

Magdalena Sanz Cortés



Obstetrician/ Postdoctoral researcher in fetal medicine.

Birth date: 9th May 1979 | Cell phone: +34629294664 | msanz1@clinic.ub.es | Fetal and Perinatal Medicine Research group. Hospital Clinic. C/ Sabino de Arana, 1 - 08028 Barcelona, Spain.

Academic degrees

- *School of Medicine, Universitat de València. 1997-2003.*
- *PhD in Medicine, Department of Pediatrics, Gynecology and Obstetrics, Universitat de València. 2005- 2009. Thesis: "Diagnosis of central nervous system malformations. Comparison between 2D, 3D ultrasound and other imaging techniques". Cum-Laude.*
- *Postgraduate course on "Foundations of design and statistics" and " Data processing using SPSS", Universitat Autònoma de Barcelona. 2011-2012.*

Professional training/experience

- *Residency/Specialization in Obstetrics and Gynecology. Hospital Clínico Universitario Valencia. 2004- 2008.*
- *Clinical fellowship in maternofetal medicine. Postdoctoral research in maternofetal medicine. MaternoFetal Medicine Research Group, Hospital Clinic, Barcelona-IDIBAPS. 2008-present.*
- *Clinical attending in obstetrics and gynecology, Hospital Clínic Barcelona. 2008-present.*
- *Metabolomics and Microstructure research line coordinator in the MaternoFetal Medicine Research Group, Hospital Clinic, Barcelona. 2011-present.*

Experience in other centers

- *University of Virginia. Observership in digestive surgery. 2003.*
- *University of South Florida. Tampa General Hospital. Observership in the maternofetal medicine and fetal therapy department. 2007.*
- *Yale University. Magnetic Resonance Imaging Research Center. 2011.*

Research interests:

- Fetal brain development. Neurosonography.
- Fetal brain MRI and advanced MRI techniques applied on fetal brain imaging.
- Fetal programming.
- Fetal therapy.
- Neurodevelopment during early infancy.

Languages

- Spanish: Native.
- English: Fluent.
- French: Basic.
- Catalan: Fluent.

Publications

Articles in peer-reviewed scientific journals:

1. **"Feasibility and success rate of a fetal MRI and MR Spectroscopy research protocol at term on a 3.0T scanner"**. Sanz Cortes M, Bargallo N, Arranz A, Simoes R, Figueras F, Gratacos E. Under review *Ultrasound Obstet Gynecol*
2. **"Severity of fetal brain abnormalities in congenital heart disease in relation with the main expected pattern of in utero brain blood supply"**. Masoller N, Sanz Cortes M, Crispi F, Gomez O, Egaña-Ugrinovic G, Bennasar M, Bargallo N, Martinez JM, Gratacos E. Under review *Fet Diagn Ther*.
3. **"In vivo detection of perinatal brain metabolite changes in a rabbit model of Intrauterine Growth Restriction (IUGR)"**. Simoes RV; Muñoz-Moreno E; Carbajo RJ; González-Tendero A; Sanz-Cortés M; Pineda-Lucena A; Gratacós E. Under review *PLOS One*.
4. **"Fetal brain Doppler and biometry at mid-gestation for the early prediction of abnormal brain development at birth in congenital heart disease"**. Masoller N, Sanz-Cortés M, Crispi F, Gómez O, Egaña-Ugrinovic G, Bennasar M, Bargallo N, Martínez JM, Gratacós E. Under review *Ultrasound in Obstet Gynecol*.
5. **"Brain metabolite differences in one year old infants born small at term and its association with neurodevelopmental outcome"**. Simoes RV, Cruz Lemini M, Bargallo N, Gratacos E, Sanz Cortes M. Accepted *Am J Obstet Gynecol*.
6. **"Association of brain metabolism with sulcation and corpus callosum development assessed by MRI in late onset small fetuses"**. Sanz Cortes M, Egaña-Ugrinovic G, Simoes RV, Vazquez L, Bargallo N, Gratacos E. Accepted. *Am J Obstet Gynecol*.
7. **"Proton Magnetic Resonance Spectroscopy assessment of fetal brain metabolism in late onset "small for gestational age" versus "intrauterine growth restriction"**. Sanz Cortes M, Simoes RV, Bargallo N, Masoller N, Figueras F, Gratacos E. *Fetal Diagn Ther*. 2014. DOI 366160.
8. **"Neurosonographic assessment of the corpus callosum as imaging biomarker of abnormal neurodevelopment in late-onset fetal growth restriction"**. Egaña-Ugrinovic G, Savchev S, Bazan-Arcos C, Puerto B, Gratacós E, Sanz-Cortés M. Accepted. *Fetal Diagn Ther*.
9. **"Corpus callosum differences assessed by fetal MRI in late onset intrauterine growth restriction and its association with neurobehavior"**. Egaña-Ugrinovic G, Sanz-

Cortes M, Couve-Perez, Figueras F, Gratacós E. *Prenatal Diagn.* 2014 Apr 7. doi: 10.1002/pd.4381.

10. **"Evidence of second trimester changes in head biometry and brain perfusion in fetuses with congenital heart disease"**. Masoller N, Crispi F, Bennasar M, Sanz Cortes M, Puerto B, Martinez JM, Gratacos E. *In press Ultrasound Obstet Gynecol.*2014

11. **"Meningoangiomas in a second trimester fetus"**. Hakim S, Sanz-Cortes M, Puerto B, Ribalta T, Nadal A. *Pediatr Dev Pathol.*2014 Mar 28.

12. **"Differential vulnerability of gray matter and white matter to intrauterine growth restriction in preterm infants at 12 months corrected age"**. Padilla , Junque C, Figueras F, Sanz-Cortes M, Bargallo N, Arranz A, Donaire A, Figueras J, Gratacos E. *Brain Res.* 2013 Dec 17. doi:10.1016/j.brainres.2013.12.007.

13. **"Brain spectroscopic assessment in term small for gestational age fetuses with and without signs of growth restriction"**. Sanz-Cortes M, Simoes RV, Bargallo N, Masoller N, Figueras F, Gratacos E. *In press Fetal Dian Ther.*

14. **"Evaluation of an optimal gestational age cut-off for the definition of early and late-onset fetal growth restriction"** .Savchev S, Figueras F, Sanz-Cortes M, Cruz-Lemini M, Triunfo S, Botet F, Gratacos E. *Fetal Dian Ther.*2013 Nov 6.

15. **"Added value of umbilical vein flow as a predictor of perinatal outcome in term small-for-gestational-age fetuses"**Parra-Saavedra M, Crovetto F, Triunfo S, Savchev, Parra G, Sanz M, Gratacos E, Figueras F. *Ultrasound Obstet Gynecol* 2013;42:189-195.

16. **"Brain stem and cerebellar differences and its association with neurobehavior in term small for gestational age (SGA) fetuses assessed by fetal MRI"**., Sanz-Cortes M, Egaña-Ugrinovic G, Zupan R, Figueras F, Gratacós E. *Am J Obstet Gynecol.*2013 Dec 4. doi:10.1016/j.ajog.2013.12.008

17. **"Fetal MRI Insular cortical morphometry and its association with neurobehavior in late-onset intrauterine growth restriction"**. Egaña-Ugrinovic G, Sanz-Cortes M, Figueras F, Bargalló N, Gratacós E. *Ultrasound Obstet Gynecol* 2014 Mar 10. doi: 10.1002/uog.13360.

18. **"Metabolomic profile of umbilical cord blood plasma from early and late IUGR neonates with and without signs of brain vasodilation"**. Sanz-Cortes M ,Carbajo R, Crispi F, Figueras F, Pineda A, Gratacós E. *PLOS ONE* 2013 Dec 2;8(12):e80121. doi:10.1371/journal.pone.0080121.

19. **"Differences in cortical development assessed by fetal MRI in late-onset intrauterine growth restriction"**. Egaña-Ugrinovic G, Sanz-Cortes M, Figueras F, Bargalló N, Gratacós E. *Am J Obstet Gynecol.*2013. Apr 9 doi:pui: S0002-9378.

20. **"Automatic Quantitative MRI texture analysis in small-for-gestational-age fetuses discriminates abnormal neonatal neurobehavior"**. Sanz-Cortes M, Ratta G, Bonet_ Carne E, Padilla N, Arranz N, Figueras F Bargalló N, Gratacós E. *PLOS One.* 2013 26;8:e69595.

21. **"Cisterna magna width at 11-13 weeks in the detection of posterior fossa anomalies"**. Garcia-Posada R, Eixarch E, Sanz M ,Puerto B, Figueras F, Borrell A. *Ultrasound Obstet Gynecol.* 2013;41(5):515-20. doi: 10.1002/uog.12302.

22. **"Fetal brain MRI texture analysis identifies different microstructural patterns in adequate and small for gestational age fetuses at term"**. Sanz-Cortés M, Figueras F, Bonet-Carne E, Padilla N, Tenorio V, Bargalló N, Amat-Roldan I, Gratacós E. *Fetal Diagn Ther.*2013; 33(2): 122-9.

23. **"Neurodevelopmental outcome of full-term, small-for-gestational age infants with normal placental function"**. Savchev S, Sanz-Cortes M, Cruz-Martinez R, Arranz A, Botet F, Gratacos E, Figueras F. *Ultrasound Obstet Gynecol.*2013. Jan 10. doi: 10.1002/uog.12391.

24. **“Re: Axonal loss and cognitive deficits in term infants with normal umbilical artery Doppler born small-for-gestational age”**. Sanz-Cortés M. *Ultrasound Obstet Gynecol* 2012; 40 (3): 255.
25. **“Neurobehavioral outcomes in preterm, growth-restricted infants with and without prenatal advanced signs of brain-sparing”**. Figueras F, Cruz-Martinez R, Sanz-Cortés M, Arranz A, Illa M, Botet F, Costas-Moragas C, Gratacos E. *Ultrasound Obstet Gynecol*.2011; 38(3): 288-94.
26. **“Differential effects of intrauterine growth restriction on brain structure and development in preterm infants: a magnetic resonance imaging study”**. Padilla N, Falcón C, Sanz-Cortés M, Figueras F, Bargallo N, Crispí F, Eixarch E, Arranz A, Botet F, Gratacós E. *Brain Res*. 2011; 25:98-108.
27. **“ Cord occlusion followed by laser cord transection in monochorionic monoamniotic discordant twins”**. Valsky DV, Martínez Serrano MJ, Sanz M, Eixarch E, Acosta ER, Martínez JM, Puerto B, Gratacos E. *Ultrasound Obstet Gynecol*.2011. 37:684-688.
28. **“Fractal-dimension analysis detects cerebral changes in preterm infants with and without intrauterine growth restriction”**. Esteban FJ, Padilla N, Sanz-Cortés M, de Miras JR, Bargalló N, Villoslada P, Gratacós E.*Neuroimage*.2010; 53(4): 1225-32.
29. **“Abnormal neurostructure and neurometabolism in small for gestational age term fetuses with normal umbilical artery Doppler”**. Sanz-Cortés M, Figueras F, Bargalló N, Padilla N, Amat-Roldan I, Gratacós E.*Ultrasound Obstet Gynecol*. 2010; 36 (2): 159-65.
30. **“Feticide followed by mifepristone-misoprostol regimen for mid-trimester termination of pregnancy in two cases of complete placenta previa”**. Borrás A, Gomez O, Sanz M, Martínez JM, Puerto B. *Fetal Diagn Ther*. 2010; 28(2): 114-6.
31. **“Prenatal diagnosis of fetal tuberous sclerosis and analysis of its spectroscopic profile”**. Sanz-Cortés M, Martínez JM, Bennasar M, Puerto B, Gratacos E. *Ultrasound Obstet Gynecol*. 2010; 36(4): 522-4.
32. **“Reducing blood loss at myomectomy with use of gelatine-thrombin matrix hemostatic sealant”**. Raga F, Sanz-Cortés M, Bonilla F, Casañ EM, Bonilla-Musoles F. *Fertil Steril*. 2009; 92(1): 356-60.
33. **“High doses of GnRH antagonists are efficient in the management of severe ovarian hyperstimulation syndrome”**. Bonilla-Musoles F, Raga F, Castillo JC, Sanz M, Dolz M, Osborne N. 2009;36:78-81.*Clin Exp Obstet Gynecol*.
34. **“Cotyledonoid dissecting leiomyoma of the uterus”**. Raga F, Sanz-Cortés M, Casañ EM, Burgues O, Bonilla-Musoles F. *Fertil and Steril*. 2009;91: 1269-70.
35. **“Prenatal diagnosis of congenital cystic adenomatoid malformation using three-dimensional inversion rendering: a case report”**. Sanz-Cortés M, Raga F, Bonilla-Musoles F.*J Obstet Gynaecol Res*.2008; 34: 631-4.
36. **“Three dimensional inversion rendering in molar pregnancy”**. Raga F, Bonilla F, Sanz-Cortés M, Bonilla-Musoles F.*Ultrasound Obstet Gynecol*. 2008; 31 (3): 362-3.
37. **“Three dimensional ultrasound diagnosis of ruptured subcapsular liver hematoma caused by HELLP syndrome”**. Raga F, Bonilla F, Sanz-Cortés M, Bonilla-Musoles F.*Ultrasound Obstet Gynecol*.2008; 32(6): 838-9.
38. **“Prenatally detected double trisomy: Klinefelter and Down syndrome”**. Sanz-Cortés M, Raga F, Bonilla-Musoles F.*Prenat Diagn*. 2006; 26(11): 1078-80.
39. **“3D sonographic prenatal diagnosis of a lobar holoprosencephaly associated with cebocephaly. Assessment and diagnosis with multiplanar reconstruction”**. Sanz-Cortés M, Raga F, Bonilla-Musoles F.*Prenat Diagn*.2007; 27 (6): 585-6.
40. **“Prenatal diagnosis of a 11q deletion syndrome associated with unilateral hydronephrosis diagnosed by 3D ultrasound examination”**. Sanz-Cortés M, Raga F, Bonilla-Musoles F. *Prenat Diagn*. 2007; 27(12): 1158-60.

41. **"MRI and multiplanar 3D ultrasound compared in the prenatal assessment of enlarged posterior fossa"**. Sanz-Cortés M, Raga F, Leon JL, Sniderman A, Bonilla-Musoles F. *J Perinat Med*. 2007; 35(5): 422-4.

42. **"No todo es ecografía en el diagnóstico prenatal"**. Sanz-Cortés M. *Revista del SIIC (Sociedad Iberoamericana de información científica*. Buenos Aires, Argentina) Editorial invitada. Crónica de autores. Edición 30-abril 2007. (<http://www.siicsalud.com/dato/crosiic.php/88117>)

43. **"Gestación tubárica bilateral tras FIV en una paciente con factores de bajo riesgo para gestación ectópica"**. Sanz-Cortés M, Raga F, Bonilla-Musoles F. *Revista Iberoamericana de Infertilidad*.2007;24(1):49-53.

Book chapters:

1. Masoller N, Sanz Cortes M, Martínez JM. **"Chapter 24: Cardiopatías congénitas y sistema nervioso central"**. In **"Cardiología Fetal"**. Galindo, Martínez, Gratacos. Ed Marban. Madrid, Spain. (2014):488-498.
2. Sanz-Cortés M, Gómez O, Puerto B., **"Micrognathia and retrognathia"**; Sanz-Cortés M, Fernández S, Puerto B. **"Fetal thyroid masses and fetal goiter"**; Puerto B, Eixarch E, Sanz-Cortés M. **"Neck teratoma"** *Obstetric Imaging* por Copel J. Elsevier, Philadelphia, EEUU. (2012)
3. Puerto B, Eixarch E, Sanz-Cortés M., **"Exploración de la fosa posterior del encéfalo fetal normal"**, *Neurosonografía fetal normal* por Martínez Cortés L, Huertas Fernández MA. Ed. Glosa, Barcelona (2012): 99-110.
4. Sanz M, Eixarch E, Figueras F., **"Alteraciones del crecimiento fetal"**, *Ecografía del sistema nervioso central* por Puerto B, Eixarch E, Sanz M.
5. Puerto B, Eixarch E, Sanz M., **"Ventriculomegalia"**, **"Anomalías de la fosa posterior"**, *Curso intensivo en Medicina Materno fetal*, por Figueras F, Gratacós E, Puerto B. Ed. Ergon, Madrid (2012): 1-13; 43-67.
6. Machado LE, Bonilla Musoles F, Osborne N, Sanz M, Raga F, Machado F, Bonilla Jr F, Dolz M. **"Skeletal anomalies"**, *Fetus in three dimensions: Imaging, embryology and fetoscopy*. Kurjak A, Azumendi G. Informe Healthcare. Abingdon. Inglaterra (2006): 331-346.

Scientific communications:

Some of the most relevant communications presented in different scientific meetings:

1. **"Differences in term brain cortical development and metabolism assessed by magnetic resonance in fetuses with major congenital heart defects"**. 24th World Congress of the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG). 14th-17th September, Barcelona, Spain. Oral Communication.
2. **Neurosonographic assessment of the corpus callosum as a potential biomarker of abnormal neurodevelopment using fetal growth restriction as a model**. 24th World Congress of the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG). 14th-17th September, Barcelona, Spain. Oral Communication.
3. **Association between brain metabolism by MRI spectroscopy with corpus callosum development and cortical sulcation assessed by fetal MRI at term** 24th World Congress of the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG). 14th-17th September, Barcelona, Spain. Oral Communication.
4. **Fetal brain cortical development and corpus callosum morphometry assessed by MRI as pre-dictors of an abnormal neurodevelopment outcome at 2 years of age in term small for gesta-tional age-born infants**. 24th World Congress of the International Society of

Ultrasound in Obstetrics and Gynecology (ISUOG). 14th-17th September, Barcelona, Spain. Oral Communication.

5. **Corpus callosum differences assessed by MRI in term small for gestational age fetuses and its association with neurobehaviour.** 24th World Congress of the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG). 14th-17th September, Barcelona, Spain. Oral Communication.

6. **MRI spectroscopy: assessing brain metabolism as marker of neurodevelopment.** 24th World Congress of the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG). 14th-17th September, Barcelona, Spain. Oral Communication.

7. **Fetal brain metabolism assessed by magnetic resonance spectroscopy in late onset "small for gestational age" versus "Intrauterine growth restriction".** 24th World Congress of the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG). 14th-17th September, Barcelona, Spain. Oral Communication.

8. **" FGR: Fetal brain metabolism"**. 13th World conference in fetal medicine. Fetal Medicine Foundation. June 29th- July 2nd, Nice, 2014. Oral communication.

9. **"Differential metabolomic patterns in late IUGR with and without Doppler abnormalities"**. 12th World conference in fetal medicine. Marbella, 2013. *Poster presentation.*

10. **"Cerebellar differences in term SGA fetuses assessed by fetal MRI and its association to neurobehavioral outcome"**. Ultrasound meets Magnetic Resonance. Vienna, 2013. *Poster presentation.*

11. **" Fetal brain ultrasound assessment by Texture Analysis in CMV infected fetuses with and without neurological damage"** . 22nd World congress on ultrasound in Obstetrics and Gynecology. Copenhagen, 2012. *Oral communication.*

12. **"Predictive value of fetal brain texture analysis by Automatic Quantitative MRI analysis in SGA fetuses for an abnormal neonatal neurobehavior"**. 22nd World congress on ultrasound in Obstetrics and Gynecology. Copenhagen, 2012. *Oral communication.*

13. **"Metabolomic profile assessment from umbilical cord blood sampling in early and late IUGR neonates"**. 22nd World congress on ultrasound in Obstetrics and Gynecology. Copenhagen, 2012. *Oral communication.*

14. **"Cord occlusion in a clinical series of 103 monochorionic pregnancies: Impact of early (≤ 18 weeks) versus later treatment in outcome"**. 21st World congress on ultrasound in Obstetrics and Gynecology. Los Angeles, 2011. *Oral communication.*

15. **"Evaluation of a computer-based analysis of brain textures on fetal MRI to detect changes in small for gestational age (SGA) fetuses and to predict neurodevelopmental outcome"** . 21st World congress on ultrasound in Obstetrics and Gynecology. Los Angeles, 2011. *Oral communication.*

16. **"Evaluation of brain microstructure assessed by computer-based fetal MRI analysis to detect progressive changes associated with brain sparing in small for gestational age (SGA) fetuses"**. 21st World congress on ultrasound in Obstetrics and Gynecology. Los Angeles, 2011. *Oral communication.*

17. **"Neurodevelopmental outcome of posterior fossa anomalies with uncertain prognosis"**. 21st World congress on ultrasound in Obstetrics and Gynecology. Los Angeles, 2011. *Oral communication.*

18. **"Cord occlusion in 103 monochorionic pregnancies: Impact of early (≤ 18 weeks) vs later treatment in outcome"** . 10th world conference in fetal medicine. Malta, 2011. *Oral communication.*

19. **"Evaluation of fetal brain MRI Texture analysis to detect changes in SGA fetuses and to predict neurodevelopmental outcome"** . 10th world conference in fetal medicine. Malta, 2011. *Oral communication* **Effects of intrauterine growth restriction on brain structure and development at 12-18 months"**. 16th Annual Meeting of the Organization for Human brain mapping Conference Barcelona 2010. *Poster presentation*

20. **“Fetal brain metabolism assessed by MR spectroscopy and its association with neurodevelopmental outcome”**. 9th world conference in fetal Medicine. Rhodes, 2010. *Oral communication*.
21. **“Cerebral fractal dimension analysis in preterm infants with intrauterine growth restriction”**. 9th world conference in fetal medicine. Rhodes, 2010. *Oral communication*.
22. **“Impact of fetal IUGR on brain morphology and neurodevelopment at 1 year of age”**. 9th world conference in fetal medicine. Rhodes, 2010. *Oral communication*.
23. **“Abnormal brain microstructure and metabolism in small for gestational age fetuses with normal umbilical artery Doppler”**. Ultrasound meets Magnetic Resonance. Vienna, 2010. *Oral communication*.
24. **“Abnormal brain metabolism in small for gestational age term fetuses with normal umbilical artery Doppler”**. 19th world congress on Ultrasound in Obstetrics and Gynecology. ISUOG.Hamburg, 2009. *Oral communication*.
25. **“Abnormal brain microstructure in small for gestational age term fetuses with normal umbilical artery Doppler”**. 19th World Congress on Ultrasound in Obstetrics and Gynecology ISUOG . Hamburg, 2009. *Oral communication*.
26. **“MRI and Neurodevelopment in FGR and preterm”**. 8th world congress in fetal medicine. Slovenia, 2009. *Oral communication*.
27. **“Cord coagulation and section with laser: Clinical series of 16 cases”**. Eurofetus meeting: Monochorionic Multiple Pregnancies: Complications and Management Options. Barcelona, 2009. *Oral communication*.

Invited speaker at international courses:

1. ISUOG Advanced course on: Fetal anomalies and CNS. “Automatic quantitative MRI texture analysis in small-for-gestational-age fetuses. Discriminates abnormal neonatal neurobehavior”. February 28th- March 1st.2014. Amsterdam.
2. Fetal Medicine Foundation : Advances in Fetal Medicine course. “Fetal growth and brain development”.14-15th December.2014.London.
3. I Simposio Internacional de Medicina MaternoFetal. “Aporte de la RMN al estudio del neurodesarrollo en el CIR”, “ Neurosonografía: Exploración del SNC fetal “ “Ventriculomegalia” “Patología de la línea media” ,“Patología de la fosa posterior”. 15th and 16th November 2013. Barranquilla, Colombia.
4. 8th Symposium CEVIM Clinica Las Condes. Course in Medicina Fetal. 28th March 2014. Santiago de Chile, Chile.

Scientific meetings

Attendance to over 20 international conferences and scientific meetings, among the most relevant:

- Ultrasound meets Magnetic Resonance.

- Vienna 2013. Congress of European Society of Magnetic Resonance in Neuropediatrics.
- Paris 2011. *Invited speaker*. “Intrauterine growth restriction (IUGR) and its impact on neurodevelopment”.
- Vienna 2010.

- **World congress on ultrasound in Obstetrics and Gynecology.** International society of ultrasound in obstetrics and gynecology (ISUOG).
 - Barcelona 2014. Chairperson in fetal MRI.
 - Copenhagen 2012. *Chairperson* in neurosonography.
 - Los Angeles 2011. *Chairperson* in neurosonography.
 - Prague 2010.
 - Hamburg 2009.
- **World congress in fetal medicine.** Fetal medicine foundation.
 - Nice 2014. Invited speaker "Posterior fossa anomalies", chairperson in neurosonography section.
 - Marbella 2013. *Invited speaker* "Posterior fossa anomalies" and "Ultrasound and MRI in CNS pathologies" and *chairperson* in neurosonography.
 - Malta 2011. *Chairperson* in neurosonography.
 - Rhodes 2010.
 - Slovenia 2009.

Scientific awards

- **Top abstract winner:** "Differences in term brain cortical development and metabolism assessed by magnetic resonance in fetuses with major congenital heart defects". 24th World Congress of the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG). 14th-17th September, Barcelona, Spain.
- **Best poster:** "Mild ventricular abnormalities: Associated findings and prognosis based on frontal horn dilatation". Illa M, Eixarch E, Sanz Cortes M, Angles S, Fervienza A, Figueras F, Puerto B, Gratacos E. "Ultrasound Meets Magnetic Resonance. Congress of European Society of Magnetic Resonance in Neuropediatrics". Vienna. 2013.
- **Best oral communication:** "Analysis of brain structure by MRI and neurodevelopment in preterm born infants with and without IUGR at 12-18 months of age" Sanz Cortes M, Padilla N, Falcon C, Bargalló N, Figueras F, Botet F, Arranz A, Gratacos E. "20th World Congress on Ultrasound in Obstetrics and Gynecology". International Society of Ultrasound in Obstetrics and Gynecology (ISUOG). Prague 2010.
- **Selected lecture** "Effects of IUGR on brain development" for the Fetal Medicine Foundation website. www.fetalmedicine.com/fmf/online-education/07-lectures-in-fetal-medicine/
- **Best oral communication** Torres-Quesada award from the ultrasound section of the Spanish Society of Obstetrics and Gynecology (SESEGO). 2006.
- **Best clinical case presentation** in the congress of the Spanish Society of Obstetrics and Gynecology (SEGO). 2007.

Personal grants

- Grant from "Fundación Dexeus para la Salud de la Mujer" for the project "Fetal brain MRI analysis and its association with neurodevelopmental in IUGR". 2011.

Teaching

Member of the teaching committee of over 10 international courses held by the Maternofetal Medicine department of the Hospital Clinic Barcelona since 2009. Participation focused on the classes on fetal central nervous system development and pathology and growth restriction.

Invited Journal Reviewer of: (Have reviewed papers from:)

- Ultrasound in Obstetrics and Gynecology
- Prenatal Diagnosis
- American Journal in Obstetrics and Gynecology
- PLOS One
- Fetal Diagnosis and Therapy
- Journal of Ultrasound in Medicine.