

Grupo BACH Publicaciones en revistas y libros con ISBN Patentes

7 Junio, 2016

Publicaciones en revistas científicas con revisores no incluidas en el ISI -Thompson

- Jordana, R., García-Mina Freire, JM^a., Hernandez-Minguillón, M.A., Coello de Portugal, D., Ariño, A.H. (1994). Effects of an Organic Soil Amendment on the Parasitism of Meloidogyne sp. on Tobacco in Spain. Afro-Asian Journal of Nematology, 4 (1): 88-95.
- Iglesias, J., García-Mina, JM^a., Hernandez, M., Rodriguez Rodriguez, R., Jordana, R. (1999). Evaluation of the organic product “Coactyl” on yield, plant growth and nematode communities in banana plant in the canary Islands. International Journal of Nematology, 9., 34-42.
- Juan J. Tuset, I. Lapeña, J. M. García-Mina. (2003). Efecto fungitóxico del ácido fosforoso en naranjo dulce a la infección con zoosporas de Phytophthora citrophthora. Plagas (Boletín de sanidad vegetal. Plagas) 29, 413-420.

Publicaciones en revistas científicas con revisores incluidas en el ISI –Thompson

Años 1997-2003

- Zamarreño, A., Cantera, R. G., and García-Mina F. J. M^a., (1997). Extraction and Determination of Glycinebetaine in Liquid Fertilizers. Journal of Agricultural and Food Chemistry. 45, 774-776.
- Goicoechea, N., Aguirreolea, I., Cenoz, S., García-Mina, JM^a. (2000). Verticillium Dahliae modifies the concentration of proline, soluble

sugars, starch, soluble protein and abscisic acid in pepper plants. European Journal of Plant Pathology, 106., 19-25.

- Goicoechea, N., Aguirreolea, I., Cenoz, S., García-Mina, JM^a. (2001). Gas Exchange and Flowering in Verticillium-wilted Pepper Plants. Journal of Phytopathology 149, 281-286.
- G. Cantera, R., Zamarreño, A.M. and García-Mina, JM. (2002). Characterization of commercial iron chelates and their behavior in an alkaline and calcareous soil.. Journal of Agricultural and Food Chemistry, 50:7609-7615.
- García-Mina, JM., Cantera, R.G., Zamarreño, A.M. (2003). Interaction of different iron chelates with an alkaline and calcareous soil: A complementary methodology to evaluate the performance of iron compounds in the correction of iron chlorosis. Journal of Plant Nutrition, 26:1943-1954.
- Zamarreño, A., García-Mina, JM., G-Cantera, R. (2003). A New Methodology for Studying the Performance of Products against Ruminant Acidosis Journal of Science of Food and Agriculture. 83, 1607-1612.

Año 2004

- García-Mina, JM., Antolín, M.C., Sanchez-Diaz, M. (2004). Metal-humic complexes and plant micronutrient uptake: a study based on different plant species cultivated in diverse soil types. Plant and Soil. 258, 57-68.
- Goicoechea, N., J. Aguirreolea, JM^a. Garcia-Mina. (2004). Alleviation of verticillium wilt in pepper (*Capcium annuum L.*) by using the organic amendment COA H of natural origin. Scientia Horticulturae. 101, 23-37.
- Bienfait, F., Garcia-Mina, JM^a., Zamarreño, A M^a. (2004). Distribution and secondary effects of EDDHA in some vegetable species. Soil Science and Plant Nutrition, 50, 1103-110.

- Esparza, I., Salinas, I., Caballero, I., Santamaría, C., Calvo, I., Garcia-Mina, JM^a., Fernández, JM^a. (2004). Evolution of metal and polyphenol content over a 1-year period of vinification: sample fractionation and correlation between metals and anthocyanins. *Analitica Chimica Acta.*, 524, 215-224.

Año 2005

- San-Francisco, S., Houdusse, F., Zamarreño, AM^a., Garnica, M., Casanova, E., García-Mina, JM^a. (2005). Effects of IAA and IAA precursors on the development, mineral nutrition, IAA content and free polyamine content of pepper plants cultivated in hydroponic conditions. *Scientia Horticulturae*, 106, 38-52.
- Esparza, I., Salinas, I., Santamaría, C., Garcia-Mina, JM^a., Fernández, JM^a. (2005). Electrochemical and theoretical complexation studies for Zn and Cu with individual polyphenols. *Analitica Chimica Acta* 543, 267-274.
- Houdusse, F , Zamarreño Angel M , Garnica Maria, García-Mina, JM^a. (2005).The importance of nitrate in ameliorating the effects of ammonium and urea nutrition on plant development: the relationships with free polyamines and proline plant contents. *Functional Plant Biology.*, 32, 1057-1067.
- Iñaki Guardado, Oscar Urrutia, Jose M^a Garcia-Mina. (2005). A methodological approach to the study of the formation and physico-chemical properties of phosphate-metal-humic complexes in solution. *Journal of Agricultural and Food Chemistry*, 53, 8673-8678.

Año 2006

- Marta Fuentes Ramírez, Gustavo González-Gaitano, José M^a García-Mina (2006).The usefulness of UV-visible and fluorescence spectroscopies to study the chemical nature of humic substances from soils and composts. *Organic Geochemistry*. 37, 1949-1959.

- Jose M^a Garcia-Mina. (2006). Stability, solubility and maximum metal binding capacity in metal-humic complexes involving humic substances extracted from peat and organic compost. *Organic Geochemistry*. 37, 1960-1972.

Año 2007

- Roberto Baigorri,, José María García-Mina, Gustavo González-Gaitano. (2007). Supramolecular Association Induced by Fe(III) in Low Molecular Weight Sodium Polyacrylate. *Colloids and Surfaces A*, 292, 212-216.
- Roberto Baigorri, Marta Fuentes, Gustavo González-Gaitano, Jose M^a García-Mina, (2007). Analysis of molecular aggregation in humic substances in solution. *Colloids and Surfaces A*, 302, 301-306.
- Iñaki Guardado, Oscar Urrutia, Jose M^a Garcia-Mina. (2007). Size distribution, complexing capacity and stability of phosphate-metal-humic complexes. *Journal of Agricultural and Food Chemistry*, 55, 408-413.
- Baigorri R, Fuentes M, Gonzalez-Gaitano G, García-Mina JM. (2007) Simultaneous presence of diverse molecular patterns in humic substances in solution. *Journal of Physical Chemistry B*. 111(35):10577-82.
- Villen M, Lucena JJ, Cartagena MC, Bravo R, Garcia-Mina J, de la Hinojosa MI. (2007). Comparison of two analytical methods for the evaluation of the complexed metal in fertilizers and the complexing capacity of complexing agents. *Journal of Agricultural and Food Chemistry*, 55(14):5746-53.
- Esparza I, Santamaria C, Garcia-Mina JM, Fernandez JM. (2007). Complexing capacity profiles of naturally occurring ligands in Tempranillo wines for Cu and Zn: an electroanalytical approach for cupric case. *Analitica Chimica Acta*, 599(1):67-75.
- Belastegui-Macadam XM, Estavillo JM, Garcia-Mina JM, Gonzalez A, Bastias E, Gonzalez-Murua C. (2007). Clover and ryegrass are tolerant species to ammonium nutrition. *Journal of Plant Physiology*, 164(12):1583-1594.

- García-Mina JM. (2007). Advantages and limitations of the use of an extended polyelectrolyte model to describe the proton-binding process in macromolecular systems. Application to a poly(acrylic acid) and a humic acid. *Journal of Physical Chemistry B*. 111(17):4488-94.
- Fabrice Houdusse, María Garnica, Jose M. García-Mina. (2007). Nitrogen fertilizer source effects on the growth and mineral nutrition of pepper (*Capsicum annum* L.) and wheat (*Triticum aestivum* L.). *Journal of Science of Food and Agriculture*, 87, 2099-2115.
- Fuentes M, Baigorri R, Gonzalez-Gaitano G, Garcia-Mina JM. (2007). The complementary use of ¹H NMR, ¹³C NMR, FTIR and size exclusion chromatography to investigate the principal structural changes associated with composting of organic materials with diverse origin. *Organic Geochemistry*, 38, 2012-2023.
- Erro J, Urrutia O, San Francisco S, Garcia-Mina JM. (2007). Development and agronomical validation of new fertilizer compositions of high bioavailability and reduced potential nutrient losses. *Journal of Agricultural and Food Chemistry*, 55(19):7831-7839.
- Lopez V, Akerreta S, Casanova E, Garcia-Mina JM, Cavero RY, Calvo MI. (2007). In Vitro Antioxidant and Anti-rhizopus Activities of Lamiaceae Herbal Extracts. *Plant Foods and Human Nutrition*, 62(4):151-155.

Año 2008

- Baigorri, R., Garcia-Mina, JM., Aroca, RF., Alvarez-Puebla, R. (2008). Optical enhancing properties of anisotropic gold nanoplates prepared with different fractions of a natural humic substance. *Chemistry of Materials*, 20, 1516-1521.
- Iñaki Guardado, Oscar Urrutia, Jose M^a Garcia-Mina. (2008). Some structural and electronic features of the interaction of phosphate with metal-humic complexes. *Journal of Agricultural and Food Chemistry*, 56, 1035-1042.

- Domínguez, MJ., SanMartin, C., Font, M., Palop, JA., San Francisco, S., Urrutia, O., Houdusse, F., Garcia-Mina, JM. 2008. Design, synthesis, and biological evaluation of phosphoramidate derivatives as urease inhibitors. *Journal of Agricultural and Food Chemistry*, 56, 3721-3731.
- Baigorri, R; Zamarreno, AM; Fuentes, M, Gonzalez-Gaitano, G., Garcia-Mina, JM., Almendros, G., Gonzalez-Vila, FJ. 2008. Multivariate statistical analysis of mass spectra as a tool for the classification of the main humic substances according to their structural and conformational features. *Journal of Agricultural and Food Chemistry*, 56, 5480-5487.
- Casanova, E., Garcia-Mina, JM^a, Calvo, M., 2008. Antioxidant and Antifungal Activity of *Verbena officinalis* L. Leaves. *Plant Foods and Human Nutrition*, 63(3):93-97.
- Houdusse Fabrice., Garnica Maria, Zamarreño, Angel Maria., Yvin, Jean-Claude., Garcia-Mina JM. 2008. Possible mechanism of the nitrate action regulating free-putrescine accumulation in ammonium fed plants. *Plant Science* 175, 731-739.
- Font, M., Domínguez, MJ., SanMartin, C., Palop, JA., San Francisco, S., Urrutia, O., Houdusse, F., Garcia-Mina, JM. 2008. Structural characteristics of phosphoramidate derivatives as uréase inhibitors. Requirements for activity. *Journal of Agricultural and Food Chemistry*., 56(18):8451-60.
- Lopez, Victor., Akerreta, Silvia., Casanova Esther., Garcia-Mina, JM^a., Cavero, Titã, Calvo, Maria Isabel., 2008. Screening of spanish medicinal plants for antioxidant and antifungal activities. *Pharmaceutical Biology*., 46, 602-609.

Año 2009

- Roberto Baigorri, Marta Fuentes, Gustavo Gonzalez-Gaitano, Jose M. Garcia-Mina, Gonzalo Almendros and Francisco J. Gonzalez-Vila. 2009. Complementary Multianalytical Approach To Study the Distinctive Structural Features of the Main Humic Fractions in Solution:

Gray Humic Acid, Brown Humic Acid, and Fulvic Acid. *Journal of Agricultural and Food Chemistry*, 57 (8), 3266–3272.

- Garnica M., Houdusse F., Yvin, JC., Garcia-Mina JM. 2009. Nitrate modifies urea root uptake and assimilation in wheat seedlings. *Journal of Science of Food and Agriculture*, 89, 55-62.
- Garnica M., Houdusse F., Yvin, JC., Garcia-Mina JM. 2009. Nitrate supply induces changes in polyamine content and ethylene production in wheat plants grown with ammonium. *Journal of Plant Physiology*, 163, 363-374.
- Aguirre Elena, Leménager Diane, Bacaicoa Eva, Fuentes Marta , Baigorri Roberto, Zamarreño, Angel M^a , and García-Mina José M^a. 2009. The root application of a purified leonardite humic acid modifies the transcriptional regulation of the main physiological root responses to Fe deficiency in Fe sufficient cucumber plants. *Plant Physiology and Biochemistry*, 47, 215-223.
- Camilla Giovannini, Jose M. Garcia-Mina, Claudio Ciavatta and Claudio Marzadori. 2009. Ureic Nitrogen Transformation in Multi-Layer Soil Columns Treated with Urease and Nitrification Inhibitors. *Journal of Agricultural and Food Chemistry*, 57 (11), 4883–4887.
- Javier Erro, Angel M. Zamarreño, Jean-Claude Yvin and Jose M. Garcia-Mina. 2009. Determination of Organic Acids in Tissues and Exudates of Maize, Lupin, and Chickpea by High-Performance Liquid Chromatography–Tandem Mass Spectrometry. *Journal of Agricultural and Food Chemistry*, 57 (10), 4004–4010.
- Javier Erro, Angel M. Zamarreño, Jose M. Garcia-Mina, Jean-Claude Yvin 2009. Comparison of different phosphorus-fertiliser matrices to induce the recovery of phosphorus-deficient maize plants. *Journal of Science of Food and Agriculture*, 89, 927-934.
- Eva Bacaicoa, Jose M^a Garcia-Mina. 2009. Iron-Efficiency in Different Cucumber Cultivars: The Importance of the Optimizing the Use of Foliar

Iron. Journal of American Society for Horticultural. Science 134, 405-416.

- Eva Bacaicoa, Angel María Zamarreño, Diane Leménager, Roberto Baigorri, Jose M^a Garcia-Mina. 2009. Relationship between the Hormonal Balance and the Regulation of Iron Deficiency Stress Responses in Cucumber. Journal of American Society for Horticultural Science, 134, 589-601.

Año 2010

- Maria Garnica, Fabrice Houdusse, Angel M Zamarreño, Jose M Garcia-Mina. 2010. Nitrate modifies the assimilation pattern of ammonium and urea in wheat seedlings. Journal of Science of Food and Agriculture, 90, 357-369.
- Maria Garnica, Fabrice Houdusse, Angel M. Zamarreño, Jose M. Garcia-Mina. 2010. The signal effect of nitrate supply enhances active forms of cytokinins and indole acetic content and reduces abscisic acid in wheat plants grown with ammonium. Journal of Plant Physiology 167: 1264–1272
- Roberto Baigorri, Marta Fuentes, Francisco J. González-Vila, José M. García-Mina. 2010. Singular structural features on humic fractions in solution: Statistical analysis of diverse analytical techniques spectra. Soil Science Society of America Journal, 74, 74-86.
- Verónica Mora, Eva Bacaicoa, Angel-Maria Zamarreño, Elena Aguirre, Maria Garnica, Marta Fuentes, José-Maria García-Mina. 2010. Action of humic acid on promotion of cucumber shoot growth involves nitrate-related changes associated with the root to shoot distribution of cytokinins, polyamines and mineral nutrients. Journal of Plant Physiology 167,633-642.
- Fuentes M, Baigorri R, González-Vila FJ, González-Gaitano G, García-Mina JM. 2010. Pyrolysis-gas chromatography/mass spectrometry identification of distinctive structures providing humic character to organic materials. J Environ Qual. 39,1486-1497.

- Vetvicka V, Baigorri, R, Zamarreño, AM, Garcia-Mina JM; Yvin. 2010. Glucan and humic acid – synergistic effects on immune system. *Journal of Medicinal Food*, 13, 863-869.

Año 2011

- Ekhiñe Artola, Saioa Cruchaga, Idoia Ariz, Jose Fernando Moran, María Garnica, Fabrice Houdusse, José María Garcia Mina, Ignacio Irigoyen, Berta Lasa, Pedro María Aparicio-Tejo 2011. Effect of N-(n-butyl) thiophosphoric triamide on urea metabolism and the assimilation of ammonium into *Triticum aestivum* L. *Plant Growth Regulation*, 63, 73-79.
- Bacaicoa E, Mora V, Zamarreño AM, Fuentes M, Casanova E, García-Mina JM. 2011. Auxin: a major player in the shoot-to-root regulation of root Fe-stress physiological responses to Fe deficiency in cucumber plants. *Plant Physiol Biochem.* 49, 545-556.
- Casado R, Landa A, Calvo J, García-Mina JM, Marston A, Hostettmann K, Calvo MI. 2011. Anti-inflammatory, antioxidant and antifungal activity of *Chuquiraga spinosa*. *Pharm Biol.* 49,620-6.
- Erro J, Baigorri R, Yvin JC, Garcia-Mina JM. 2011. ³¹P NMR characterization and efficiency of new types of water-insoluble phosphate fertilizers to supply plant-available phosphorus in diverse soil types. *J Agric Food Chem.* 59,1900-1908.
- Mellisho CD, González-Barrio R, Ferreres F, Ortuño MF, Conejero W, Torrecillas A, García-Mina JM, Medina S, Gil-Izquierdo A. 2011. Iron deficiency enhances bioactive phenolics in lemon juice. *J Sci Food Agric.* 91,2132-9.
- Quiñones A Martínez-Alcantara B; San-Francisco S; et al. 2011. Methyl Xanthine as a potencial alternative to gibberellic acid in enhancing fruit set and quality in Clementine citrus trees in Spain. *Experimental Agriculture*, 47, 159-171.
- Renella G; Landi L; Garcia Mina JM.; et al. 2011. Microbial and hydrolase activity after release of indoleacetic acid and ethylene-

polyamine precursors by a model root surface. *Applied Soil Ecology*, 47,106-110.

- San Francisco S, Urrutia O, Martin V, Peristeropoulos A, Garcia-Mina JM. 2011. Efficiency of urease and nitrification inhibitors in reducing ammonia volatilization from diverse nitrogen fertilizers applied to different soil types and wheat straw mulching. *J Sci Food Agric.* 91, 1569-1575.
- Baslam M, Pascual I, Sánchez-Díaz M, Erro J, García-Mina JM, Goicoechea N. 2011. Improvement of Nutritional Quality of Greenhouse-Grown Lettuce by Arbuscular Mycorrhizal Fungi Is Conditioned by the Source of Phosphorus Nutrition. *J Agric Food Chem.* 59, 11129-11140.

Año 2012

- Mora V, Baigorri R, Bacaicoa E, Zamarreño AM, García-Mina. JM. 2012. The humic acid-induced changes in the root concentration of nitric oxide, IAA and ethylene do not explain the changes in root architecture caused by humic acid in cucumber. *Environ. Exp. Bot.*,76, 24-32.
- Azcona I., Pascual I., Agirreolea, J., Fuentes M., Garcia-Mina, JM, Sanchez-Diaz, M. 2012. Growth and development of pepper are affected by humic substances derived from composted sludge. *J. Plant Nutr. Soil Sci.*, 174, 916–924.
- C. Giovannini, J. M. Garcia-Mina, C. Ciavatta, C. Marzadori. 2013. Effect of organic-complexed superphosphates on microbial biomass and microbial activity of soil. *Biol Fertil Soils.*, 49:395–401.
- Marta Fuentes, Maria F Ortuno, Francisco Perez-Sarmiento, Eva Bacaicoa, Roberto Baigorri, Wenceslao Conejero, Arturo Torrecillas, JoseM Garcia-Mina. 2012 . Efficiency of a new strategy involving a new class of natural hetero-ligand iron(III) chelates(Fe(III)-NHL) to

improve fruit tree growth in alkaline/calcareous soils. *J Sci Food Agr.*, **92**: 3065–3071.

- E Aymerich, JM Garcia-Mina., M Esteban-Gutierrez., JL Garcia-Heras. 2012. Dry Anaerobic Digestion of Agro-Food Waste in a Batch System. *Journal of Residuals Science & Technology*, Vol. 9, No. 1—(January 2012) 1544-8053.
- Mustapha Arkoun, Xavier Sarda, Laëtitia Jannin, Philippe Laîné, Philippe Etienne, José-Maria Garcia-Mina, Jean-Claude Yvin, Alain Ourry. 2012. Hydroponics versus field lysimeter studies of urea, ammonium and nitrate uptake by oilseed rape (*Brassica napus* L.). *J Exp Bot.*, 63: 5245–5258.
- Javier Erro, Oscar Urrutia, Roberto Baigorri, Pedro Aparicio-Tejo, Ignacio Irigoyen, Francesco Storino, Marcos Mandado, Jean Claude Yvin, Jose M. Garcia-Mina. 2012. Organic Complexed Superphosphates (CSP): Physicochemical Characterization and Agronomical Properties. *J Agr. Food. Chem.*, 60, 2008–2017.
- Laëtitia Jannin & Mustapha Arkoun, Alain Ourry, Philippe Laîné, Didier Goux, Maria Garnica, Marta Fuentes, Sara San Francisco, Roberto Baigorri, Florence Cruz, Fabrice Houdusse, José-Maria Garcia-Mina, Jean-Claude Yvin, Philippe Etienne. 2012. Microarray analysis of humic acid effects on *Brassica napus* growth: Involvement of N, C and S metabolisms. *Plant and Soil* 359: 297–319.

Año 2013

- Mustapha Arkoun, Laëtitia Jannin, Philippe Laîné, Philippe Etienne, Céline Masclaux-Daubresse, Sylvie Citerne, Maria Garnica, José-Maria Garcia-Mina, Jean-Claude Yvin, Alain Ourry. 2013. A physiological and molecular study of the effects of nickel deficiency and phenylphosphorodiamidate (PPD) application on urea metabolism in oilseed rape (*Brassica napus* L.). *Plant and Soil* 362 : 79-92.

- Ricardo Aroca, Juan Manuel Ruiz-Lozano, Ángel María Zamarreño, José Antonio Paz, José María García-Mina, María José Pozo, Juan Antonio López-Ráez. 2013. Arbuscular mycorrhizal symbiosis influences strigolactone production under salinity and alleviates salt stress in lettuce plants. *J Plant Physiol.*, 170 (2013) 47– 55.
- Laetitia Jannin, Mustapha Arkoun, Philippe Etienne, Philippe Lane, Didier Goux, Maria Garnica, Marta Fuentes, Sara San Francisco, Roberto Baigorri, Florence Cruz, Fabrice Houdusse, Jose Maria Garcia-Mina, Jean-Claude Yvin, Alain Ourry. 2013. Brassica napus Growth is Promoted by *Ascophyllum nodosum* (L.) Le Jol. Seaweed Extract: Microarray Analysis and Physiological Characterization of N, C, and S Metabolisms. *J Plant Growth Regul.*, 32:31–52.
- Oscar Urrutia, Iñaki Guardado, Javier Erro, Marcos Mandado, Jose M Garcia-Mina. 2013. Theoretical chemical Characterization of phospho-metal–humic complexes and relationships with their effects on both phosphorus soil fixation and phosphorus availability for plants. *J Sci Food Agr.*, 93: 293–303.
- Marta Fuentes, Maite Olaetxea, Roberto Baigorri, Angel M. Zamarreño, Philippe Etienne, Philippe Lafné, Alain Ourry, Jean-Claude Yvin, Jose M. Garcia-Mina. 2013. Main binding sites involved in Fe (III) and Cu(II) complexation in humic-based structures. *Journal of Geochemical Exploration* 129: 14-17.
- José M. García-Mina, Eva Bacaicoa, Marta Fuentes, Esther Casanova. 2013. Fine regulation of leaf iron use efficiency and iron root uptake under limited iron bioavailability. *Plant Sci.*, 198, 39–45.
- Vaclav Vetvicka, Aruna Vashishta, Marta Fuentes, Roberto Baigorri, Jose M. Garcia-Mina, Jean-Claude Yvin. 2013. The relative abundance of oxygen-alkyl related groups in aliphatic domains is involved in the main pharmacological-pleiotropic effects of humic acids. *Journal of Medicinal Food*, 16: 625-632.
- Damien Sudre, Elain Gutierrez-Carbonell, Giuseppe Lattanzio, Rubén Rellán-Álvarez, Frédéric Gaymard, Oliver Fiehn, Ana Álvarez-

Fernández, Angel M Zamarreño, Eva Bacaicoa, Daniela Duy, Jose-María García-Mina, Javier Abadía, Katrin Philippar, Ana-Flor López-Millán, Jean-Francois Briat. 2013. Iron-dependent reset of the flower transcriptome, proteome, metabolome and hormonal content in an Arabidopsis ferritin mutant. *Journal of Experimental Botany* 64: 2665-2668.

- Ariz I., Asensio, A., Zamarreño, AM., Garcia-Mina, JM., Aparicio-Tejo, P., Moran, J. 2013. Changes in the C/N balance caused by increasing external ammonium concentrations are driven by carbon and energy availabilities during ammonium nutrition in pea plants: the key roles of asparagine synthetase and anaplerotic enzymes. *Physiologia Plantarum.*, 148: 522-537.
- Baigorri R., Urrutia, O., Erro, J., Mandado, M., Perez-Juste, I., Garcia-Mina, JM 2013. Structural Characterization of Anion–Calcium–Humate Complexes in Phosphate-based Fertilizers. *ChemSusChem.*, 6: 1245-1251.
- Ligan Kong., Fahong Wang., Luis Lopez-bellido., Jose Maria Garcia-Mina., Jisheng Si. 2013 Agronomic improvements through the genetic and physiological regulation of nitrogen uptake in wheat (*Triticum aestivum* L.). *Plant Biotechnology Reports* 7: 129-139.

Año 2014

- Billard V, Maillard A, Garnica M, Cruz F, Garcia-Mina JM, Yvin JC, Ourry A, Etienne P. (2014). Zn deficiency in *Brassica napus* induces Mo and Mn accumulation associated with chloroplast proteins variation without Zn remobilization. *Plant Physiol Biochem.* 86: 66-71.
- Billard V, Ourry A, Maillard A, Garnica M, Coquet L, Jouenne T, Cruz F, Garcia-Mina JM, Yvin JC, Etienne P. (2014). Copper-deficiency in *Brassica napus* induces copper remobilization, molybdenum accumulation and modification of the expression of chloroplastic proteins. *PLoSOne*.15;9(10):e109889.doi: 10.1371/journal.pone.0109889. eCollection 2014.

- Pro D, Huguet S, Arkoun M, Nugier-Chauvin C, Garcia-Mina JM, Ourry A, Wolbert D, Yvin JC, Ferrières V. (2014). From algal polysaccharides to cyclodextrins to stabilize a urease inhibitor. *Carbohydr Polym.* 112:145-51.
- Kołodziej A, Fuentes M, Baigorri R, Lorenc-Grabowska E, Garcia-Mina JM, Burg P, Gryglewicz G. (2014). Mechanism of adsorption of different humic acid fractions on mesoporous activated carbons with basic surface characteristics. *Adsorption* 20: 667–675.
- Calvo-Polanco M, Molina S, Zamarreño AM, Garcia-Mina JM, Aroca R (2014). The symbiosis with the arbuscular mycorrhizal fungus *Rhizophagus irregularis* drives root water transport in flooded tomato plants. *Plant Cell Physiology.* 55:1017-29
- Porcel, R., Zamarreño, AM., Garcia-Mina, JM., Aroca, R. (2014) Involvement of plant endogenous ABA in *Bacillus megaterium* PGPR activity in tomato plants. *BMC Plant Biol.*, 14:36.
- Urrutia O, Erro J, Guardado I, San Francisco S, Mandado M, Baigorri R, Yvin JC, Garcia-Mina JM (2014). Physico-chemical characterization of humic-metal-phosphate complexes and their potential application to the manufacture of new types of phosphate-based fertilizers. *J Plant Nutr Soil Sci.*, DOI: 10.1002/jpln.201200651.
- Sánchez-Romera B, Ruiz-Lozano JM, Li G, Luu D-T, Martínez-Ballesta MC, Carvajal M, Zamarreño AM, García-Mina JM, Maurel C, Aroca R (2014). Enhancement of root hydraulic conductivity by methyl jasmonate and the role of calcium and abscisic acid in this process. *Plant Cell Environment.*, 37: 995–1008.
- Piñero, MC., Houdusse, F., Garcia-Mina, JM., Garnica, M., Del Amor F. (2014). Regulation of hormonal responses of sweet pepper as affected by salinity and elevated CO₂ concentration. *Physiol Plant.*, 151(4):375-89.
- Mora, V., Bacaicoa, E., Baigorri, R., Zamarreño, AM., Garcia-Mina, JM (2014) NO and IAA Key regulators in the shoot growth promoting action of humic acid in *Cucumis sativus* L. *J Plant Growth Reg.*, 33:430–439.

- Billard V, Etienne P, Jannin L, Garnica M., Cruz F, Garcia-Mina JM, Yvin JC, Ourry A (2014). Two biostimulants derived from algae or humic acid induce similar responses in the mineral content and gene expression of winter oilseed rape (*Brassica napus* L.). *J Plant Growth Reg.*, 33:305–316.
 - Vetvicka V, Garcia-Mina JM, Proctor M and Yvin J-C. (2014). Synergistic Effects of Humic Acid and Glucan in Hepatoprotection against Experimental Liver Injury. *Austin Journal of Clinical Pathology.*, 1:4
- 2015
- Stamatiadis S, Evangelou L, Yvin JC, Tsadilas C, Garcia-Mina JM, Cruz F (2015) Responses of winter wheat to *Ascophyllum nodosum* (L.) Le Jol. extract application under the effect of N fertilization and water supply. *Journal of Applied Phycology.* 27: 589-600.
 - Billard V, Maillard A, Garnica M, Cruz F, Garcia-Mina JM, Yvin JC, Ourry A, Etienne P (2015). Zn deficiency in *Brassica napus* induces Mo and Mn accumulation associated with chloroplast proteins variation without Zn remobilization. *Plant Physiol Biochem.* 86: 66-71.
 - Vetvicka V, Garcia-Mina JM, Proctor M, Yvin JC (2015). Humic acid and glucan: protection against liver injury induced by carbon tetrachloride. *J Med Food.* 18: 572-7.
 - Jauregui I, Aroca R, Garnica M, Zamarreño ÁM, García-Mina JM, Serret MD, Parry M, Irigoyen JJ, Aranjuelo I. (2015) Nitrogen assimilation and transpiration: key processes conditioning responsiveness of wheat to elevated [CO₂] and temperature. *Physiol Plant.* 155: 338-354.
 - Maillard A, Diquélou S, Billard V, Lâiné P, Garnica M, Prudent M, Garcia-Mina JM, Yvin JC, Ourry A. (2015) Leaf mineral nutrient remobilization during leaf senescence and modulation by nutrient deficiency. *Front Plant Sci.* 13;6:317. doi: 10.3389/fpls.2015.00317. eCollection 2015.

- Sánchez-Romera B, Ruiz-Lozano JM, Zamarreño ÁM, García-Mina JM, Aroca R. (2015) Arbuscular mycorrhizal symbiosis and methyl jasmonate avoid the inhibition of root hydraulic conductivity caused by drought. *Mycorrhiza*. In press. doi:10.1007/s00572-015-0650-7
 - Sorin E, Etienne P, Maillard A, Zamarreño AM, Garcia-Mina JM, Arkoun M, Jamois F, Cruz F, Yvin JC, Ourry A. (2015) Effect of sulphur deprivation on osmotic potential components and nitrogen metabolism in oilseed rape leaves: identification of a new early indicator. *J Exp Bot*. 66: 6175-89.
 - Silva-Navas J, Moreno-Risueno MA, Manzano C, Pallero-Baena M, Navarro-Neila S, Téllez-Robledo B, Garcia-Mina JM, Baigorri R, Gallego FJ, Del Pozo JC. (2015). D-Root: a system for cultivating plants with the roots in darkness or under different light conditions. *Plant J*. 84:244-55.
 - Botelho RV, Roberti R, Tessarin P, Garcia-Mina JM, Rombolà AD.(2015) Physiological responses of grapevines to biodynamic management. *Renewable Agriculture and Food Systems*. doi:10.1017/S1742170515000320.
 - Vetvicka V, Garcia-Mina JM, Yvin JC (2015) Prophylactic effects of humic acid-glucan combination against experimental liver injury. *J. Intercol Ethnopharmacol*, 4: 249-255.
 - Olaetxea M, Mora V, Bacaicoa E, Garnica M, Fuentes M, Casanova E, Zamarreño AM, Iriarte JC, Etayo D, Ederra I, Gonzalo R, Baigorri R, García-Mina JM. (2015) Abscisic Acid Regulation of Root Hydraulic Conductivity and Aquaporin Gene Expression Is Crucial to the Plant Shoot Growth Enhancement Caused by Rhizosphere Humic Acids. *Plant Physiology* 169, 2587–2596.
- 2016*
- García AC, Ambrosio de Souza LG, Pereira MG, Castro RN, García-Mina JM, Zonta E, Junior F, Lisboa G, Louro-Berbara RL. (2016). Structure-Property-Function Relationship in Humic Substances to

Explain the Biological Activity in Plants. *Scientific Reports*, 6:20798 | DOI: 10.1038/srep20798

- Garcia-Mina JM, Hadawi I. (2016). Editorial: Organic-Based Foliar Biostimulation and Nutrition in Plants. *Front. Plant Sci.* 6:1131. doi: 10.3389/fpls.2015.01131.
- Carrasco-Gil S, Rios JJ, Álvarez-Fernández A, Abadía A, García-Mina JM, Abadía J. (2016). Effects of individual and combined metal foliar fertilisers on iron- and manganese-deficient *Solanum lycopersicum* plants. *Plant and Soil.*, DOI 10.1007/s11104-015-2759-z.
- Ruiz-Lozano JM, Aroca R, Zamarreño ÁM, Molina S, Andreo-Jiménez B, Porcel R, García-Mina JM, Ruyter-Spira C, López-Ráez JA. (2016) Arbuscular mycorrhizal symbiosis induces strigolactone biosynthesis under drought and improves drought tolerance in lettuce and tomato. *Plant Cell Environ.* 39:441-522.
- Esteban R, Royo B, Urarte E, Zamarreño ÁM, Garcia-Mina JM, Moran JF. (2016). Both Free Indole-3-Acetic Acid and Photosynthetic Performance are Important Players in the Response of *Medicago truncatula* to Urea and Ammonium Nutrition Under Axenic Conditions. *Front Plant Sci.* 2016 Feb 16;7:140. doi: 10.3389/fpls.2016.00140. eCollection 2016.
- Olaetxea M, Mora V, García AC, Santos LA, Baigorri R, Fuentes M, Garnica M, Berbara RL, Zamarreño AM, Garcia-Mina JM. (2016). Root-Shoot Signaling crosstalk involved in the shoot growth promoting action of rhizospheric humic acids. *Plant Signal Behav.* Apr 2;11(4):e1161878. doi: 10.1080/15592324.2016.1161878.
- García AC, Santos LA, de Souza LG, Tavares OC, Zonta E, Gomes ET, García-Mina JM, Berbara RL. (2016). Vermicompost humic acids modulate the accumulation and metabolism of ROS in rice plants. *J Plant Physiol.* 192: 56-63.
- Mohan TC, Castrillo G, Navarro C, Zarco-Fernandez S, Ramireddy E, Mateo C, Zamarreño AM, Paz-Ares J, Muñoz R, Garcia-Mina JM,

Hernandez LE, Schmülling T, Leyva A. (2016). Cytokinin determines thiol-mediated arsenic tolerance and accumulation in *Arabidopsis thaliana*. *Plant Physiol.* 2016 Apr 18. pii: pp.00372.2016.

- Fernández L, Baigorri R, Urrutia O, Erro J, Aparicio-Tejo P. M, Yvin J. C, García-Mina JM. (2016). Improving the short-term efficiency of rock phosphate-based fertilizers in pastures by using edaphic biostimulants. *Chemical and Biological Technologies in Agriculture* 2016 3:5
- Erro J, Urrutia O, Baigorri R, Fuentes M, Zamarreño AM, Garcia-Mina JM. (2016). Incorporation of humic-derived active molecules into compound NPK granulated fertilizers: main technical difficulties and potential solutions. *Chemical and Biological Technologies in Agriculture* 2016 3:18
- Garcia, AC Olaetxea M, Santos LA, Mora V, Baigorri R, Fuentes M, Zamarreño AM, Berbara RL, Garcia-Mina JM. (2016) Involvement of Hormone- and ROS-Signaling Pathways in the Beneficial Action of Humic Substances on Plants Growing under Normal and Stressing Conditions. *BioMed Research International.*, Volume 2016, Article ID 3747501, doi.org/10.1155/2016/3747501
- Galantini JA, Duval M, Martinez JM, Mora V, Baigorri R, García-Mina JM. (2016). Quality and Quantity of Organic Fractions as Affected by Soil Depth in an Argiudoll under Till and No-till Systems. *International Journal of Plant & Soil Science.*, 10 (5) 1-12.

CAPÍTULOS EN LIBROS

Colecciones Internacionales

- García-Mina Freire, JM^a., Sanchez-Díaz, M., Iñiguez, J. (1994). " Comparative study about the capacity of certain organo-metallic complexes consisting of Fe(II) and different humic substances to provide available iron to plants under adverse edaphic conditions En Iron nutrition and Interactions in Plants. Ed. Abadía, J. Kluwer Publishers. Dordrecht. pp 235-240.
- J.M García-Mina Freire, R. Jordana., J. Aguirreolea., M.A. Hernandez. (1995). The effect of a special organic amendment on the development of pepper plants cultivated in a soil infested with *Verticillium dahliae*. En Fertilizers and Environment. Ed. R.Barrueco, A. Kluwer Academic Publishers, Dordrecht. pp 301-304.
- Gustavo González-Gaitano and Josemaría García-Mina. (2004). The Macromolecular or supramolecular nature of humic substances : a dynamic lighth scattering study. En Humic Substances: Nature's Most Versatile Materials. Ghabbour, E.A., Davies, G. Ed., Taylor and Francis, New York. pp 53-60.
- JM García-Mina. (2004). Exploring the molecular character and heterogeneity of humic systems via the study of the ion binding process using an extended polyelectrolyte model. En Humic Substances: Nature's Most Versatile Materials. Ghabbour, E.A., Davies, G. Ed., Taylor and Francis, New York. pp.195-218.
- García-Mina, JM., Fuentes, M., Baigorri, R., Gonzalez-Gaitano, G. (2004). On the chemical nature of humic substances: a dynamic equilibrium of individual macromolecules, small molecules and supramolecules governed by the environmental conditions. En Humic substances and soil and water environment. Eds Martin-Neto, L., Milori, D., Lopes da Silva, W. EMBRAPA Edit. pp. 266-268.

- Fuentes, M., Baigorri, R., Gonzalez-Gaitano, G., García-Mina, JM. (2004). New insights into the macromolecular and supramolecular nature of humic substances: an ultrafiltration-HPSEC study. En Humic substances and soil and water environment. Eds Martin-Neto, L., Milori, D., Lopes da Silva, W. EMBRAPA Edit. pp. 374-376.
- Baigorri, R., Fuentes, M., Gonzalez-Gaitano, G., García-Mina, JM. (2004). The importance of metal bridges in the final molecular configuration and conformation of humic substances in solution. En Humic substances and soil and water environment. Eds Martin-Neto, L., Milori, D., Lopes da Silva, W. EMBRAPA Edit. pp. 404-406.
- Guardado, I., Urrutia, O., García-Mina, JM. (2004). A methodological approach for studying the chemical interaction between phosphorous and humic substances. En Humic substances and soil and water environment. Eds Martin-Neto, L., Milori, D., Lopes da Silva, W. EMBRAPA Edit. pp. 585-587.
- D'Isidoro, I., García-Mina, JM^a. (2004). Synergy among mineral nutrition, phyto-regulation and plant defense mechanisms in citrus protection: a complementary alternative. Proceedings of the International Society of Citriculture: 10th ISC Congress. Ed El-Otmani, M; Ait-Oubahou, A. Volume II. 691-695.
- Bernal, J., Zamarreño, AM^a, Cantera, R.G. García-Mina, JM^a. (2004). Simultaneous soil application of iron chelates and bioregulators: general effects on citrus plants cultivated in an alkaline and calcareous soil. Proceedings of the International Society of Citriculture: 10th ISC Congress. Ed El-Otmani, M; Ait-Oubahou, A. Volume II. 609-613.
- Baigorri, R., Fuentes, M., Gonzalez-Gaitano, G., Garcia-Mina, JM^a. (2006). General structural-molecular patterns associated with the main fractions of humic substances. En Humic Substances-Linking structure to functions. Volumen 45-I Editors Frimmel, F., Abbt-Braun, G. Schriftenreihe Bereich Wasserchemie/Engler-Bunte-Institut der Universität Karlsruhe Edt. pp. 5-8.
- Fuentes, M., Baigorri, R., Gonzalez-Gaitano, G., Garcia-Mina, JM^a. (2006). Structural singularities related to the chemical nature of humic substances. En Humic Substances-Linking structure to functions. Volumen 45-I Editors

Frimmel, F., Abbt-Braun, G. Schriftenreihe Bereich Wasserchemie/Engler-Bunte-Institut der Universität Karlsruhe Edt. pp. 301-304.

- Iñaki Guardado, Oscar Urrutia, Garcia-Mina, JM^a. (2006). Formation and physicochemical characterization of phospho-metal-humic complexes. Influence of the complexed metal. En Humic Substances-Linking structure to functions. Volumen 45-II Editors Frimmel, F., Abbt-Braun, G. Schriftenreihe Bereich Wasserchemie/Engler-Bunte-Institut der Universität Karlsruhe Edt. pp. 797-800.
- JM Garcia-Mina. 2012. Plant Nutrition and Defense Mechanism: Frontier Knowledge. En Advances in Citrus Nutrition. A.K. Srivastava (ed.), Springer. NY.
- Mora, V., Jannin, L., Bacaicoa, E., Arkoun, M., Fuentes, M., Olaetxea, M., Baigorri, R., Garnica, M., San Francisco, S., Zamarreño, AM., Ourry, A., Etienne, P., Láiné, P., Yvin, JC., García-Mina, JM. 2012. Potential direct mechanisms involved in the action of humic substances on plant development. En Function of Natural Organic Matter in Changing Environment. Xu J et al. (eds). Springer- NY.
- Garnica M, Houdusse F, San Francisco S, Zamarreño AM, Urrutia O, Baigorri R, Yvin JC, Garcia-Mina JM^a. 2013. The signal role of nitrate in the correction and improvement of the negative effects of ammonium and / or urea nutrition on plant growth and development. En Nitrate Occurrence, Characteristics and Health Considerations. Brandan S.A. (ed). Nova Science Publishers. USA
- V. Mora, M. Olaetxea, E. Bacaicoa, R. Baigorri, M. Fuentes, A. M. Zamarreño and J. M. Garcia-Mina. 2014. Abiotic Stress Tolerance in Plants: Exploring the Role of Nitric Oxide and Humic Substances. En M. N. Khan et al. (eds.), Nitric Oxide in Plants: Metabolism and Role in Stress Physiology, DOI: 10.1007/978-3-319-06710-0_15, Springer International Publishing Switzerland 2014.

PATENTES NACIONALES E INTERNACIONALES

Patentes Internacionales Concedidas y en Explotación

- García-Mina Freire JM^a., Jordana, R., Hernandez-Minguillon, MA (1994). Organic amendment of natural origin capable of protecting plants from the aggression of pathogens and of stimulating plant growth. (1993) **EP 94500010.7**.
- García-Mina Freire, J.M^a., Cenoz Imaz, S., García Cantera, R., Zamarreño Arregui, A.M^a. (2002). Natural source composition for the control of post-harvest pathologies and method of application. **USA patent US 6,482,455 B1**.
- García-Mina Freire, JM^a., Cenoz, A. (2004). Growth Stimulating composition for plants. **EP 01500090.4**
- Garcia-Mina JM; Baigorri R; Zamarreno AM; et al. 2011. Heteromolecular metal-humic (chelate) complexes. Patent Number: US 07947818. Source: Official Gazette of the United States Patent and Trademark Office Patents Published: MAY 24 2011.
- Garcia-Mina, JM., Zamarreño, AM., Casanova, E., Houdusse, F. 2007 Formulation useful for improving assimilation of mineral nutrients e.g. nitrogen, magnesium and iron and activating the metabolism of the nutrients in plants comprises at least one 2-hydroxy-4-methyl thiobutanoic acid derivative. **EP1813584** (2013).
- Garcia-Mina, JM^a. (2006). Fertilising composition and process for the obtainment thereof. **EP 1 612 200. (2013)**

Patentes Internacionales en trámite

- Urrutia, O., San Francisco, S., Casanova, E., Houdusse, F., Garnica, M. (2005). Nuevas formulaciones con la capacidad de inhibir la actividad ureasa y potencial uso agronómico. **EP 2264386 (2006)**.

- Garcia-Mina, JM^a., Bacaicoa, E., San Francisco, S., Aguirre, E., Lemenager, D., Zamarreño, AM^a. (2006). Formulations comprising indole and/or indole derivatives for increasing the capacity of plants to assimilate nutrients. **EP 1 712 131**.
- Lemenager, D., Bacaicoa, E., Garcia-Mina, JM, Yvin, JC (2007). Utilisation des substances humiques comme activateurs des agents moléculaires spécifiques de l'absorption du fer chez les plantes. **FR 0758196**.
- Garcia-Mina, JM., Bacaicoa, E., Fuentes, M., Zamarreño, AM., Baigorri, R. 2009. New heteromolecular metal chelates comprising humic acid, multitoothed organic molecule and metal, useful as plant growth and nutrition stimulant; and as metabolic and immune system activator in animals and humans. **EP1997793-A2; BR200800372-A**.
- Garcia-Mina, JM., Garnica, M., Houdusse, F., Casanova, E. 2007. New use for 2-hydroxy-4-methylthiobutanoic acid (HMTB). **EP1849360**
- Casanova, E., Garcia-Cantera, G., Garcia-Mina, JM., Yvin JC.2009. Composition, useful to treat physiopathies and diseases caused by post harvest fruit and vegetable pathogens, comprises vegetable essences containing e.g. timol and eugenol; and essences or vegetable extracts containing salicylic acid. **EP2047749-A2**.
- Bacaicoa, E., Lemenager, D., Garcia-Mina, JM., Yvin, JC. 2009. Use of a composition comprising humic substances as gene expression activator encoding the molecular agents specific of iron absorption in plants.**FR2922220-A1; WO2009053625-A1**.
- Garcia-Mina, JM., San Francisco, S., Urrutia, O., Yvin, JC. 2009. Urease inhibitor and nitrification inhibiting composition, useful e.g. for inhibiting conversion of urea into ammonia, comprises urease inhibitor compound of phosphoramidate type associated with Allium essential oil. **FR2925826-A1; WO2009083701-A2**.
- Fuentes, M., Baigorri, R., Bacaicoa, E., Garcia-Mina, JM., Yvin, JC. (2010). New hetero-nuclear lignin-based metal chelates able to correct micronutrient deficiencies in plants. **FR 856977**.

- Erro, J., Baigorri, R., Garcia-Mina, JM., Yvin, JC. 2010 . Nouveaux composés phosphatés et leur utilisation en tant qu'engrais. **FR 1050009**
- Garcia-Mina JM; Baigorri R; Zamarreno AM; et al. 2011. Heteromolecular metal-humic (chelate) complexes. Patent Number: US 07947818. Source: Official Gazette of the United States Patent and Trademark Office Patents Published: MAY 24 2011.
- Fuentes, Marta; Baigorri, Roberto; Bacaicoa, Eva; Garcia-Mina, Jose Maria et al. (2014) Metal complexes; use thereof for the preparation of compositions for agricultural use.US 08652231.
- ERRO GARCES JAVIER; URRUTIA SAGARDIA OSCAR; GARNICA OCHOA MARIA; LEMENAGER DIANE; CASANOVA PORTILLO ESTHER; GARCIA MINA FREIRE JOSE MARIA; YVIN JEAN CLAUDE. **Título:COMPOSITION FERTILISANTE ET BIOSTIMULANTE CONTENANT DES FRUCTO-OLIGOSACCHARIDES, PROCEDE D'APPLICATION ET UTILISATIONS. FR20140053157; WO2015155476 (A1). fecha:9-4- 2014.**
- Garcia-Mina, JM., San Francisco, S., Urrutia, O., Yvin, JC. 2009. Urease inhibitor and nitrification inhibiting composition, useful e.g. for inhibiting conversion of urea into ammonia, comprises urease inhibitor compound of phosphoramidate type associated with Allium essential oil. Patent Number(s): FR2925826-A1; WO2009083701-A2
- Bacaicoa, E., Baigorri, R, Fuentes, M., et al., 2010. New metal complex comprising metal containing trace metallic element, ligand comprising e.g. lignosulfonate, modified lignin, and ligand comprising organic polydentate ligand, useful for treating iron deficiency. FR2936932-A1; WO2010043819-A1
- Alis, Y., Blodin, AF, Erro, J., Garcia-Mina JM ; Jaqot, V., Urrutia, O., Yvin JC, Zabini, A. 2014. Produit Fertilisant a Liberation Retardee, procedees de fabrication et d'epandages.PCT/FR2014/050780.

Patentes Internacionales publicadas y no mantenidas

- García-Mina Freire, J.M^a.,Cenoz Imaz, S., García Cantera, R., Zamarreño Arregui, A.M^a. (2001). Natural source composition for the control of post-harvest pathologies and method of application. **European Patent Application EP 1 106 070.**
- García-Mina, JM. (2002). Nitrogenated fertilizer containing ureic, nitric, ammoniac and organic nitrogen, of gradual solubility and progressive nitrification, and preparation method. **European Patent Application EP 1 070 690.**

Patentes Nacionales en Explotación

- García-Mina Freire, JM^a. (1990). Método de obtención de complejos organometálicos por vía líquida. Patente Nacional nº **P9001813**. Julio. 1990. Pub.- ES 2032699 (1994).
- García-Mina Freire, JM^a. (1990). Método de obtención de complejos organometálicos por vía sólida. Patente Nacional nº **P9002379**. Sept.1990. Pub.- ES 2032702 (1994).
- García-Mina Freire, JM^a. (1992). Complemento cálcico granulado para la alimentación de aves en época de puesta. Patente Nacional nº **P9202458**. Dic.1992.
- García-Mina Freire, JM^a., Jordana, R., Hernandez-Minguillón, M.A. (1993). Enmienda orgánica, de origen natural, con capacidad para proteger a las plantas de la agresión de patógenos y estimuladora del crecimiento vegetal. Patente Nacional nº **P9300163**. Enero.1993.
- García-Mina Freire, J.M^a., Cenoz, S., García Cantera, R., Urdániz, A., Zamarreño, A.M^a., y Lerga, J. Composición capaz de estimular el mecanismo de defensa adquirida de las plantas. Patente : **P9702715** (29 de Diciembre de 1997). N° Publ. **2 134 167 (1999)**.

- García-Mina Freire, J.M^a., García Cantera, R., Cenoz, S. Composición capaz de estimular el desarrollo del color de la piel y pulpa en frutas y hortalizas. Patente : **P9800752** (7 de Abril de 1998). N° Publ. **2137893**. 1999.
- García-Mina Freire, J.M^a., García Cantera, R., Urdániz, A., Zamarreño, A.M^a. Composición capaz de mejorar las condiciones higiénico-sanitarias de las camas de animales domésticos y en explotaciones agropecuarias. Patente : **P9800806** (16 de Abril de 1998).
- García-Mina Freire, J.M^a. Complejo orgánico adecuado para controlar la hidrólisis enzimática de la urea presente en suelos por acción de la enzima ureasa. Patente : **P9801875** (4 de Septiembre de 1998).
- García-Mina Freire, J.M^a., Urdániz Solá, Arturo. Procedimiento para la producción de fertilizantes organo-minerales. Patente : **P9801876** (4 de Septiembre de 1998).
- García-Mina Freire, J.M^a., Cenoz Imaz, S., García Cantera, R., Zamarreño Arregui, A.M^a. Composición de origen natural para controlar la patología post-cosecha de frutas y hortalizas y método de aplicación. Patente : **P9902472** (12- Noviembre-1999).
- García-Mina Freire, JM^a. Fertilizante nitrogenado conteniendo nitrógeno ureico, nítrico, amoniacal y orgánico, de solubilidad gradual y nitrificación progresiva y método de obtención. Patente : **P9901639** (21 de Julio de 1999).
- García-Mina Freire, JM^a. Método de Fabricación de Productos Fosfo-ureicos. Patente : **P200000035** (10 de Enero de 2000).
- García-Mina Freire, JM^a., Cenoz, A. Composición estimulante del crecimiento de las plantas Patente : **P200000968** (13 de Abril de 2000).
- García-Mina, JM., G-Cantera, R., Zamarreño, AM. (2004). Método para aumentar la productividad de las plantas. **P 2 213 480**.
- García-Mina, JM. (2004). Composición extractante de sustancias húmicas y un procedimiento para la obtención de un extracto que contiene sustancias húmicas. **P 2 212 915**.

- García-Mina, JM. (2004). Composición fertilizante controlada por las necesidades y actividad de la planta y procedimiento para su obtención. **P 200401565.**
- Garcia-Mina, JM^a., Bacaicoa, E., San Francisco, S., Aguirre, E., Lemenager, D., Zamarreño, AM^a. (2005). Nuevas formulaciones con la capacidad de incrementar la eficiencia de las plantas para asimilar diferentes nutrientes minerales y en especial el hierro en condiciones normales y en condiciones de deficiencia de hierro potencialmente asimilable. **P200500841.**
- Urrutia, O., San Francisco, S., Casanova, E., Houdusse, F., Garnica, M. (2005). Nuevas formulaciones con la capacidad de inhibir la actividad ureasa y potencial uso agronómico. **P200501360.**
- Garcia-Mina, JM^a., Houdusse, F., Zamarreño, A.M^a., Casanova, E. (2006). Nuevo activador metabólico y nutricional para las plantas. **P200600178.**
- Garcia-Mina, Jose M^a; Casanova, Esther; Houdusse, Fabrice; Garnica, Maria. (2006) Nueva utilización del ácido 2-HIDROXI-4-METILTIOBUTANOICO (HMTB). **P200601056.**
- Garcia-Mina, JM^a., Baigorri, R., Zamarreño, AM^a., Bacaicoa, E. (2007). Complejos (quelatos) metálicos heteromoleculares de naturaleza húmica. **P2000700595 (solicitud)**
- Garcia-Mina, Jose M^a; Casanova, Esther; Garcia-Cantera, Rodrigo, Yvin, Jean Claude. (2007). Composiciones de origen natural para tratar fisiopatías y enfermedades producidas por agentes patógenos de frutas y hortalizas, después de su cosecha, y método para su aplicación. **P 200702638.**

