# CURRICULUM VITAE

**María del Carmen Clapp Jiménez L**
clapp@unam.mx
http://personal.inb.unam.mx/clapp/

**EDUCATION/TRAINING**
B.S.: Biology. Metropolitan University (UAM), México, DF (1974-1978).
M.S.: Physiology, National University of Mexico (UNAM), México City (1980-1983).
Ph.D.: Physiology, National University of Mexico (UNAM), México City (1982-1984).
Post-doc: Physiology-Anatomy, University of California Berkeley, California, USA (1985-1988)

**CURRENT POSITION (since 2002)**
Professor, Institute of Neurobiology, UNAM, Querétaro, México; National System of Research Emeritus (Member since 1984)

**HONORS:** Biotechnology Career Fellowship. Rockefeller Foundation (1989-1995); Fellow "John Simon Guggenheim Memorial Foundation (1994); Research Award of the Mexican Academy of Science (1995); Young researcher award UNAM (1995); International Research Scholar of the Howard Hughes Medical Institute (1997-2002); José Santos Ophthalmology Award (2001 and 2007); GEN award for research on defects at birth (2005 and 2008); Medical Research Award "Dr. Jorge Rosenkranz" Grupo ROCHE-SYNTEX (2006); Bienial Research Award on Ophthalmology (2006); Research award by the Mexican Chamber of Pharmaceutical Laboratories (CANIFARMA) (2008). Research Award in Diabetic Retinopathy, Mexican Health Foundation (2011). Lifetime Scientific Achievements Award, Queretaro University (2013). UNAM Award in Natural Sciences 2016 (PUN 2016). Clinical Investigation Award 2017, Foundation Miguel Alemán Valdés. Award by the Program of Patent and Innovation (PROFOPI) 2020, UNAM. Mexican Women Scientist Award L'Oreal-UNESCO-AMC, 2021. Emeritus Scientist of the National System of Researchers (2022-). Farmaceutical Innovation Award 2021, 6a. Edition from Mexican Pharmaceutical Council and Health Foundation. Ophthalmology Innovation Award FUNDSALUD 2023. Basic Research award by CANIFARMA (2024)

**EDITORIAL BOARD:** American Journal of Physiology: Regulatory, Integrative & Comparative Physiology ( 2008-); European Journal of Cell Biology (2010-), Frontiers in Vascular Physiology (2011-), Endocrinology (2020-), Frontiers in Endocrinology (2022-).

**PATENT:**
**Granted:** Mexico. *Title*: Oligopéptidos Inhibitorios de la Angiogénesis y de la Función Vascular *Inventors:* Carmen Clapp, Juan Pablo Robles, Magdalena Zamora, Gonzalo Martínez de la Escalera, Jakob Triebel, Thomas Bertsch. *Application No*. MX/E/2019/079075. *Filing Date:* November 20, 2019. Publication No. MX/E/2019/079075. *Publication Date*: May 2021 (Gaceta de la Propiedad Industrial, México)
**Filed Patent Applications**: *International-PCT* (Patent Cooperation Treaty). *Title:* Oligopeptides that inhibits angiogenesis and vascular function. *Inventors:* Carmen Clapp, Juan Pablo Robles, Magdalena Zamora, Gonzalo Martínez de la Escalera, Jakob Triebel, Thomas Bertsch. *PCT Application No*.: PCT/EP2020/069154. *Filing Date*: July 7, 2020. *Publication No.:* WO2021098996. *Publication Date*: May 27, 2021. https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2021098996
*National Phase Entries*: USA (US17/778,396; Exp. P2022/13828US), Japan (Exp. P2022/13827JP), China (Exp. P2022/13825CN), and Europe (EP20740261.1; Exp 109205320).

**SCIENTIFIC SOCIETIES** (8)
**THESIS:** B.S. (14), M.S. (33), Ph.D. (31)
**SYMPOSIA (**85)
**ABSTRACTS (**358)

**PUBLICATIONS** Articles: 166 (average impact: 4.6); Book chapters: 20; Citations: 6975 (June 2025)

**ARTICLES (71 in last 10 years; 44 in the last 3 years)**:

168. García-González MA, Miguel-Martínez AD, González-Hernández A, Zamora M, Adán-Castro E, Triebel J, Bertsch T, López-López JG, Martínez de la Escalera G, Robles JP, Clapp C, Villalón CM. (2025). Cardiovascular safety of VIAN-c4551, an antiangiogenic peptide derived from vasoinhibin. Drug Development Research, Under revision, 2025. FI: 3.500

167. Adán-Castro E, Zamora M, Granados-Carrasco D, Siqueiros-Marquez L, García-Rodrigo JF, Bertsch T, Triebel J, Martínez de la Escalera G, Robles JP, Clapp C. Topical eye administration of the antiangiogenic peptide VIAN-c4551 for the treatment of diabetic macular edema: efficacy and ocular pharmacokinetics. Scientific Reports, Under revision, 2025. FI: 3.800

166. Pérez AL, Zamora M, Bahena M, Arámburo-Williams R, Adán-Castro E, Bertsch T, Triebel J, Martínez de la Escalera G, Robles JP, Clapp C. The antiangiogenic peptide VIAN-c4551 inhibits lung melanoma metastasis in mice by reducing pulmonary vascular permeability. PLOS ONE, 20(5): e0316983, 2025. https://doi.org/10.1371/journal.pone.0316983. FI: 3.752

165. Nuñez FF, Siqueiros-Marquez L, Adán-Castro E, Zamora M, Robles JP, Ruíz-Herrera X, Bertsch T, Triebel J, Martínez de la Escalera G, Clapp C. Vasoinhibin is generated by the renin-angiotensin system. Endocrinology 166, bqaf023, 2025. https://doi.org/10.1210/endocr/bqaf023. FI: 5.054

164. Macías F, Ulloa M, Clapp C, Martínez de la Escalera G, Arnold E. Prolactin protects hippocampal neurons against $H_2O_2$-induced neurotoxicity by suppressing BAX and NOX4 via the NF-κB signaling pathway. PLOS ONE, 19:e0313328, 2024. https://doi.org/10.1371/journal.pone.0313328. FI: 3.752

163. Zamora M, Harris D, Davies N, Ebnet J, Radermacher P, Brucker C, Waller C, Robles JP, Bertsch T, Clapp C, Triebel J. Immunometric and functional measurement of endogenous vasoinhibin in human sera. Frontiers in Endocrinology 15:1345996, 2024. https://doi.org/10.3389/fendo.2024.1345996. FI: 6.055

162. Castillo X, Ortíz G, Arnold E, Wu Z, Tovar y Romo LB, Clapp C, Martínez de la Escalera G. The influence of the prolactin/vasoinhibin axis on post-stroke lesion volume, astrogliosis, and survival. Journal of Neuroendocrinology 2024:e13415. https://doi.org/10.1111/jne.13415. FI: 3.200

161. Ulloa M, Macías F, Clapp C, Martínez de la Escalera G, Arnold E. Prolactin is an endogenous antioxidant factor in astrocytes that limits oxidative stress-induced astrocytic cell death via the STAT3/NRF2 signaling pathway. Neurochemical Research 49: 1879-1901, 2024. https://doi.org/10.1007/s11064-024-04147-3 . FI: 4.400

160. Vázquez-Carrillo DI, Ocampo-Ruíz AL, Báez-Mesa A, Ramírez-Hernández G, Adán-Castro E, García-Rodrigo JF, Dena-Beltrán JL, de los Ríos EA, Sánchez-Martínez MK, Ortíz-Arballo MG, Martínez de la Escalera G, Clapp C, Macotela Y. Dopamine D2 receptor antagonist counteracts hyperglycemia and insulin resistance in diet-induced obese male mice. PLOS ONE 19:e0301496, 2024. https://doi.org/10.1371/journal.pone.0301496. FI: 3.752

159. Robles JP, Zamora M, Garcia-Rodrigo JF, Perez AL, Bertsch T, Martínez de la Escalera G, Triebel J, Clapp C. The apoptotic, inflammatory, and fibrinolytic actions of vasoinhibin are in a motif different from its antiangiogenic HGR motif. Endocrinology 165:1-12, 2024. https://doi.org/10.1210/endocr/bqad185. FI: 5.045

158. Núñez-Amaro CD, López M, Adán-Castro E, Robles-Osorio ML, García-Franco L, García-Roa M, Villalpando-Robles Y, Ramírez-Neria P, Pineiro N, Rubio-Mijangos JF, Sánchez J, Ramírez-Hernández G, Siqueiros-Márquez L, Díaz-Lezama N, López-Star E, Bertsch T, Martínez de la Escalera G, Triebel J, Clapp C. Levosulpiride for the treatment of diabetic macular oedema: A phase 2 randomized clinical trial. EYE 38:520-528, 2024. http://doi.org/10.1038/s41433-023-02715-5. FI: 4.456

157. Luzardo-Ocampo I, Ocampo-Ruíz AL, Dena-Beltrán JL, Martínez de la Escalera G, Clapp C, Macotela Y. The diversity of gut microbiota at weaning is altered in prolactin receptor null mice. Nutrients 15:3447, 2023. http://doi.org/10.3390/nu15153447. FI: 5.717

156. García-Rodrigo JF, Ortíz-Arballo G, Martínez-Díaz OF, Furuzawa-Carballeda J, Ruíz-Herrera X, Macías F, Ledesma-Colunga MG, Martínez de la Escalera G, Clapp C. Prolactin inhibits or stimulates the inflammatory response of joint tissues in a cytokine-dependent manner. Endocrinology 1-14, bqad156, 2023. https://doi.org/10.1210/endocr/bqad156. FI: 5.045

155. Ruiz-Herrera X, Luzardo-Ocampo I, Martínez de la Escalera G, Clapp C, Macotela Y. Differentiated mouse adipocytes in primary culture: A model of insulin resistance. Journal of Visualized Experiments. 192: E63979, 2023. http://doi:10.3791/63979v. FI: 1.424

154. Luzardo-Ocampo I, Dena-Beltrán JL, Martínez de la Escalera G, Clapp C, Macotela Y. Obesity-derived alterations in the lactating mammary gland: focus on prolactin. Molecular and Celular Endocrinology 559:111810, 2023. FI: 4.102

153. Macotela Y, Ruiz-Herrera X, Vázquez-Carrillo DI, Ramírez-Hernández G, Martínez de la Escalera G, Clapp C. The beneficial metabolic actions of prolactin. Frontiers in Endocrinology 13;1001703, 2022. FI: 6.055

152. Triebel J, Bertsch T, Clapp C. Prolactin and vasoinhibin are endogenous players in diabetic retinopathy revisited. Frontiers in Endocrinology 13:994898, 2022. FI: 6.055

151. Clapp C, Ortíz G, García-Rodrigo JF, Ledesma-Colunga MG, Martínez-Díaz F, Adán N, Martínez de la Escalera G. Dual roles of prolactin and vasoinhibin in inflammatory arthritis. Frontiers in Endocrinology 13:905756, 2022. Doi: 10.3389/fendo.2022.905756. FI: 6.055

150. Triebel J, Robles JP, Zamora Z, Clapp C, Bertsch. New horizons in specific hormone proteolysis. Trends in Endocrinology and Metabolism 33:371-377, 2022. FI: 12.015

149. Ortíz G, Ledesma-Colunga MG, Zhijian Wu Z, García-Rodrigo JF, Adán N, Martínez-Díaz F, de Los Ríos EA, López-Barrera F, Martínez de la Escalera G, Clapp C. Vasoinhibin is generated and promotes inflammation in mild antigen-induced arthritis. Endocrinology 163(5):1-12 2022. FI: 5.045

148. Martínez de la Escalera G, Macotela Y, Clapp C. A new experimental tool towards understanding the regulation of human prolactin secretion and functions. Endocrinology 163(4):1-2, 2022. FI: 5.045

147. Robles JP, Zamora M, Martínez de la Escalera G, Clapp C. The spike protein of SARS-CoV-2 induces endothelial inflammation through integrin α5β1 and NF-κB signaling. Journal of Biological Chemistry 298(3):101695, 2022. FI: 4.238

146. Leuchs A, Davies N, Friedrich C, Trier S, Clapp C, Bertsch T, Triebel J. A comparative phylogenetic analysis of prolactin cleavage sites for the generation of vasoinhibin in vertebrates. General and Comparative Endocrinology 320:114011, 2022. FI: 2.88

145. Markl-Hahn H, Neugebauer L, Lenke L, Ecker S, Merz T, McCook O, Khouder n, Bruckeer C, Radermacher P, Waller C, Clapp C, Bertsch T, Triebel J. Human placental tissue contains a placental lactogen derived vasoinhibin. Journal of the Endocrine Society 6:1-14, 2022. FI: 3.49

144. Hernández-Soto R, Adán-Castro E, Clapp C, Peña-Ortega F. Main olfactory bulb reconfiguration by prolonged passive ofactory experience correlates with increased brain-derived neurotrophic factor and improved innate olfaction. European Journal of Neuroscience 55:1141-1161, 2022. FI: 3.386

143. Adán-Castro E, Siqueiros-Márquez L, Ramírez-Hernández G, Díaz-Lezama N, Ruiz-Herrera X, Nuñez FF, Nuñez-Amaro CD, Robles-Osorio ML, Bertsch T, Triebel J, Martínez de la Escalera G, Clapp C. Sulpiride-induced hyperprolactinemia increases retinal vasoinhibin and protects against diabetic retinopathy in rats. Journal of Neuroendocrinology: Translational and Clinical Neuroendocrinology 34:e13091, 2022. doi:10.1111/jne.13091. FI: 3.627

142. Robles JP, Zamora M, Siqueiros-Marquez L, Adan-Castro E, Ramirez-Hernadez G, Nuñez FF, Lopez-Casillas F, Millar RP, Bertsch T, Martínez de la Escalera G, Tiebel J, Clapp C. The HGR motif is the antiangiogenic determinant of vasoinhibin: implications for a therapeutic orally active oligopeptide. Angiogenesis 25:57-70, 2022. Doi: 10.1007/s10456-021-09800-x. FI: 9.78

141. Ruggiero C, Altieri B, Arnold E, Siqueiros-Marquez L, Doghman-Bouguerra M, Detomas M, Durand N, Jarjat M, Chatonnet F, Fassnacht M, Deutschbein T, Clapp C, Lalli E. Integrative genomic analysis reveals a conserved role for prolactin signalling in the regulation of adrenal function. Clinical and Translational Medicine 11: e630, 2021. Doi: https://doi.org/10.1002/ctm2.630, FI: 11.492

140. Friedrich C, Neugebauer L, Zamora M, Robles JP, Martínez de la Escalera G, Clapp C, Bertsch T, Triebel J. Plasmin generates vasoinhibin-like peptides by cleaving prolactin and placental lactogen. Molecular and Cellular Endocrinology, 538:111471, 2021. FI: 4.102

139. Zamora M, Robles JP, Aguilar MB, Romero-Gómez SJ, Bertsch T, Martínez de la Escalera G, Tiebel J, Clapp C. Thrombin cleaves prolactin into a potent 5.6 kDa vasoinhibin: Implication for tissue repair. Endocrinology 162: 2021. Doi:10.1210/endocr/bqab177. FI: 5.045

138. Müller N, Robles JP, Zamora M, Ebnet J, Markl-Hahn H, Martínez de la Escalera G, Clapp C, Bertsch, Tiebel J. Development of vasoinhibin-specific monoclonal antibodies. Frontiers in Endocrinology 12:645085, 2021. DOI: 10.3389/fendo.2021.645085. FI: 3.675

137. Ramírez-Hernández G., Adán-Castro E., Díaz-Lezama N., Ruiz-Herrera X, Martínez de la Escalera G., Macotela Y, Clapp C. Global deletion of the prolactin receptor aggravates streptozotocin-induced diabetes in mice. Frontiers in Endocrinology 12:619696, 2021. DOI: 10.3389/fendo.2021.619696. FI: 3.675

136. Nuñez-Amaro C.D., Moreno-Vega A.I., Adan-Castro E., Zamora M., García Franco R., Ramirez-Neria P., Garcia-Roa M., Villalpando Y, Robles J.P., Ramirez-Hernandez G., Lopez M., Sanchez J., Lopez-Star E., Bertsch T., Martínez de la Escalera G., Robles-Osorio M.L., Triebel J., Clapp C. Levosulpiride increases the levels of prolactin and antiangiogenic vasoinhibin in the vitreouw of patients with proliferative diabetic retinopathy. Translational Vision Science & Technology (TVST) 9:27, 2020.

135. Ortiz G, Ledesma-Colunga M.G., Wu Z., Garcia-Rodrigo JF, Adan N, MartInez de la Escalera G, Clapp C. Vasoinhibin reduces joint inflammation, bone loss, and the angiogenesis and vasopermeability of the pannus in murine antigen-induced arthritis. Laboratory Investigation 100:1068-1079, 2020.

134. Macotela Y, Triebel J, Clapp C. Time for a new perspective on prolactin in metabolism. Trends in Endocrinology and Metabolism 31:276-286, 2020. FI: 11.64

133. Vazquez-Membrillo M, Sigueiros-Marquez L, Nuñez FF, Diaz-Lezama N, Adan-Castro E, Ramirez-Hernandez G, Adán N, Macotela Y, Martinez de la Escalera G, Clapp C. Prolactin stimulates the vascularization of the retina in newborn mice under hyperoxia conditions. J. Neuroendocrinology, e12858, 2020. https://doi.org/10.1111/jne.12858

132. Ponce AJ, Galván-Salas T, Lerma-Alvarado RM, Ruiz-Herrera X, Cardenas LE, Hernandez T, Valencia R, Martínez de la Escalera G, Clapp C, Macotela Y. Low prolactin levels associate with visceral adipocyte hypertrophy and insulin resistance in humans. Endocrine 67:331-343, 2020. FI:3.878

131. Triebel J, Schauer N, Zamora M, Moreno-Vega AI, Martínez de la Escalera G, Clapp C, Bertsch T. Matrix Metalloproteases and cathepsin D in human serum do not cleave prolactin to generate vasoinhibin. Clinical Laboratory. 66:877-866, 2020

130. Aroña RM, Arnold E, Macías F, López-Casillas F, Clapp C, Martínez de la Escalera G. Vasoinhibin generation and effect on neuronal apoptosis in the hippocampus of late mouse embryos.

American J Physiol: Regulatory, Integrative, Comparative Physiology 318:R760-R771, 2020. FI: 3.529

129. Lemke L, Martínez de la Escalera G, Clapp C, Bertsch T, Triebel J. A dysregulation of the prolactin/vasoinhibin axis can contribute to preeclampsia. Front Endocrinol (Lausanne) 10:893, 2020

128. Arnold, E., Thébault, S., Aroña, R.M., Martínez de la Escalera, G., Clapp, C. Prolactin mitigates deficiencies of retinal function associated with aging. Neurobiology of Aging 85: 38-48, 2019. FI: 5.153

127. Pérez-Ortíz, A.C., Peralta-Ildefonso, M.J., Iira-Romero, E., Moya-Albor, E., Brieva, J., Ramírez-Zanchez, I., Clapp, C., Luna-Angulo, A., Rendón, A., Adan-Castro, E., Ramírez-Hernández, G., Díaz-Lezama, N., Coral-Vázquez, R.M., Estrada-Mena, F.J. Lack of delta-sarcoglycan (Sgcd) results in retinal degeneration resembling geographic atrophy AMD. International Journal of Molecular Sciences 20: 5480-, 2019. https://doi:10.3390/ijms20215480

126. Moreno-Carranza, B., Robles, J.P., Cruces-Solís, H., Ferrer-Ríos, M.G., Aguilar-Rivera, E., Yupanki, M., Martínez de la Escalera, G., Clapp, C. Sequence optimization and glycosylation of vasoinhibin: Pitfalls of recombinant production. Protein Expression and Purification 161: 49-56, 2019. FI: 1.338

125. Clapp, C., Díaz-Lezama, N., Adan-Castro, E., Ramírez-Hernandez, G., Moreno-Carranza, B., Sarti, A.C., Falzoni, S., Solini, A., Di Virgilio, F. Pharmacological blockade of the P2X7 receptor reverses retinal damage in a rat model of type 1 diabetes. Acta Diabetologica Acta Diabetologica 56:1031-1036, 2019. FI: 6.206

124. Triebel, J., Robles, J.P., Zamora, M., Martínez de la Escalera, G., Bertsch, T, Clapp, C. Regulator of angiogenesis and vascular function: A 2019 update of the vasoinhibin nomenclature. Frontiers in Endocrinology 10: 214, 2019. DOI: 10.3389/fendo.2019.00214. FI: 3.675

123. Melo, Z., Castillo, X., Moreno-Carranza, B., Ledesma-Colunga, M.G., López-Casillas, F., Ruíz-Herrera, X., Clapp, C., Martínez de la Escalera, G. Vasoinhibin suppresses nerve growth factor-induced differentiation and survival of PC12 pheochromocytoma cells. Neuroendocrinology 109:152-164, 2019. Doi: 10.1159/000499507. FI: 5.024

122. Robles, J.P., Zamora, M., Velasco-Bolom, J.L., Tovar, M., Garduño-Juárez, R., Bertsch, T., Martínez de la Escalera, G., Triebel, J., Clapp, C. Vasoinhibins comprise a three-helix bundle and their antiangiogenic domain is located within the first 79 residues. Scientific Reports 8(17111):1-17, 2018. DOI: DOI:10.1038/s41598-018-35383-7. FI: 5.525

121. Moreno-Carranza, B., Bravo-Manríquez, M., Baez, A., Ledesma-Colunga, M.G., Ruíz-Herrera, X., Reyes-Ortega, P., de los Ríos, E.A., Macotela, Y., Martínez de la Escalera, G., Clapp, C. Prolactin regulates liver growth during postnatal development in mice. American Journal of Physiology: Regulatory, Integrative and Comparative Physiology 314: R902-R908, 2018. DOI: 10.1152/ajpregu.00003.2018. FI: 3.529

120. Robles-Osorio, L., García-Franco, R., Núñez-Amaro, D., Mira-Lorenzo, X., Ramírez-Neria, P., Hernández, W., López-Star, E., Bertsch, T., Martínez de la Escalera, G., Triebel, J., Clapp, C. Basis and design of a randomized clinical trial to evaluate the effect of levosulpiride on retinal alterations in patients with diabetic retinopathy and diabetic macular edema. Frontiers in Endocrinology 9: 242, 2018. DOI 10.3389/fendo.2018.00242. FI: 3.675

119. de los Ríos, E.A., Ruíz-Herrera, X., Tinoco-Pantoja, V., López-Barrera, F., Martínez de la Escalera, G., Clapp, C., Macotela, Y. The effect of maternal high fat feeding during lactation on offspring metabolism involves altered PRL action on the mammary gland and reduced milk PRL levels. FASEB J 32: 3457-2470, 2018. DOI: 10.1096/fj.201701154R. FI: 5.595

118. Castillo, X., Melo, Z., Varela-Echevarría, A., Tamáriz, E., Aroña, R.M., Arnold, E., Clapp, C., Martínez de la Escalera, G. Vasoinhibins suppresses the ability of NGF and VEGF to stimulate

neurite growth in rat primary sensory neurons. Neuroendocrinology 106: 221-233, 2018. DOI:10.1159/000477768. FI: 5.024

117. Triebel, J., Robles-Osorio, M.L., Garcia-Franco, R., Martínez de la Escalera, G., **Clapp, C.,** Bertsch, T. From bench to bedside: translating the prolactin/vasoinhibin axis. Frontiers in Endocrinology, doi:10.3389/fendo.2017.00342. FI: 3.675
116. Zepeda-Romero, L.C., Vázquez-Membrillo, M., Adán-Castro, E., Gómez-Aguayo, F., Gutiérrez-Padilla, J.A., Angulo-Castellanos, E., Barrera de León, J.C., González-Bernal, C., Quezada-Chalita, A., Meza-Anguiano, A., Díaz-Lezama, N., Martínez de la Escalera, G., Triebel, J., **Clapp, C.** Higher prolactin and vasoinhibin serum levels associate with incidence and progression of retinopathy of prematurity. Pediatric Research, 81:473-479. FI: 2.76.
115. Triebel, J., **Clapp, C**., Martínez de la Escalera, G., Bertsch, T. Remarks on the prolactin hypothesis of peripartum cardiomyopathy. Frontiers in Endocrinology, 8: 77, 2017. FI: 3.675
114. Ledesma-Colunga, M.G., Adan N., Ortiz, G., Solis-Gutierrez, M., López-Barrera, F., Martínez de la Escalera, G., **Clapp, C.** Prolactin blocks the expression of receptor activator of nuclear factor kB ligand and reduces osteoclastogenesis and bone loss in murine inflammatory arthritis. Arthritis Research & Therapy 19: 93-109, 2017. FI: 3.9
113. Triebel, J., **Clapp, C**., Martínez de la Escalera, G., Bertsch, T. Commentary: Prolactin alters blood pressure by modulating the activity of endothelial nitric oxide synthase. Frontiers in Endocrinology 8: 105, 2017. FI: 3.675
112. Arredondo-Zamarripa, D., Noguez-Imm, R., Bautista Cortés, A.M., Vázquez-Ruiz, O., Bernanrdini, M., Fiorio Pla, A., Gkika, D., Prevarskaya, N., Prevarskaya, N., López-Casillas, F., Liedtke, W., **Clapp, C**., Thebault, S. Dual contribution of TRPV4 antagonism in the regulatory effect of vasoinhibins on blood-retinal barrier permeability: diabetic milieu makes a difference. Scientific Reports 7: 13094-13109, 2017. FI:5.525
111. Triebel, J., Martínez de la Escalera, G., **Clapp, C.,** Bertsch, T. Vasoinhibins may contribute to postpartum depression. Frontiers in Psychiatry, doi:10.3389/fpsyt.2007.00167, 2017. FI: 3.532.
110. Castillo, X., Melo, Z., Varela-Echevarría, A., Tamáriz, E., Aroña, R.M., Arnold, E., **Clapp, C.,** Martínez de la Escalera, G. Vasoinhibins suppresses the ability of NGF and VEGF to stimulate neurite growth in rat primary sensory neurons. Neuroendocrinology 2017. DOI:10.1159/000477768. FI: 4.373.
109. Triebel, J., **Clapp, C**., Martínez de la Escalera, G., Bertsch, T. Vasoinhibin serum levels are required to demonstrate their role in peripartum cardiomyopathy etiopathology. ASAIO Journal 63: e50, 2017. FI: 2.291
108. Triebel, J., **Clapp, C**., Martínez de la Escalera, G., Bertsch, T. Commentary: Prolactin alters blood pressure by modulating the activity of endothelial nitric oxide synthase. Frontiers in Endocrinology 8: 105, 2017. FI: 3.675
107. Ruiz-Herrera, X, de los Ríos, E.A., Díaz, M.M., Lerma-Alvarado, R.M., Martínez de la Escalera, L., López-Barrera, F., Lemini, M., Arnold, E., Martínez de la Escalera, G., **Clapp, C**., Macotela, Y. Prolactin promotes adipose tissue fitness and insulin sensitivity in obese males. Endocrinology, accepted 2016. FI: 5.045
106. **Clapp, C**., Adán, N., Ledesma-Colunga, G.M., Solís-Gutiérrez, M., Triebel, J., Martínez de la Escalera, G. The role of the prolactin/vasoinhibin axis in rheumatoid arthritis: An integrative overview. Cellular and Molecular Life Sciences. 73:2929-2948, 2016. FI: 5.808. DOI 10.1007/s00018-016-2187-0.
105. Meléndez García, R., Arredondo Zamarripa, D., Arnold, E., Ruiz-Herrera, X., Noguez Imm, R., Baeza Cruz, G., Adán, N., Binart, N., Riesgo-Escovar, J., Goffin, V., Ordaz, B., Peña-Ortega, F., Martínez-Torres, A., **Clapp, C.,** and Thebault, S.. Prolactin protects retinal pigment epithelium by inhibiting SIRT2-dependent cell death. EBioMedicine 7:35-49, 2016.
104. Díaz-Lezama, N., wu, Z., Adán-Castro, E., Arnold, E., Vázquez-Membrillo, M., Arredondo-Zamarripa, D., Ledesma-Colunga, M.G., Moreno-Carranza, B., Martínez de la Escalera, G., Colosi, P., **Clapp, C**. Diabetes enhances the efficacy of AAV2 vectors in the retina: therapeutic effect of AAV2 encoding vasoinhibin and soluble VEGF receptor 1. Laboratory Investigation 96: 283-295, 2016. FI: 4.453
103. Triebel, J., Bertsch, T., Bollheimer, C., Ríos-Barrera, D., Pearce, C.F., Hüfner, M., Martinez de la Escalera, G., **Clapp, C**. Principles of the prolactin/vasoinhibin axis. American Journal of

Physiology: Regulatory, Integrative and Comparative Physiology. 309: R1193-R1203, 2015. FI: 3.529

102. Lemini ,M., Ruiz-Herrera , X., Ledesma-Colunga, M.G., Díaz-Lezama, N., De los Ríos, E.A., Lopez-Barrera, F., Méndez. I., Martinez de la Escalera, G., Macotela, Y., and **Clapp C.** Prolactin anterior pituitary expression and circulating levels are reduced in obese and diabetic rats: Role of TGFβ and TNFα. American Journal of Physiology- Regulatory, Integrative and Comparative Physiology. 308:R792-R799, 2015. FI: 3.59

101. Triebel, J., Bertsch, T., Martínez de la Escalera, G., and **Clapp, C**. On the path towards classifying hormones of the vasoinhibin-family. Frontiers in Endocrinology 6:1-2, 2015

100. Triebel, J., Moreno-Vega, A.I., Vázquez-Membrillo, M., Jeziorski, M.C., García-Franco, R., López-Star, E., Baldivieso-Hurtado, O., Ochoa, D., Macotela, Y., Bertsch, T., Martínez de la Escalera, G., **Clapp, C**. High prolactin excretion in patients with diabetes mellitus and impaired renal function. Clinical Laboratory, 61:709-716, 2015. FI:1.084

99. **Clapp, C.,** Thebault, S., Macotela, Y., Moreno-Carranza, B., Triebel, J., Martínez de la Escalera, G. Regulation of blood vessels by prolactin and vasoinhibins. Advances in Experimental Medicine and Biology 846: 83-95, 2015. FI: 2.020.

98. Arredondo, D., Díaz-Lezama, N., Meléndez, R., Chávez Balderas, J., Adán, N., Ledesma-Colunga, M.G., Arnold, E., **Clapp, C.,** Thebault, S. Vasoinhibins regulate the inner and outer blood-retinal barrier and limit retinal oxidative stress. Frontiers in Cellular Neuroscience. Doi: 10.3389/fncel.2014.00333. FI: 4.5

97. Zamorano, M., Ledesma-Colunga, M.G., Adán, A., Vera-Massieu, C., Lemini, M., Méndez, I., Moreno-Carranza, B., Neumann I.D., Thebault, S., Martínez de la Escalera, G., Torner, L., **Clapp, C.** Prolactin-derived vasoinhibins increase anxiety- and depression-related behaviors. Psychoneuroendocrinology. 44: 123-132, 2014. FI: 5.926

96. Adán, N., Ledesma-Colunga, M.G., Reyes-López, A.L., Martínez de la Escalera, G., **Clapp, C.** Arthritis and prolactin: A phylogenetic viewpoint. General and Comparative Endocrinology. Doi: 10.1016/j.ygcen.2014.01.011. FI: 3.108

95. García, C., Nuñez-Arita, R.E., Thebault, S., Arredondo-Zamarripa, D., Jeziorski, M.C., Martínez de la Escalera, G., **Clapp, C.** Requirement of phosphorytable endothelial nitric oxide synthase at Ser-1177 for vasoinhibin-mediated antiangiogenic effects. Endocrine 45(2): 263-270, 2014. FI: 2.250

94. Arnold, E., Thebault, S., Baeza-Cruz, G., Arredondo Zamarripa, D., Adán, N., Quintanar-Stéphano, A., Condés-Lara, M., Rojas-Piloni, G., Binart, N., Martínez de la Escalera, G., **Clapp, C**. The hormone prolactin is a novel, endogenous trophic factor able to regulate reactive glía and to limit retinal degeneration. Journal of Neuroscience 34(5): 1868-1878, 2014. FI: 7.87.

93. Lajud, N., Gonzalez-Zapien, R., Roque, A., Tinajero, E., Valdez, J.J., **Clapp, C.**, Torner L. Prolactin administration during early postnatal life decreases hippocampal and olfatory bulb neurogenesis and results in depressive-like behavior in adulthood. Hormones and Behavior, 64: 781-789, 2013. FI: 3.735

92. Moreno-Carranza, B., Goya-Arce, M., Vega, C., Adán, N., Triebel, J., Lopez-Barrera, F., Quintanar-Stephano, A., Binart, N., Martínez de la Escalera, G., **Clapp, C.** Prolactin promotes normal liver growth, survival, and regeneration in rodents: effects on hepatic IL-6, suppressor of cytokine signaling-3, and angiogenesis. American Journal of Physiology: Regulatory, Integrative and Comparative Physiology 305: R720-R726, 2013. FI: 3.058

91. Adán, N., Guzmán-Morales, J., Ledesma-Colunga, G., Perales-Canales, S.I., Quintanar-Stephano, A., López-Barrera, F., Méndez, I., Moreno-Carranza, B., Triebel, J., Binart, N., Martínez de la Escalera, G., Thebault, S., **Clapp, C**. Prolactin promotes cartilage survival and attenuates inflammation in rheumatoid arthritis. Journal of Clinical Investigation 123(9): 3902-3913, 2013. FI: 16.559