (2003). Reconstitution of Src-dependent phospholipase Cgamma phosphorylation and transient calcium release by using membrane rafts and cell-free extracts from Xenopus eggs. J. Biol. Chem. *278*, 38413-38420.

Scheel,J., Srinivasan,J., Honnert,U., Henske,A. y Kurzchalia,T.V. (1999). Involvement of caveolin-1 in meiotic cell-cycle progression in Caenorhabditis elegans. Nat. Cell Biol. *1*, 127-129.

Schmitt,A. y Nebreda,A.R. (2002a). Inhibition of Xenopus oocyte meiotic maturation by catalytically inactive protein kinase A. Proc. Natl. Acad. Sci. U. S. A *99*, 4361-4366.

Schmitt,A. y Nebreda,A.R. (2002b). Signalling pathways in oocyte meiotic maturation. J. Cell Sci. *115*, 2457-2459.

Schorderet-Slatkine,S., Schorderet,M., Boquet,P., Godeau,F. y Baulieu,E.E. (1978). Progesterone-induced meiosis in Xenopus laevis oocytes: a role for cAMP at the "maturation-promoting factor" level. Cell *15*, 1269-1275.

Shah,M.B. y Sehgal,P.B. (2007). Nondetergent isolation of rafts. Methods Mol. Biol. *398*, 21-28.

Shaik,N.A. y Palmer,F.B.S. (1977).Phosphoinositide kinases in chick brain and sciatic nerve, a developmental study. J. Neurochem. *28*, 395-402.

Shogomori,H. y Brown,D.A. (2003). Use of detergents to study membrane rafts: the good, the bad, and the ugly. Biol. Chem. *384*, 1259-1263.

Simerly,C., Nowak,G., de,L.P. y Schatten,G. (1998). Differential expression and functions of cortical myosin IIA and IIB isotypes during meiotic maturation, fertilization, and mitosis in mouse oocytes and embryos. Mol. Biol. Cell *9*, 2509-2525.

Smart,E.J., Graf,G.A., McNiven,M.A., Sessa,W.C., Engelman,J.A., Scherer,P.E., Okamoto,T. y Lisanti,M.P. (1999). Caveolins, liquid-ordered domains, and signal transduction. Mol. Cell Biol. *19*, 7289-7304.

Smart,E.J., Ying,Y.S., Mineo,C. y Anderson,R.G. (1995). A detergent-free method for purifying caveolae membrane from tissue culture cells. Proc. Natl. Acad. Sci. U. S. A *92*, 10104-10108.

Sobo,K., Chevallier,J., Parton,R.G., Gruenberg,J. y van der Goot,F.G. (2007). Diversity of raft-like domains in late endosomes. PLoS. One. *2*, e391.

Song,K.S., Li,S., Okamoto,T., Quilliam,L.A., Sargiacomo,M. y Lisanti,M.P. (1996). Co-purification and direct interaction of Ras with caveolin, an integral membrane protein of caveolae microdomains. Detergent-free purification of caveolae microdomains. J. Biol. Chem. *271*, 9690-9697.

Sorbera,L.A., Asturiano,J.F., Carrillo,M. y Zanuy,S. (2001). Effects of polyunsaturated fatty acids and prostaglandins on oocyte maturation in a marine teleost, the European sea bass (Dicentrarchus labrax). Biol. Reprod. *64*, 382-389.

Spangler,B.D. (1992). Structure and function of cholera toxin and the related Escherichia coli heat-labile enterotoxin. Microbiol. Rev. *56*, 622-647.

Stith,B.J., Jaynes,C., Goalstone,M. y Silva,S. (1992). Insulin and progesterone increase 32PO4-labeling of phospholipids and inositol 1,4,5-trisphosphate mass in Xenopus oocytes. Cell Calcium *13*, 341-352.

Stith,B.J., Kirkwood,A.J. y Wohnlich,E. (1991). Insulin-like growth factor 1, insulin, and progesterone induce early and late increases in Xenopus oocyte sn-1,2-diacylglycerol levels before meiotic cell division. J. Cell Physiol *149*, 252-259.

Strum,J.C., Swenson,K.I., Turner,J.E. y Bell,R.M. (1995). Ceramide triggers meiotic cell cycle progression in Xenopus oocytes. A potential mediator of progesterone-induced maturation. J. Biol. Chem. *270*, 13541-13547.

Swailes,N.T., Colegrave,M., Knight,P.J. y Peckham,M. (2006). Non-muscle myosins 2A and 2B drive changes in cell morphology that occur as myoblasts align and fuse. J. Cell Sci. *119*, 3561-3570.

Tata,J.R. (2002). Signalling through nuclear receptors. Nat. Rev. Mol. Cell Biol. *3*, 702-710.

Testai,F.D., Landek,M.A. y Dawson,G. (2004). Regulation of sphingomyelinases in cells of the oligodendrocyte lineage. J. Neurosci. Res. *75*, 66-74.

Testi,R. (1996). Sphingomyelin breakdown and cell fate. Trends Biochem. Sci. *21*, 468-471.

Thompson,J.R. y Banaszak,L.J. (2002). Lipid-protein interactions in lipovitellin. Biochemistry *41*, 9398-9409.

Tian,J., Kim,S., Heilig,E. y Ruderman,J.V. (2000). Identification of XPR-1, a progesterone receptor required for Xenopus oocyte activation. Proc. Natl. Acad. Sci. U. S. A *97*, 14358-14363.

Tokmakov,A., Iwasaki,T., Itakura,S., Sato,K., Shirouzu,M., Fukami,Y. y Yokoyama,S. (2005). Regulation of Src kinase activity during Xenopus oocyte maturation. Dev. Biol. *278*, 289-300.

Tomashov-Matar,R., Levi,M. y Shalgi,R. (2008). The involvement of Src family kinases (SFKs) in the events leading to resumption of meiosis. Mol. Cell Endocrinol. *282*, 56-62.

Trigatti,B.L., Anderson,R.G. y Gerber,G.E. (1999). Identification of caveolin-1 as a fatty acid binding protein. Biochem. Biophys. Res. Commun. *255*, 34-39.

Tunquist,B.J. y Maller,J.L. (2003). Under arrest: cytostatic factor (CSF)-mediated metaphase arrest in vertebrate eggs. Genes Dev. *17*, 683-710.

Uchiyama,H., Komazaki,S., Oyama,M., Matsui,T. y Ozeki,Y. (1997). Distribution and localization of galectin purified from Rana catesbeiana oocytes. Glycobiology *7*, 1159-1165.

Uchiyama,H., Nakamura,T., Komazaki,S., Takio,K., Asashima,M. y Sugino,H. (1994). Localization of activin and follistatin proteins in the Xenopus oocyte. Biochem. Biophys. Res. Commun. *202*, 484-489.

Uma,S. y Ramakrishnan,C.V. (1983). Studies on polyphosphoinositides in developing rat brain. J. Neurochem. *40*, 914-916.

Valdez Toledo,C.L. y Pisano,A. (1980). [Studies of oogenesis in Bufo arenarum (author's transl)]. Reproduccion. *4*, 315-330.

Vallejo,C.G., Sillero,M.A. y Marco,R. (1979). Mitochondrial maturation during Artemia salina embryogenesis. General description of the process. Cell Mol. Biol. Incl. Cyto. Enzymol. *25*, 113-124.

van Blitterswijk,W.J., van der Luit,A.H., Veldman,R.J., Verheij,M. y Borst,J. (2003). Ceramide: second messenger or modulator of membrane structure and dynamics? Biochem. J. *369*, 199-211.

Varhac,R., Robinson,N.C. y Musatov,A. (2009). Removal of bound Triton X-100 from purified bovine heart cytochrome bc1. Anal. Biochem. *395*, 268-270.

Varnold,R.L. y Smith,L.D. (1990). Protein kinase C and progesterone-induced maturation in Xenopus oocytes. Development *109*, 597-604.

Vietzke,J.P., Brandt,O., Abeck,D., Rapp,C., Strassner,M., Schreiner,V. y Hintze,U. (2001). Comparative investigation of human stratum corneum ceramides. Lipids *36*, 299-304.

Villecco,E.I., Aybar,M.J., Sanchez Riera,A.N. y Sanchez,S.S. (1999). Comparative study of vitellogenesis in the anuran amphibians Ceratophrys cranwelli (Leptodactilidae) and Bufo arenarum (Bufonidae). Zygote. *7*, 11-19.

Wall,D.A. y Meleka,I. (1985). An unusual lysosome compartment involved in vitellogenin endocytosis by Xenopus oocytes. J. Cell Biol. *101*, 1651-1664.

Wallace,R.A. y Dumont,J.N. (1968). The induced synthesis and transport of yolk proteins and their accumulation by the oocyte in Xenopus laevis. J. Cell Physiol *72*, Suppl-89.

Wallace,R.A. y Jared,D.W. (1976). Protein incorporation by isolated amphibian oocytes. V. Specificity for vitellogenin incorporation. J. Cell Biol. *69*, 345-351.

Warner,A.H., Chu,P.P., Shaw,M.F. y Criel,G. (2002). Yolk platelets in artemia embryos: are they really storage sites of immature mitochondria? Comp Biochem. Physiol B Biochem. Mol. Biol. *132*, 491-503.

Waugh,M.G. y Hsuan,J.J. (2009). Preparation of membrane rafts. Methods Mol. Biol. *462*, 403-414.

Weber,G. (1952). Polarization of the fluorescence of macromolecules. I. Theory and experimental method. Biochem. J. *51*, 145-155.

Wehling,M., Schultz,A. y Losel,R. (2007). To be or not to be (a receptor). Steroids *72*, 107-110.

Widnell,C.C. y Unkeless,J.C. (1968). Partial purification of a lipoprotein with 5'-nucleotidase activity from membranes of rat liver cells. Proc. Natl. Acad. Sci. U. S. A *61*, 1050-1057.

Wiley,H.S. y Wallace,R.A. (1981). The structure of vitellogenin. Multiple vitellogenins in Xenopus laevis give rise to multiple forms of the yolk proteins. J. Biol. Chem. *256*, 8626-8634.

Wischnitzer,S. (1966).The ultrastructure of the cytoplasm of the developing amphibian egg. Adv. Morphog. *5*, 131-179.

Wu,C., Butz,S., Ying,Y. y Anderson,R.G. (1997). Tyrosine kinase receptors concentrated in caveolae-like domains from neuronal plasma membrane. J. Biol. Chem. *272*, 3554-3559.

Yamashita,M., Mita,K., Yoshida,N. y Kondo,T. (2000). Molecular mechanisms of the initiation of oocyte maturation: general and species-specific aspects. Prog. Cell Cycle Res. *4*, 115-129.

Yang,Z., Sun,W. y Hu,K. (2009). Adenosine A(1) receptors selectively target protein kinase C isoforms to the caveolin-rich plasma membrane in cardiac myocytes. Biochim. Biophys. Acta.

Yoshida,N., Mita,K. y Yamashita,M. (2000). Comparative study of the molecular mechanisms of oocyte maturation in amphibians. Comp Biochem. Physiol B Biochem. Mol. Biol. *126*, 189-197.

Yoshizaki,N., Moriyama,A. y Yonezawa,S. (1998). Purification and properties of embryonic cysteine proteinase which participates in yolk-lysis of Xenopus laevis. Comp Biochem. Physiol B Biochem. Mol. Biol. *119*, 571-576.

Yue,J. Xiong,W. y Ferrell,J.E.(1996). B-Raf and C-Raf are required for Ras-stimulated p42 MAP kinase activation in Xenopus egg extracts. Oncogene 25, 3307-3315.

Zacharias,D.A., Violin,J.D., Newton,A.C. y Tsien,R.Y. (2002). Partitioning of lipid-modified monomeric GFPs into membrane microdomains of live cells. Science *296*, 913-916.

Zanetti,S.R., Maldonado,E.N. y Aveldano,M.I. (2007). Doxorubicin affects testicular lipids with long-chain (C18-C22) and very long-chain (C24-C32) polyunsaturated fatty acids. Cancer Res. *67*, 6973-6980.

Zhang,Z., Lu,L. y Berkowitz,M.L. (2008). Energetics of cholesterol transfer between lipid bilayers. J. Phys. Chem. B *112*, 3807-3811.

Zhao,J., Singleton,P.A., Brown,M.E., Dudek,S.M. y Garcia,J.G. (2009). Phosphotyrosine protein dynamics in cell membrane rafts of sphingosine-1-phosphate-stimulated human endothelium: role in barrier enhancement. Cell Signal. *21*, 1945-1960.

Zidovetzki,R. y Levitan,I. (2007). Use of cyclodextrins to manipulate plasma membrane cholesterol content: evidence, misconceptions and control strategies. Biochim. Biophys. Acta *1768*, 1311-1324.

PUBLICACIONES ORIGINADAS DE ESTA TESIS

- **Buschiazzo J.**, Bonini I.C. y Alonso T.S. (2008) "Inhibition of *Bufo arenarum* oocyte maturation induced by cholesterol depletion by methyl-β-cyclodextrin. Role of low-density caveolae-like membranes" Biochimica et Biophysica Acta – Biomembranes 1778: 1398-1406.

- **Buschiazzo J.** y Alonso T. (2005) "Effect of meiotic maturation on yolk platelet lipids from *Bufo arenarum* oocytes" Journal of Experimental Zoology 303A(9): 813-822.