

REFERENCIAS

1. Abboud S, Haile DJ. A novel mammalian iron-regulated protein involved in intracellular iron metabolism. *J Biol Chem* 2000; 275: 19906-12.
2. Abouhamed M, Gburek J, Liu W, et al. Divalent metal transporter 1 in the kidney proximal tubule is expressed in late endosomes/lysosomal membranes: implications for renal handling of protein-metal complexes. *Am J Physiol Renal Physiol*. 2006; 290: F1525-F33.
3. Altamura S, Kiss J, Blattmann C, et al. SELDI-TOF MS detection of urinary hepcidin. *Biochimie* 2009; 91(10): 1335-8.
4. Andriopoulos B Jr, Corradini E, Xia Y, et al. BMP6 is a key endogenous regulator of hepcidin expression and iron metabolism. *Nat Genet* 2009; 41(4):482-7.
5. Arosio P, Levi S. Ferritin, iron homeostasis and oxidative damage. *Free Radic Biol Med* 2002; 33:457.
6. Babitt JL, Huang FW, Wrighting DM, et al. Bone morphogenetic protein signaling by hemojuvelin regulates hepcidin expression. *Nat Genet* 2006; 38(5):531-9.
7. Babitt JL, Huang FW, Xia Y, et al. Modulation of bone morphogenetic protein signaling in vivo regulates systemic iron balance. *J Clin Invest* 2007; 117: 1933-9.
8. Beilby JP, Prins AW, Swanson NR. Determination of Hepatic Iron Concentration in Fresh and Paraffin-embedded Tissue. *Clin Chem* 1999; 45 (4): 573-4.
9. Bekri S, Gual P, Anty R, et al. Increased adipose tissue expression of hepcidin in severe obesity is independent from diabetes and NASH. *Gastroenterology* 2006; 131(3):788-96.
10. Bligh, J. Temperature regulation in mammals and other vertebrates. *Frontiers of Biology* 30. American Elsevier, New York, 1973.
11. Boenisch T. Manual Métodos inmunohistoquímicos de coloración, 3^{era} edición. DAKO corporation, 2002.
12. Burdo JR, Menzies SL, Simpson IA, et al. Distribution of divalent metal transporter 1 and metal transport protein 1 in the normal and Belgrade rat. *J Neurosci Res* 2001; 66(6): 1198-207.
13. Butterfield AM, Luan P, Witcher DR. A dual monoclonal sandwich ELISA specific for hepcidin 25. *Clin Chem* 2010; In press.
14. Canonne-Hergaux F, Gros P. Expression of the iron transporter DMT1 in kidney from normal and anemic mice. *Kidney Int* 2002; 62: 147-56.
15. Canonne-Hergaux F, Donovan A, Delaby C, et al. Comparative studies of duodenal and macrophage ferroportin proteins. *Am J Physiol Gastrointest Liver Physiol* 2006; 290: 156-63.
16. Casanovas G, Mleczko K, Altamura S, et al. Bone morphogenetic protein (BMP)-responsive elements located in the proximal and distal hepcidin promoter are critical for its response to HJV/BMP/SMAD. *J Mol Med* 2009; 87: 471-80.
17. Chaston T, Chung B, Mascarenhas M, et al. Evidence for differential effects of hepcidina in macrophages and intestinal epithelial cells. *Gut* 2008; 57: 374-82.

18. Choi SO, Cho YS, Kim HL, et al. ROS mediate the hypoxic repression of the hepcidin gene by inhibiting C/EBPalpha and STAT-3. *Biochem Biophys Res Commun* 2007; 356(1):312-7.
19. Chomczynski P, Sacchi N. Single-step method of RNA isolation by acid guanidinium thiocyanate-phenol-chloroform extraction. *Anal Biochem* 1987; 162: 156-9.
20. Courselaud B, Pigeon C, Inoue Y, et al. C/EBPalpha regulates hepatic transcription of hepcidin, an antimicrobial peptide and regulator of iron metabolism. Cross-talk between C/EBP pathway and iron metabolism. *J Biol Chem* 2002; 277(43):41163-70.
21. Courselaud B, Troadec M, Fruchon S, et al. Starin and gender modulate hepatic hepcidin 1 and 2 mRNA expression in mice. *Blood Cells Mol Dis* 2004; 32: 283-9.
22. Cozzi A, Corsi B, Levi S, et al. Analysis of the biologic functions of H- and L-ferritins in Hela cells by transfection with siRNAs and cDNAs: evidence for a proliferative role of L-ferritin. *Blood* 2004; 103: 2377-83.
23. D'Anna MC, Gatti C, Veuthey TV, et al. Eritropoyesis y esplenectomia en un modelo murino. *Revista AMBB* 2006; 16 (4): 88-96.
24. D'Anna MC, Veuthey TV, Roque ME. Immunolocalization of ferroportin in healthy and anemic mice. *J Histochem Cytochem* 2009; 57(1): 9-16.
25. De Domenico I, McVey WD, Musci G, et al. Iron overload due to mutations in Ferroportin. *Haematol* 2006; 91:92-5.
26. De Domenico I, Ward DM, Langelier C, et al. The molecular mechanism of hepcidin-mediated ferroportin down-regulation. *Mol Biol Cell* 2007; 18(7):2569-78.
27. Delaby C, Pilard N, Goncalves AS, et al. Presence of the iron exporter ferroportin at the plasma membrane of macrophages is enhanced by iron loading and down-regulated by hepcidin. *Blood* 2005; 106:3979-84.
28. Delaby C, Pilard N, Puy H, et al. Sequential regulation of ferroportin expression after erythrophagocytosis in murine macrophages: early mRNA induction by haem, followed by iron-dependent protein expression. *Biochem J* 2008; 411: 123-31.
29. Devore JL. *Probabilidad y estadística para ingeniería y ciencias*. 5ta edición. México: Editorial Thompson Learning, 2001.
30. Donovan A, Brownlie A, Zhou Y, et al. Positional cloning of zebrafish ferroportin1 identifies a conserved vertebrate iron exporter. *Nature* 2000; 403: 776-81.
31. Donovan A, Lima CA, Pinkus JL, et al. The iron exporter ferroportin/Slc40a1 is essential for iron homeostasis. *Cell Met* 2005; 1: 191-200.
32. Dor F, Ramirez ML, Parmar K, et al. Primitive hematopoietic cell populations reside in the spleen: studies in the pig, baboon and human. *Exp Hematol* 2006; 34:1573-82.
33. Dornfest BS, Lapin DM, Naughton BA, et al. Phenylhydrazine-induced leukocytosis in the rat. *J Leukoc Biol* 1986; 39: 37-48.
34. Du X, She E, Gelbart T, et al. TMPRSS6 is required to sense iron deficiency. *Science* 2008; 320(5879):1088-92.

35. Dunn LL, Rahmanto YS, Richardson DS. Iron uptake and metabolism in the new millennium. *Trend in cell Biology* 2006; 17: 93-100.
36. Elbarghati L, Murdoch C, Lewis CE. Effects of hypoxia on transcription factor expression in human monocytes and macrophages. *Immunobiology* 2008; 213: 899-908.
37. Fandrey J. Oxygen-dependent and tissue-specific regulation of erythropoietin gene expression. *Am J Physiol Regul Integr Comp Physiol* 2004; 286: 977-88.
38. Festing MF, Overend P, Gaines Das R, et al. The design of animal experiments. *Laboratory animal handbooks* 2004; 14.
39. Fleming MD. The regulation of hepcidin and its effects on systemic and cellular iron metabolism. *Hematology Am Soc Hematol Educ Program* 2008:151-8.
40. Frazer DM, Anderson GJ. Iron Imports I. Intestinal iron absorption and its regulation. *Am J Physiol Gastrointest Liver Physiol* 2005; 289: G631-5.
41. Frazer DM, Wilkins SJ, Becker EM, et al. A rapid decrease in the expression of DMT1 and Dcytb but not Ireg1 or hephaestin explains the mucosal block phenomenon of iron absorption. *Gut* 2003; 52: 340-6.
42. Gagliardo B, Kubat N, Faye A, et al. Pro-hepcidin is unable to degrade the iron exporter ferroportin unless matured by a furin-dependent process. *J Hepatol* 2009; 50: 394-401.
43. Galy B, Ferring D, Minana B, et al. Altered body iron distribution and microcytosis in mice deficient in iron regulatory protein 2 (IRP2). *Blood* 2005; 106:2580-9.
44. Galy B, Ferring-Appel D, Kaden S, et al. Iron regulatory proteins are essential for intestinal function and control key iron absorption molecules in the duodenum. *Cell Metabolism* 2008; 7: 79-85.
45. Ganz T. Hepcidin, a key regulator of iron metabolism and mediator of anemia of inflammation. *Blood* 2003; 102: 783-8.
46. Ganz T, Nemeth E. Regulation of iron acquisition and iron distribution in mammals. *Biochim Biophys Acta* 2006; 1763: 690-699
47. Ganz T, Olbina G, Girelli D, et al. Immunoassay for human serum hepcidin. *Blood* 2008; 112(10): 4292-7.
48. Garby L, Noyes WD. Studies of hemoglobin metabolism. I. The kinetic properties of the plasma hemoglobin pool in normal man. *J Clin Invest* 1959; 38: 1479-88.
49. García del Moral R. *Laboratorio de anatomía patológica*. Madrid: Editorial Interamericana McGraw-Hill, 1993. ISBN: 84-481-0229-0.
50. Garrick MD, Dolan KG, Horbinski C, et al. DMT1: a mammalian transporter for multiple metals. *Biometals*. 2003; 16(1):41-54.
51. Gartner LP, Hiatt JL. *Atlas color de Histología*, 2da edición. Madrid: Editorial Médica Panamericana, 1998. ISBN: 84-7903-236-7.
52. Graham RM, Chua AC, Herbison CE, et al. Liver iron transport. *World J Gastroenterol* 2007; 13: 4725-36.
53. *Guide for the care and use of laboratory animals*. National Research Council. Washington DC, 1996.
54. Gunshin H, Mackenzie B, Berger UV, et al. Cloning and characterization of a mammalian proton-coupled metal-ion transporter. *Nature* 1997; 388: 482-8.

55. Gunshin H, Starr CN, Drenth C, et al. Cybrd1 (duodenal cytochrome b) is not necessary for dietary iron absorption in mice. *Blood* 2005; 106: 2879-83.
56. Han O, Kim EY. Colocalization of ferroportin-1 with hephaestin on the basolateral membrane of human intestinal absorptive cells. *J Cell Biochem* 2007; 101(4):1000-10.
57. Hastings JW, Menaker M. Physiological and biochemical aspects of circadian rhythms. *Federation Proc* 1976; 35:2325-57.
58. Hentze MW, Muckenthaler MU, Galy B, et al. Two to tango: Regulation of Mammalian Iron Metabolism. *Cell* 2010; 142: 24-38.
59. Hoff J. Methods of blood collection in the mouse. *Lab Animal* 2000; 29; 47-53.
60. Huang H, Constante M, Layoun A, et al. Contribution of STAT3 and SMAD4 pathways to the regulation of hepcidin by opposing stimuli. *Blood* 2009; 113(15):3593-9.
61. Hubert N, Hentze MW. Previously uncharacterized isoforms of divalent metal transporter (DMT)-1: implications for regulation and cellular function. *Proc Natl Acad Sci USA* 2002; 99(19):12345-50.
62. Hunter HN, Fulton DB, Ganz T, et al. The solution structure of human hepcidina, a peptide hormone with antimicrobial activity that is involved in iron uptake and hereditary hemochromatosis. *J Biol Chem* 2002; 277; 37597-603.
63. Johnson MB, Chen J, Murchison N, et al. Transferrin receptor 2: evidence for ligand-induced stabilization and redirection to a recycling pathway. *Mol Biol Cell*. 2007; 18(3):743-54.
64. Kautz L, Meynard D, Monnier A. Iron regulates phosphorylation of Smad1/5/8 and gene expression of Bmp6, Smad7, Id1 and Atoh8 in the mouse liver. *Blood* 2008; 112: 1503-9.
65. Kawabata H, Germain RS, Ikezoe T, et al. Regulation of expression of murine transferrin receptor 2. *Blood* 2001; 98:1949-54.
66. Kell D. Iron behaving badly: inappropriate iron chelation as a major contributor to the aetiology of vascular and other progressive inflammatory and degenerative diseases. *BMC Medical Genomics* 2009, 2: 1-79.
67. Keller G, Lacaud G, Robertson S. Development of the hematopoietic system in the mouse. *Exp Hematol* 1999; 27: 777-87.
68. Knutson MD, Vafa M, Haile D, et al. Iron loading and erythrophagocytosis increase ferroportin 1 (FPN1) expression in J774 macrophages. *Blood* 2003; 102: 4191-7.
69. Knutson MD, Oukka M, Koss LM, et al. Iron release from macrophages after erythrophagocytosis is up-regulated by ferroportin 1 overexpression and down-regulated by hepcidin. *Proc Natl Acad Sci* 2005; 102: 1324-8.
70. Knutson MD, Wessling-Resnick M. Iron metabolism in the reticuloendothelial system. *Crit Rev Biochem Mol* 2003; 38: 61-88.
71. Kong WN, Chang YZ, Wang SM, et al. Effect of erythropoietin on hepcidin, DMT1 with IRE, and hephaestin gene expression in duodenum of rats. *J Gastroenterol* 2008; 43: 136-43.
72. Koshimura J, Narita T, Sasaki H, et al. Urinary excretion of transferrin and orosomucoid are increased after acute protein loading in healthy subjects. *Nephron Clin Pract*. 2005; 100: 33-7.

73. Koury ST, Bondurant MC, Koury MJ. Localization of erythropoietin synthesizing cells in murine kidneys by in situ hybridization. *Blood* 1988; 71 (2): 524-7.
74. Kozlov VA, Zhuravkin IN, Coleman RM, et al. Splenic plaque-forming cells (PFC) and stem cells (CFU-s) during acute phenylhydrazine-induced enhanced erythropoiesis. *J Exp Zool* 1980; 213:199-203.
75. Krause A, Neitz S, Mägert HJ, et al. LEAP-1, a novel highly disulfide-bonded human peptide exhibits antimicrobial activity. *FEBS Lett* 2000; 480:147-50.
76. Kristiansen M, Graversen JH, Jacobsen C, et al. Identification of the haemoglobin scavenger receptor. *Nature* 2001; 409: 198-201.
77. Kulaksiz H, Gehrke SG, Janetzko A, et al. Pro-hepcidin: expression and cell specific localization in the liver and its regulation in hereditary haemochromatosis, chronic renal insufficiency, and renal anaemia. *Gut* 2004; 53: 735-43.
78. Kulaksiz H, Theilig F, Bachmann S, et al. The iron-regulatory peptide hormone hepcidin: expression and cellular localization in the mammalian kidney. *J Endocrinol* 2005; 184: 361-70.
79. Kushner JP, Porter JP, Olivieri NF. Secondary iron overload. *Hematol (Am Soc Hematol Educ Program)* 2001:47.
80. Laemmli UK. Cleavage of structural proteins during the assembly of the head of bacteriophage T4. *Nature* 1970; 227: 680-5.
81. Latunde-Dada GO, Vulpe CD, Anderson GJ, et al. Tissue specific changes in iron metabolism genes in mice following phenylhydrazine-induced haemolysis. *Biochim Biophys Acta* 2004; 1690: 169-76.
82. Latunde-Dada GO, McKie AT, Simpson RJ. Animal models with enhanced erythropoiesis and iron absorption. *Biochim Biophys Acta* 2006; 1762:414-23.
83. Latunde-Dada GO, Westhuizen JV, Vulpe CD, et al. Molecular and functional roles of duodenal cytochrome B (Dcytb) in iron metabolism. *Blood Cell Mol Dis* 2002; 29: 356-60.
84. Liu XB, Nguyen N, Marquess KD, et al. Regulation of hepcidin and ferroportin expression by lipopolysaccharide in splenic macrophages. *Blood* 2005a; 35: 47-56.
85. Liu XB, Yang F, Haile DJ. Functional consequences of ferroportin 1 mutations. *Blood Cells Mol Dis* 2005b; 35(1): 33-46.
86. Lymboussaki A, Pignatti E, Montosi G, et al. The role of the iron responsive element in the control of ferroportin1/IREG1/MTP1 gene expression. *J Hepatol* 2003; 39: 710–5.
87. Mackenzie B, Garrick MD. Iron imports. II. Iron uptake at the apical membrane in the intestine. *Am J Physiol Gastrointest Liver Physiol* 2005; 289: 981-6.
88. Mackenzie B, Ujwal ML, Chang MH, et al. Divalent metal-ion transporter DMT1 mediates both H⁺-coupled Fe²⁺ transport and uncoupled fluxes. *Pflugers Arch* 2006; 451(4):544-58.
89. Magnani M, Stocchi V, Cucchiaroni L, et al. Red blood cell phagocytosis and lysis following oxidative damage by phenylhydrazine. *Cell Biochem Funct* 1986; 4:263-9.
90. Matsuno T, Mori M, Awai M. Distribution of ferritin and hemosiderin in the liver, spleen and bone marrow of normal, phlebotomized and iron overloaded rats. *Acta Med Okayama* 1985; 39: 347-60.

91. Maxwell AP, Lappin TR, Johnston CF, et al. Erythropoietin production in kidney tubular cells. *British J Haematol* 1990; 74: 535-9.
92. McKie AT, Barlow DJ. The SLC40 basolateral iron transporter family (IREG1/FERROPORTIN/MTP1). *Eur J Physiol* 2004; 447:801-6.
93. McKie AT, Barrow D, Latunde-Dada GO, et al. An iron regulated ferric reductasa associated with absorption of dietary iron. *Science* 2001; 291: 1755-9.
94. McKie AT, Marciani P, Rolfs A, et al. A novel duodenal iron-regulated transporter, IREG1, implicated in the basolateral transfer of iron to the circulation. *Mol Cell* 2000; 5: 299-309.
95. Mena NP, Esparza AL, Nuñez MT. Regulation of transepithelial transport of iron by hepcidin. *Biol Res* 2006; 39: 191-3.
96. Metcalf D. Cell-cell signalling in the regulation of blood cell formation and function. *Immunol Cell Biol* 1998; 76(5):441-7.
97. Meynard D, Kautz L, Darnaud V, et al. Lack of the bone morphogenetic protein BMP6 induces massive iron overload. *Nature genetics* 2009; 41: 478-81.
98. Muckenthaler M, Galy B, Hentze M. Systemic iron homeostasis and the Iron-responsive element/iron-regulatory protein (IRE/IRP) regulatory network. *Annu Rev Nutr* 2008; 28: 21-9.
99. Muñoz M, Villar I, Garcia-Erce JA. An update on iron physiology. *World J Gastroenterol* 2009; 15(57): 4617-26.
100. Nemeth E, Valore E, Territo M, et al. Hepcidin, a putative mediator of anemia of inflammation, is a type II acute phase-protein. *Blood* 2003; 101: 2461-3.
101. Nemeth E, Tuttle MS, Powelson J, et al. Hepcidin regulates cellular iron efflux by binding to ferroportin and inducing its internalization. *Science* 2004a; 306: 2090-3.
102. Nemeth E, Rivera S, Gabayan V, et al. IL-6 mediates hipoferremia of inflammation by inducing the synthesis of the iron regulatory hormone hepcidina. *J Clin Invest* 2004b; 113: 1271-6.
103. Nemeth E, Preza GC, Jung CL, et al. The N-terminus of hepcidin is essential for its interaction with ferroportin: structure-function study. *Blood* 2006; 107(1): 328-33.
104. Nemeth E. Targeting the Hepcidin-Ferroportin Axis in the Diagnosis and Treatment of Anemias. *Adv Hematol*. 2010; 2010:750643.
105. Nicolas G, Bennoun M, Devaux I, et al. Lack of hepcidin gene expression and severe tissue iron overload in upstream stimulatory factor 2 (USF2) knockout mice. *Proc Natl Acad Sci USA* 2001; 98: 8780-5.
106. Nicolas G, Chauvet C, Viatte L, et al. The gene encoding the iron regulatory peptide hepcidin is regulated by anemia, hypoxia and inflammation. *J Clin Invest* 2002a; 110: 1037-1044.
107. Nicolas G, Bennoun M, Porteu A, et al. Severe iron deficiency anemia in transgenic mice expressing liver hepcidin. *Proc Natl Acad Sci USA* 2002b; 99: 4596-601.
108. Nuñez MT. Regulatory mechanisms of intestinal iron absorption – Uncovering of a fast response mechanism based on DMT1 and ferroportin endocytosis. *Biofactors* 2010; En prensa.
109. Oates PS, Thomas C. Ferroportin/IREG-1/MTP-1/SLC40A1 modulates the uptake of iron at the apical membrane of enterocytes. *Gut* 2004; 53: 44-9.

- 110.**Oates PS, Thomas C. Ferroportin is expressed on the mucous granule membrane of a subpopulation of goblet cells in the duodenum of the rat. *Histol Histopathol* 2005; 20: 681-687
- 111.**Oates PS. The relevance of the intestinal crypt and enterocyte in regulating iron absorption. *Pflugers Arch.* 2007; 455(2):201-13.
- 112.**Pak M, Lopez MA, Gabayan V, et al. Suppression of hepcidin during anemia requires erythropoietic activity. *Blood* 2006; 108: 3730-5.
- 113.**Pantapoulos K. Function of the hemochromatosis protein HFE: lessons from animal models. *World J Gastroenterol* 2008; 14(45): 6893-901
- 114.**Park CH, Valore EV, Waring AJ, et al. Hepcidin, a urinary antimicrobial peptide synthesized in the liver. *J Biol Chem* 2001; 276:7806-10.
- 115.**Pérez G, Vittori D, Pregi N, et al. Homeostasis del hierro. Mecanismos de absorción, captación celular y regulación. *Acta Bioquím Clin Latinoam* 2005; 39(3): 301-14.
- 116.**Perls M. Nachweis von Eisenoxyd in gewissen Pigmentationen. *Virchows Archiv fur pathologische Anatomie und klinische Medizin* 1867; 39:42.
- 117.**Peslova G, Petrak J, Kuzelova K, et al. Hepcidin, the hormone of iron metabolism, is bound specifically to 2-macroglobulin in blood. *Blood.* 2009; 113:6225-6236.
- 118.**Peyssonnaud C, Zinkernagel AS, Datta V, et al. TLR4-dependent hepcidin expression by myeloid cells in response to bacterial pathogens. *Blood* 2006; 107(9):3727-32.
- 119.**Peyssonnaud C, Zinkernagel AS, Schuepbach RA, et al. Regulation of iron homeostasis by the hypoxia-inducible transcription factors (HIFs). *J Clin Invest* 2007; 117: 1926-32.
- 120.**Pigeon C, Ilyin G, Courselaud B, et al. A new mouse liver-specific gene encoding a protein homologous to human antimicrobial peptide hepcidin, is overexpressed during iron overload. *J Biol Chem* 2001; 276: 7811-9.
- 121.**Pignatti E, Mascheroni L, Sabelli M, et al. Ferroportin is a monomer in vivo in mice. *Blood Cells Mol Dis* 2006; 36(1): 26-32.
- 122.**Pinto JP, Ribeiro S, Pontes H, et al. Erythropoietin mediates hepcidin expression in hepatocytes through EPOR signaling and regulation of C/EBPalpha. *Blood* 2008; 111(12):5727-33.
- 123.**Piperno A, Girelli D, Nemeth E, et al. Blunted hepcidin response to oral iron challenge in HFE-related hemochromatosis. *Blood* 2007; 110(12):4096-100.
- 124.**Ponka P. Cellular iron metabolism. *Kidney Int* 1990; 55: S2-S11.
- 125.**Ramey G, Deschemin JC, Vaulont S. Cross talk between the mitogen activated protein kinase and bone morphogenetic protein/hemojuvelin pathways is required for the induction of hepcidin by holotransferrin in primary mouse hepatocytes. *Haematol* 2009; 94: 765-72.
- 126.**Ramey G, Deschemin J-C, Durel B, et al. Hepcidin targets ferroportin for degradation in hepatocytes. *Haematologica* 2010; 95:501-4.
- 127.**Ramsay AJ, Reid JC, Velasco G, et al. The type II transmembrane serine protease matriptase-2-- identification, structural features, enzymology, expression pattern and potential roles. *Front Biosci* 2008; 13: 569-79.

- 128.**Recalcati S, Locati M, Marini A, et al. Differential regulation of iron homeostasis during human macrophage polarized activation. *Eur J Immunol* 2010; 40(3):824-35.
- 129.**Rivera S, Nemeth E, Gabayan V, et al. Synthetic hepcidin causes rapid-dose dependent hipoferremia and is concentrated in Ferroportin-containing organs. *Blood* 2005; 106(6): 2196-9.
- 130.**Roque ME, Sandoval MJ, Aggio MC. Serum erythropoietin and its relation with soluble transferrin receptor in patients with different types of anaemia in a locally defined reference population. *Clin Lab Haematol* 2001; 23(5):291-5.
- 131.**Roque M, DAnna C, Gatti C, et al. Hematological and Morphological Analysis of the Erythropoietic Regenerative Response in Phenylhydrazine-induced Hemolytic Anemia in Mice. *Scand J Lab Anim Sci* 2008; 35(3): 181-90.
- 132.**Rothberg H, Corallo LA, Crosby WH. Observations on heinz bodies in normal and splenectomized rabbits. *Blood Journal* 1959; 14: 1180-6.
- 133.**Semenza GL. HIF-1: mediator of physiological and pathophysiological responses to hypoxia. *J Appl Physiol* 2000; 88: 1474-80.
- 134.**Shayeghi M, Latunde-Dada GO, Oakhill JS, et al. Identification of an intestinal heme transporter. *Cell* 2005; 122: 789-801.
- 135.**Sheikh N, Dudas J, Ramadori G. Changes of gene expression of iron regulatory proteins during turpentine oil-induced acute-phase response in the rat. *Lab Invest* 2007; 1:13.
- 136.**Slayton WB, Georgelas A, Pierce LJ, et al. The spleen is a major site of megakaryopoiesis following transplantation of murine hematopoietic stem cells. *Blood* 2002; 100:3975-82.
- 137.**Soe-Lin S, Apte SS, Andriopoulos B Jr, et al. Nramp1 promotes efficient macrophage recycling of iron following erythrophagocytosis in vivo. *Proc Natl Acad Sci U S A* 2009; 106(14):5960-5.
- 138.**Spivak JL, Connor E. A simple hypoxic chamber. *J Lab Clin Med* 1977; 89: 1375-8.
- 139.**Spivak JL. The clinical physiology of erythropoietin. *Semin Hematol* 1993; 30(4 Suppl 6): 2-11.
- 140.**Tabuchi M, Yoshimori T, Yamaguchi K, et al. Human NRAMP2/DMT1, which mediates iron transport across endosomal membranes, is localized to late endosomes and lysosomes in HEp-2 cells. *J Biol Chem* 2000; 275(29):22220-8.
- 141.**Tabuchi M, Yanatori I, Kawai Y, et al. Retromer-mediated direct sorting is required for proper endosomal recycling of the mammalian iron transporter DMT1. *J Cell Sci* 2010; 123:756-6.
- 142.**Tanno T, Bhanu N, Oneal PA, et al. High levels of GDF15 in thalassemia suppress expression of the iron regulatory protein hepcidin. *Nature Med* 2007; 13: 1096-101.
- 143.**Tanno T, Porayette O, Sripichai O, et al. Identification of TWSG1 as a second novel erythroid regulator of hepcidin expression in murine and human cells. *Blood* 2009; 114: 181-6.
- 144.**Theurl I, Ludwiczek S, Eller P, et al. Pathways for the regulation of body iron homeostasis in response to experimental iron overload. *J Hepatol* 2005; 43:711-9.
- 145.**Theurl I, Theurl M, Seifert M, et al. Autocrine formation of hepcidin induces iron retention in human monocytes. *Blood* 2008; 111(4): 2392-9.
- 146.**Torti FM, Torti S. Regulation of ferritin genes and protein. *Blood* 2002; 99: 3505-16.

- 147.**UFAW / Royal Society, U.K. Guidelines for the care of laboratory animals and their use for scientific purposes I. housing and Care. London, 1987.
- 148.**Valentine WN, Paglia DE, Fink K, et al. Lead Poisoning: association with hemolytic anemia, basophilic stippling, erythrocyte pyrimidine 5'-nucleotidase deficiency, and intraerythrocytic accumulation of pyrimidines. *J Clin Invest* 1976; 58:926-32.
- 149.**Valore E, Ganz T. Posttranslational processing of hepcidina in human hepatocytes is mediated by the prohormone convertase furin. *Blood Cells, Mol Dis* 2008; 40: 132-8.
- 150.**Verga Falzacappa MV, Spasic MV, Kessler R, et al. STAT3 mediates hepatic hepcidina expression and its inflammatory stimulation. *Blood* 2007; 109: 353-8.
- 151.**Veuthey T, D'Anna MC, Roque ME. Role of the kidney in iron homeostasis: renal expression of Prohepcidin, Ferroportin and DMT1 in anemic mice. *Am J Physiol Renal Physiol* 2008; 295: F1213-21.
- 152.**Viatte L, Nicolas G, Lou D, et al. Chronic hepcidin induction causes hyposideremia and alters the pattern of cellular iron accumulation in hemochromatotic mice. *Blood* 2006; 107: 2952-8.
- 153.**Viatte L, Vaulont S. Hepcidin, the iron watcher. *Biochimie* 2009; 1-6.
- 154.**Vokurka M, Krijt J, Sulc K, et al. Hepcidin mRNA levels in mouse liver respond to inhibition of erythropoiesis. *Physiol Res* 2006; 55: 667-74.
- 155.**Wallace DF, Summerville L, Lusby PE, et al. Prohepcidin localizes to the Golgi compartment and secretory pathway in hepatocytes. *J Hepatol* 2006; 43: 720-8.
- 156.**Wareing M, Ferguson CJ, Delannoy M, et al. Altered dietary iron intake is a strong modulator of renal DMT1 expression. *Am J Physiol Renal Physiol* 2003; 285: F1050-F9.
- 157.**Weinberg ED. Iron loading and disease surveillance. *Emerg Infect Dis* 1999; 5:346.
- 158.**Weiss G. Iron metabolism in the anemia of chronic disease. *Biochim Biophys Acta* 2008; 1790(7):682-93.
- 159.**Wessling-Resnick M. Iron imports.III. Transfer of iron from the mucosa into circulation. *Am J Physiol Gastrointest Liver Physiol* 2006; 290: 1-6
- 160.**Wolber FM, Leonard E, Michael S, et al. Roles of spleen and liver in development of the murine hematopoietic system. *Exp Hematol* 2002; 30: 1010-9.
- 161.**Wolff NA, Liu W, Fenton RA, et al. Ferroportin 1 is expressed basolaterally in rat kidney proximal tubule cells and iron excess increases its membrane trafficking. *J Cell Mol Med* 2010. *En prensa*.
- 162.**Yamaji S, Sharp P, Ramesh B, et al. Inhibition of iron transport across human intestinal cells by hepcidin. *Blood* 2004; 104: 78-80.
- 163.**Yanai N, Satoh T, Obinata M. Endothelial cells create a hematopoietic inductive microenvironment preferential to erythropoiesis in the mouse spleen. *Cell Struct and Funct* 1991; 16: 87-93.
- 164.**Yang F, Liu X, Quinones M, et al. Regulation of Reticuloendothelial Iron Transporter MTP1 (Slc11a3) by Inflammation. *J Biol Chem* 2002b; 277 (2): 39786–91.
- 165.**Yang F, Wang X, Haile DJ, et al. Iron increases expression of iron-export protein MTP1 in lung cells. *Am J Physiol Lung Cell Mol Physiol* 2002a; 283, 932–9.
- 166.**Yokoyama T, Etoh T, Kitagawa H, et al. Migration of erythroblastic islands toward the sinusoid as erythroid maturation proceeds in rat bone marrow. *J Med Sci* 2003; 65(4): 449-52.

- 167.**Zhang A, Xiong S, Tsukamoto H, et al. Localization of iron metabolism-related mRNAs in rat liver indicate that HFE is expressed predominantly in hepatocytes. *Blood* 2004; 103: 1509-14.
- 168.**Zhang D, Meyron-Holtz E, Rouault TA. Renal iron metabolism: transferrin iron delivery and the role of iron regulatory proteins. *J Am Soc Nephrol* 2007; 18: 401-6.
- 169.**Zhang D, Hughes RM, Olliviere-Wilson H, et al. A ferroportin transcript that lacks an iron-responsive element enables duodenal and erythroid precursor cells to evade translational repression. *Cell metabolism* 2009; 9: 461-73.