

Department: Agriculture and Food

Group Name: *Antibiotic Resistance, Food Safety and Public Health*

Acronym: *resaIUR*

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ANEP Area(s): Food Science and Technology; Biomedicine

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Department Report: 17/04/2015

RESEARCH TEAM

Number of researchers: 9

<u>Researcher</u>	<u>Department</u>	<u>Professional category</u>
Torres Manrique, Carmen	Agriculture and Food	FP
Ceballos Marcaida, Sara	Agriculture and Food	Predoctoral
Juárez Vela, Raúl	Nursing	TP
Lozano Fernández, Carmen	Agriculture and Food	TP
Olarte Martínez, M ^a del Carmen	Agriculture and Food	TP
Robredo Valgañón, Beatriz	Agriculture and Food	TP
Ruiz Ripa, Laura	Agriculture and Food	Predoctoral
Sanz Cervera, Susana A.	Agriculture and Food	FP
Zarazaga Chamorro, Miriam	Agriculture and Food	TP

COLLABORATORS

Nº of collaborators: 3

<u>Collaborators</u>	<u>Department</u>	<u>Professional category</u>
Alonso Arribas, Carla Andrea	Agriculture and Food	Predoctoral

Lines of research

Molecular characterization and ecology of antimicrobial resistance in bacteria of human, animal, food and environmental origin. "One Health" perspective
Role of the food chain in the transfer of antibiotic-resistant bacteria and with virulence factors. Impact on Food Safety and Public Health.
Epidemiology of antibiotic resistance, and molecular characterization of bacteria in the animal-man-environmental ecosystem "interface".
Ecology of the intestinal microbiota in humans and animals. Influence of diet and implications on health.
New antimicrobials and new therapeutic strategies
Characterization of antimicrobial peptides secreted by bacteria of different origins and their applications.
Genetic characterization and propagation pathways of pathogenic, altering and beneficial microorganisms in food. Molecular traceability.
Food processing, preservation and packaging technologies: quality control of agrifood processes, shelf-life studies.
Dissemination of the problem of Antibiotic Resistance to specialized/non-specialized audiences.

Scientific and technological offer

Identification, characterization and quantification of microorganisms of interest in the food industry, both altering and pathogenic microorganisms as well as beneficial microorganisms.
Identification and characterization of microorganisms of interest in human and animal health through molecular biology techniques and MALDI-TOF mass spectrometry.
Genetic characterization of antimicrobial resistance mechanisms.
Genetic and biochemical characterization of antimicrobial peptides of bacterial origin.
Characterization of genes, study of mutations and genetic markers of sanitary and alimentary interest.
Clonal characterization of microorganisms of interest in food and human and animal health for epidemiological or technological purposes.
Study of new antimicrobials and new therapeutic strategies
Molecular traceability.
Availability of a pilot food processing plant and a sensory analysis room.
Studies of useful life and improvement and innovation of food processing and preservation technologies.

National and international relations

University of Notre Dame, Department of Chemistry and Biochemistry, Notre Dame, IN, USA (Prof. S. Mobasheri and Dr M. Chang).
 Department of Clinical Veterinary Medicine, University of Cambridge, UK (Dr. M. A. Holmes).
 Department of Veterinary Medicine, Freie Universität, Berlin, Germany (Dr. S. Schwarz).
 Faculty of Veterinary, University of Trás-os-Montes-e Alto Douro (UTAD), Vila Real, Portugal (Dr. P. Poeta, Dr. G. Igrejas).
 Universidad de Buenos Aires, Buenos Aires, Argentina (Dr D. Centrón).
 Université de Limoges, Faculté de Médecine, Limoges, France (Dr M.C. Ploy).
 Centre Hospitalo-Universitaire d'Amiens, Faculté de Médecine d'Amiens, Université de Picardie Jules Verne, Amiens, France (Dr. H. Mammeri).
 National Institut of Health Dr. Ricardo Jorge (INSA), Lisboa, Portugal (Dr. M. Canica).
 National Veterinary Institut, Sweden. (Dr. S. Börjesson).
 Institut of Microbiology and Epizootics, Veterinary Faculty, Berlin, Germany (Dr. S. Gunther).
 Departament of Microbiology, Faculty of Sciences, University El Manar of Tunis, Tunisia (Prof. A. Boudabous, Dr. K. Ben Slama, Dr. N. Klibi).
 Institut Pasteur, Tunis, Tunisia (Dr. A. Jouini).
 Institute of Veterinary Research of Tunis, Tunisia (Prof. MS Abbassi).
 Charles Nicolle Hospital, Laboratory of Microbiology, Tunis, Tunisia (Dr. I. Boutiba-Ben Boubaker).
 Faculty of Veterinary Medicine, Utrecht University. Department of Farm Animal Health Utrecht, The Netherlands (Dr. Gerrit Koop).
 General Hospital of Massachussets, Boston, USA (Dr L. Vinué).
 Department of Microbiology and Infection Control. Staten Serum Institut, Copenhagen, Denmark (Dr. J. Larsen, M. Stegger, R. Skov).
 Faculty of Science and Technology, Universidad Nova de Lisboa, Portugal (Dr. J.L. Capelo, C. Lodeiro).
 Dept. of Medical Microbiology, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands (Dr. J. M. van Dijk).
 Benemérita Universidad Autónoma de Puebla, Mexico (Dr R. Rocha, Dr P. Lozano).
 Department of Microbiology and Immunology, UNESP, Botucatu, SP, Brasil (Dr. N. Cirone, Dr Vera Rall).
 Environmental Genomics and Systems Biology Research Group, Institute of Natural Resource Sciences, Zurich University of Applied Sciences, Suiza (Dr E. Gómez-Sanz).
 Faculty of Biological Sciences, University of Sciences and Technology Houari Boumedién, Algiers, Argeria (Dr. R. Bakour).
 Division of Infectious Diseases, Department of Biochemistry and Molecular Biology, Wayne State University, Detroit, USA (Dr. S.A. Lerner).
 Department of Veterinary Pathology and Microbiology, University of Nigeria, Nasukka (Dr. K. Chah).
 University of Djelfa, Algeria (Dr. A. Hackem).
 Université Laval, Quebec, Canada (Dr. Ismail Fliss).

National

Centre for Biomedic Research (CIBIR), Logroño (Dr Y. Sáenz/ Dr B. Rojo/ Dr. M. de Toro/ Dr M. López).
 Microbiology Laboratory, San Pedro Hospital, Logroño (Dr. J.M. Azcona).
 Technological Centre for the Meatpacking Industry (CTIC), La Rioja. (L. Navarro, E. Romero).
 BioRioja Clean-Biotec Group (Dr. N. Beaucourt).
 Food Technology and Research Centre (CITA). R. López.
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 Microbiology Service, Ramón y Cajal Hospital of Madrid (Dr. F. Baquero, Dr. R. Cantón, Dr. T. Coque, Dr. R. Del Campo).
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 Microbiology Service, Hospital Clínico Universitario Lozano Blesa de Zaragoza (Dr. J. Castillo, Dr. C. Seral).

Microbiology Department, Miguel Servet Hospital in Zaragoza (Dr. A. Rezusta).
Department of Animal Pathology. Faculty of Veterinary Medicine, University of Zaragoza (Dr. C. Simón).
Department of Animal Production and Food Technology. University of Zaragoza (Dr. L. Sánchez).
Microbiology Service, Gregorio Marañón University Hospital, Madrid (Dr. E. Cercenado).
Microbiology Service. Virgen Macarena Hospital (Dr. L. López Cerero)
Barcelona International Health Research Centre (CRESIB) and the Microbiology Service of the Hospital Clínic de Barcelona (Dr. J. Vila, Dr. J. Ruiz, Dr. F. Marco).
Centro Nacional de Biotecnología, Madrid (Dr. J.L. Martínez).
Institute of Biomedicine and Biotechnology of Cantabria, Univ. of Cantabria (Dr. F. de la Cruz).
E. coli reference laboratory. (Univ. Santiago de Compostela, Lugo) (Dr. J. Blanco, Dr. A. Mora).
Instituto de Investigación en Recursos Cinegéticos (IREC), Centro del CSIC, Ciudad Real (U. Hoffle, F. Ruiz-Fons, C. Cortázar, D. González-Barrio).
Department of Biodiversity and Evolutionary Biology, National Museum of Natural Sciences of Madrid (CSIC) (Dr. Alfonso Navas).
Faculty of Veterinary Medicine, Complutense University of Madrid (Dr. J. M. Rodríguez)
Department of Animal Pathology, Faculty of Veterinary Medicine. Complutense University, Madrid (Dr. M.A. Moreno).
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Arnau University Hospital in Vilanova, Lérida (Dr. F. Barcenilla).
Department of Internal Medicine, University Consortium of Vic, Barcelona (Dr. E. Reynaga).
Microbiology Service, General Hospital of Pontevedra (Dr. M. García-Campello).
Virgen de la Cinta Hospital (Tortosa) (Dr. M.O. Pérez).
Microbiology Service, Getafe Hospital (Dr. J.I. Alós).