

## Prof. Dr. Peter Shellis



### Academic Qualifications

- 1966 BSc (Hons Class 2.1) Zoology and Comparative Physiology. University of Birmingham
- 1967 MSc (Radiobiology). University of Birmingham
- 1975 PhD (Anatomy). University of London

### Appointments

- 1968-1972 Research Assistant to Prof A E W Miles, Dept of Oral Pathology, London Hospital Medical College
- 1972-1984 Non-clinical Scientist, Medical Research Council (MRC) Dental Unit, Bristol
- 1984-1988 Non-clinical Scientist (External Scientific Staff), MRC Dental Group, Bristol
- 1988-1998 Non-clinical Senior Scientist (External Scientific Staff), MRC Dental Group, Bristol
- 1993-1998 Team Leader, MRC Dental Group, Bristol
- 1998-present Research Fellow, Dept of Oral and Dental Science, University of Bristol
- 2000-present Editor-in-Chief, Caries Research Editor, ORCA
- 2007-present Member of Editorial Board, The Open Anthropology Journal

### Publications

84 peer-reviewed papers and reviews, 85+ published abstracts and other short pieces.

### Prize

1981 Colgate Prize, British Society for Dental Research

### **Research Interests**

- Calcium phosphate chemistry
- Chemistry and structure of dental hard tissues
- Interaction of chemical processes and structural change in dental erosion and caries

### **Selected Papers (Calcium Phosphate chemistry and erosion)**

Shellis RP, Wahab FK, Heywood BR: The hydroxyapatite ion activity product in acid solutions equilibrated with human enamel at 37°C. *Caries Res* 1993;27:365-372

Shellis RP, Heywood BR, Wahab FK: Formation of brushite, monetite and whitlockite during equilibration of human enamel with acid solutions at 37°C. *Caries Res* 1997;31:71-78.

Shellis RP, Lee AR, Wilson RM: Observations on the apparent solubilities of carbonated apatites. *J Coll Interf Sci* 1999;218:351-358.

Shellis RP, Dibdin GH: Microporosity of enamel and its functional implications. In 'Teeth: development, evolution and function', Ed Teaford MF, Smith MM, Ferguson MJ. Cambridge University Press, 2000, pp.242-251.

Eisenburger M, Hughes JA, West NX, Shellis RP, Addy M: The use of ultrasonication to study remineralisation of eroded enamel. *Caries Res* 2001;35:61-66.

Eisenburger M, Addy M, Hughes JA, Shellis RP: Effect of time on the remineralisation of enamel after citric acid erosion. *Caries Res* 2001;35: 211-215.

Eisenburger M, Shellis RP, Addy M: Comparative study of wear of enamel induced by alternating and simultaneous combinations of abrasion and erosion in vitro. *Caries Res* 2003;37:450-456.

Eisenburger M, Shellis RP, Addy M: Scanning electron microscopy of softened enamel. *Caries Res* 2004;38:67-74.

Shellis RP, Wilson RM: Apparent solubility distributions of hydroxyapatite and enamel apatite. *J Coll Interf Sci* 2004;278:325-332.

Shellis RP, Finke M, Eisenburger M, Parker DM, Addy M: Relationship between enamel erosion and flow rate. *Eur J Oral Sci* 2005;113:232-238.

Barbour ME, Shellis RP, Parker DM, Allen GC, Addy M: An investigation of some food-approved polymers as agents to inhibit hydroxyapatite dissolution. *Eur J Oral Sci* 2005;113:457-61.

Addy M, Shellis RP: Interactions between attrition, abrasion and erosion in tooth wear. In *Dental Erosion (Monographs in Oral Science 20)* Ed. A Lussi. Basel: Karger, 2006, pp. 17-31.

Barbour ME, Shellis RP: An investigation using atomic force microscopy nanoindentation of dental enamel demineralisation as a function of undissociated acid concentration and differential buffer capacity. *Phys Med Biol* 2007;52:899-910.

Hemingway CA, Shellis RP, Parker DM, Addy M, Barbour ME: Inhibition of hydroxyapatite dissolution by ovalbumin as a function of pH, calcium concentration, protein concentration and acid type. *Caries Res* 2008;42:348-353.

Barbour ME, Shellis RP, Parker DM, Allen GC, Addy M: Inhibition of hydroxyapatite dissolution by whole casein: the effects of pH, protein concentration, calcium, and ionic strength. *Eur J Oral Sci* 2008;116:473-478.