CV Date	30/01/2022

Part A. PERSONAL INFORMATION

First Name	Tomas		
Family Name	Bolumar Garcia		
Sex	Not Specified	Date of Birth	
ID number Social Security, Passport			
URL Web			
Email Address			
Open Researcher and Contributor ID (ORCID)	0000-0001-7156-6632		

A.1. Current position

Job Title	Head of Meat Technology		
Starting date	2020		
Institution	Max Rubner Institute (MRI)		
Department / Centre			
Country	Germany	Phone Number	(49) 151 7165 7692
Keywords			

A.2. Previous positions (Research Career breaks included)

Period	Job Title / Name of Employer / Country
2018 - 2020	Senior Research Scientist / Max Rubner Institute (MRI), Department of Safety and Quality of Meat – Meat Technology (Kulmbach,Germany)
2015 - 2018	Senior Research Scientist / Commonwealth for Scientific and Industrial Research Organisation (CSIRO), Meat Science Team (Brisbane, Australia)
2012 - 2014	Project Manager and Deputy Department Manager / German Institute of Food Technologies. Department of Process Technologies.
2010 - 2012	Postdoc / University of Copenhagen. Department of Food Science/ Food Chemistry, Faculty of Life Sciences
2005 - 2009	Project manager / Martinez Loriente SA. Research area. Technical and Quality Management Department
2004 - 2005	Food Biotechnologist (Titulado superior de investigacion = research associate) / Instituto de Agroquímica y Tecnología de Alimentos
2000 - 2003	PhD student / Instituto de Agroquímica y Tecnología de Alimentos
1999 - 1999	Becario predoctoral (= research assistant) / Instituto de Agroquímica y Tecnología de Alimentos
1997 - 1997	Internship / S.A.T L´Horta nº4560, Quality Control Department,

A.3. Education

Degree/Master/PhD	University / Country	Year
Programa Oficial de Doctorado en Ciencia de los Alimentos	Universitat de València	2004
Licenciado en Ciencia y Tecnología de los Alimentos Intensificación Tecnología de los Alimentos	Universitat de València	1998

Part B. CV SUMMARY
Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences
AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

1 **Scientific paper**. Bolumar, T.; Orlien, V.; Sikes, A.; et al; Brüggemann, D.A.(1/11). 2021. High-pressure processing of meat: Molecular impacts and industrial applications Comprehensive Reviews in Food Science and Food Safety. 20-1, pp.332-368. SCOPUS (12)
2 **Scientific paper**. Bolumar, T.; Enneking, M.; Toepfl, S.; Heinz, V.(1/4). 2013. New developments in shockwave technology intended for meat tenderization: Opportunities and challenges. A review Meat Science. Elsevier. 95-4, pp.931-939. SCOPUS (47)
3 **Scientific paper**. Bajovic, B.; Bolumar, T.; Heinz, V.(2/3). 2012. Quality considerations with high pressure processing of fresh and value added meat products Meat Science. 92-3, pp.280-289. SCOPUS (157)
4 **Scientific paper**. Bolumar, T.; Sanz, Y.; Flores, M.; Aristoy, M.-C.; Toldrá, F.; Flores, J.(1/6). 2006. Sensory improvement of dry-fermented sausages by the addition of cell-free extracts from Debaryomyces hansenii and Lactobacillus sakei Meat Science. Elsevier. 72-3, pp.457-466. SCOPUS (49)
5 **Scientific paper**. Bolumar, T.; Sanz, Y.; Aristoy, M.-C.; Toldrá, F.(1/4). 2003. Purification and characterization of a prolyl aminopeptidase from Debaryomyces hansenii Applied and Environmental Microbiology. 69-1, pp.227-232. SCOPUS (55)
6 **Scientific paper**. Gómez, B.; Munekata, P.E.S.; Gavahian, M.; et al; Bolumar, T.; Lorenzo, J.M.(6/9). 2019. Application of pulsed electric fields in meat and fish processing industries: An overview Food Research International. 123, pp.95-105. SCOPUS (71)
7 **Scientific paper**. Bak, K.H.; Bolumar, T.; Karlsson, A.H.; Lindahl, G.; Orlien, V.(2/5). 2019. Effect of high pressure treatment on the color of fresh and processed meats: A review Critical Reviews in Food Science and Nutrition. 59-2, pp.228-252. SCOPUS (25)
8 **Scientific paper**. Mora, L.; Bolumar, T.; Heres, A.; Toldrá, F.(2/4). 2017. Effect of cooking and simulated gastrointestinal digestion on the activity of generated bioactive peptides in aged beef meat Food and Function. 8-12, pp.4347-4355. SCOPUS (39)
9 **Scientific paper**. Bolumar, T.; LaPeña, D.; Skibsted, L.H.; Orlien, V.(1/4). 2016. Rosemary and oxygen scavenger in active packaging for prevention of high-pressure induced lipid oxidation in pork patties Food Packaging and Shelf Life. 7, pp.26-33. SCOPUS (45)
10 **Scientific paper**. Tamm, A.; Bolumar, T.; Bajovic, B.; Toepfl, S.(2/4). 2016. Salt (NaCl) reduction in cooked ham by a combined approach of high pressure treatment and the salt replacer KCl Innovative Food Science and Emerging Technologies. 36, pp.294-302. SCOPUS (40)
11 **Scientific paper**. Grossi, A.; Olsen, K.; Bolumar, T.; Rinnan, Å.; Ogendal, L.H.; Orlien, V.(3/6). 2016. The effect of high pressure on the functional properties of pork myofibrillar proteins Food Chemistry. 196, pp.1005-1015. SCOPUS (83)
12 **Scientific paper**. Bolumar, T.; Bindrich, U.; Toepfl, S.; Toldrá, F.; Heinz, V.(1/5). 2014. Effect of electrohydraulic shockwave treatment on tenderness, muscle cathepsin and peptidase activities and microstructure of beef loin steaks from Holstein young bulls Meat Science. 98-4, pp.759-765. SCOPUS (31)
13 **Scientific paper**. Grossi, A.; Bolumar, T.; Søltoft-Jensen, J.; Orlien, V.(2/4). 2014. High pressure treatment of brine enhanced pork semitendinosus: Effect on microbial stability, drip loss, lipid and protein oxidation, and sensory properties Innovative Food Science and Emerging Technologies. 22, pp.11-21. SCOPUS (35)
14 **Scientific paper**. Bolumar, T.; Andersen, M.L.; Orlien, V.(1/3). 2014. Mechanisms of radical formation in beef and chicken meat during high pressure processing evaluated by electron spin resonance detection and the addition of antioxidants Food Chemistry. 150, pp.422-428. SCOPUS (43)

15 **Scientific paper**. Bolumar, T.; Skibsted, L.H.; Orlien, V.(1/3). 2012. Kinetics of the formation of radicals in meat during high pressure processing Food Chemistry. Elsevier Limited. 134-4, pp.2114-2120. SCOPUS (55)

16 **Scientific paper**. Bolumar, T.; Andersen, M.L.; Orlien, V.(1/3). 2011. Antioxidant active packaging for chicken meat processed by high pressure treatment Food Chemistry. Elsevier limited. 129-4, pp.1406-1412. SCOPUS (92)

17 **Scientific paper**. Resa, P.; Bolumar, T.; Elvira, L.; Pérez, G.; De Espinosa, F.M.(2/5). 2007. Monitoring of lactic acid fermentation in culture broth using ultrasonic velocity Journal of Food Engineering. Elsevier Limited. 78-3, pp.1083-1091. SCOPUS (27)

18 **Scientific paper**. Bolumar, T.; Sanz, Y.; Aristoy, M.-C.; Toldrá, F.(1/4). 2003. Purification and properties of an arginyl aminopeptidase from Debaryomyces hansenii International Journal of Food Microbiology. 86-1-2, pp.141-151. SCOPUS (45)

19 **Scientific paper**. Bolumar, T.; Nieto, P.; Flores, J.(1/3). 2001. Acidity, proteolysis and lipolysis changes in rapid-cured fermented sausage dried at different temperatures Food Science and Technology International. Technomic Publishing CO., INC. 7-3, pp.269-276. SCOPUS (27)

20 **Scientific paper**. Santos, N.N.; Santos-Mendonça, R.C.; Sanz, Y.; Bolumar, T.; Aristoy, M.C.; Toldrá, F.(4/6). 2001. Hydrolysis of pork muscle sarcoplasmic proteins by Debaryomyces hansenii International Journal of Food Microbiology. Elservier. 68-3, pp.199-206. SCOPUS (56)

C.2. Conferences and meetings

1 Tomas Bolumar. Shockwave technology.. American Reciprocal Meat Conference. Wisconsin- Madison, USA, 15-17-June-2014.. American Meat Science Association. 2014. United States of America. Participatory - invited/keynote talk. Conference.

2 Tomas Bolumar. New developments in shockwave technology intended for meat tenderization: opportunities and challenges.. 59 ICoMST. International Congress of Meat Science and Technology.. International Congress of Meat Science and Technology. 2013. Turkey. Participatory - invited/keynote talk. Conference.

3 Tomas Bolumar. Innovation and Technological Trends in Food Industry. Challenges facing the European Food and Drink Industry. RECAPT EU-project. 2012. Holland. Participatory - invited/keynote talk.

C.3. Research projects and contracts

1 **Project**. Future scenarios for consumer protection based on food quality and safety information, innovative measurement methods and artificial intelligence (Future Laboratory 2030, Zukunftslabor2030) (Project 28DK126F20).. Bundesanstalt für Landwirtschaft und Ernährung (German Ministry of Agriculture and Nutrition). (Max Rubner Institute). 01/10/2021-30/10/2024. 550.000 €. My contribution: Coordination of the manufacturing of reference meat products ensuring their standard processing as well as their comparable storage and distribution. Data analysis and interpretation.

2 **Project**. A Robust, Flexible and Scalable Cognitive Robotics Platform for meat deboning - RoButcher' (H2020-871631) H2020-EU. Industrial Leadership - Topic(s) ICT-10-2019-2020 - Robotics Core Technology. Alex Mason. (Max Rubner Institute. The project involves 10 partners from 7 countries (4 NO, 2 DK, 1 DE, 1HU, 1 SP, 1 SW)). 01/01/2020-30/06/2023. 7.536.000 €. My contribution: Work-Pack Leader

3 **Project**. Shockwave technology for tenderisation and decontamination of beef cuts. Australian Meat Processors Corporation (AMPC). (Commonwealth Scientific Industrial Research Organisation (CSIRO)). 01/01/2018-31/12/2020. 848.000 €. My contribution: Principal Investigator

4 **Project**. Strategies for salt reduction in meat products (MRI-FL-08-621-1070 LOSS, 2819108216). Funding Agency: Bundesanstalt für Landwirtschaft und Ernährung (Ministry of Agriculture and Nutrition). (Max Rubner Institute. Department of Safety and Quality of Meat). 17/10/2016-30/11/2019. 364.606 €. My contribution: project leader of the high pressure processing trials.

5 **Project**. Establishment of a model system to evaluate shockwave intensities for meat tenderization. Tomas Bolumar Garcia. (German Institute of Food Technologies. Division of Process Technologies). 01/05/2012-31/12/2015. 30.000 €. Co-ordinator. My contribution: Principal Investigator and Technical coordinator

6 **Project**. Non-invasive high power ultrasounds (HPU) processing method for meat tenderization. 'ULTRATENDER" Project no. FP7- 603429.. European Union. Tomas Bolumar Garcia. (German Institute of Food Technologies. Division of Process Technologies). 01/10/2013-30/09/2015. 1.070.034 €. Co-ordinator. My contribution: Technical director

7 **Project**. Novel Processing approaches for the development of food products Low in fAt, Salt and sUgar. 'PLEASURE' Project no. FP7- 287034.. European Union. Volker Heinz. (German Institute of Food Technologies. Division of Process Technologies). 01/01/2012-31/12/2014. 3.957.316 €. Co-ordinator. My contribution: Work-pack leader. Salt and fat reduction in meat products

8 **Project**. Development of Shock wave technology for packed meat. 'SHOCKMEAT' Project no. FP7- 289536.. European Union. Tomas Bolumar. (German Institute of Food Technologies. Division of Process Technologies). 01/01/2012-30/04/2014. 1.322.700 €. Co-ordinator. My contribution: Technical and administrative coordinator of the project

9 **Project**. New gourmet pork products obtained through molecular understanding of alternative pig breeds and high pressure technology. Project no. 3304-FVFP-08-K-21-04.. Danish Ministry of Food, Agriculture and Fisheries. Vibeke Orlien. (University of Copenhagen. Department of Food Science/ Food Chemistry.). 15/01/2010-15/01/2012. Team member. My contribution: Post-doctoral research on antioxidant active packaging of meat processed by high pressure

10 **Project**. Control and prevention of emerging and future pathogens at cellular and molecular level throughout the food chain. 'PATHOGEN COMBAT for Safe Food. EU 6th Framework Programme.. Mogens Jakobsen. (Martinez Loriente SA. Technical & Quality Department. R&D Area.). 08/08/2005-31/12/2009. Team member. My contribution. Researcher. Sampling; Microbial Analysis; Implementation Of Rapid Microbiological Methods; Data Analysis, Food Safety.

11 **Project**. Use of the dairy by-products, whey milk and ultrafiltrate permeates, through biotechnological process to obtain diacetyl and L-lactic acid. Comisión Interministerial de Ciencia y Tecnología (CICYT).. Gaspar Perez Martinez. (Instituto De Agroquímica Y Tecnología De Alimentos (IATA-CSIC): Departament of Biotechnology. Laboratory of Lactic Acid Bacteria). 01/02/2004-21/03/2005. Team member. My contribution: Research Associate. Commissioning and operation of a pilot scale bioreactor and analysis of fermentation products. .

12 **Project**. Interaction between volatile compounds and the dry-cured ham matrix as a new method for the development of flavour enhancers. AGL 2001-1441.. Comisión Interministerial de Ciencia y Tecnología (CICYT).. Fidel Toldra Vilardell. (Instituto De Agroquímica Y Tecnología De Alimentos (IATA-CSIC). Departament of Food Science. Laboratory of Meat Science). 01/01/2001-31/12/2003. Predoctoral Researcher: Research On Aminoacid Content; Flavours Compounds; Enzymology; Starter Cultures.

13 **Project**. Application of yeast to improve the quality of big size fermented sausages made by employing fast-curing technology (ALI 98-0890). Comisión Interministerial de Ciencia y Tecnología (CICYT).. Jose Flores Duran. (Instituto De Agroquímica Y Tecnología De Alimentos (IATA-CSIC). Departament of Food Science. Laboratory of Meat Science.). 01/01/1999-31/12/2000. Others. Predoctoral Researcher. Research on Amino Acid Content And Biogenic Amines In Spanish Cured Fermented Sausages

C.4. Activities of technology / knowledge transfer and results exploitation

Patent of invention. Stefan Toepfl; Tomas Bolumar; Werner Kohorst; Thomas Rode; Matthias Enneking. DE 102013212347 B3. Device and method for schock wave treatment of food Germany. 03/07/2014. DEUTSCHES INSTITUT FUR LEBENSMITTELTECHNICK.