1. Datos de Contacto:

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Anexos: 8118 directo, 8117 asistente

2. Líneas de Investigación:

Los campos de especialización en los cuales se inserta la investigación en el CMPL incluye disfunción vascular, reactividad vascular fetal, transporte de membrana y enfermedades del embarazo. En estas áreas de trabajo, se enmarca diferentes líneas de investigación las cuales incluyen: (a) papel de los receptores de adenosina como moduladores de la función vascular fetal, (b) papel de los receptores de insulina en la regulación del transporte de membrana de nucleósidos (expresión y actividad), (c) reactividad micro y macrovascular y el papel de arginasas y sintasas de óxido nítrico, y (d) lípidos y disfunción vascular fetal en la hipercolesterolemia materna suprafisiológica. El papel de insulina y expresión y rutas de señaliación de receptires de insulina A y B ha sido abordado en diabetes gestacional y preeclampsia, así como mecanismos de regulación de pH intracelular en condiciones de hipoxia en cánceres ginecológicos humanos.

3. Proyectos de Investigación:

1. European Union (Erasmus+) (2016-2020) International Master in Innovative Medicine (IMIM) (w/U Groningen (The Netherlands), U Heidelberg (Germany), Uppsala Universitet (Sweden), U Nacional de Méjico (UNAM), U Antioquia (Colombia), U Sao Paulo (Brazil)).
2. Dirección de Investigación U San Sebastián (CoI) (11/2015 - 11/2017). Role of RECK in the development of human preeclampsia as regulator of cytotrophoblast invasiveness and endovascular differentiation. (w/ J Gutiérrez (USS), A Leiva (PUC)).
3. CONICYT Postdoctoral 3160194 (SR) (11/2015 - 10/2018). Role of the axis Mg^{2+}/exosomes/adenosine in reversing the human fetoplacental microvascular endothelial dysfunction in early-onset preeclampsia. (w/I Chiarello (PUC)).
4. FONDECYT Initiation in Research Competition 11150083. Excessive maternal gestational weight gain reduces the vascular endothelium-smooth muscle functional interaction involving endothelin-1 and nitric oxide in the human placenta. (SR) (2015-2018) (w/ F Pardo (PUC)).

5. FONDECYT 1150377 (Principal investigator (PI)) (2015-3/2019) Role of insulin receptors and adenosine receptors in prevention of fetoplacental endothelial dysfunction by in sulin in women with gestational diabetes mellitus (w/A Leiva, M Farías (PUC), J Gutiérrez (U San Sebastián)).
6. FONDECYT 1150344 (Co-investigator (CoI)) (2015-3/2019) Involvement of PCSK9 in 'human maternal supraphysiological hypercholesterolemia'. Effects on placental cholesterol traffic and function of neonatal lipoproteins (w/ A Leiva (PI), J Gutiérrez (U San Sebastián)). CONICYT Chile.
7. FONDECYT 1110977 (CI)(2011-3/2015). Role of adenosine in insulin response of macro and microvascular human placental endothelium from gestational diabetes mellitus via insulin receptor subtypes A and B. (w/P Casanello, C Belmar, Pontificia Universidad Católica de Chile)
8. CONICYT Postdoctoral 3140516 (Tutor) (11/2013 - 10/2016). Role of Na+/H+ exchanger isoform 1 (NHE1) and hypoxia-inducible transcription factor 2α (HIF2α) as a mediator of ovary cancer cell proliferation (w/C Sanhueza (PUC)).
9. CONICYT Postdoctoral 3130583 (Tutor) (10/2012 - 9/2015). Gestational diabetes and obesity alter human equilibrative nucleoside transporter 1 recycling in human umbilical vein endothelium (w/F Pardo (PUC)).
10. FONDECYT 1121145 (CoI) (2012-3/2016). Maternal obesity produces insulin resistance in fetal tissues involving endoplasmic reticulum stress (w/M Farías (PI), PUC).
11. FONDECYT 1120928 (CoI) (2012-3/2016). Intrauterine programming of hypoxia- and oxidative stress-induced vascular responses in placental endothelium from IUGR and macrosomic fetuses: early evidence for epigenetic-driven vascular dysfunction (w/P Casanello (PI), PUC).
12. CONICYT DRI 130102 (CoI) (2014). International network for the study of feto-placental vascular dysfunction in diseases of pregnancy (w/A Leiva (PI), PUC).
13. IBTech AUT PhDFOR 2014 Institute of Biomedical Technology, Auckland University of Technology (PI Chile) (1/2015- 1/2018). Cell bases of airways reactivity to a non-invasive device (w/ student *tbd* (PUC, AUT), A Al-Jumaily (PI in New Zealand), New Zealand)
14. UQCCR POSTD2013 U Queensland Center for Clinical Research (PI in Chile) (3/2013- 3/2015). Exosomes and placental dysfunction in gestational diabetes (w/C Salomón (PUC, UQCCR), G Rice, M Mitchel (PIs Australia), Australia).
15. UMCG RUG INT/2013 U Groningen, University Medical Center Groningen (PI in Chile) (5/2013- 5/2014). Placenta pathologies and vascular mechanisms (w/ T Sáez (PUC), H van Goor, M Faas, J-L Hillebrand (The Netherlands)).
16. CONICYT Anillos ACT73 (PI)(2010-3/2014). Characterization of the pathohysiological mechanisms, and detection of common therapeutic targets in placental dysfunction in pathologies of the human pregnancy (w/P Casanello, J Kae Nien, Pontificia Universidad Católica de Chile)

17. AECID Spanish Agency for International Collaboration (AECI) (PI in Chile)(2010-1/2011). L-Carnitine and hypertension. (w/C Vásquez, Universidad de Sevilla, Spain).
18. AECID A/018828/08 Spanish Agency for International Collaboration (AECI) (PI in Chile)(2010-1/2011). Nucleosides and gynaecologic cancer. (w/M Pastor-Anglada, Universitat de Barcelona, Spain).
19. FONDECYT 1090616 (CI)(2009-3/2013). Paracrine role of brain natriuretic pepetide (BNP) in the maintenance of miometrial quiescence in pregnancy. Study of the cell signalling pathways in the human miometrium (w/J Carvajal (PI), P Casanello, M Cuello, A Poblete, Pontificia Universidad Católica de Chile)
20. FONDECYT 1070865 (PI)(2007-3/2011). Regulation of expression and activity of equilibrative nucleoside transporters type 1 (hENT1) and 2 (hENT2) by insulin in micro and macrovascular human fetal endothelium in gestational diabetes (w/P Casanello, J Carvajal, M Boric, Pontificia Universidad Católica de Chile; R San Martín, Universidad Austral de Chile)
21. FONDECYT 1080534 (CI)(2008-3/2012). Role of arginases I and II in endothelial dysfunction in the feto-placenta unit in pregnancies with intrauterine growth restriction and hypoxia (w/P Casanello (PI), J Carvajal, Pontificia Universidad Católica de Chile).
22. CONICYT (PI and Tutor)(2009-3/2011). D-Gucose metabolism and D-glucose transport in HUVEC (w/C Puebla, PhD Biological Sciences, Pontificia Universidad Católica de Chile).
23. CONICYT (PI and Tutor)(2009-3/2010). TGF-ß and cell signalling in hyperglycaemia (w/JL Vega, PhD Biological Sciences, Pontificia Universidad Católica de Chile).
24. CONICYT (Co-Tutor)(2009-3/2011). Arginases and hypoxia in HUVEC from IUGR (w/C Prieto, P Casanello (PI and Tutor) PhD Biological Sciences, Pontificia Universidad Católica de Chile).
25. CONICYT (PI and Tutor)(2010-3/2012). (w/F Westermeier, PhD Biological Sciences, Pontificia Universidad Católica de Chile).
26. CONICYT (AT-24120941)-AT (PI and Tutor)(2012-3/2013). Modulation of
27. expression and activity of hENT2 by insulin in placental microvascular endothelial cells (hPMEC) from gestational diabetes (w/C Salomón, PhD Medical Sciences, Pontificia Universidad Católica de Chile).
28. CONICYT (24120940)-AT (Tutor) (2012-3/2013). Regulation of adenosine transport by insulin in astrocytes of mouse fetuses with gestational diabetes (w/P Arroyo, Pontificia Universidad Católica de Chile)
29. CONICYT (24120944)-AT (PI and Tutor)(2012-3/2013). Regulation of L-arginine transport by insulin via hCAT-1 involves differential activation of subtypes A and B insulin receptors and adenosine receptors in HUVEC (w/E Guzmán-Gutiérrez, PhD Biological Sciences, Pontificia Universidad Católica de Chile).

4. Publicaciones:

Artículos y Reviews ISI

1. Riquelme JA, Westermeier F, Hall AR, Vicencio JM, Pedrozo Z, Ibacache M, Fuenzalida B, Sobrevia L, Davidson SM, Yellon DM, Sánchez G, Lavandero S. (2016). Dexmedetomidine protects the heart against ischemia-reperfusion injury by an endothelial eNOS/NO dependent mechanism. *Pharmacol Res* (In Press).
2. Gutiérrez J, Droppelmann CA, Salsoso R, Westermeier F, Toledo F, Salomon C, Sanhueza C, Pardo F, Leiva A, Sobrevia L. (2016). A hypothesis for the role of RECK in angiogenesis. *Curr Vasc Pharmacol* (In Press).
3. Sobrevia L, Ooi L, Ryan S, Steinert JR. (2015). Nitric oxide: a regulator of cellular function in health and disease. *Oxid Med Cell Longev* (In Press).
4. Westermeier F, Sáez T, Arroyo P, Toledo F, Gutiérrez J, Sanhueza C, Pardo F, Leiva A, Sobrevia L. (2015). Insulin receptor isoforms: an integrated view focused on gestational diabetes mellitus. *Diab Metab Res Revs* (In Press).
5. Leiva A, Fuenzalida B, Westermeier F, Toledo F, Salomon C, Gutiérrez J, Sanhueza C, Pardo F, Sobrevia L. (2015). Role for tetrahydrobiopterin in the fetoplacental endothelial dysfunction in maternal supraphysiological hypercholesterolemia. *Oxid Med Cell Longev* (In Press).
6. Leiva A, Salsoso R, Sáez T, Sanhueza C, Pardo F, Sobrevia L. (2015). Cross-sectional and longitudinal lipid determination studies in pregnant women reveal an association between increased maternal LDL cholesterol concentrations and reduced human umbilical vein relaxation. *Placenta* 36:895-902.
7. Pardo F, Silva L, Sáez T, Salsoso R, Gutiérrez J, Sanhueza C, Leiva A, Sobrevia L. (2015). Human supraphysiological gestational weight gain and fetoplacental vascular dysfunction. *Int J Obesity* 39:1264-1273.
8. González M, Rojas S, Avila P, Cabrera L, Villalobos R, Palma C, Aguayo C, Peña E, Gallardo V, Guzmán-Gutiérrez E, Sáez T, Salsoso R, Sanhueza C, Pardo F, Leiva A, Sobrevia L. (2015). Insulin reverses D-glucose–increased nitric oxide and reactive oxygen species generation in human umbilical vein endothelial cells. *PLoS ONE* 10:e0122398.
9. Contador D, Ezquer F, Espinosa M, Arango-Rodriguez M, Puebla C, Sobrevia L, Conget P. (2015). Dexamethasone and rosiglitazone are sufficient and necessary for producing functional adipocytes from mesenchymal stem cells. *Exp Biol Med (Maywood)* (In Press). doi: 10.1177/1535370214566565
10. Sobrevia L, Salsoso R, Sáez T, Sanhueza C, Pardo F, Leiva A. (2015). Insulin therapy and fetoplacental vascular function in gestational diabetes mellitus. *Exp Physiol* 100:231-238.
11. Salsoso R, Guzmán-Gutiérrez E, Sáez T, Bugueño K, Ramírez MA, Farías M, Pardo F, Leiva A, Sanhueza C, Mate A, Vázquez C, Sobrevia L. (2015). Insulin restores L-arginine transport requiring adenosine receptors activation in umbilical vein endothelium from late-onset preeclampsia. *Placenta* 36:287-296.

12. Westermeier F, Salomón C, Farías M, Arroyo P, Fuenzalida B, Sáez T, Salsoso R, Sanhueza C, Guzmán-Gutiérrez E, Pardo F, Leiva A, Sobrevia L. (2015). Insulin requires normal expression and signalling of insulin receptor A to reverse gestational diabetes-reduced adenosine transport in human umbilical vein endothelium. *FASEB J* 29:37-49.
13. Cifuentes F, Palacios J, Nwokocha CR, Pardo F, Sobrevia L. (2015). Erratum for: Synchronization in the heart rate and the vasomotion in rat aorta: effect of arsenic trioxide. *Cardiovasc Toxicol* 2015:1-10. Erratum at http://dx.doi.org/10.1007/s12012-015-9340-0.
14. Salomon C, Torres MJ, Kobayashi M, Scholz K, Sobrevia L, Illanes SE, Mitchell MD, Rice GE. (2014). The Concentration of placenta-derived exosome in the maternal circulation increases during pregnancy and induces endothelial cell migration. *PLoS ONE* 9:e98667.
15. Salsoso R, Guzmán-Gutiérrez E, Arroyo P, Salomón C, Zambrano S, Ruiz-Armenta MV, Blanca AJ, Pardo F, Leiva A, Mate A, Sobrevia L, Vázquez C. (2014). Reduced L-carnitine transport in aortic endothelial cells from spontaneously hypertensive rats. *PLoS ONE* 9:e90339.
16. Guzmán-Gutiérrez E, Arroyo P, Salsoso R, Fuenzalida B, Sáez T, Leiva A, Pardo F, Sobrevia L. (2014). Role of insulin and adenosine in the human placenta microvascular and macrovascular endothelial cell dysfunction in gestational diabetes mellitus. *Microcirculation* 21:26-37.
17. Sobrevia L, Myatt L, Rice G. (2014). Diseases of pregnancy and fetal programming: cell and molecular mechanisms. *BioMed Res Inter*. 2014:937050.
18. Westermeier F, Sáez PJ, Villalobos RE, Sobrevia L, Farías M. (2014). Programming of fetal insulin resistance in pregnancies with maternal obesity by ER stress and inflammation. *BioMed Res Inter*. 2014:917672.
19. Acurio J, Troncoso F, Bertoglia P, Salomon C, Aguayo C, Sobrevia L, Escudero C. (2014). Potential role of A_{2B} adenosine receptors on proliferation/migration of fetal endothelium derived from preeclamptic pregnancies. *BioMed Res Inter* 2014:274507.
20. Sáez PJ, Villalobos-Labra R, Westermeier F, Sobrevia L, Farías-Jofré M. (2014). Modulation of endothelial cell migration by ER stress and insulin resistance: a role during maternal obesity? *Front Pharmacol* 5:189.
21. Guzmán-Gutiérrez E, Leiva A, Escudero CA, Veas C, Sobrevia L. (2014). Is a low level of free thyroxine in the maternal circulation associated with altered endothelial function in gestational diabetes? *Front Pharmacol* 5:136.
22. Salomon C, Kobayashi M, Ashman K, Sobrevia L, Mitchel M, Rice GE. (2013). Hypoxia-induced changes in the bioactivity of cytotrophoblast-derived exosomes. *PLoS ONE* 8:e79636.
23. Pardo F, Arroyo P, Salomón C, Westermeier F, Salsoso R, Sáez T, Guzmán-Gutiérrez E, Leiva A, Sobrevia L. (2013). Role of equilibrative adenosine transporters and adenosine receptors as modulators of the human placental endothelium in gestational diabetes mellitus. *Placenta* 34:1121-1127.
24. Leiva A, Diez de Medina C, Salsoso R, Sáez T, San Martín S, Abarzúa F, Farías M, Guzmán-Gutiérrez E, Pardo F, Sobrevia L. (2013).

Maternal hypercholesterolemia in pregnancy associates with umbilical vein endothelial dysfunction: role of eNOS and arginase II. *Arterioscl Throm Vasc Biol.* 33:2444-2453.
25. Salomon C, Ryan J, Sobrevia L, Kobayashi M, Ashman K, Mitchel M, Rice GE. (2013). Exosomal signaling during hypoxia mediates microvascular endothelial cell migration and vasculogenesis. *PLoS ONE* 8:e68451.
26. Calligaris SD, Lecanda M, Solis F, Ezquer M, Gutiérrez J, Brandan E, Leiva A, Sobrevia L, Conget P. (2013). Mice long-term high-fat diet feeding recapitulates human cardiovascular alterations: an animal model to study the early phases of diabetic cardiomyopathy. *PLoS ONE* 8:e60931.
27. Quezada C, Wallys G, Carlos O, Fernández K, Segura R, Melo R, Casanello P, Sobrevia L, Martín RS. (2013). 5'-ectonucleotidase mediates multiple-drug resistance in glioblastoma multiforme cells. *J Cell Physiol* 228:602-608.
28. Guzmán-Gutiérrez E, Westermeier F, Salomón C, González M, Pardo F, Leiva A, Sobrevia L. (2012). Insulin-increased L-arginine transport requires A_{2A} adenosine receptors activation in human umbilical vein endothelium. *PLoS ONE* 7:e41705.
29. Mate A, Vázquez CM, Leiva A, Sobrevia L. (2012). New therapeutic approaches to treating hypertension in pregnancy. *Drug Discov Today* 17:1307-1315.
30. Salomón C, Westermeier F, Puebla C, Arroyo P, Guzmán-Gutiérrez E, Pardo F, Leiva A, Casanello P, Sobrevia L (2012). Gestational diabetes reduces adenosine transport in human placental microvascular endothelium, an effect reversed by insulin. *PLoS ONE* 7:e40578.
31. Aravena C, Beltrán AR, Cornejo M, Torres V, Díaz ES, Guzmán-Gutiérrez E, Pardo F, Leiva A, Sobrevia L, Ramírez MA. (2012). Potential role of sodium-proton exchangers in the low concentration arsenic trioxide-increased intracellular pH and cell proliferation. *PLoS ONE* 7:e51451.
32. Krause BJ, Prieto CP, Muñoz-Urrutia E, San Martín S, Sobrevia L, Casanello P. (2012). Role of arginase-2 and eNOS in the differential vascular reactivity and hypoxia-induced endothelial response in umbilical arteries and veins. *Placenta* 33:360-366.
33. Escudero C, Sobrevia L (2012). Adenosine plasma levels in the fetoplacental circulation in preeclampsia. *Am J Obstet Gynecol* 206:e5-e6.
34. Guzmán-Gutiérrez E, Abarzúa F, Belmar C, Nien JK, Ramírez MA, Arroyo P, Salomón C, Westermeier F, Puebla C, Leiva A, Casanello P, Sobrevia L (2011). Functional link between adenosine and insulin: a hypothesis for feto-placental vascular endothelial dysfunction in gestational diabetes. *Curr Vasc Pharmacol* 9:750-762.
35. Prieto CP, Krause BJ, Quezada C, San Martin R, Sobrevia L, Casanello P. (2011). Hypoxia-reduced nitric oxide synthase activity is partially explained by higher arginase-2 activity and cellular redistribution in human umbilical vein endothelium. *Placenta* 32:932-940.
36. Leiva A, Pardo F, Ramirez MA, Farías M, Casanello P, Sobrevia L. (2011). Fetoplacental vascular endothelial dysfunction as an early

phenomenon in the programming of human adult diseases in subjects born from gestational diabetes mellitus or obesity in pregnancy. *Exp Diab Res* 2011:349286.
37. Westermeier F, Salomón C, González M, Puebla C, Guzmán-Gutiérrez E, Cifuentes F, Leiva A, Casanello P, Sobrevia L (2011). Insulin restores gestational diabetes mellitus-reduced adenosine transport involving differential expression of insulin receptor isoforms in human umbilical vein endothelium. *Diabetes* 60:1677-1687
38. González M, Gallardo V, Rodríguez N, Salomón C, Westermeier F, Guzmán-Gutiérrez E, Abarzúa F, Leiva A, Casanello P, Sobrevia L. (2011). Insulin-stimulated L-arginine transport requires SLC7A1 gene expression and is associated with human umbilical vein relaxation. *J Cell Physiol* 262: 2916-2924.
39. Quezada C, Alarcón S, Cárcamo JG, Yáñez A, Casanello P, Sobrevia L, San Martín R. (2011). The activity of the multidrug resistance-associated protein 1 (MRP1) is increased in kidney glomeruli of diabetic rats. *Biol Chem* 392:529-37.
40. Sobrevia L, Abarzúa F, Nien JK, Salomón C, Westermeier W, Puebla C, Cifuentes F, Guzmán-Gutiérrez E, Leiva A, Casanello P (2011). Differential placental macrovascular and microvascular endothelial dysfunction in gestational diabetes. *Placenta* 32:S159-164
41. Sobrevia L (2011). Preface. *Placenta* 32:78-80.
42. Guzmán-Gutiérrez E, Sandoval C, Nova E, Castillo JL, Vera JC, Lamperti L, Krause B, Salomón C, Sepúlveda C, Aguayo C, Sobrevia L. (2010). Differential expression of functional nucleoside transporters in non-differentiated and differentiated human endothelial progenitor cells. *Placenta* 31:928-936.
43. Farías M, Puebla C, Westermeier F, Jo MJ, Pastor-Anglada M, Casanello P, Sobrevia L. (2010). Nitric oxide reduces SLC29A1 promoter activity and adenosine transport involving transcription factor complex hCHOP-C/EBPα in human umbilical vein endothelial cells from gestational diabetes. *Cardiovasc Res* 86:45-54.
44. Lash GE, Burton GJ, Chamley LW, Clifton VL, Constancia M, Crocker IP, Dantzer V, Desoye G, Drewlo S, Hemmings DG, Hiendleder S, Kalionis B, Keelan JA, Kudo Y, Lewis RM, Manuelpillai U, Murthi P, Natale D, Pfarrer C, Robertson S, Saffery R, Saito S, Sferruzzi-Perri A, Sobrevia L, Waddell BJ, Roberts CT. (2010). IFPA Meeting 2009 workshops report. *Placenta* 31:S4-S20.

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45. Pardo F, Silva L, Salsoso R, Sáez T, Farías M, Villalobos R, Leiva A, Sanhueza C, Sobrevia L. (2014). Fetoplacental endothelial dysfunction in maternal hypercholesterolemia and obesity in pregnancy. *Physiol Mini Revs* 7:60-76.
46. Arroyo P, Sáez T, Salsoso R, Salomon C, Westermeier F, Guzmán-Gutiérrez E, Pardo F, Leiva A, Sobrevia L. (2013). Mus musculus strain C57BL/6J insulin receptor isoform B mRNA, complete cds. *GenBank* KC356871.1.

47. Arroyo P, Guzmán-Gutiérrez E, Pardo F, Salomón C, Westermeier F, Salsoso R, Sáez T, Leiva A, Sobrevia L. (2013). Gestational diabetes mellitus and the role of adenosine in the human placental endothelium and central nervous system. *Global J Pathol Microbiol* 1:24-42.
48. Sobrevia L. (2012). [Basic science in Obstetrics and Gynecology: a need.]. Ciencia básica en Obstetricia y Ginecología: una necesidad. *Rev Chi Obstet Gynecol* 77:83-86.
49. Sobrevia L, Casanello P. (2009). Congreso mundial de la Federación Internacional de Asociaciones de Placenta, IFPA Chile 2010. *Rev Chil Obstetr Ginecol* 74:130-131.
50. Escudero C, Casanello P, Sobrevia L. (2007). Reduced placental flux in severe pre-eclampsia: is adenosine involved in this phenomenon? *Bol Soc Esp Fisiol* 9:6-9.
51. Vásquez R, Sobrevia L. (2006). Role of transforming growth factor β1 as modulator of endothelial L-arginine/NO signalling pathway. *Physiol Mini Revs* 1:98-104.

5. Libros y patentes:

Libros editados

1. *Gestational Diabetes - Causes, Diagnosis and Treatment.* Eds. L Sobrevia. Ed. InTech Editorial, Croatia, Shangai. (2013).

Ediciones especiales

1. *Nitric Oxide: A Regulator of Cellular Function in Health and Disease*. Eds. J Steinert, L Ooi, S Ryan, L Sobrevia. *Oxidat Med Cell Longevity*. Ed. Hindawi Publishing Corporation, Egypt, USA (2015, In press).
2. *Diseases of pregnancy and fetal programming: cell and molecular approaches*. Eds. L Sobrevia, L Myatt, G Rice. *BioMed Res Internat*. Ed. Hindawi Publishing Corporation, Egypt, USA. Vol 2014 (2014).
3. *Fetus and Placenta – A perfect harmony*. Eds. AM Carte, L Sobrevia, S Zamudio. *Trophoblast Research*. Ed. Elsevier, Oxford, UK. Vol 25 (2011).

Capítulos de libros

1. Lappas M, Leiva A, Pardo F, Sobrevia L, Jawerbaum A. (2015). Oxidative stress in pregnancies complicated by diabetes. In: *Perinatal and prenatal disorders.* Eds. PA Dennery, G Buonocore, OD Saugstad. Ed. Spinger Science+Bussiness Media New York, New York. Chapter 3, pp 47-79.
2. Sobrevia L, Sáez T, Fuenzalida B, Salsoso R, Vázquez MC, Arroyo P, Guzmán-Gutiérrez E, Pardo F, Leiva A (2014). Transplacental transport of calcium in health and disease. In: *Calcium and Vitamin D Role in Bone Health and Beyond.* Eds. J Belizán, R Uauy, E Carmuega. Ed. Lenguamadre/Pentapir, Buenos Aires, Argentina. Chapter 7, pp 139-164 (*Spanish*).

3. Salomon C, Sobrevia L, Ashman K, Illanes S, Mitchell M, Rice G. (2013). The role of placental exosomes in gestational diabetes mellitus. In: *Gestational Diabetes-Causes, Diagnosis and Treatment*. Eds. L Sobrevia. Ed. InTech Editorial, Croatia, Shangai. Chapter 3, pp 29-49.
4. Guzmán-Gutiérrez E, Arroyo P, Pardo F, Leiva A, Sobrevia L (2013). The adenosine-insulin signalling axis in the fetoplacental endothelial dysfunction in gestational diabetes. In: *Gestational Diabetes - Causes, Diagnosis and Treatment*. Eds. L Sobrevia. Ed. InTech Editorial, Croatia. Chapter 4, pp 49-78.
5. Leiva A, Diez de Medina A, Guzmán-Gutierrez E, Pardo F, Sobrevia L (2013). Maternal hypercholesterolemia in gestational diabetes and the association with placental endothelial dysfunction. In: *Gestational Diabetes - Causes, Diagnosis and Treatment*. Eds. L Sobrevia. Ed. InTech Editorial, Croatia. Chapter 6, pp 103-134.
6. Escudero C, González M, Acurio J, Valenzuela F, Sobrevia L. (2013). The role of placenta in the fetal programming associated to gestational diabetes. In: *Gestational Diabetes - Causes, Diagnosis and Treatment*. Eds. L Sobrevia. Ed. InTech Editorial, Croatia. Chapter 7, pp 135-162.
7. Sobrevia L, Guzmán-Gutiérrez E, Westermeier F, Salomón C, Arroyo P, Palacios E, Bugueño K, Santos M, Diez de Medina C, González M, Escudero C, Salsoso R, Mate A, Vásquez CM, Pardo F, Leiva A. (2012). Fetoplacental vascular pathophysiology in preeclampsia. In: *Recent Research Developments in Physiology*. Eds. SG Pandalai. Ed. Research Signpost, India. Vol. 5, Chapter 7, pp 105-158.
8. González M, Muñoz E, Puebla C, Guzmán-Gutiérrez E, Cifuentes F, Nien JK, Abarzúa F, Leiva A, Casanello P, Sobrevia L. (2011). Maternal and fetal metabolic dysfunction in pregnancy diseases associated with vascular oxidative and nitrative stress. In: *The Molecular Basis for Origin of Fetal Congenital Abnormalities and Maternal Health: An overview of Association with Oxidative Stress*. Eds. BM Matata, M Elahi. Ed. Bentham, USA. Chapter 8, pp 98-115.
9. Sobrevia L, Casanello P. (2011). Placenta function. In: *Obstetricia*. Eds. A Pérez-Sánchez, E Donoso-Siña. Ed. Mediterráneo, Santiago, Chile. (*Spanish*) Chapter 7, pp 136-176.

Patentes

1. Adenosine as modulator of insulin action in gestational diabetes (Apr 2013) (w/ E Guzmán-Gutiérrez, PUC) (In process).