

## Curriculum Vitae

### Personal information

First name / Surname	Ali Zidi
E-mail	Academic: <a href="mailto:ali.zidi@uco.es">ali.zidi@uco.es</a> Personal: <a href="mailto:ali.zidi@hotmail.com">ali.zidi@hotmail.com</a>
Nationality	Tunisian
Gender	Male

### Personal statement and statement of intent

I graduated in Agriculture Engineering in the “École Supérieure d’Agriculture de Mateur” (Tunisia) in 2003. Subsequently, I initiated a Master in Animal Science at the Department of Animal production of the Autonomous University of Barcelona (UAB, Spain) in the context of a fellowship from the International Centre of Advanced Mediterranean Agronomic Studies-Mediterranean Agronomic Institute of Zaragoza (CIHEAM-IAMZ, Spain). Following that, I received a fellowship from the Spanish Agency of International Cooperation and Development (Madrid, Spain) to carry out the Ph.D. studies in the field of animal genetics (at the same department where I did my master). My PhD Thesis was presented on June 2010 and obtained the maximum qualification *cum laude*.

During my scientific trajectory I have worked at animal nutrition (master degree), and at genetic field at both molecular and computational levels (Ph.D. thesis and post-doctoral research), showing a good ability to acquire all the necessary knowledge to perform the research I was involved in. In this sense, while my PhD was mainly based on molecular genetics applied to the characterization and association analysis of candidate genes for milk production and composition, I became familiar with many statistical tools employed in association analyses (i.e. SAS, R).

During my post-doctoral fellows, I was familiarized with the statistical analysis of large data set, as microarray gene expression data (first postdoctoral fellowship at the Department of Nutrition of the UAB) and high throughput genotyping data (i.e. Illumina BeadChip). As a postdoc fellow at the Centre for Research in Agricultural Genomics (CRAG, Spain), I was also involved in the whole-genome identification of copy number variation and analysis of selection signature in pig through the analysis of massive SNP data. Until now I have published a total of 14 papers (10 are in the first quartile in their respective area) and 2 book chapters as co-author.

I am now working as a post-doctoral researcher at the University of Córdoba (Spain) with the collaboration of the National Florida Goat Breeders Association (ACRIFLOR), I am performing genome wide SNP association studies on susceptibility/resistance to heat stress and also on milk production and quality, with the perspective to implement a genomic selection scheme.

Thus, I am constantly expanding my knowledge on the statistical genetics and bioinformatic fields and also developing a special interest on the applications

	<p>based on high-throughput technologies. Moreover, I have been able to adapt the change of throughput level from working on specific SNP associations or gene expression tests during my PhD to the statistical analysis of high-throughput techniques during the Post-Doctorate period.</p> <p>The AgreenSkills incoming fellowship is an opportunity to gain an international experience. In fact, it opens a new window in the application of high-throughput technologies in order to enhance the agricultural productivity. In this way, Agreenskills incoming fellowship via the proposal research project permits to extend my knowledge on statistical genetic especially on genomic selection field. At the current step of my research career, I proved ability to acquire new notions involving genetic and statistical analysis to understand complex traits (milk production and composition, fat metabolism, heat stress), guaranties a good and fast accommodation to the research on new genetic filed at the host group. Therefore, this postdoctoral fellowship allows me to develop my own future research line joining molecular, biological and statistical knowledge.</p>
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### Education and training

Location and dates	Barcelone (Spain), from Oct. 2005 to June 2010
Title of qualification awarded	Ph.D in Animal Science
Principal subjects/occupational skills covered	<p>Title: Analysis of candidate genes for milk traits in goats.</p> <p>In this project the main tasks were 1) Amplification and sequencing of candidate genes previously identified in regions harbouring significant QTL for lipid traits, 2) Genotyping of the identified polymorphisms in the resource population by using SNaPshot or Pyrosequencing techniques, 3) analysis of gene expression profile by Real time PCR (ABI-Prism 7900HT, Applied Biosystem) and 4) Performance of association studies.</p>
Name of Institute	Autonomous University of Barcelone.
Location and dates	Barcelone (Spain), from Oct. 2004 to Sep 2005
Title of qualification awarded	M.Sc. in Animal Production
Principal subjects/occupational skills covered	<p>Title: Effect of prepubertal feeding and growth rate on mammary development and lactation performance during lifespan in dairy sheep.</p> <p>Analysis of images taken by computerized axial tomography (CAT), in order to study the effect of nutrition level on mammary gland growth (parenchyma and fat pad tissues) until to pubertal age of ewes. Subsequently, I studied the relationship between the developments of mammary gland tissues, especially parenchyma tissue, with the milk traits in sheep.</p>
Name of Institute	Autonomous University of Barcelone (UAB), with the collaboration of the the International Centre of Advanced Mediterranean Agronomic Studies-Mediterranean Agronomic Institute of Zaragoza (CIHEAM-IAMZ, Spain)

### Work experience

Location and dates	Córdoba (Spain), From March 2013 at present
Occupation or position held	Post-doctoral Researcher
Main activities and responsibilities	<p>The main tasks were:</p> <p>1) Analysis of genotype data of Goat Bead Chip 50k (Illumina) and identification of</p>

	copy number variation by the use of Plink, and PennCNV softwares 2) Carry out an association analysis at genomic level with resistance/susceptibility to heat stress and with milk production and quality using R packages. 3) Simulation of genomic selection program using the simulator software QMSim.
Name of employer	University of Córdoba
Location and dates	Barcelone (Spain) From April 2011 to Feb. 2013
Occupation or position held	Post-doctoral Researcher
Main activities and responsibilities	During this fellowship period I was involved in the whole-genome identification of copy number variation and analysis of selection signature in pig through the analysis of massive SNP data. And Also, in the characterization of genes candidates associated with phenotypes of economic interest in pigs.
Name of employer	Centre for Research in Agricultural Genomics
Location and dates	Barcelone (Spain), From July 2010 to March 2011
Occupation or position held	Post-doctoral Researcher
Main activities and responsibilities	My main role in this research work was to validate the whole genome expression profile measured in different tissues by micro-array technique, and to perform the statistical analysis in order to identify genes differentially expressed using the R program. To accomplish this objective, we extracted RNA from fat and liver and we designed a specific primers to measure the expression profile of each gene studied (about 10 genes differentially expressed and previously determined by micro-array) by Real time PCR (ABI-Prism 7900HT, Applied Biosystem).
Name of employer	Department of Animal and Food Sciences, Autonomous University of Barcelone

### Languages

Mother tongue(s)	Arabic						
Other language(s)	<b>Understanding</b>				<b>Speaking</b>		<b>Writing</b>
<i>European level (*)</i>	Listening	Reading	Spoken interaction	Spoken production			
French	C2	C2	C2	C2	C2		
Spanish	C2	C2	C2	C2	C2		
English	B2	B2	B2	B2	B2		
<p>(*) <i>Common European Framework of Reference for Languages</i>  <a href="http://europass.cedefop.europa.eu/en/resources/european-language-levels-cefr">http://europass.cedefop.europa.eu/en/resources/european-language-levels-cefr</a></p>							

### Academic Record

Publications	<p><b>Accepted, in press and published articles / papers:</b></p> <ol style="list-style-type: none"> <li>1- <b>Zidi, A.</b>, E. Casas, M. Amills, J. Jordana, J. Carrizosa, B. Urrutia, J.M Serradilla. 2014. Genetic variation at the caprine lactalbumin, alpha (LALBA) gene and its association with milk lactose concentration. Animal Genetics.( doi: 10.1111/age.12152).</li> <li>2- Manunza, A., <b>A. Zidi</b>, S. Yeghoyan, V. Balteanu, T. C. Carsai, O. Scherbakov, O. Ramírez, S. Eghbalsaied, A. Castello, A. Mercade, M. Amills. 2013. A high throughput genotyping approach reveals distinctive autosomal genetic signatures for European and Near Eastern Sus scrofa. PloS One, 8: e55891.</li> </ol>
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- 3- **Zidi, A.**, A. Castelló, J. Jordana, J. Carrizosa, B. Urrutia, J.M. Serradilla, M. Amills. 2013. Identification of two paralogous caprine *CD36* genes that display highly divergent mRNA expression profiles. *Comparative Immunology, Microbiology and Infectious Diseases*, 36: 1-7.
- 4- Melo, C., D. Gallardo., R. Quintanilla., **A. Zidi.**, A. Castello., I. Diaz , M. Amills, R.N. 2013. Pena An association analysis between polymorphisms of the pig solute carrier family 27A (*SLC27A*), member 1 and 4 genes and serum and muscle lipid traits. *Livestock Science*, 152: 143-146.
- 5- Melo, C., R. Quintanilla, D. Gallardo, **A. Zidi**, J. Jordana, I. Díaz, R.N. Pena, M. Amills. 2013. Association analysis with lipid traits of two candidate genes (*LRP12* and *TRIB1*) mapping to a SSC4 QTL for serum triglyceride concentration in pigs. *Journal of Animal Science*, 91: 1531-1537.
- 6- Manunza, A., **A. Zidi**, V.M. Fernández-Cabanás, J. Jordana, J. Carrizosa, E. Belaifa, B. Urrutia, O. Polvillo, P. González-Redondo, M. Amills and J. M. Serradilla. 2012. Short communication: An association analysis between one missense polymorphism at the *SREBF1* gene and milk yield and composition traits in goats. *Canadian Journal of Animal Science*, 92: 167-173.
- 7- Badaoui, B., M. D'Andrea, F. Pilla, J. Capote, **A. Zidi**, J. Jordana, A. Ferrando, J. V. Delgado, A. Martínez, O. Vidal, M. Amills. 2011. Polymorphism of the Goat Agouti Signaling Protein Gene and Its Relationship with Coat Color in Italian and Spanish Breeds *Biochemical Genetics*, 49: 523-532.
- 8- **Zidi, A.**, J. M. Serradilla, J. Jordana, J. Carrizosa, B. Urrutia, O. Polvillo, P. González-Redondo, D. Gallardo, M. Amills, V. M. Fernández-Cabanás. 2010. Association analysis between goat malic enzyme 1 (*ME1*) genotype and dairy traits. *Animal*, 4: 1953-1957.
- 9- **Zidi, A.**, V. M. Fernández-Cabanás, B. Urrutia, J. Carrizosa, O. Polvillo, P. González-Redondo, J. Jordana, D. Gallardo, M. Amills, J. M. Serradilla. 2010. Association between the polymorphism of the goat stearyl-coA desaturase 1 (*SCD1*) gene and milk fatty acid composition in Murciano-Granadina goats. *Journal of Dairy Science*, 93: 4332-4339.
- 10- **Zidi, A.**, V. M. Fernández-Cabanás, J. Carrizosa, J. Jordana, B. Urrutia, O. Polvillo, P. González Redondo, D. Gallardo, M. Amills, J. M. Serradilla. 2010. Genetic variation at the goat hormone-sensitive lipase (*LIPF*) gene and its association with milk yield and composition. *Journal of Dairy Research*, 77: 190-198.
- 11- Clop, A., **A. Zidi**, M. Amills. 2010. Identification of positively selected sites in the goat kappa casein (*CSN3*) gene. *Animal Genetics*, 41: 332.
- 12- **Zidi, A.**, M. Amills, A. Tomàs, O. Vidal, O. Ramírez, B. J. Carrizosa, B. Urrutia, J. M. Serradilla and A. Clop. 2010. Short Communication: Genetic variability in the predicted microRNA target sites of caprine casein genes. *Journal of Dairy Science*, 93: 1749-1753.
- 13- **Zidi, A.**, J. M. Serradilla, J. Jordana, J. Carrizosa, B. Urrutia, O. Polvillo, P. González- Redondo, D. Gallardo, M. Amills, V. M. Fernández-Cabanás. 2010. Pleiotropic effects of the goat prolactin receptor genotype on milk fatty acid composition. *Domestic Animal Endocrinology*, 39: 85-89.
- 14- **Zidi, A.**, A. Sánchez, G. Obexer-Ruff and M. Amills. 2008. Sequence analysis of goat major histocompatibility complex class I genes. *Journal of Dairy Science*, 91: 814-817.

**Submitted publications:**

1. **Zidi, A.**, J. Jordana, V.M. Fernández-Cabanás, B. Urrutia, J. Carrizosa, O. Polvillo, P. González-Redondo, D. Gallardo, M. Amills. 2014. An association analysis between the variability of the caprine *CD36* and *CD36-like* genes and dairy traits. *Small Ruminant Research*.

Presentations as invited speaker	
Authored books or book chapter(s)	<p>1- Amills, M., J. Jordana, <b>A. Zidi</b>, J. M. Serradilla. 2012. Genetic factors that regulate milk protein and lipid composition in goats: In: Milk Production 2 (Ed. N. Chaiyabutr). InTech Edition. Chapter 1, pp. 3-30.</p> <p>2- Amills, M., J. M. Serradilla, A. Clop., <b>A. Zidi</b>, J. Jordana. 2012. Genetics of caseins in domestic ruminants: In Casein: production, uses and health effects (Ed. A.M. Ventimiglia and J. M. Birkenhäger.) Nova Science Publishers, Inc. Chapter 3, pp. 59-81.</p>
Participation in open calls for proposals as contributor or leader	
Graduate teaching as lecturer or training coordinator	175 hours teaching genetic in the Bachelor's degree in Veterinary science of the Autonomous University of Barcelone
Awards and prizes, if any	

### Collaboration and Networking

Participation in collaborative projects funded by competitive programmes	<p>2011-2014 Genetic tolerance to heat stress. Quantitative analysis of genetic variability in dairy ruminants (PI: Dr. Juan Manuel Serradilla Manrique, Ref: RTA2011-00108-C02-02).</p> <p>2007-2010 Changing of the amount and the distribution of deposited fat in chickens and pigs by nutrition strategies (PI: Dr. Ana Cristina Barroeta Lajusticia; Ref: CYCIT-AGL2007- 65898-C02-00).</p> <p>2007-2009 Mapping and identification of genes involved in lipid metabolism in pigs, quality of meat and ham quality (PI: Dr. Marcel Amills Eras; Ref: CICYT- AGL2007-66707-C02-02).</p> <p>2007-2009 Genetic characterization of five goat breeds Blanca de Rasquera, Ibicenca, Azpi Gorri, Ajuí y Tinerfeña del Sur and comparative analysis with others goat populations (PI: Dr. Marcel Amills Eras; Ref: RZ2007-00005-C02-01).</p> <p>2007-2009 Genetic Analysis of milk fat content and composition in goat (PI: Dr. Jordi Jordana; Ref: CICYT-AGL2007-66161-C02-02/GAN).</p>
Partnerships or experience with industry	
University or post-graduate programme leader	
Graduate teaching as lecturer or training coordinator; PhD supervision	
Membership of professional bodies and committees	

### Research management, Technology transfer, and Communication

Team management	
Technological platform management	
Consultancy for the public or private sector	
<b>Other experience and skills relevant to the application</b>	<p><b>COURSES ATTENDED</b></p> <p>- Bioinformatics for Biologists (3rd edition) at Facultat de Biologia-Universitat de Barcelona (June 2010)</p>

	<ul style="list-style-type: none"> <li>- Course of risk prevention in the biological laboratory for the Animal and Food Science Department. Given by the Human Resources Area of the Univeritat Autònoma de Barcelona (June 2007).</li> <li>- Training course for research personnel users of animal in experimentation and other scientific purposes at Departament de biologia Cel·lular, Fisiologia i d'Imunologia, Univeritat Autònoma de Barcelona and accredited by Federation of European Laboratory Animal Science Association (Oct. 2006)</li> <li>- Introductory course to the laboratory risk prevention". Given by the <i>Instituto Nacional de Seguridad e Higiene en el Trabajo</i> (INSHT) at Univeritat Autònoma de Barcelona (November 2005)</li> </ul>
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### Scientific References

Full name	Dr. Juan Manuel Serradilla
Position	Professor of Animal Breeding
Institution	University of Córdoba
Email address	<a href="mailto:pa1semaj@uco.es">pa1semaj@uco.es</a>
Full name	Dr. Marcel Amills Eras
Position	Associate professor and Researcher
Institution	<ul style="list-style-type: none"> <li>- Universitat Autònoma de Barcelona.</li> <li>- Centre for Research in Agricultural Genomics (CSIC-IRTA-UAB-UB).</li> </ul>
Email address	<a href="mailto:marcel.amills@uab.es">marcel.amills@uab.es</a>

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