

SECUREFISH relevant publication list

Surrey relevant publications

1. Pooimun Leong, Marwa Yousr and Nazlin K Howell. Biofunctional products from fish waste. Food Res. International. Submitted.
2. Marwa Yousr and Nazlin Howell (2014). Antioxidant and ACE inhibitory properties of purified egg yolk bioactive peptides. Int. J of Molecular International Journal of Molecular Sciences — Open Access Journal. IF 2.239. Submitted.
3. Bangalore Shamasundar, Krishnamoorthy Elavarasan, Farah Badii and Nazlin K Howell (2014). Angiotensin I-converting enzyme (ACE) inhibitory activity and structural properties of oven and freeze dried protein hydrolysate from fresh water fish (*Cirrhinus mrigala*). Food Chemistry. IF 3.2. Submitted.
4. Norizah Mhd Sarbon and Nazlin K Howell (2014). Angiotensin -1 converting enzyme (ACE) inhibitory peptides from chicken skin gelatin hydrolysate. J Functional Foods (IF 4.5). Submitted.
5. Chitundu Kasase, Farah Badii and Nazlin Howell (2014). Angiotensin -1 converting enzyme (ACE) inhibitory peptides from fish protein hydrolysates. J. Functional Foods (IF 4.5).
6. Norizah Mhd Sarbon, Farah Badii and Nazlin K Howell (2014). The effect of chicken skin gelatin and whey protein interactions on rheological and thermal properties. Food Hydrocolloids 45, 83-92.
7. Tan ST Rai B Boustead L, Badii F, Howell NK, Frost G, Scott J, Elliott P, Chambers JC and Kooner JS.(2013). Assessing the contribution of dietary factors to the increased prevalence of insulin resistance amongst UK Indian Asians compared to Europeans Circulation Abstract. 11/2013; 128(22). (IF 15.202).
8. Norizah Mhd Sarbon, Farah Badii and Nazlin K Howell (2012). Preparation and characterisation of chicken skin gelatin as an alternative to mammalian gelatin. Food Hydrocolloids. **Food Hydrocolloids** 30, 143-151(IF 4.28). Citation 10.
9. Dileep, A. O., Shamasundar, B.A., Binsi, Badii, F and Howell, N.K. (2012). Composition, physicochemical and rheological properties of fresh Bigeye Snapper (*Priacanthus Hamrur*) meat. J. Food Biochemistry **36**, 5, 577-586.
10. **Marwa Yousr, Pooimun Leong and Nazlin K Howell. Bioactive peptides from salmon. SECUREFISH Workshop. Lisbon, 1-5 December, 2014.**
11. Marwa Yousr, Pooimun Leong and Nazlin K Howell. Bioactive peptides from salmon skin gelatin. SECUREFISH Workshop EFFoST conference. **Upsalla, Sweden**. 24-28 November, 2014.
12. Nazlin K Howell, Pooimun Leong, Marwa Yousr. Functional properties of bioactive peptides from salmon. ISNFF conference. **Istanbul**, 14-16 October 2014.
13. Nazlin K Howell, Pooimun Leong, Marwa Yousr. Biofunctional products from fish waste. **IUFOST Congress 2014. Montreal** August 2014.
14. Nazlin Howell. Molecular characterisation and rheological behaviour of fish skin gelatin. Polymer Conference, **Kerala, India**, 11-13th October 2014.
15. Howell NK and Odote Oduor, P. Nutritional and organoleptic quality of hybrid solar tunnel/wind dried fish products. Asia-Pacific Aquaculture Conference, **Ho Chi Minh City, Vietnam**, 11-13 Dec 2013.

16. Howell, NK. Securefish and upgrading waste proteins to bioactive peptides. University Pertanian, Kuala Lumpur December 2013.
17. Howell, NK and Kasase, C (2010). Bioactive peptides and proteins from fish muscle and collagen. In *Biologically Active Food Proteins and Peptides in Health – Fundamental and Clinical Aspects*. Ch 14. Ed Y Mine, E C.Y. Li-Chan, and B Jiang, Blackwell-Wiley Publ. London, pp 203-224.
18. Alghazeer, R., Saeed, S and Howell, NK. (2008). Aldehyde formation in frozen fish. *Food Chemistry* 108, 801-810.
19. Sarkardei, S and Howell, NK (2007). Effects of Freeze-drying on Lipids of Atlantic Mackerel (*Scomber scombrus*) and Horse Mackerel (*Trachurus trachurus*) by FT-Raman spectroscopy. *Food Chemistry* 103, 62-70.
20. Sarkardei, S and Howell, NK. (2007). Effects of natural antioxidants on stored freeze-dried food product formulated using Horse Mackerel (*Trachurus trachurus*). *IJFST* , 43, 309-315.
21. Badii, F and Howell, NK. (2006). Fish gelatin: structure, gelling properties and interaction with egg albumen proteins. *Food Hydrocolloids* 20, 630-640.
22. Merdaw, A.A., Sharif, A.O. and Derwish, G.A.W, (2010a). Water permeability in polymeric membranes, Part I, *Desalination J.* 260, 180-192.
23. Howell, NK. (Dec 3-6 2013). Bioactive peptides from fish and its beneficial effects on human health. Global Symposium on Aquatic resources for eradicating hunger and malnutrition – opportunities and challenges, Mangalore, India.
24. Howell, NK. **Invited Presentation as Coordinator of the EU FP7 SECUREFISH** project at the European Commission Representation of the FP7 Launch of Final Calls in LISBON on 9th July 2012. **(Out of all European projects funded in FP7 Food and Agriculture, our SECUREFISH project is one of five invited for the presentation).**
25. Howell, NK. Physicochemical properties and bioactivity of fish proteins. 5th International Conference on Nutraceuticals & Functioning Foods, Kailua-Kona, Hawaii, USA. December 1-6, 2012.
26. Howell, NK. Bioactive peptides from fish muscle, 16th World Congress of Food Science and Technology of IUFoST, Addressing Global Food Security and Wellness, Foz do Iguassu, Parana State, Brazil. August 5-9 2012.
27. Norizah Mhd Sarbon, Farah Badii and Nazlin K Howell (2012). Preparation and characterisation of chicken skin gelatin as an alternative to mammalian gelatin. *Food Hydrocolloids*, 30, 143-151. Available on line.
28. Norizah Mhd Sarbon and Nazlin K Howell (2013). Angiotensin -1 converting enzyme (ACE) inhibitory peptides from chicken skin gelatin hydrolysate. Submitted.

29. Dileep, A. O., Shamasundar, B.A., Binsi, Badii, F and Howell, N.K. (2011). Composition, physicochemical and rheological properties of fresh Bigeye Snapper (*Priacanthus Hamrur*) meat. J. Food Biochemistry **In Press**: DOI: 10.1111/j.1745-4514.2011.00592.x.
30. Dileep, A. O., Shamasundar, B.A., Binsi, and Howell, N.K. (2010). Composition and quality of rice flour-fish mince based extruded products with emphasis on thermal properties of rice flour. J. Texture Studies 41, 190-207.
31. Dileep, A. O., Shamasundar, B.A., Binsi, Badii, F and Howell, N.K. (2009). Rheological and functional properties of gelatin from the skin of Bigeye Snapper (*Priacanthus Hamrur*). Influence of gelatin on the gel-forming ability of fish mince. J. Food Hydrocolloids 23, 132-145.
32. Alghazeer, R, Saeed, S and Howell, N. (2008). Formation of 4-hydroxynonenal (4-HNE) in frozen mackerel. J. Sci Food Agric. 88. 1128-1134.
33. Alghazeer, R and Howell, N. (2010). Effect of green tea on protein structure of mackerel (*Scomber scombrus*) during frozen storage by FT-Raman spectroscopy. Int J. Food Sci. Technol. Accepted.
34. Alghazeer, R, Gao, H and Howell, N. (2008). Cytotoxicity effect of oxidised lipids on cultured colonal human intestinal cancer cells (Caco-2 cells). Toxicology Letters, 140, 202-211.
35. Leelapongwattana K, Benjakul S, Visessanguan W, and Howell, N.K.(2008). Raman spectroscopic analysis and rheological measurements on natural actomyosin from haddock (*Melanogrammus aeglefinus*) during refrigerated (4oC) and frozen (-10 oC) storage in the presence of trimethylamine-N-oxide demethylase from kidney of lizardfish (*Saurida tumbil*). Food Chem. 106, 1253-1263.
36. Norizah Mhd Sarbon, Farah Badii and Nazlin K Howell (2012). Preparation and characterisation of chicken skin gelatin as an alternative to mammalian gelatin. Food Hydrocolloids, 30, 143-151. Available on line.
37. Norizah Mhd Sarbon, Farah Badii and Nazlin K Howell (2012). The effect of chicken skin gelatin and whey protein interactions on rheological and thermal properties. Food Hydrocolloids. Accepted.
38. Norizah Mhd Sarbon and Nazlin K Howell (2013). Angiotensin -1 converting enzyme (ACE) inhibitory peptides from chicken skin gelatin hydrolysate. Submitted.
39. Dileep, A. O., Shamasundar, B.A., Binsi, Badii, F and Howell, N.K. (2011). Composition, physicochemical and rheological properties of fresh Bigeye Snapper (*Priacanthus Hamrur*) meat. J. Food Biochemistry **In Press**: DOI: 10.1111/j.1745-4514.2011.00592.x.
40. Dileep, A. O., Shamasundar, B.A., Binsi, and Howell, N.K. (2010). Composition and quality of rice flour-fish mince based extruded products with emphasis on thermal properties of rice flour. J. Texture Studies 41, 190-207.
41. Dileep, A. O., Shamasundar, B.A., Binsi, Badii, F and Howell, N.K. (2009). Rheological and functional properties of gelatin from the skin of Bigeye Snapper (*Priacanthus Hamrur*). Influence of gelatin on the gel-forming ability of fish mince. J. Food Hydrocolloids 23, 132-145.
42. Alghazeer, R, Saeed, S and Howell, N. (2008). Aldehyde formation in frozen fish. Food Chemistry 108, 801-810.

43. Alghazeer, R, Saeed, S and Howell, N. (2008). Formation of 4-hydroxynonenal (4-HNE) in frozen mackerel. *J. Sci Food Agric.* 88. 1128-1134.
44. Alghazeer, R and Howell, N. (2010). Effect of green tea on protein structure of mackerel (*Scomber scombrus*) during frozen storage by FT-Raman spectroscopy. *Int J. Food Sci. Technol.* Accepted.
45. Alghazeer, R, Gao, H and Howell, N. (2008). Cytotoxicity effect of oxidised lipids on cultured colonal human intestinal cancer cells (Caco-2 cells). *Toxicology Letters*, 140, 202-211.
46. Leelapongwattana K, Benjakul S, Visessanguan W, and Howell, N.K.(2008). Raman spectroscopic analysis and rheological measurements on natural actomyosin from haddock (*Melanogrammus aeglefinus*) during refrigerated (4oC) and frozen (-10 oC) storage in the presence of trimethylamine-N-oxide demethylase from kidney of lizardfish (*Saurida tumbil*). *Food Chem.* 106, 1253-1263.
47. Leelapongwattana, K, Benjakul, S, Visessanguan, W and Howell, Nazlin K. (2008). Effect of some additives on the inhibition of lizardfish trimethylamine-N-oxide demethylase and frozen storage stability of minced flesh. *Int. J. Food Sci Technol.* 43(3):448-455.
48. Nandutu, A M and Howell, NK (2009). Nutritional And rheological properties of sweet potato based infant food and its preservation using antioxidants. *African Journal of Food, Agriculture, Nutrition and Development*, 9, 1077-1091.
49. Eduard Dàvila, Dolors Parés, Nazlin K. Howell (2007). Studies on plasma proteins interactions in heat-induced gels by differential scanning calorimetry and FT-Raman spectroscopy. *Food Hydrocolloids* 21, 1144-1152.
50. Eduard Dàvila, Dolors Parés, Nazlin K. Howell (2006). FT Raman spectroscopy study of heat-induced gelation of plasma proteins as influenced by pH. *J. Agric and Food Chem.* 54, 7890-7897.
51. Rahimuddin, S, Khoja, S, Zuhair, M M, Howell, N K and Brown, J E. (2007). Inhibition of peroxidation in UVA-treated skin fibroblasts by luteolin and its glucosides. *Eur. J. Lipid Sci.* 109, 647-655.
52. Wu, W, Clifford MN and Howell NK (2007). The effect of instant green tea on the foaming and rheological properties of egg albumen proteins. *J. Sci. Food Agric.* 87, 1810-1819.
53. Sarkardei, S and Howell, NK (2007). Effects of Freeze-drying on Lipids of Atlantic Mackerel (*Scomber scombrus*) and Horse Mackerel (*Trachurus trachurus*) by FT-Raman spectroscopy. *Food Chemistry* 103, 62-70.
54. Saeed, S, Gillies, D, Wagner, G and Howell, N. K. (2006). ESR and NMR spectroscopy studies on formation of dityrosine in emulsions containing oxidised methyl linoleate. *Food and Chemical Toxicology* 44, 1385-1392.
55. Nandutu, A M, Clifford, M and Howell, N.K. (2007). Analysis of phenolic compounds in Ugandan sweet potato varieties (NSP, SPK AND TZ). *African Journal of Biochemistry Research* Vol. 1 (3), 029-036.
56. Cheow, CS, Norizah, MS, Kyaw, ZY and Howell, NK. (2007). Preparation and characterisation of gelatins from the skins of sin croaker (*Johnius dussumieri*) and shortfin scad (*Decapterus macrosoma*). *Food Chemistry*, 101, 386-391.
57. Intarasirisawat R, Benjakul S, Visessanguan, W and Howell, N.K. (2007). Autolysis study of bigeye snapper (*Priacanthus macracanthus*) skin and its effect on gelatin *Food Hydrocolloids* 21 (4): 537-544.

58. Leelapongwattana, K., Benjakul, S., Visessanguan, W. and Howell, N. K. (2008). Effect of trimethylamine-*N*-oxide demethylase from lizardfish kidney on biochemical changes of haddock natural actomyosin stored at 4 and -10°C. *Eur. Food Res. Technol.* 226, 833-841.
59. Leelapongwattana, K., Benjakul, S., Visessanguan, W. and Howell, N. K. (2007). Effects of inhibitors and antioxidants on physicochemical and biochemical changes of haddock muscle induced by lizardfish trimethylamine-*N*-oxide demethylase during frozen storage. *J. Sci. Food Agric.* in review.
60. Leelapongwattana K, Benjakul S, Visessanguan W, Howell NK. (2005). Physicochemical and biochemical changes in whole lizardfish (*Saurida micropectoralis*) muscles and fillets during frozen storage. *J. Food Biochemistry* 29, 547-569.
61. Leelapongwattana, K, Benjakul, S, Visessanguan, W and Howell, N. K.(2005). Physicochemical and biochemical changes during frozen storage of minced flesh of lizardfish (*Saurida micropectoralis*). *Food Chemistry* 90, 141-150.
62. Dileep, A. O., Shamasundar, B.A., Binsi, P.K., Badii, F and Howell, N.K. (2006). Effect of ice storage on the physicochemical and dynamic viscoelastic properties of ribbonfish (*Trichiurus* spp). *J. Food Science* 70, 537-545.
63. Cheow, CS, Kyaw, ZY, Howell, NK and Dzulkifly, M.H. (2005). Relationship between physicochemical properties of starches and expansion of fish cracker (keropok). *Journal of Food Quality* 27, (1), 1-12.
64. Ngarize, S, Herman, H., Adams, A and Howell, N.K. (2004). Comparison of changes in the secondary structure of unheated, heated and high-pressure treated β -lactoglobulin and ovalbumin proteins using Fourier Transform Raman spectroscopy and self deconvolution. *J.Agric. Food Chem.* 52, 6470-6477.
65. Ngarize, S, Adams, A and Howell, N.K. (2005). A comparative study of heat and high pressure induced gels of whey and egg albumen proteins and their binary mixtures. *Food Hydrocolloids.* 19, 984-996.
66. Ngarize, S, Adams, A and Howell, N.K. (2004). Studies on egg albumen and whey protein interactions by FT-Raman spectroscopy and rheology. *Food Hydrocolloids* 18, 49-59.
67. Ngarize, S, Adams, A and Howell, N.K. (2006). A study of the effects of salt on the rheological properties and molecular interactions of unheated, heated and high pressure treated ovalbumin and β -lactoglobulin proteins.. *Food Hydrocolloids.* Accepted.
68. Badii, F and Howell, N.K.(2004). Elucidation of protein aggregation in frozen cod and haddock by transmission electron microscopy/ immunocytochemistry, light microscopy and atomic force microscopy. *J Sci. Food Agric.* 84, 1919-1928.
69. Saeed, S and Howell, N.K. (2004). Rheological and differential scanning calorimetry studies on structural and textural changes in frozen Atlantic mackerel (*Scomber scombrus*). *J Sci. Food Agric.* 84, 1216-1222.
70. Badii, F and Howell, N.K. (2003). Elucidation of molecular changes in the water soluble proteins in cod by circular dichroism and FT-Raman spectrsocopy. *J. Sci Food and Agric.* Submitted.
71. Badii, F and Howell, N.K. (2003). Elucidation of the effect of formaldehyde and lipids on collagen from frozen cod by Raman spectroscopy and differential scanning calorimetry. *J. Agric. Food Chemistry*, 51, 1440-1446.
72. Comfort, S and Howell, N.K. (2003). Gelation properties of soluble wheat proteins and meat protein mixtures. *Food Hydrocolloids* 17, 149-159.

73. Saeed, S and Howell, N.K. (2002). Effect of lipid oxidation and frozen storage on muscle proteins of Atlantic mackerel (*Scomber scombrus*). J Sci Food Agric. 82, 579-586.
74. Badii, F and Howell, N.K. (2002). Effect of antioxidants, citrate and cryoprotectants on protein solubility and texture of frozen cod (*Gadus morhua*). J. Agric. Food Chemistry, 50, 2053-2061.
75. Badii, F and Howell, N.K. (2002). Changes in the texture and structure of cod and haddock fillets during frozen storage. Food Hydrocolloids 16, 313-319.
76. Badii, F and Howell, N.K. (2002) A comparison of biochemical changes in cod (*Gadus morhua*) and haddock (*Melanogrammus aeglefinus*) during frozen storage. J. Sci. Food Agric. 82, 87-97.
77. Howell, N.K., Herman, H and Li-Chan, E.C.Y (2001). Elucidation of protein-lipid interactions in a lysozyme-corn oil system by Fourier Transform Raman spectroscopy. J. Agric. Food Chemistry 49, 1529-1533.
78. Saeed, S and Howell, N.K.(2001). 12-Lipoxygenase activity in the muscle tissue of Atlantic mackerel (*Scomber scombrus*) and its prevention by antioxidants. J Sci Food Agric. **81**, 1-6.
79. Kyaw, Z.Y., Yu, S.Y, Dzulkifly, M.H and Howell, N.K.(2001). Effect of fish:starch ratio on viscoelastic and microstructure of fish cracker (keropok) dough. International Journal of Food Science and Technology. 36, 1-7.
80. Cheow,C.S., Yu,S.Y., Howell,N.K., Che Man,Y & Mohamad, S.K.(1999). Effect of salt and fish contents on the microstructure and expansion of fish cracker (keropok). J Sci Food Agric. **79**, 879-885.
81. Medina, I., Saeed, S. and Howell, N.K.(1999). Enzymatic oxidative activity in sardine (*Sardina pilchardus*) and herring (*Cuplea harengus*) during chilling and correlation with freshness. Europ. Food Res. Technol. **210**, 34-38.
82. Saeed, S., Fawthrop, S.A. and Howell, N.K. (1999). Electron spin resonance (ESR) study on free-radical transfer in food lipid-protein interaction. J Sci Food Agric. **79**, 1809-1816.
83. Cheow,C.S., Yu,S.Y. & Howell, N.K. (1999). Effect of salt, sugar and MSG on the viscoelastic properties of fish cracker gel. J. Food Processing and Preservation. **23**, 21-37.
84. Howell, N.K., Arteaga, G., Nakai, S and Li-Chan, E.C.Y. (1999). Raman spectral analysis in the C-H stretching region of proteins and amino acids for investigation of hydrophobic interactions. J. Agric. Food Chem. **47**, 924-933.
85. Saeed, S and Howell, N.K. (1999). High performance liquid chromatography (HPLC) and spectroscopic studies on fish oil oxidation products extracted from frozen Atlantic mackerel. J. American Oil Chem. Soc. **76**, (3), 391-397.
86. Mendes, R., Batista, I, Kandando, R and Howell, N. (1998).Influence of washing parameters on the characteristics of horse mackerel (*Trachurus trachurus*) mince. Journal of Food Biochemistry **22**, 511-528.
87. Howell, N.K., Shavila, Y., Grootveld, M and Williams, S. (1996). High resolution NMR and magnetic resonance imaging (MRI) studies on fresh and frozen cod (*Gadus morhua*). Journal of Magnetic Resonance Analysis **2**, 180-181.
88. Howell, N.K. and Li-Chan, E.C.Y. (1996). Elucidation of the Interaction of Lysozyme and Whey Proteins by Raman spectroscopy. International Journal of Food Science and Technology **31** 439-452.
89. Friedli, G.L.and Howell, N. (1996). Gelation properties of deamidated soluble wheat protein. Food Hydrocolloids **10**, 255-261.

90. Howell, N.K. Shavila, Y. Grootveld, M. and Williams, S. (1996). High resolution NMR and Magnetic Resonance Imaging of Fresh and Frozen Cod (*Gadus morhua*) and Haddock (*Melanogrammus aeglefinus*). *Journal of the Science of Food and Agriculture* **72**, 49-56.
91. Nazlin K Howell and Chitundu Kasase (2010). Bioactive peptides and proteins from fish muscle and collagen. In *Biologically Active Food Proteins and Peptides in Health – Fundamental and Clinical Aspects*. Ch 14. Ed Yoshinori Mine, Eunice C.Y. Li-Chan, and Bo Jiang. Blackwell-Wiley Publ. London. 203-224.
92. Meng, G, Howell, NK and Li-Chan ECY (2006). Investigation of protein-lipid interactions by vibrational spectroscopy. In *Lipid Analysis and Lipidomics.: New Techniques and Applications*. Ed. M.M. Mossoba, J.K.G. Kramer, J.T. Brenna and R.E. McDonald. AOACS Press. Pp 355-376.
93. Howell, N.K. (2005). Interaction of proteins with small molecules. In *Ingredient Interactions - Effects on Food Quality*. Ed. A. Gaonkar and A. McPherson. CRC Press Taylor and Francis, Florida. 2nd Ed. Pp. 309-341.
94. Howell, N.K., Saeed, S and Gillies, D (2005). ESR and NMR spectroscopy studies on emulsions containing β -lactoglobulin and oxidised methyl linoleate. In *Magnetic Resonance in Food Science: A Multivariate Challenge*. Ed. S B Engleson, P S Belton and H J Jakobsen. Royal Society of Chemistry, UK. Pp 104-112.
95. Howell, N.K. (2004). Fish gelatin: structure, gelling properties and interaction with other food proteins. In *Gums and Stabilisers for the Food Industry 12*. Ed. P.A. Williams and G.O. Philips. The Royal Society of Chemistry, Cambridge, UK. Pp. 167-178.
96. Howell, N.K. (2004). The chemistry of quality enhancement in low-value fish. In *Quality of Fresh and Processed Foods*. American Chemical Society. Ed. A. Spanier. Kluwer Academic/Plenum Publishers, New York. Pp 135-145.
97. Howell, N.K. (2002). Elucidation of protein-lipid interactions. In *Gums and Stabilisers for the Food Industry 11*. Ed. P.A. Williams and G.O. Philips. The Royal Society of Chemistry, Cambridge, UK. Pp. 136-144.
98. Howell, N.K. (2000). Advances in protein interactions. In *Gums and stabilisers for the food industry 10*. Ed. P.A. Williams and G.O. Philips. The Royal Society of Chemistry, Cambridge, UK. Pp . 217-227.
99. Howell, N.K. and Saeed, S. (1999). The application of electron spin resonance spectroscopy to the detection and transfer of free radicals in protein-lipid systems. In: *Applications of Magnetic Resonance in Food Science*. Ed. P.S. Belton, B.P. Hills and G.A. Webb. The Royal Society of Chemistry, Cambridge, UK. Pp 133-143.
100. Howell, N.K. and Saeed, S. (1999). The effect of antioxidants on the production of lipid oxidation products and transfer of free radicals in oxidised lipid-protein systems. In: *Antioxidants in Human Health and Disease*. Ed. T.K. Basu, N.J Temple and M.L. Garg. CAB International, Oxford, UK. pp 43-54.
101. Howell, N.K. (1999). Gelation properties and interactions of fish proteins. In: *Food Hydrocolloids I: Physical Chemistry and Industrial Application of Gels, Polysaccharides and Proteins*. Ed. K. Nishinari. Elsevier, Amsterdam Pp 399-406.
102. Somers, P and Howell, N.K. (1997). Gelation properties of smooth and skeletal muscle myosin proteins. In *Gums and stabilisers for the food industry 9*. Ed. P.A. Williams and G.O. Philips. The Royal Society of Chemistry, Cambridge, UK. Pp 136-144.

103. Howell, N.K.(1996) Chemical and enzymatic modifications of food proteins. In Food Proteins: Properties and Applications Vol 1. Ed. S. Nakai and H.W. Modler. Food Science and Technology Series. VCH Publishers, New York. pp. Pp 235-280. ISBN: 1-56081-691-0.
104. Howell, N.K. (1995). Synergism and Interactions in Mixed Food Protein Systems. In Biopolymer Mixtures, Ed. S.E. Harding, S.E.Hill and J. Mitchell. University of Nottingham Press, pp 329-347. ISBN: 1-897676-247.
105. Howell, N.K. (1995). Interaction of proteins with small molecules. In Ingredient Interactions - Effects on Food Quality. Ed. A. Gaonkar. Marcel Dekker, New York. Pp.269-289. ISBN:0-8247- 9347-1.
106. Howell, N.K. (1994). Elucidation of protein-protein interactions in gels and foams. In Gums and stabilisers for the food industry 7. Ed. G.O. Philips., P.A. Williams and D.J. Wedlock, Oxford University Press. UK. Pp 77-89. ISBN:0-19-963465-3.
107. Howell, N.K. (1992). Protein-protein Interactions. In Biochemistry of Food Proteins. Ed.B.J.F.Hudson. Elsevier Applied Science Publ.Ltd., Essex, pp 35-74. ISBN 1-85166-768.
108. Howell, N.K.(1991). Protein-Protein Interactions. In Developments in Food Proteins -7 Ed.B.J.F.Hudson. Elsevier Applied Science Publ.Ltd., Essex, pp 231-270.
109. Howell, N.K and Wu, W (2009). Effect of tea constituents on the rheological and foaming properties of globular proteins. Proceedings of the 5th International Symposium on Food Rheology and Structure. Ed. P. Fischer, P. Erni, and E.J Windhab. ETH Swiss Federal Institute of Technology, Zurich. Pp 323-326.
110. Howell, N.K. and Saeed, S (2006). Rheological and spectroscopic studies of emulsions containing proteins and oxidized lipids. Proceedings of the 4th International Symposium on Food Rheology and Structure. Ed. P. Fischer, P. Erni, and E.J Windhab. ETH Swiss Federal Institute of Technology, Zurich. Pp 323-326.
111. Howell, N.K., Saeed, S and Badii, F. (2005). Molecular mechanisms of protein-lipid interactions. The International Conference on Nanotechnology: Science and Applications (Nanotech Insight 2005),Ed. A Haist and MMS Abdel-Mottaleb, Chemnitz University of Technology, Germany. Pp 140-141.
112. Howell, N.K. (2001). Biochemical changes and processing of under-utilised marine fish in Africa and Asia. EC Fisheries Cooperation Bulletin **14**, 45-47.
113. Howell, N. K. (2001). Changements et transformation biochimiques des poissons de mer peu employes en Afrique et en Asia. CE Cooperation Peche Bulletin **14**, 48-50.
114. Howell, N.K. (2000). EC Synopsis of selected R&D projects in the field of fisheries and aquaculture. ISBN 92-828-7143-6. Pp 46-49.
115. Howell, N.K.(1999). Protein-protein and protein-polysaccharide interactions in food gels. Food Ingredients and Analysis International, **4**, 23-30.
116. Flair-Flow dissemination report F-FE 290/98 (1998). Toughening in Frozen Fish. EU FAIR project.CT95.1111.
117. Howell, N.K. (1998). Biochemical changes and protein interactions leading to aggregation and toughening in frozen fish. Third European Marine Science and Technology Conference Project Synopses Vol. VI: Fisheries and Aquaculture (FAIR 1994-1998). Published by the European Commission, Luxembourg. ISBN No . 92-828-3039-X. Pp 110-113.
118. Howell, N.K. (1997). Processing of and related biochemical studies on the under-utilised marine fish/crustacea species in Africa and Asia. Scientific cooperation of the European Union

- with the countries of South-East Asia. Published by the European Commission EC DG XII Luxembourg. ISBN No . 92-828-0574-3. Pp 108-109.
119. Flair-Flow dissemination report F-FE 204/96 (1995). Mechanisms of aggregation of proteins in frozen fish. EU FAR project.
 120. Howell, N.K. (1995). Processing of and related biochemical studies on the under-utilised marine fish/crustacea species in Africa and Asia. European Commission Life Sciences and technologies for developing countries STD 3 Agriculture. Published by EC DG XII Luxembourg. ISBN No . 92-827-6619-5. Pp 306-307.
 121. Howell, N.K.(1995).Elucidation of aggregation mechanisms of proteins in frozen fish. Fisheries and Aquaculture Research Vol.1 pp 243-246. Published by EU DG XII Luxembourg. ISBN No . 92-826-9926-9.
 122. Howell, N.K. (1990). Food protein ingredients, structure and function. Food Technology International Europe, 175-179.
 123. Nazlin K Howell, Norizah Mhd Sarbon and Farah Badii. Rheological and physicochemical properties of a novel source of gelatin from chicken skin as an alternative to mammalian gelatin. Food Hydrocolloids Gums and Stabilisers International meeting 28th June-1st July, 2011. **Wageningen**, The Netherlands.
 124. Nazlin K Howell and Chitundu Kasase Bioactive peptides from Atlantic mackerel (*Scomber scombrus* 41st West European Fish Technologists Association (WEFTA) Annual Meeting “Seafood for the Modern Consumer” 27-30 September 2011, **Gothenburg, Sweden**.
 125. Howell, N. K. Food Structure, Function and Health. North Carolina State University. **Kannapolis, USA**. June 2011.
 126. Howell, N.K. Effect of polyphenols on protein structure and function. University of British Columbia, **Vancouver**, Canada. 5th August 2011.
 127. Howell, Nazlin. Industrial Science and Technology Workshop: Protein functionality. **Washington DC, USA**. 31st August, 2011.
 128. Howell, N.K. Elucidation of Protein Oxidation by ESR, NMR and FT-Raman Spectroscopy. BIT Life Sciences Third Annual Protein and Peptide Conference. **Beijing** March 21-23, 2010.
 129. Howell, N.K. Examining the functional qualities of established and emerging natural food colourings that influence protein structure and function. Innovation in Natural Colours. **London**, February 25-26, 2010.
 130. Howell, N.K and Kasase, C. Antihypertensive and antioxidant activity of fish bioactive peptides. American Chemical Society Symposium on Biopeptides and specialty proteins for health promotion and disease risk reduction. **Salt Lake City, USA**. March 2009.
 131. Howell, N.K. Effect of polyphenols on protein structure and function. University of British Columbia, **Vancouver**, Canada. July 7th 2010.
 132. Howell NK Food Structure, Function and Health, Nestle, **York**. June 2010.
 133. Howell, N.K. Improving Food Security by reducing post-harvest losses. INTI, **Buenos Aires**, Argentina, October 2009
 134. Howell NK Eco-challenges in the Fisheries Chain INTI, Mar del Plata, Argentina. October, 2009.
 135. Howell, N.K and Wu, W. Effect of tea constituents on the rheological and foaming properties of globular proteins. 5th International Symposium on Food Rheology and Structure. ETH, **Zurich**, 14-18 June 2009.

136. Howell, N.K, Zheng, N and Hao Jin. Effect of polyphenol-rich bog bilberry extract and pH on the gelation properties of whey proteins. 14th Food Hydrocolloids conference, **Wrexham**. 23-26 June, 2009.
137. Howell, N.K. Effect of protein-lipid interactions on texture and health. Food Hydrocolloids Conference, **Singapore**, 15-20 June 2008.
138. Howell, N.K. Biochemical changes in frozen fish. Royal Golden Jubilee Conference, Pattaya, **Thailand**. April 2007.
139. Howell, N.K. Effect of natural antioxidants on protein functionality. Hunan Agricultural University, Changsha, Hunan Province, **China**, November 2007.
140. Howell, N.K. Protein-polyphenol interactions. China Agricultural University, **Beijing, China**, November 2007.
141. Howell, N.K. Role of natural antioxidants in protein oxidation. East China Normal University, Shanghai, **China**, November 2007.
142. Howell, N.K. Role of natural antioxidants in minimising oxidative damage in cultured human cells. Aga Khan University, Karachi, **Pakistan**, November 2007.
143. Nazlin K. Howell and Suhur Saeed. Rheological and spectroscopic studies of emulsions containing proteins and oxidized lipids. 4th International Symposium on Food Rheology and Structure. **Zurich** February 19-23, 2006.
144. Howell, N.K. Effect of oxidised lipids on protein structure and cultured human cells. Hunan University, Changsha, Hunan Province, **China**, October 2006.
145. Howell, N.K. Effect of oxidised lipids on protein structure. China Agricultural University, **Beijing, China**, November 2006.
146. Howell, N.K. Protein-lipid interactions. East China Normal University, Shanghai, **China**, November 2006.
147. Howell, N.K. Effect of oxidised lipids and natural antioxidants on protein structure and cultured human cells. Aga Khan University, Karachi, **Pakistan**, November 2006.
148. Nazlin K. Howell, Suhur Saeed and Farah Badii. Molecular mechanisms of protein-lipid interactions. The International Conference on Nanotechnology: Science and Applications (Nanotech Insight 2005), **Luxor, Egypt** 20-25 February, 2005.
149. Nazlin K. Howell, Suhur Saeed and Duncan Gillies. ESR and NMR spectroscopy studies on emulsions containing β -lactoglobulin and oxidised methyl linoleate. 7th International Conference on Applications of Magnetic Resonance in Food Science, **Copenhagen** on September 13-15, 2004.
150. Howell, N.K. Mechanisms of protein-lipid interactions. Hunan University, **Changsha**, Hunan Province, China, October 2005.
151. Nazlin K. Howell Protein-lipid Interactions. University of British Columbia, Food Nutrition and Health, **Vancouver**, Canada. 12th August 2004.
152. Howell, N.K. Seafood Biotechnology: processing, quality and preservation of fish. UNESCO Expert meeting, Sultan Qaboos University, **Muscat**, Oman, 3-4 December, 2003.
153. Howell, N.K. Gelatin: structure, physicochemical properties and interactions with food proteins. Sultan Qaboos University, **Muscat**, Oman 2 December 2003. .
154. **Howell, N.** Physicochemical and rheological properties of fish gelatin. The Twelfth Gums and Stabilisers for the Food Industry Conference, **Wrexham**, 24-28 June 2003.
155. Howell, N.K. Fish gelatins: structure and function. Department of Food, Nutrition and Health, University of British Columbia, **Vancouver, Canada**, 23rd August 2003.

156. Howell, N.K. Effect of high pressure processing on the physical-chemical properties of food proteins. Sixth International Conference on Food Hydrocolloids, University of Guelph, **Guelph, Canada**, 15-19 July, 2002.
157. Howell, N.K. Effect of heating and high pressure on whey and egg albumen proteins. Department of Food, Nutrition and Health, University of British Columbia, **Vancouver, Canada**, 13 August 2002.
158. Howell, N.K. Elucidation of the effect of lipids on the structure of lysozyme by FT-Raman spectroscopy. First International Conference on Biomedical Spectroscopy-From Molecules to Men, **Cardiff**, 8-10th July, 2002.
159. **Howell, N.** Elucidation of protein-lipid interactions. The Eleventh Gums and Stabilisers for the Food Industry Conference, **Wrexham**, 2-7 July 2001.
160. Howell, N. The chemistry of quality enhancement in low-value fish. PacifiChem 2000 meeting, American Chemical Society, **Honolulu, Hawaii**, 14-19 December 2000.
161. Howell, N.K. Elucidation of protein-lipid interactions by FT-Raman and electron spin resonance spectroscopy. Food Colloids 2000 Max Plank Institute, **Potsdam, Germany**, 2-6 April 2000.
162. Howell, N and Badii, F (1999). Gelation properties and interactions of fish proteins. 10th World Congress of Food Science and Technology, **Sydney, Australia**, 3-8 October 1999.
163. Howell, N. Protein-protein interactions in food gels. Food Functionality Conference, **Chicago, USA**, 25-29 July 1999.
164. Howell, N. Effect of biochemical changes on frozen fish texture. University of Leeds, **Leeds**, 13-14 September 1999.
165. Howell, N. Lipid oxidation in fatty fish: stability and safety. International Meeting on Developments in Fish Processing, **Grimsby, UK**. 24-26 June 1999.
166. Howell, N. Recent advances in protein-protein interactions. The Tenth Gums and Stabilisers for the Food Industry Conference, **Wrexham** 7-11 July 1999.
167. Howell, N.K. Gelation and interaction of fish proteins. Fourth International Conference on Food Hydrocolloids, Osaka City University, **Osaka, Japan**, 3-10 October 1998.
168. Howell, N.K. Elucidation of protein-lipid interactions by ESR spectroscopy. The Fourth International NMR Conference on Applications of Magnetic Resonance in Food Science, University of East Anglia, **Norwich**, September 1998.
169. Howell, N.K. Exploitation of spectroscopic techniques in food research and analysis. The Scientific Instrument Association / The Royal Society of Chemistry Conference, **London**, 27-30th April 1998.
170. Howell, N.K. Processing, quality and preservation of fish and fish products. Advanced and optimised technologies in the Food Agro-industry collaboration with Mediterranean countries. EU Expert meeting, **Rome** 3-5 April 1998.
171. Howell, N.K. Elucidation of aggregation mechanisms of proteins in frozen fish. United Biscuits Ltd. **High Wycombe**, 1996.
172. Howell, N.K. Biochemical changes in frozen fish. Department of Food Science, University of British Columbia, **Vancouver, Canada**, 12 August 1997.
173. Saeed, S. and Howell, N.K. The application of electron spin resonance (ESR) spectroscopy to detect the production and transfer of free radicals in oxidised lipid-protein systems. 6th World Congress on Clinical Nutrition 'Antioxidants and Disease' **Banff, Canada** 23-26th July 1997.
174. Congress on Clinical Nutrition 'Antioxidants and Disease' **Banff, Canada** 23-26th July 1997.

175. Howell, N. Biochemical changes in frozen fish (protein aggregation). Developments in Fish Processing **Grimsby**, UK. 24-26 June 1997.
176. Somers, P and Howell, N. Thermal gelation of smooth and skeletal muscle proteins. The Ninth Gums and Stabilisers for the Food Industry Conference, **Wrexham** 7-11 July 1997.
177. Howell, N. High resolution NMR and magnetic resonance imaging studies on fresh and frozen cod (*Gadus morhua*). The Third International NMR Conference on Applications of Magnetic Resonance in Food Science, **Nantes, France**, 16-18 September 1996.
178. Howell, N., Bristow, E and Friedli, G-F . The interaction of deamidated soluble wheat proteins with sodium alginate. Food Hydrocolloids Meeting, **Saratov, Russia**, 17-22 June 1996.
179. Howell, N, K. Protein-polysaccharide interactions in food gels. Molecular Interactions and Food Structure. LINK Food Processing Science Conference, **London**, April 1995.
180. Howell, N.K. Specific protein interactions. The Eighth Gums and Stabilisers for the Food Industry Conference, **Wrexham**, 10-14 July 1995.
181. Howell, N.K., Shavila., J; Grutweld, M and Williams, S. NMR Studies on Fresh and Frozen Fish. The Second International NMR Conference on Applications of Magnetic Resonance in Food Science, **Alveiro, Portugal**.
182. Howell, N.K. Synergism and Interactions of Food Proteins. International Conference on Biopolymer Mixtures, 56th Meeting of the Easter School, University of Nottingham, **Sutton Bonington**, 1994.
183. Howell, N.K. Interactions of gluten proteins in mixed gels. International Conference on Food Hydrocolloids. The Ohio State University, **Ohio, USA**, September 1994.
184. Howell, N.K. Raman Spectroscopy of whey proteins and lysozyme. University of British Columbia. **Vancouver, Canada**, July 1994.
185. Howell, N.K., Iyambo,A and Shavila, J. Aggregation mechanisms of proteins in fish. International Conference on Food Macromolecules, ENSBANA **Dijon, France**, 1994.
186. Howell, N.K. Protein and polysaccharide Interactions. Nestec Research Centre, **Lausanne, Switzerland**, 1994.
187. Howell, N.K. Structure-function relationships of food proteins. Amylum Research, **Aalst, Belgium**, 1994.
188. Howell, N.K. Elucidation of protein-protein interactions in gels and foams. The Seventh Gums and Stabilisers for the Food Industry Conference, **Wrexham. UK**, 1993.
189. Howell, N.K. Mechanisms of protein interactions in gels. Bone and Joint Research Unit, The London Hospital Medical College, **London**. 1992.
190. Yeboah, N. and Howell, N. Elucidation of protein-protein interactions in food gels. International Union of Food Science and Technology conference, **Den Haag**, The Netherlands, 1992.
191. Leelapongwattana, K, Benjakul, S, Visessanguan, W and Howell, Nazlin K. (2008). Effect of some additives on the inhibition of lizardfish trimethylamine-N-oxide demethylase and frozen storage stability of minced flesh. *Int. J. Food Sci Technol.* 43(3):448-455.
192. Nandutu, A M and Howell, NK (2009). Nutritional And rheological properties of sweet potato based infant food and its preservation using antioxidants. *African Journal of Food, Agriculture, Nutrition and Development*, 9, 1077-1091.
193. Eduard Dàvila, Dolors Parés, Nazlin K. Howell (2007). Studies on plasma proteins interactions in heat-induced gels by differential scanning calorimetry and FT-Raman spectroscopy. *Food Hydrocolloids* 21, 1144-1152.

194. Eduard Dàvila, Dolores Parés, Nazlin K. Howell (2006). FT Raman spectroscopy study of heat-induced gelation of plasma proteins as influenced by pH. *J. Agric and Food Chem.* 54, 7890-7897.
195. Rahimuddin, S, Khoja, S, Zuhair, M M, Howell, N K and Brown, J E. (2007). Inhibition of peroxidation in UVA-treated skin fibroblasts by luteolin and its glucosides. *Eur. J. Lipid Sci.* 109, 647-655.
196. Wu, W, Clifford MN and Howell NK (2007). The effect of instant green tea on the foaming and rheological properties of egg albumen proteins. *J. Sci. Food Agric.* 87, 1810-1819.
197. Sarkardei, S and Howell, NK (2007). Effects of Freeze-drying on Lipids of Atlantic Mackerel (*Scomber scombrus*) and Horse Mackerel (*Trachurus trachurus*) by FT-Raman spectroscopy. *Food Chemistry* 103, 62-70.
198. Sarkardei, S and Howell, NK. (2007). Effects of natural antioxidants on stored freeze-dried food product formulated using Horse Mackerel (*Trachurus trachurus*). *IJFST*, **43**, 309-315.
199. Saeed, S, Gillies, D, Wagner, G and Howell, N. K. (2006). ESR and NMR spectroscopy studies on formation of dityrosine in emulsions containing oxidised methyl linoleate. *Food and Chemical Toxicology* 44, 1385-1392.
200. Nandutu, A M, Clifford, M and Howell, N.K. (2007). Analysis of phenolic compounds in Ugandan sweet potato varieties (NSP, SPK AND TZ). *African Journal of Biochemistry Research* Vol. 1 (3), 029-036.
201. Cheow, CS, Norizah, MS, Kyaw, ZY and Howell, NK. (2007). Preparation and characterisation of gelatins from the skins of sin croaker (*Johnius dussumieri*) and shortfin scad (*Decapterus macrosoma*). *Food Chemistry*, 101, 386-391.
202. Badii, F and Howell, N.K. (2006). Fish gelatin: structure, gelling properties and interaction with egg albumen proteins. *Food Hydrocolloids* 20, 630-640.
203. Intarasirisawat R, Benjakul S, Visessanguan, W and Howell, N.K. (2007). Autolysis study of bigeye snapper (*Priacanthus macracanthus*) skin and its effect on gelatin *Food Hydrocolloids* 21 (4): 537-544.
204. Leelapongwattana, K., Benjakul, S., Visessanguan, W. and Howell, N. K. (2008). Effect of trimethylamine-*N*-oxide demethylase from lizardfish kidney on biochemical changes of haddock natural actomyosin stored at 4 and -10°C. *Eur. Food Res. Technol.* 226, 833-841.
205. Leelapongwattana, K., Benjakul, S., Visessanguan, W. and Howell, N. K. (2007). Effects of inhibitors and antioxidants on physicochemical and biochemical changes of haddock muscle induced by lizardfish trimethylamine-*N*-oxide demethylase during frozen storage. *J. Sci. Food Agric.* in review.
206. Leelapongwattana K, Benjakul S, Visessanguan W, Howell NK. (2005). Physicochemical and biochemical changes in whole lizardfish (*Saurida micropectoralis*) muscles and fillets during frozen storage. *J. Food Biochemistry* 29, 547-569.
207. Leelapongwattana, K, Benjakul, S, Visessanguan, W and Howell, N. K.(2005). Physicochemical and biochemical changes during frozen storage of minced flesh of lizardfish (*Saurida micropectoralis*). *Food Chemistry* 90, 141-150.
208. Dileep, A. O., Shamasundar, B.A., Binsi, P.K., Badii, F and Howell, N.K. (2006). Effect of ice storage on the physicochemical and dynamic viscoelastic properties of ribbonfish (*Trichiurus* spp). *J. Food Science* 70, 537-545.
209. Cheow, CS, Kyaw, ZY, Howell, NK and Dzulkiyfy, M.H. (2005). Relationship between physicochemical properties of starches and expansion of fish cracker (keropok). *Journal of Food Quality* **27**, (1), 1-12.

210. Ngarize, S, Herman, H., Adams, A and Howell, N.K. (2004). Comparison of changes in the secondary structure of unheated, heated and high-pressure treated β -lactoglobulin and ovalbumin proteins using Fourier Transform Raman spectroscopy and self deconvolution. *J. Agric. Food Chem.* 52, 6470-6477.
211. Ngarize, S, Adams, A and Howell, N.K. (2005). A comparative study of heat and high pressure induced gels of whey and egg albumen proteins and their binary mixtures. *Food Hydrocolloids.* 19, 984-996.
212. Ngarize, S, Adams, A and Howell, N.K. (2004). Studies on egg albumen and whey protein interactions by FT-Raman spectroscopy and rheology. *Food Hydrocolloids* **18**, 49-59.
213. Ngarize, S, Adams, A and Howell, N.K. (2006). A study of the effects of salt on the rheological properties and molecular interactions of unheated, heated and high pressure treated ovalbumin and β -lactoglobulin proteins.. *Food Hydrocolloids.* Accepted.
214. Badii, F and Howell, N.K.(2004). Elucidation of protein aggregation in frozen cod and haddock by transmission electron microscopy/ immunocytochemistry, light microscopy and atomic force microscopy. *J. Sci. Food Agric.* 84, 1919-1928.
215. Saeed, S and Howell, N.K. (2004). Rheological and differential scanning calorimetry studies on structural and textural changes in frozen Atlantic mackerel (*Scomber scombrus*). *J. Sci. Food Agric.* 84, 1216-1222.
216. Badii, F and Howell, N.K. (2003). Elucidation of molecular changes in the water soluble proteins in cod by circular dichroism and FT-Raman spectroscopy. *J. Sci Food and Agric.* Submitted.
217. Badii, F and Howell, N.K. (2003). Elucidation of the effect of formaldehyde and lipids on collagen from frozen cod by Raman spectroscopy and differential scanning calorimetry. *J. Agric. Food Chemistry*, 51, 1440-1446.
218. Comfort, S and Howell, N.K. (2003). Gelation properties of soluble wheat proteins and meat protein mixtures. *Food Hydrocolloids* 17, 149-159.
219. Saeed, S and Howell, N.K. (2002). Effect of lipid oxidation and frozen storage on muscle proteins of Atlantic mackerel (*Scomber scombrus*). *J. Sci Food Agric.* 82, 579-586.
220. Badii, F and Howell, N.K. (2002). Effect of antioxidants, citrate and cryoprotectants on protein solubility and texture of frozen cod (*Gadus morhua*). *J. Agric. Food Chemistry*, 50, 2053-2061.
221. Badii, F and Howell, N.K. (2002). Changes in the texture and structure of cod and haddock fillets during frozen storage. *Food Hydrocolloids* 16, 313-319.
222. Badii, F and Howell, N.K. (2002) A comparison of biochemical changes in cod (*Gadus morhua*) and haddock (*Melanogrammus aeglefinus*) during frozen storage. *J. Sci. Food Agric.* 82, 87-97.
223. Howell, N.K., Herman, H and Li-Chan, E.C.Y (2001). Elucidation of protein-lipid interactions in a lysozyme-corn oil system by Fourier Transform Raman spectroscopy. *J. Agric. Food Chemistry* 49, 1529-1533.
224. Saeed, S and Howell, N.K.(2001). 12-Lipoxygenase activity in the muscle tissue of Atlantic mackerel (*Scomber scombrus*) and its prevention by antioxidants. *J. Sci Food Agric.* **81**, 1-6.
225. Kyaw, Z.Y., Yu, S.Y, Dzulkifly, M.H and Howell, N.K.(2001). Effect of fish:starch ratio on viscoelastic and microstructure of fish cracker (keropok) dough. *International Journal of Food Science and Technology.* 36, 1-7.

226. Cheow,C.S., Yu,S.Y., Howell,N.K., Che Man,Y & Mohamad, S.K.(1999). Effect of salt and fish contents on the microstructure and expansion of fish cracker (keropok). *J Sci Food Agric.* **79**, 879-885.
227. Medina, I., Saeed, S. and Howell, N.K.(1999). Enzymatic oxidative activity in sardine (*Sardina pilchardus*) and herring (*Cuplea harengus*) during chilling and correlation with freshness. *Europ. Food Res. Technol.* **210**, 34-38.
228. Saeed, S., Fawthrop, S.A. and Howell, N.K. (1999). Electron spin resonance (ESR) study on free-radical transfer in food lipid-protein interaction. *J Sci Food Agric.* **79**, 1809-1816.
229. Cheow,C.S., Yu,S.Y. & Howell, N.K. (1999). Effect of salt, sugar and MSG on the viscoelastic properties of fish cracker gel. *J. Food Processing and Preservation.* **23**, 21-37.
230. Howell, N.K., Arteaga, G., Nakai, S and Li-Chan, E.C.Y. (1999). Raman spectral analysis in the C-H stretching region of proteins and amino acids for investigation of hydrophobic interactions. *J. Agric. Food Chem.* **47**, 924-933.
231. Saeed, S and Howell, N.K. (1999). High performance liquid chromatography (HPLC) and spectroscopic studies on fish oil oxidation products extracted from frozen Atlantic mackerel. *J. American Oil Chem. Soc.* **76**, (3), 391-397.
232. Mendes, R., Batista, I, Kandando, R and Howell, N. (1998).Influence of washing parameters on the characteristics of horse mackerel (*Trachurus trachurus*) mince. *Journal of Food Biochemistry* **22**, 511-528.
233. Howell, N.K., Shavila, Y., Grootveld, M and Williams, S. (1996). High resolution NMR and magnetic resonance imaging (MRI) studies on fresh and frozen cod (*Gadus morhua*). *Journal of Magnetic Resonance Analysis* **2**, 180-181.
234. Howell, N.K. and Li-Chan, E.C.Y. (1996). Elucidation of the Interaction of Lysozyme and Whey Proteins by Raman spectroscopy. *International Journal of Food Science and Technology* **31** 439-452.
235. Friedli, G.L.and Howell, N. (1996). Gelation properties of deamidated soluble wheat protein. *Food Hydrocolloids* **10**, 255-261.
236. Howell, N.K. Shavila,Y. Grootveld, M. and Williams, S. (1996). High resolution NMR and Magnetic Resonance Imaging of Fresh and Frozen Cod (*Gadus morhua*) and Haddock (*Melanogrammus aeglefinus*). *Journal of the Science of Food and Agriculture* **72**, 49-56.
237. Nazlin K Howell and Chitundu Kasase (2010). Bioactive peptides and proteins from fish muscle and collagen. In *Biologically Active Food Proteins and Peptides in Health – Fundamental and Clinical Aspects*. Ch 14. Ed Yoshinori Mine, Eunice C.Y. Li-Chan, and Bo Jiang. Blackwell-Wiley Publ. London.203-224.
238. Meng, G, Howell, NK and Li-Chan ECY (2006). Investigation of protein-lipid interactions by vibrational spectroscopy. In *Lipid Analysis and Lipidomics.: New Techniques and Applications*. Ed. M.M. Mossoba, J.K.G. Kramer, J.T. Brenna and R.E. McDonald. AOACS Press.Pp 355-376.
239. Howell, N.K. (2005). Interaction of proteins with small molecules. In *Ingredient Interactions - Effects on Food Quality*. Ed. A. Gaonkar and A. McPherson. CRC Press Taylor and Francis, Florida.2nd Ed. Pp.309-341.
240. Howell, N.K., Saeed, S and Gillies, D (2005). ESR and NMR spectroscopy studies on emulsions containing β -lactoglobulin and oxidised methyl linoleate. In *Magnetic Resonance in Food Science: A Multivariate Challenge*. Ed. S B Engleson, P S Belton and H J Jakobsen. Royal Society of Chemistry, UK. Pp 104-112.

241. Howell, N.K. (2004). Fish gelatin: structure, gelling properties and interaction with other food proteins. In *Gums and Stabilisers for the Food Industry 12*. Ed. P.A. Williams and G.O. Philips. The Royal Society of Chemistry, Cambridge, UK. Pp. 167-178.
242. Howell, N.K. (2004). The chemistry of quality enhancement in low-value fish. In *Quality of Fresh and Processed Foods*. American Chemical Society. Ed. A. Spanier. Kluwer Academic/Plenum Publishers, New York. Pp 135-145.
243. Howell, N.K. (2002). Elucidation of protein-lipid interactions. In *Gums and Stabilisers for the Food Industry 11*. Ed. P.A. Williams and G.O. Philips. The Royal Society of Chemistry, Cambridge, UK. Pp. 136-144.
244. Howell, N.K. (2000). Advances in protein interactions. In *Gums and stabilisers for the food industry 10*. Ed. P.A. Williams and G.O. Philips. The Royal Society of Chemistry, Cambridge, UK. Pp . 217-227.
245. Howell, N.K. and Saeed, S. (1999). The application of electron spin resonance spectroscopy to the detection and transfer of free radicals in protein-lipid systems. In: *Applications of Magnetic Resonance in Food Science*. Ed. P.S.Belton, B.P. Hills and G.A. Webb. The Royal Society of Chemistry, Cambridge, UK. Pp 133-143.
246. Howell, N.K. and Saeed, S. (1999). The effect of antioxidants on the production of lipid oxidation products and transfer of free radicals in oxidised lipid-protein systems. In: *Antioxidants in Human Health and Disease*. Ed. T.K. Basu, N.J Temple and M.L. Garg. CAB International, Oxford, UK. pp 43-54.
247. Howell, N.K. (1999). Gelation properties and interactions of fish proteins. In: *Food Hydrocolloids I: Physical Chemistry and Industrial Application of Gels, Polysaccharides and Proteins*. Ed.K. Nishinari. Elsevier, Amsterdam Pp 399-406.
248. Somers, P and Howell, N.K. (1997). Gelation properties of smooth and skeletal muscle myosin proteins. In *Gums and stabilisers for the food industry 9*. Ed. P.A. Williams and G.O. Philips. The Royal Society of Chemistry, Cambridge, UK. Pp 136-144.
249. Howell, N.K.(1996) Chemical and enzymatic modifications of food proteins. In *Food Proteins: Properties and Applications Vol 1*. Ed. S. Nakai and H.W. Modler. Food Science and Technology Series. VCH Publishers, New York. pp. Pp 235-280. ISBN: 1-56081-691-0.
250. Howell, N.K. (1995). Synergism and Interactions in Mixed Food Protein Systems. In *Biopolymer Mixtures*, Ed. S.E. Harding, S.E.Hill and J. Mitchell. University of Nottingham Press, pp 329-347. ISBN: 1-897676-247.
251. Howell, N.K. (1995). Interaction of proteins with small molecules. In *Ingredient Interactions - Effects on Food Quality*. Ed. A. Gaonkar. Marcel Dekker, New York. Pp.269-289. ISBN:0-8247-9347-1.
252. Howell, N.K. (1994). Elucidation of protein-protein interactions in gels and foams. In *Gums and stabilisers for the food industry 7*. Ed. G.O. Philips., P.A. Williams and D.J. Wedlock, Oxford University Press. UK. Pp 77-89. ISBN:0-19-963465-3.
253. Howell, N.K. (1992). Protein-protein Interactions. In *Biochemistry of Food Proteins*. Ed.B.J.F.Hudson. Elsevier Applied Science Publ.Ltd., Essex, pp 35-74. ISBN 1-85166-768.
254. Howell, N.K.(1991). Protein-Protein Interactions. In *Developments in Food Proteins -7* Ed.B.J.F.Hudson. Elsevier Applied Science Publ.Ltd., Essex, pp 231-270.
255. Howell, N.K and Wu, W (2009). Effect of tea constituents on the rheological and foaming properties of globular proteins. *Proceedings of the 5th International Symposium on Food*

- Rheology and Structure. Ed. P. Fischer, P. Erni, and E.J Windhab. ETH Swiss Federal Institute of Technology, Zurich. Pp 323-326.
256. Howell, N.K. and Saeed, S (2006). Rheological and spectroscopic studies of emulsions containing proteins and oxidized lipids. Proceedings of the 4th International Symposium on Food Rheology and Structure. Ed. P. Fischer, P. Erni, and E.J Windhab. ETH Swiss Federal Institute of Technology, Zurich. Pp 323-326.
 257. Howell, N.K., Saeed, S and Badii, F. (2005). Molecular mechanisms of protein-lipid interactions. The International Conference on Nanotechnology: Science and Applications (Nanotech Insight 2005),Ed. A Haist and MMS Abdel-Mottaleb, Chemnitz University of Technology, Germany. Pp 140-141.
 258. Howell, N.K. (2001). Biochemical changes and processing of under-utilised marine fish in Africa and Asia. EC Fisheries Cooperation Bulletin **14**, 45-47.
 259. Howell, N. K. (2001). Changements et transformation biochimiques des poissons de mer peu employes en Afrique et en Asia. CE Cooperation Peche Bulletin **14**, 48-50.
 260. Howell, N.K. (2000). EC Synopsis of selected R&D projects in the field of fisheries and aquaculture. ISBN 92-828-7143-6. Pp 46-49.
 261. Howell, N.K. (1999). Protein-protein and protein-polysaccharide interactions in food gels. Food Ingredients and Analysis International, **4**, 23-30.
 262. Flair-Flow dissemination report F-FE 290/98 (1998). Toughening in Frozen Fish. EU FAIR project.CT95.1111.
 263. Howell, N.K. (1998). Biochemical changes and protein interactions leading to aggregation and toughening in frozen fish. Third European Marine Science and Technology Conference Project Synopses Vol. VI: Fisheries and Aquaculture (FAIR 1994-1998). Published by the European Commission, Luxembourg. ISBN No . 92-828-3039-X. Pp 110-113.
 264. Howell, N.K. (1997). Processing of and related biochemical studies on the under-utilised marine fish/crustacea species in Africa and Asia. Scientific cooperation of the European Union with the countries of South-East Asia. Published by the European Commission EC DG XII Luxembourg. ISBN No . 92-828-0574-3. Pp 108-109.
 265. Flair-Flow dissemination report F-FE 204/96 (1995). Mechanisms of aggregation of proteins in frozen fish. EU FAR project.
 266. Howell, N.K. (1995). Processing of and related biochemical studies on the under-utilised marine fish/crustacea species in Africa and Asia. European Commission Life Sciences and technologies for developing countries STD 3 Agriculture. Published by EC DG XII Luxembourg. ISBN No . 92-827-6619-5. Pp 306-307.
 267. Howell, N.K.(1995).Elucidation of aggregation mechanisms of proteins in frozen fish. Fisheries and Aquaculture Research Vol.1 pp 243-246. Published by EU DG XII Luxembourg. ISBN No . 92-826-9926-9.
 268. Howell, N.K. (1990). Food protein ingredients, structure and function. Food Technology International Europe, 175-179.
 269. Howell, Nazlin. Title **Global Symposium on Aquatic Resources for eradicating hunger and malnutrition- opportunities and challenges**. 4-6 December, 2012, Mangalore, Karnataka, India.
 270. Nazlin K Howell, Norizah Mhd Sarbon and Farah Badii. Rheological and physicochemical properties of a novel source of gelatin from chicken skin as an alternative to mammalian gelatin. Food Hydrocolloids Gums and Stabilisers International meeting 28th June-1st July, 2011. **Wageningen**, The Netherlands.

271. Nazlin K Howell and Chitundu Kasase Bioactive peptides from Atlantic mackerel (*Scomber scombrus* 41st West European Fish Technologists Association (WEFTA) Annual Meeting "Seafood for the Modern Consumer" 27-30 September 2011, **Gothenburg, Sweden**.
272. Howell, N. K. Food Structure, Function and Health. North Carolina State University. **Kannapolis, USA**. June 2011.
273. Howell, N.K. Effect of polyphenols on protein structure and function. University of British Columbia, **Vancouver**, Canada. 5th August 2011.
274. Howell, Nazlin. Industrial Science and Technology Workshop: Protein functionality. **Washington DC, USA**. 31st August, 2011.
275. Howell, N.K. Elucidation of Protein Oxidation by ESR, NMR and FT-Raman Spectroscopy. BIT Life Sciences Third Annual Protein and Peptide Conference. **Beijing** March 21-23, 2010.
276. Howell, N.K. Examining the functional qualities of established and emerging natural food colourings that influence protein structure and function. Innovation in Natural Colours. **London**, February 25-26, 2010.
277. Howell, N.K and Kasase, C. Antihypertensive and antioxidant activity of fish bioactive peptides. American Chemical Society Symposium on Biopeptides and specialty proteins for health promotion and disease risk reduction. **Salt Lake City, USA**. March 2009.
278. Howell, N.K. Effect of polyphenols on protein structure and function. University of British Columbia, **Vancouver**, Canada. July 7th 2010.
279. Howell NK Food Structure, Function and Health, Nestle, **York**. June 2010.
280. Howell, N.K. Improving Food Security by reducing post-harvest losses. INTI, **Buenos Aires**, Argentina, October 2009
281. Howell NK Eco-challenges in the Fisheries Chain INTI, Mar del Plata, Argentina. October, 2009.
282. Howell, N.K and Wu, W. Effect of tea constituents on the rheological and foaming properties of globular proteins. 5th International Symposium on Food Rheology and Structure. ETH, **Zurich**, 14-18 June 2009.
283. Howell, N.K, Zheng, N and Hao Jin. Effect of polyphenol-rich bog bilberry extract and pH on the gelation properties of whey proteins. 14th Food Hydrocolloids conference, **Wrexham**. 23-26 June, 2009.
284. Howell, N.K. Effect of protein-lipid interactions on texture and health. Food Hydrocolloids Conference, **Singapore**, 15-20 June 2008.
285. Howell, N.K. Biochemical changes in frozen fish. Royal Golden Jubilee Conference, Pattaya, **Thailand**. April 2007.
286. Howell, N.K. Effect of natural antioxidants on protein functionality. Hunan Agricultural University, Changsha, Hunan Province, **China**, November 2007.
287. Howell, N.K. Protein-polyphenol interactions. China Agricultural University, **Beijing, China**, November 2007.
288. Howell, N.K. Role of natural antioxidants in protein oxidation. East China Normal University, Shanghai, **China**, November 2007.
289. Howell, N.K. Role of natural antioxidants in minimising oxidative damage in cultured human cells. Aga Khan University, Karachi, **Pakistan**, November 2007.
290. Nazlin K. Howell and Suhur Saeed. Rheological and spectroscopic studies of emulsions containing proteins and oxidized lipids. 4th International Symposium on Food Rheology and Structure. **Zurich** February 19-23, 2006.

291. Howell, N.K. Effect of oxidised lipids on protein structure and cultured human cells. Hunan University, Changsha, Hunan Province, **China**, October 2006.
292. Howell, N.K. Effect of oxidised lipids on protein structure. China Agricultural University, **Beijing, China**, November 2006.
293. Howell, N.K. Protein-lipid interactions. East China Normal University, Shanghai, **China**, November 2006.
294. Howell, N.K. Effect of oxidised lipids and natural antioxidants on protein structure and cultured human cells. Aga Khan University, Karachi, **Pakistan**, November 2006.
295. Nazlin K. Howell, Suhur Saeed and Farah Badii. Molecular mechanisms of protein-lipid interactions. The International Conference on Nanotechnology: Science and Applications (Nanotech Insight 2005), **Luxor, Egypt** 20-25 February, 2005.
296. Nazlin K. Howell, Suhur Saeed and Duncan Gillies. ESR and NMR spectroscopy studies on emulsions containing β -lactoglobulin and oxidised methyl linoleate. 7th International Conference on Applications of Magnetic Resonance in Food Science, **Copenhagen** on September 13-15, 2004.
297. Howell, N.K. Mechanisms of protein-lipid interactions. Hunan University, **Changsha**, Hunan Province, China, October 2005.
298. Nazlin K. Howell Protein-lipid Interactions. University of British Columbia, Food Nutrition and Health, **Vancouver**, Canada. 12th August 2004.
299. Howell, N.K. Seafood Biotechnology: processing, quality and preservation of fish. UNESCO Expert meeting, Sultan Qaboos University, **Muscat**, Oman, 3-4 December, 2003.
300. Howell, N.K. Gelatin: structure, physicochemical properties and interactions with food proteins. Sultan Qaboos University, **Muscat**, Oman 2 December 2003.
301. **Howell, N.** Physicochemical and rheological properties of fish gelatin. The Twelfth Gums and Stabilisers for the Food Industry Conference, **Wrexham**, 24-28 June 2003.
302. Howell, N.K. Fish gelatins: structure and function. Department of Food, Nutrition and Health, University of British Columbia, **Vancouver, Canada**, 23rd August 2003.
303. Howell, N.K. Effect of high pressure processing on the physical-chemical properties of food proteins. Sixth International Conference on Food Hydrocolloids, University of Guelph, **Guelph, Canada**, 15-19 July, 2002.
304. Howell, N.K. Effect of heating and high pressure on whey and egg albumen proteins. Department of Food, Nutrition and Health, University of British Columbia, **Vancouver, Canada**, 13 August 2002.
305. Howell, N.K. Elucidation of the effect of lipids on the structure of lysozyme by FT-Raman spectroscopy. First International Conference on Biomedical Spectroscopy-From Molecules to Men, **Cardiff**, 8-10th July, 2002.
306. **Howell, N.** Elucidation of protein-lipid interactions. The Eleventh Gums and Stabilisers for the Food Industry Conference, **Wrexham**, 2-7 July 2001.
307. Howell, N. The chemistry of quality enhancement in low-value fish. PacifiChem 2000 meeting, American Chemical Society, **Honolulu, Hawaii**, 14-19 December 2000.
308. Howell, N.K. Elucidation of protein-lipid interactions by FT-Raman and electron spin resonance spectroscopy. Food Colloids 2000 Max Plank Institute, **Potsdam, Germany**, 2-6 April 2000.
309. Howell, N and Badii, F (1999). Gelation properties and interactions of fish proteins. 10th World Congress of Food Science and Technology, **Sydney, Australia**, 3-8 October 1999.

310. Howell, N. Protein-protein interactions in food gels. Food Functionality Conference, **Chicago, USA**, 25-29 July 1999.
311. Howell, N. Effect of biochemical changes on frozen fish texture. University of Leeds, **Leeds**, 13-14 September 1999.
312. Howell, N. Lipid oxidation in fatty fish: stability and safety. International Meeting on Developments in Fish Processing, **Grimsby**, UK. 24-26 June 1999.
313. Howell, N. Recent advances in protein-protein interactions. The Tenth Gums and Stabilisers for the Food Industry Conference, **Wrexham** 7-11 July 1999.
314. Howell, N.K. Gelation and interaction of fish proteins. Fourth International Conference on Food Hydrocolloids, Osaka City University, **Osaka, Japan**, 3-10 October 1998.
315. Howell, N.K. Elucidation of protein-lipid interactions by ESR spectroscopy. The Fourth International NMR Conference on Applications of Magnetic Resonance in Food Science, University of East Anglia, **Norwich**, September 1998.
316. Howell, N.K. Exploitation of spectroscopic techniques in food research and analysis. The Scientific Instrument Association / The Royal Society of Chemistry Conference, **London**, 27-30th April 1998.
317. Howell, N.K. Processing, quality and preservation of fish and fish products. Advanced and optimised technologies in the Food Agro-industry collaboration with Mediterranean countries. EU Expert meeting, **Rome** 3-5 April 1998.
318. Howell, N.K. Elucidation of aggregation mechanisms of proteins in frozen fish. United Biscuits Ltd. **High Wycombe**, 1996.
319. Howell, N.K. Biochemical changes in frozen fish. Department of Food Science, University of British Columbia, **Vancouver, Canada**, 12 August 1997.
320. Saeed, S. and Howell, N.K. The application of electron spin resonance (ESR) spectroscopy to detect the production and transfer of free radicals in oxidised lipid-protein systems. 6th World Congress on Clinical Nutrition 'Antioxidants and Disease' **Banff, Canada** 23-26th July 1997.
321. Howell, N. Biochemical changes in frozen fish (protein aggregation). Developments in Fish Processing **Grimsby**, UK. 24-26 June 1997.
322. Somers, P and Howell, N. Thermal gelation of smooth and skeletal muscle proteins. The Ninth Gums and Stabilisers for the Food Industry Conference, **Wrexham** 7-11 July 1997.
323. Howell, N. High resolution NMR and magnetic resonance imaging studies on fresh and frozen cod (*Gadus morhua*). The Third International NMR Conference on Applications of Magnetic Resonance in Food Science, **Nantes, France**, 16-18 September 1996.
324. Howell, N., Bristow, E and Friedli, G-F. The interaction of deamidated soluble wheat proteins with sodium alginate. Food Hydrocolloids Meeting, **Saratov, Russia**, 17-22 June 1996.
325. Howell, N, K. Protein-polysaccharide interactions in food gels. Molecular Interactions and Food Structure. LINK Food Processing Science Conference, **London**, April 1995.
326. Howell, N.K. Specific protein interactions. The Eighth Gums and Stabilisers for the Food Industry Conference, **Wrexham**, 10-14 July 1995.
327. Howell, N.K., Shavila., J; Grutweld, M and Williams, S. NMR Studies on Fresh and Frozen Fish. The Second International NMR Conference on Applications of Magnetic Resonance in Food Science, **Alveiro, Portugal**.
328. Howell, N.K. Synergism and Interactions of Food Proteins. International Conference on Biopolymer Mixtures, 56th Meeting of the Easter School, University of Nottingham, **Sutton Bonington**, 1994.

330. Howell, N.K. Interactions of gluten proteins in mixed gels. International Conference on Food Hydrocolloids. The Ohio State University, **Ohio, USA**, September 1994.
331. Howell, N.K. Raman Spectroscopy of whey proteins and lysozyme. University of British Columbia. **Vancouver, Canada**, July 1994.
332. Howell, N.K., Iyambo, A and Shavila, J. Aggregation mechanisms of proteins in fish. International Conference on Food Macromolecules, ENSBANA **Dijon, France**, 1994.
333. Howell, N.K. Protein and polysaccharide Interactions. Nestec Research Centre, **Lausanne, Switzerland**, 1994.
334. Howell, N.K. Structure-function relationships of food proteins. Amylum Research, **Aalst, Belgium**, 1994.
335. Howell, N.K. Elucidation of protein-protein interactions in gels and foams. The Seventh Gums and Stabilisers for the Food Industry Conference, **Wrexham. UK**, 1993.
336. Howell, N.K. Mechanisms of protein interactions in gels. Bone and Joint Research Unit, The London Hospital Medical College, **London**. 1992.
337. Yeboah, N. and Howell, N. Elucidation of protein-protein interactions in food gels. International Union of Food Science and Technology conference, **Den Haag, The Netherlands**, 1992.

IPMA relevant publications

1. Ravallec-Plé, R.; Charlot, C.; Pires, C.; Braga, V.; Batista, I.; Van Wormhoudt, A.; Le Gal, Y.; Fouchereau-Péron, M., 2001. Presence of bioactive peptides in hydrolysates prepared from enzymatic processing waste of sardine (*Sardina pilchardus*). *Journal of the Science of Food and Agriculture*, 81 (11): 1120-1125.
2. Batista, I.; Ramos, C.; Mendonça, R.; Nunes, M. L., 2009. Enzymatic hydrolysis of sardine (*Sardina pilchardus*) by-products and lipid recovery. *Journal of Aquatic Food Product Technology*. 18 (1-2): 120-134.
3. Batista, I.; Ramos, C.; Coutinho, J.; Bandarra, N. M.; Nunes, M. L., 2010. Characterization of protein hydrolysates and lipids obtained from black scabbard fish (*Aphanopus carbo*) by-products and antioxidative activity of the hydrolysates produced. *Process Biochemistry*, 45: 18–24.
4. Marques, A.; Teixeira, B.; Barrento, S.; Anacleto, P.; Bandarra, N.; Mendes, R.; Carvalho, M.L.; Nunes, M.L. 2010. Compositional characteristics of spider crab *Maja brachydactyla*: human health implications. *Journal of Food Composition and Analysis*, 23: 230-237.
5. Cardoso, C., Bandarra, N., Lourenço, H., Afonso, C., Nunes, M.L. 2010. Methylmercury Risks and EPA + DHA Benefits Associated with Seafood Consumption in Europe. *Risk Analysis*, 30 (5): 827-840.
6. Cardoso, C., Farias, I., Costa, V., Nunes, M.L. and Gordo, L. 2010. Estimation of risk assessment of some heavy metals intake through black scabbardfish (*Aphanopus carbo*) consumption in Portugal. *Risk Analysis*, 30(6): 952-961.

7. Nunes M.L. (Dec 3-6, 2013). "Upgrading of fish discards, underutilized species and processing by products: Benefits and risks associated to the consumption of fish products. New trends in the utilization of fish products". Global Symposium on Aquatic resources for eradicating hunger and malnutrition – opportunities and challenges. Mangalore, India.

DLO relevant publications

1. Boxtel, A.J.B. van; Bartels, P.V.; Djaeni, M.; Sanders, J.P.M.; Straten, G. van (2008). Assembly and method for drying a product. Patent WO2008063059 (2008-05-29).
2. Djaeni, M.; Bartels, P.V.; Sanders, J.P.M.; Straten, G. van; Boxtel, A.J.B. van (2008). Computational Fluid Dynamics for Multistage Adsorption Dryer Design, *Drying Technology* 26 (4). p. 487 – 502.
3. Bartels, P.V.; Kals, J. (2008). Improving the utilization of Silver carp (*Hypophthalmichthys Molitrix*) and other under-utilized fish species, especially Fresh water Bream (*Abramis brama*). Wageningen: Agrotechnology & Food Sciences Group, (Rapport / Agrotechnology & Food Sciences Group 767).
4. Kole, A.P.W.; Schelvis-Smit, A.A.M. (2009). From consumer studies to seafood product design: Functional seafood concepts for specific consumer segments. In: 3rd SEAFOODplus Conference, Tromso, Norway, 30-31 May, 2006.
5. Bartels P. (Dec 3-6, 2013). "Newer concepts in freeze drying and air drying of fish". Global Symposium on Aquatic resources for eradicating hunger and malnutrition – opportunities and challenges. Mangalore, India.

KMFRI relevant publications

1. Oduor-Odote P.M., Shitanda D. , Obiero M and Kituu M.G.M (2010). Drying Characteristics and some quality attributes of *Rastrineobola argentea* (Omena) and *Stolephorus delicatulus* (Kimarawali) *African Journal of Food Agriculture and Nutrition Development* Vol. 10 No. 8.
2. Oduor-Odote P.M. , Obiero M and Odoli C (2010). Organoleptic effect of using different plant materials on smoking of marine and freshwater catfish. *African Journal of Food Agriculture and Nutrition Development* Vol. 10 No. 6.
3. GM Kituu, D Shitanda, CL Kanali, JT Mailutha, CK Njoronge, JK Wainaina and PMO Odote (2009). Influence of Brining on Drying Characteristics of *Tilapia (Oreochromis Niloticus)* in a Glass covered Solar Tunnel Dryer. *Agricultural Engineering International: The CIGR Ejournal*. Manuscript number. EE 1349, Vol.XI. August 2009.
4. Oduor-Odote, P.M and Kazungu J.M. (2008). The Body Composition of Low Value Fish and their Preparation into a Higher Value Snack Food. *Western Indian Ocean Journal of Marine Sciences*. Vol 7 No 1 pp 1-7.

5. Oduor-Odote, P.M. , Ohowa, B.O. and Obiero, M. (2008). Performance of Improved and Traditional Fish Smoking Kilns Introduced in the Tana Delta Area of Kenya. Samaki News. Vol.V No 1 April 2008 p23-28.

6. Oduor-Odote P.M, Struszczyk MH and Peter MG. (2005). Physicochemical properties of Chitosan in Some Crustacean Species from Kenya and in Blowfly larvae. Western Indian Ocean Journal of Marine Sciences.Vol. 4 No.1 p 99-107.

CSIR-FRI relevant publications

1. Abbey, L. D., Hodari-Okae, M. A., and Osei-Yaw, A. (1995). Studies on Traditional and Improved Methods of Storage of Fermented Fish (Momone). Ghana/ Netherlands Artisanal Fish Processing Project Report. FRI. Accra, Ghana.

2. Obodai, M, Dodd, C.E.R. (2006). Characterization of dominant microbiota of a Ghanaian fermented milk product, nyarmie, by culture and nonculture-based methods. Journal of Applied Microbiology, 100, 1355-1363.

3. Nielsen, D.S., Schillinger, U., Franz, C.M.A.P., Bresciani, J., Amoa-Awua, W., Holzapfel, W.H., Jakobsen, M. (2007). *Lactobacillus ghanensis* sp. Nov., a motile, lactic acid bacterium isolated from Ghanaian cocoa fermentations. International Journal of Systematic and Evolutionary Microbiology, 57, 1468-1472.

4. Manful, J., Grimm, C., Coker R. and Abbey, L. (2007) Aroma Characteristics of Variably Parboiled Rice Samples. Cereal Chemistry. Accepted.

5. Manful, J., Abbey, L., Coker, R (2008) Effect of Artisanal Parboiling Methods on Milling Yield and Cooked Rice Textural Characteristics. Journal of Food Quality. Accepted.

6. Abbey, Lawrence (2005). Improving the utilisation and quality of low-value fish (*Brachydeuterus auritus* and *Dactylopterus volitans*) by processing. PhD Thesis, University of Surrey.

7. Biochemical composition of some marine fish species of Ghana. International Journal of Biological and Chemical Sciences, 3 (2), p. 406-409 Obodai, E. A.; Abbey, L. D.; MacCarthy, C., Journal Contribution, 2009

8. Characterization of the gelatin of the flying gurnard (*Dactylopterus volitans*) and its interaction with starch African Journal of Food Science, 2, p. 131-135 Abbey, L. D.; Johnson, P. N. T.; Howell, N. K., Journal Contribution, 2008

9. Development of value-added products from anchovies in Ghana Report and proceedings of the sixth FAO Expert Consultation on Fish Technology in Africa: Kisumu, Kenya, 27-30 August 1996, p. 57-60 Abbey, L. D., Proceedings Paper, 1998

10. Effect of marketing practices on the quality of fresh fish landed in Ghana Report and proceedings of the sixth FAO Expert Consultation on Fish Technology in Africa: Kisumu, Kenya, 27-30 August 1996, p. 45-51 Hodari-Okae, M. A.; Abbey, L. D.; Osei-Yaw, A., Proceedings Paper, 1998

11. Micronutrient enrichment of meals fed to pupils using highly nutritious and low cost underutilized fish under the school feeding programme in Ghana Third Workshop on Fish Technology, Utilization and Quality Assurance in Africa: Victoria, Mahe, Seychelles, 22-25 November 2011, p. 77-85 Atikpo, M. O.; Abbey, L. D.; Glover-Amengor, M.; Lawer, L.; Ayin, J.; Toppe, J., Proceedings Paper, 2011

12. Proximate composition and consumer acceptability of three underutilised fish species and tuna frames World Rural Observations, 4 (2), p. 65-70 Ayin, J.; Atikpo, M. O.; Glover-Amengor, M.; Abbey, L. D.; Hagan, L.; Toppe, J., Journal Contribution, 2012

UNAM relevant publications

1. Bille, P.G. and Shemkai, R.H. (2006). Process development, nutrition and sensory characteristics of spiced-smoked and sun-dried Dagaa (*Rastrineobola argentea*) from Lake Victoria, Tanzania. African J. of Food Agriculture, Nutrition and Development, 6(2), 1-12.
2. Bille, P.G., B.R. Haradoeb and N. Shigwedha (2009). Chemical and Microbiological quality of raw milk produced at Neudamm dairy farm. J. Food Technol. in Africa, 9(7), 1511-1523.
3. Uusiku, N.P., Oelofse, A., Duodu, K.G., Bester, M.J. & Faber, M. (2010). Nutritional value of leafy vegetables of sub-Saharan Africa and their potential contribution to health: A Review. Journal of Food Composition and Analysis Vol. 23, 499 - 509.

4. Samundengu C. & Landman J.J. "Sun drying and mechanical drying of Paprika (*Capsicum Annuum* L.) of the Papriqueen variety". South African Institute of Agricultural Eng. Journal. 2000.
5. Taylor, J.R.N., Barrion, S.C. and Rooney, L.W. 2010. Pearl Millet - New Developments in Ancient Food Grain. Cereal Foods World. Vol 55. 16-19.

KVAFSU relevant publications

1. Reddy, R., Patil, P and Shankar, K. M. 2008 Evaluation of Monoclonal antibody based Immunodot for routine screening of shrimp for white spot virus, Disease of Aquatic Organisms 79:157-161
2. Binsi, P K Shamasundar, B A Dileep, A. O Badii, F Howell. N K (2009). Rheological and Functional properties of gelatin from the skin of Bigeye snapper (*Priacanthus harmarur*) fish: Influence of gelatin on the gel forming ability of fish mince. Food Hydrocolloids, 23, 132-145.
3. Dileep, A.O., Shamasundar, B. A., Binsi P.K., and Howell, N.K. (2010). Composition and quality of rice flour-fish mince based extruded products with emphasis on thermal gelation of rice flour. Journal of Texture Studies:41, 190-207.
4. Dileep, A O., Shamasundar, B A., Binsi P K., Badii F and Howell. N K (2005). Effect of ice storage on the physico-chemical and dynamic visco-elastic properties of ribbonfish (*Trichiurus* spp) meat. Journal of Food Science, 70 (9), 537-545.
5. Binsi, P K., Shamasundar B A. and Dileep, A O. (2007). Physico-chemical and functional properties of proteins from green mussel (*Perna viridis*) during ice storage. Journal of the Science and Food and Agriculture, 87, 245-254.
6. Chandra, M. V., Shamasundar, B. A. and Kumar, P. R. (2013). Visco-Elastic and Flow Properties of Gelatin from the Bone of Freshwater Fish (*Cirrhinus mrigala*). Journal of Food Science, 78: E1009–E1016.
7. Chandra, M. V. and Shamasundar, B. A. (2014). Texture Profile Analysis and Functional Properties of Gelatin from the Skin of Three Species of Fresh Water Fish, International Journal of Food Properties, DOI: 10.1080/10942912.2013.845787
8. Chandra, M. V. and Shamasundar, B. A. (2014). Rheological and physico-chemical properties of gelatin extracted from the skin of a few species of freshwater carp. International Journal of Food Science & Technology, 49: 1758–1764.
9. Elavarasan, K. and Shamasundar, B. A. (2014). Angiotensin I-converting enzyme inhibitory activity of protein hydrolysates prepared from three freshwater carps (*Catla catla*, *Labeo rohita* and *Cirrhinus mrigala*) using Flavorzyme. International Journal of Food Science & Technology, 49: 1344–1350.
10. Elavarasan, K., Naveen Kumar, V. and Shamasundar, B.A. (2014). Antioxidant and Functional Properties of Fish Protein Hydrolysates from Fresh Water Carp (*Catla catla*) as Influenced by the Nature of Enzyme. Journal of Food Processing and Preservation, 38: 1207–1214.
11. Girija Phadke, Elavarasan, K. and Shamasundar, B. A. (2014). Angiotensin-I converting enzyme (ACE) inhibitory activity and antioxidant activity of fermented fish product *Ngari* as influenced by fermentation period. *International Journal of Pharma and Biological sciences* 5 (2): 134 – 142.
12. Naveen Kumar, V., Elavarasan, K. and Shamasunadar B. A. (Dec 3-6, 2012). "Antioxidant activity of alcoholic extract from the muscle sardine (*Sardinella longiceps*) and clam (*Meritrix meritrix*)". Global Symposium on Aquatic resources for eradicating hunger and malnutrition –

opportunities and challenges". Mangalore, India.

13. Girija Phadke, Elavarasan, K. and Shamasundar, B. A. (Dec 3-6, 2012). "Angiotensin-I converting enzyme inhibitory and antioxidant activities of protein hydrolysates from threadfin bream (*Nemipterus* spp) frame waste". Global Symposium on Aquatic resources for eradicating hunger and malnutrition – opportunities and challenges". Mangalore, India.
14. Girija Phadke, Elavarasan, K. and Shamasundar, B. A. (Dec 3-6, 2012). "Evidence for Angiotensin-I converting enzyme inhibitory activity and antioxidant activity of traditional fermented fish product Ngari from North East India as influenced by fermentation period". Global Symposium on Aquatic resources for eradicating hunger and malnutrition – opportunities and challenges". Mangalore, India.
15. Elavarasan, K., Girija Phadke, V. Naveen Kumar and B. A. Shamasundar ((Dec 3-6, 2012). Antioxidant and Angiotensin-I converting enzyme (ACE) inhibitory activity of digest prepared from fresh and cooked fish (*Cirrhinus mrigala*) meat using pepsin –pancreatin simulated gastrointestinal digestion. Global Symposium on Aquatic resources for eradicating hunger and malnutrition -Opportunities and Challenges. Mangalore, India.
16. Girija Phadke, Elavarasan, K. and Shamasundar, B. A. (Oct 21-25, 2013). Angiotensin-I converting enzyme (ACE) inhibitory activity and antioxidant properties of aqueous extract of traditional fermented fish product, Ngari, prepared from *Puntius* sp. Fermentation Biotechnology Workshop, National Pingtung University of Science and Technology, Taiwan.
17. Pawan, K.D., Elavarasan, K. and B. A. Shamasundar (Oct 21-25, 2014). Properties of gelatin extracted from croaker skin by chemical free method. "2014 Innovative Food Processing Technology Workshop in Taiwan" in Department of Food Science, National Pingtung University of Science and Technology, Taiwan.
18. Elavarasan, K. Manjunatha Reddy, A., Dara, P.K., Chandra, M. V. and Shamasundar, B. A. (November (12-15, 2014). Mathematical modeling of kinetics of salting of anchovy. 10th Indian Fisheries and Aquaculture Forum on "Towards Responsible Aquaculture and Sustainable Fisheries". Lucknow, India.
19. Elavarasan, K. and Shamasundar, B. A. (November (12-15, 2014). Antioxidant and Angiotensin-I converting enzyme inhibitory properties of hydrolysate of salted and dried anchovy prepared using *in vitro* gastrointestinal digestion model after cooking. 10th Indian Fisheries and Aquaculture Forum on "Towards Responsible Aquaculture and Sustainable Fisheries". Lucknow, India.
20. Elavarasan, K., Vinita Verma and Shamasundar, B. A. (November (12-15, 2014). Development of prototype solar-biomass hybrid dryer and its performance evaluation using salted fish (*Cynoglossus* spp). 10th Indian Fisheries and Aquaculture Forum on "Towards Responsible Aquaculture and Sustainable Fisheries". Lucknow, India.

UiTM relevant publications – update received 28/03/13

1. Norizzah Abd Rashid, Chong Chiew Let, Cheow Chong Seng and Zaleha Omar.(2012) Crystallisation kinetics of palm stearin, palm kernel and their blends. LWT- Food Science and Technology46, 571-573
2. Zahid, A., Cheow, C. S., Norizzah, A. R., Halimahton Zahrah, M. S., Adi, M.S. (2010). Optimization of guava edible coating using response surface methodology, Journal of Applied Horticulture, 12(2),

July-December, 2010.

3. Cheow, C.S. Norizah M.S., Kyaw, Z.Y. and Howell N.K. (2007) Preparation and characterisation of gelatins from the skins of sin croaker (*Johnius dussumieri*) and shrtfin scad (*Decapterus macrosoma*). *Food Chemistry* 101(1), 386-391

4 Zaliha, O., Chong, C. L., Cheow, C. S. and Norizzah, A. R. (2005). Crystallisation and rheological properties of hydrogenated palm oil and palm oil blends in relation to crystal networking. *European Journal of Lipid Science and Technology*, 107(9). 634-640

5. Norizzah, A. R., Chong, C. L., Cheow, C. S. and Zaliha, O. (2004). Effects of chemical interesterification on physicochemical properties of palm stearin and palm kernel olein blends. *Food Chemistry* 86, 229-235.

6. Zaliha, O., Chong, C. L., Cheow, C. S. and Norizzah, A. R. (2004). Crystallization properties of palm oil by dry fractionation. *Food Chemistry* 86, 245-250.
7. Cheow, C. S., Kyaw, Z. Y., Howell, N. K. and Dzulkifly, M. H. (2004) Relationship between Physicochemical properties of starches and expansion of fish cracker. *Journal of Food Quality* 17, 1-12.
8. Kyaw, Z. Y., Yu, S. Y., Cheow, C. S., Dzulkifly, M. H. and Howell, N. K. (2001) Effect of fish:starch ratio on viscoelastic properties and microstructure of fish cracker. *International Journal of Food Science and Technology*, 36, 741-747.
9. Kyaw, Z. Y., Cheow, C. S., Yu, S. Y. and Dzulkifly, M. H. (2001) The effect of pressure cooking on the microstructure and expansion of fish cracker ('keropok') *Journal of Food Quality*, 24, 181-194,
10. Kyaw, Z. Y., Yu, S. Y., Cheow, C. S. and Dzulkifly, M. H. (1999) Effect of steaming time on the linear expansion of fish cracker ('keropok'). *Journal of Science of Food and Agriculture*, 79 1340-1344.
11. Cheow Chong Seng, Yu Swee Yean and Howell, Nazlin K. (1999) Effect of salt, sugar and monosodium glutamate on the viscoelastic properties of fish cracker ('keropok') *Journal of Food Processing and Preservation*, 23(1) 21-37.
12. Cheow, C.S., Yu S.Y., Howell, N.K., Che Man, Y. and Muhammad Karidah (1999) Effect of fish, starch and salt contents on the microstructure and expansion of fish crackers ('keropok'). *Journal of Science of Food and Agriculture*, 79 879-885.
13. Cheow Chong Seng and Yu Swee Yean (1997) Effect of fish protein, salt, sugar and monosodium glutamate on the gelatinization of starch in fish-starch mixture. *Journal of Food Processing and Preservation*, 21 161-177.
14. Noorakmar A.W., Cheow C.S. Norizzah A. R. Mohd Zahid A, Ruzaina I. (2012) Effect of orange sweet potato (*Ipomoea batatas*) flour on the physical properties of fried extruded fish crackers. *International food Research journal* 19(2): 657-664.

INTI relevant publications

1. Zugarramurdi, A., Parin, M. A., and Lupin, H. M. (1995). Economic Engineering applied to the fishery industry. *FAO Fisheries Technical Paper* No. 351.
2. Zugarramurdi A., Parin M.A., Gadaleta L. and Lupin H.M. (2000) "The Economics of HACCP application in Argentine fish Products", in *The Economics of HACCP*, L. Unnevehr Ed., Eagan Press, Ch. 24: 403-412.
3. Zugarramurdi, A., Parin M. A; Gadaleta L.; Carrizo G and Lupin H..M. (2004) The effect of improving raw material quality on product quality and operating costs: a comparative study for lean and fatty fish. *Food Control* 15: 503-509.
4. Zugarramurdi A., Parin M.A., Gadaleta L. and Lupin H.M (2007). A Quality Cost Model for food processing plants. *Journal of Food Engineering* 83:414-421.

5. Lupin H.M., Parin M. A. Y Zugarramurdi A. "HACCP economics in fish processing plants". *Food Control*, 21 (8):1143-1149 (2010).
6. Booman A., Marquez A., Parin M.A., Zugarramurdi A. "Design and testing of a fish bone separator machine". *Journal of Food Engineering*, 100: 474-479 (2010).
7. Zugarramurdi A., 1st March 2013, Magazine article "The Mar del Plata INTI works to reduce food losses in the fisheries sector", *Plublitec – La Industria Carnica*, 52-53.
8. Zugarramurdi A., Booman A., Parin M.A., Luxardo M.E., Corrales E. "Influence of the raw material on the quality of products fishing dehydrated". *Techno INTI 2013, Paper Approved*, (2-4 July 2013).
9. Luxardo M. E, Gadaleta L. B, Parin M.A.Y., Zugarramurdi A. "Quality of raw material and its impact on the quality of fish products. Fish lean and fatty". *AATA 2013 Congress XIV Argentine Congress of Food Science and Technology*, (23-25 October 2013, Abstract presented May 17th 2013).
10. Booman A, Zugarramurdi A, (Dec 3-6, 2013). "Quality and economic advantages of a fish meat separator machine for small scale". *Global Symposium on Aquatic resources for eradicating hunger and malnutrition – opportunities and challenges*. Mangalore, India.