

Jonathan Rhoades

Brief CV

Last updated February 2025

Qualifications

PhD: 'The antimicrobial activity of chitosan and its application as a food preservative', London South Bank University, 2003.

Degree: BSc (Hons) Microbiology (Biotechnology), First Class, University of Surrey 1996.

Languages: Native English speaker. Greek: Holder of the highest level (D) State Certificate of Greek Language, >10 years of teaching in Greek.

Current Employment

Assistant Professor, Dept. of Food Science and Technology, International Hellenic University, Sindos Campus, Thessaloniki, Greece. 2025-present. Food microbiology, food safety, epidemiology of foodborne diseases, novel antimicrobials and bioactive substances in foods, food sustainability and local food systems. Teach on five courses covering general and food microbiology, epidemiology and public health, food sustainability, and technical English.

Employment History

GREECE

Academic Scholar, Dept. of Food Science and Technology, International Hellenic University, Sindos Campus, Thessaloniki, Greece. 2019-2025, yearly contracts. Designed and taught theory classes in the epidemiology of foodborne diseases, public health and predictive microbiology. Laboratory classes in general and food microbiology. Student projects.

Laboratory Lecturer, Dept. of Food Technology, Alexandrian Technological Educational Institute (now International Hellenic University), Thessaloniki, Greece. 2011-2013 and 2015-2019, contracts per semester. Taught laboratory and theory classes in general and food microbiology to nutrition and food technology students. Carried out research and consultancy for commercial companies and other academic groups.

Researcher, Dept. of Food Technology, Alexandrian Technological Educational Institute (now International Hellenic University), Thessaloniki, Greece. Nov 2010 – Mar 2011 and Nov 2011 – Feb 2012. Conducted research on two projects for SMEs: 1) the efficacy of a novel antimicrobial detergent and 2) the safety and stability of a ready-to-eat potato product.

Researcher, Food Science and Technology Section, Dept. of Agriculture, Aristotle University of Thessaloniki, Greece. Apr 2007 – Jun 2008. Conducted laboratory and literature research on beef safety as part of an EU project (ProSafeBeef).

Translator (freelance), Greece. Nov 2011 – Sep 2012. Translated a textbook "The Physical Chemistry of Foods" from Greek to English for a US-based publisher.

UNITED KINGDOM

Scientist, Health Protection Agency, London. Aug 2004 – Sep 2006 (fixed-term contracts). Co-ordinated a national survey on *Salmonella* in eggs. Created a food safety database. Assisted with investigations of gastrointestinal disease outbreaks.

Research Fellow, School of Food Biosciences, University of Reading. Jan 2002 – Jan 2004 (fixed-term contract). Conducted research on oligosaccharide-mediated inhibition of the binding of pathogens to the gut epithelium for a multinational pharmaceutical company.

Senior Research Scientist, Leatherhead Food International. Mar 2000 – Nov 2001. Proposed and managed projects, provided consultancy services and solved problems for commercial food industry clients. Supervised microbiology section. Delivered lectures and training courses.

Research Assistant, South Bank University, London. Jan 1997 – Feb 2000 (fixed-term contract). Conducted research into the antimicrobial properties of chitosan as part of an international EU project on natural antimicrobials. Prepared PhD thesis.

Assistant Microbiologist, South East Water. Jun-Aug 1995 (Summer holidays) and Jul-Dec 1996. Performed microbiological analysis of water and environmental samples. Assisted with zoological and phycological identifications.

Microbiology Technician, Milk Marketing Board, Surrey. Dec 1989 – Apr 1994. Performed microbiological analysis of food, water and environmental samples in an accredited commercial laboratory.

Publications

IN PEER REVIEWED SCIENTIFIC JOURNALS

1. Frangopoulos, T., Marinopoulou, A., Petridis, D., Rhoades, J., Likotrafiti, E., Goulas, A., Fetska, S., Flegka, D., Mati, E., Tosounidou, A., Triantafillou, V., Tsihlikis, K., Veskou, E., Ylli, S. & Karageorgiou, V. (2025). Films from Starch Inclusion Complexes with Bioactive Compounds as Food Packaging Material. *Food and Bioprocess Technology*.
2. Frangopoulos, T., Marinopoulou, A., Goulas, A., Likotrafiti, E., Rhoades, J., Petridis, D., Kannidou, E., Stamelos, A., Theodoridou, M., Arampatzidou, A., Tosounidou, A., Tsekmes, L., Tsihlikis, K., Gkikas, G., Tourasanidis, E., & Karageorgiou, V. (2023). Optimizing the Functional Properties of Starch-Based Biodegradable Films. *Foods*, **12**(14), 2812.
3. Rhoades, J., Fotiadou, S., Paschalidou, G., Papadimitriou, T., Alvarez-Ordóñez, A., Kormas, K., Vardaka, E. & Likotrafiti, E. (2023). Microbiota and cyanotoxin content of retail spirulina supplements and spirulina supplemented foods. *Microorganisms* **11**, 1175.
4. Rogkotis, K., Matsia, S., Likotrafiti, E., Rhoades, J., Kountouras, D., Katalalos, K., Pavlidou, E., Ritzoulis, C. & Salifoglou, A. (2022). Selective antimicrobial food packaging of composite poly (lactic acid) cobalt-citrate films. *Food Packaging and Shelf Life* **34**, 100959.
5. Rhoades, J., Katsouda, V., Matsia, S., Rogkotis, K., Taousani, S., Kiriazidi, N., Salifoglou, A. & Likotrafiti, E. (2022). Antimicrobial activity of cobalt (II)-citrate against common foodborne pathogens and its potential for incorporation into food packaging material. *Applied Sciences* **12**, 10855.
6. Kazeli, K., Tsamesidis, I., Theocharidou, A., Malletzidou, L., Rhoades, J., Pouroutzidou, G.K., Likotrafiti, E., Chrissafis, K., Lialiaris, T., Papadopoulou, L., Kontonasaki, E. & Lymperaki, E. (2021). Synthesis and characterization of novel calcium-silicate nanobioceramics with magnesium: Effect of heat treatment on biological, physical and chemical properties. *Ceramics*, **4** (4), 628-651.
7. Rhoades, J., Anastasiou, I., Michailidou, S., Koinidis, A., Doulgerakis, C., Alexa, E.A., Alvarez-Ordóñez, A., Argiriou, A. & Likotrafiti, E. (2021). Microbiological analysis of Greek Protected Designation of Origin cheeses and characterization of the isolated lactic acid bacteria. *International Dairy Journal*, **123**, 105183.
8. Michailidou, S., Pavlou, E., Pasentsis, K., Rhoades, J., Likotrafiti, E. & Argiriou, A. (2021). Microbial profiles of Greek PDO cheeses assessed with amplicon metabarcoding. *Food Microbiology*, **99**, 103836.
9. Omar, A.A., Mahgoub, S., Salama, A., Likotrafiti, E., Rhoades, J., Christakis, C. & Samaras, P. (2021). Evaluation of *Lactobacillus kefir* and manganese peroxidase-producing bacteria for decolorization of

melanoidins and reduction of chemical oxygen demand. *Water and Environment Journal* **35** (2), 704-714.

10. Pouroutzidou, G.K., Theodorou, G.S., Kontonasaki, E., Tsamesidis, I., Pantaleo, A., Patsiaoura, D., Papadopoulou, L., Rhoades, J., Likotrafiti, E., Lioutas, C.B., Chrissafis, K., Paraskevopoulos, K.M. (2019). Effect of ethanol/TEOS ratios and amount of ammonia on the properties of copper-doped calcium silicate nanoceramics. *Journal of Materials Science: Materials in Medicine* **30** (9), article number 98.
11. Likotrafiti, E., Valavani, P., Argiriou, A. and Rhoades, J. (2015). *In vitro* evaluation of potential antimicrobial synbiotics using *Lactobacillus kefir* isolated from kefir grains. *International Dairy Journal* **45**, 23-30.
12. Likotrafiti, E., Anagnou, M., Lampiri P. and Rhoades, J. (2014). Effect of storage temperature on the behaviour of *Escherichia coli* O157:H7 and *Salmonella enterica* serotype Typhimurium on salad vegetables. *Journal of Food Research* **3** (2), 1-8.
13. Likotrafiti, E., Smirniotis, P., Nastou, A and Rhoades, J. (2013). Effect of relative humidity and storage temperature on the behaviour of *Listeria monocytogenes* on fresh vegetables. *Journal of Food Safety* **33** (4), 545-551.
14. Rhoades J, Gialagkolidou K, Gogou M, Mavridou O, Blatsiotis N, Ritzoulis C and Likotrafiti E. (2013) Oregano essential oil as an antimicrobial additive to detergent for hand washing and food contact surface cleaning. *Journal of Applied Microbiology* **115** (4), 987-994
15. Rhoades, J., Kargiotou, C., Katsanidis, E. and Koutsoumanis K.P. (2013). Use of marination for controlling *Salmonella enterica* and *Listeria monocytogenes* in raw beef. *Food Microbiology* **36** (2), 248-253.
16. Nastou A, Rhoades J, Smirniotis P, Makri I, Kontominas M and Likotrafiti E (2012). Efficacy of household washing treatments for the control of *Listeria monocytogenes* on salad vegetables. *International Journal of Food Microbiology* **159**, 247-253.
17. Kargiotou C, Katsanidis E, Rhoades J, Kontominas M and Koutsoumanis K (2011). Efficacies of soy sauce and wine base marinades for controlling spoilage of raw beef. *Food Microbiology* **28** (1), 158-163.
18. Rhoades JR, Duffy G & Koutsoumanis K (2009). Prevalence and concentration of verocytotoxigenic *Escherichia coli*, *Salmonella enterica* and *Listeria monocytogenes* in the beef production chain: a review. *Food Microbiology* **26**, 357-376.
19. Rhoades J, Manderson K, Wells A, Hotchkiss AT, Gibson GR, Formentin K, Beer M, Rastall RA (2008). Oligosaccharide-mediated inhibition of the adhesion of pathogenic *Escherichia coli* strains to human gut epithelial cells in vitro. *Journal of Food Protection* **71** (11), 2272-2277.
20. Little CL, Rhoades JR, Hucklesby L, Greenwood M, Surman-Lee S, Bolton FJ, Meldrum R, Wilson I, McDonald C, de Pinna E, Threlfall EJ & Chan C-H (2008). Survey of *Salmonella* contamination of raw shell eggs used in food service premises in the United Kingdom, 2005 through 2006. *Journal of Food Protection* **71** (1), 19-26.
21. Little CL, Rhoades JR, Sagoo SK, Harris J, Greenwood M, Mithani V, Grant K & McLauchlin J (2008) Microbiological quality of retail cheeses made from raw, thermised or pasteurised milk in the UK. *Food Microbiology* **25** (2), 304-312.
22. Rhoades J, Gibson GR, Formentin K, Beer M & Rastall RA (2006). Inhibition of the adhesion of enteropathogenic *Escherichia coli* strains to HT-29 cells in culture by chito-oligosaccharides. *Carbohydrate Polymers* **64**, 57-59.
23. Rhoades JR, Gibson GR, Formentin K, Beer M, Greenberg N & Rastall RA (2005). Caseinoglycomacropeptide inhibits adhesion of pathogenic *Escherichia coli* strains to human cells in culture. *Journal of Dairy Science* **88**, 3455-3459.

24. Helander IM, Nurmiäho-Lassila E-L, Ahvenainen R, Rhoades J & Roller S (2001). Chitosan disrupts the barrier properties of the outer membrane of Gram-negative bacteria. *International Journal of Food Microbiology* **71** (2-3), 235-244.
25. Kelly NA, Reuben BG, Rhoades J & Roller S (2000). Solvent extraction of bacteriocins from model solutions and fermentation broths. *Journal of Chemical Technology and Biotechnology* **75** (9), 777-784.
26. Rhoades J and Roller S (2000). Antimicrobial action of degraded and native chitosan against spoilage organisms in laboratory media and foods. *Applied and Environmental Microbiology* **66** (1), 80-86.
27. Bell C, Rhoades JR, Neaves P & Scannella D (1995). An evaluation of the IDEXX SNAP test for the detection of β -lactam antibiotics in ex-farm raw milks. *Nederlands Melk en Zuiveltijdschrift* **49** (1), 15-25.

CONFERENCE POSTERS

Rhoades J, Michailidou S, Anastasiou I, Argiriou A and Likotrafiti E. Study of the microbiota of Greek P.D.O. soft cheeses and characterisation of isolated lactic acid bacteria. Probiotics, Prebiotics and New Foods, Nutraceuticals and Botanicals for Nutrition and Human and Microbiota Health, Rome, September 2019.

Nastou A, Makri I, Rhoades JR, Kontominas M and Likotrafiti E. Factors affecting the efficacy of decontamination of *Listeria monocytogenes* from ready to eat vegetables. Fourth Panhellenic Conference on Food of the Hellenic Veterinary Society, 2011.

Kargiotou C, Rhoades J, Katsanidis E and Koutsoumanis K. Effect of soy sauce- and wine-based marinades on the microbiological quality of beef. Third Panhellenic Conference of the Interdisciplinary Society for Food Hygiene Assurance, Thessaloniki, 2010.

Rhoades J & Rastall R. Oligosaccharides and *E. coli* Adhesion. European Society for Parenteral and Enteral Nutrition, 25th Congress, Cannes, France, 2003.

Rhoades J & Roller S. Modification of chitosan for food preservation. The 3rd Karlsruhe Nutrition Symposium, Karlsruhe, Germany, 1998.

OTHER PUBLICATIONS

Book chapter: Probiotics, prebiotics, synbiotics and foodborne illness. Likotrafiti, E. and Rhoades, J. In: Watson, R.R. and Preedy, V.R. (Eds). *Bioactive Foods in Promoting Health: Probiotics, Prebiotics and Synbiotics*, 2nd Edition. Elsevier Inc.

Translation (Greek to English): Ritzoulis, C. *Introduction to the Physical Chemistry of Foods*. CRC Press, Taylor & Francis Group, 2013. ISBN 9781466511750.

Patent: US 7,842,678. 30/11/2010. Compositions comprising oligosaccharides. Nestec S.A. Inventors: Rhoades, J.R., Rastall, R. & Gibson, G.R.

Article: Rhoades J & Rastall R (2004). Chitosan as an antimicrobial agent. *Food Technology International* **2004**, 32-33.

Research Projects

EUROPEAN PROGRAMMES

Local Development and Cross Border Cooperation in the area of Agricultural Products and Traditional Food (LOC-FOOD). Funding: Black Sea Cross Border Cooperation, Joint Operational Programme Black Sea Basin 2014-2020. International Hellenic University, 2020-2022.

Improving the safety of beef and beef products for the consumer in production and processing (ProSafeBeef), FP6-FOOD ref 36241. Aristotle University of Thessaloniki, 2007-08.

Antimicrobial Peptides: Studies aimed at Application in Food and Food Products, FAIR97-3135. Leatherhead Food Research Association, UK, 2000-01.

Natural Antimicrobials, FAIR CT96-1066. London South Bank University, 1997-2000.

NATIONAL PROGRAMMES

Study of the physicochemical characteristics and effective thermal processing of ready mashed potato in order to develop a microbiologically stable product. Funded by the General Secretariat for Research and Technology, European Structural and Investment Funds. ATEIThe 16/11/2011 – 16/02/2012.

Development of the distillation process of oregano and other Greek herbs for the improvement of their antiseptic properties Funded by the General Secretariat for Research and Technology, European Structural and Investment Funds. ATEIThe 03/11/2010 – 02/03/2011.

Salmonella in eggs from catering premises. Food Standards Agency and Health Protection Agency, UK, 2005-06.

PROJECTS FUNDED BY COMMERCIAL COMPANIES

A shelf-life study at different storage temperatures of plant-based cheese replacement products following inoculation with yeasts and moulds. Funded by ARIVIA Ltd. ATEIThe 2015-2017, multiple short-term contracts.

Inhibition of the binding of pathogens to the gut wall. Funded by Novartis Medical Nutrition (now Nestlé). University of Reading, UK, 2002-2004.

A variety of confidential research and consultancy projects funded by food industry companies. Examples: The growth of *Cl. botulinum* in heat-processed sauces; the growth of *St. aureus* in pitta breads packaged in a modified atmosphere; the shelf-life of fresh pasta products. Leatherhead Food Research Association, UK, 2000-01.