

CURRICULUM VITAE

OF

Colin Alexander Murray

PhD, BDS, FDS RCS(Edin), FDS RCPS(Glas), FDS(Rest Dent) RCS(Edin).

July 2017

PERSONAL DETAILS

Date of Birth : 24th December 1968

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Dubai
UAE

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Nationality : British

EDUCATION / QUALIFICATIONS

SECONDARY	Craigmount High School, UK	1980 – 1986
SCE O Grade	- Nine Grade A's	
SCE H Grade	- Six Grade A's	
SCE SYS	- One Grade A, One Grade B	
A Level	- One Grade A	

UNDERGRADUATE	University of Edinburgh, UK	1986 – 1991
Physics	- Merit	
Bacteriology	- Merit	
Pathology	- Merit	
Chemistry	- Distinction and Class Medal	
Dental Materials Science	- Distinction and Class Medal	
Dental Mechanics and Prosthetics	- Dall Medal for most outstanding technical work	

- Six United Kingdom Dental Elective Prizes awarded for research project investigating incidence and epidemiology of oral cancer prevalence within Papua New Guinea 1991
- Selected representative for University of Edinburgh Dental School on ERASMUS exchange to University of Copenhagen Dental School 1990
- Elected 3rd Year BDS Class Representative 1988-1989
- Elected Social Convener, Edinburgh University Dental Student Society 1989-1990

POSTGRADUATE

- Fellowship in Dental Surgery, RCPS Glasgow (FDS RCPSG) 2007
- Higher Specialist Clinical Training in Restorative Dentistry (CCST)- UK 2001-2006
- Doctorate of Philosophy (PhD), University of Glasgow, Faculty of Medicine 2006
- Intercollegiate Specialty Fellowship in Restorative Dentistry- ISFE (UK) 2006
- Fellowship in Dental Surgery, The Royal College of Surgeons of Edinburgh 1997
- Part 1, Diploma in General Dental Practice (UK) 1997

INTERNATIONAL DENTAL LICENSING

General Dental Council (United Kingdom): Registration number: 66616

Registered as a CCST Dental Specialist in the following UK specialist lists:

- Restorative Dentistry
- Endodontics
- Prosthodontics
- Periodontics

DHCCR, Dubai Healthcare City, Dubai, UAE: Registration number: DS0130-12

Registered as a Dentist and Specialist in:

- Endodontics
- Restorative & Prosthodontics

AHPRA (Australia), Registration number: DEN0000985158

Registered as Dental Practitioner: Dental Board of Australia

CURRENT APPOINTMENT

**Professor in Restorative Dentistry & Associate Dean
European University College (EUC), Dubai, UAE**

February 2014 to date

Associate Dean for Academic Affairs & Staff Development, EUC, Dubai
Chair of Restorative Dentistry Department
Director of Endodontics MSc 3yr Advanced Clinical Specialist Programme
Director of Restorative- Prosthodontics MSc 3 yr Advanced Clinical Specialist Programme
Previously Director of Advanced Education in General Dentistry Diploma Programme

Web site: <http://www.euc.ac.ae/>

I am currently serving as Programme Director of the 3 year Restorative-Prosthodontics & Endodontic Masters clinical specialist training programmes.

I was initially recruited by EUC to prepare, implement, deliver and recruit first cohort of residents to a new 3 year Restorative MSc advanced specialty clinical training programme. MSc in Rest-Pros programme has been established and 3rd cohort of residents recently matriculated and undertaking clinical specialist training with first MSc batch successfully graduated in 2015.

MANAGEMENT RESPONSIBILITIES

- Associate Dean of Academic Affairs responsible for delivery of academic activities within the College.
- Chair and Professor of Restorative Department line managing Restorative staff and delivering postgraduate learning and teaching to Restorative residents across 3 Restorative programmes.
- Associate Dean promoting career development of College faculty and professional development of EUC residents in addition to academic affairs.
- College Institutional Review Board- assessing research protocols for approving research ethics applications.
- Chairing Departmental meetings for devising policy to recruit suitable postgraduate students, develop and establish further postgraduate programmes and to recruit and retain departmental faculty.
- Chair of College Faculty Promotions Committee.
- Programme Director of Endodontic and Restorative-Prosthodontic postgraduate programme ensuring delivery of high quality course content and material.
- Leading on introduction of innovative methods in assessments of clinical training. Developed and implemented Workplace Based Assessments (WBAs).
- Programme Director and Curriculum Development Committees.
- Interview panellist for resident recruitment to 3 year specialist training programmes.
- College Faculty Recruitment and Appointments Committee.
- Overseeing Center for Healthcare Planning and Quality (CPQ) licensing inspection at EUC to obtain approval of hospital clinical license renewal as Clinical Director.

TEACHING (Clinical & didactic seminars/ lectures)

MSc in Endodontics Programme (clinical and didactic courses)	2014- to date
MSc in Restorative-Prosthodontics Programme (clinical & didactic courses)	2014- to date
Postgraduate Certificate in AEGD Courses (clinical & didactic)	2014- 2016
Multidisciplinary teaching with Orthodontics, Paediatrics and Oral Surgery	2014- to date

CLINICAL ACTIVITIES

Endodontic and Restorative dentistry patient clinics

External Examiner

Final Clinical/Oral Examination of the Saudi Board- Restorative, Riyadh, KSA	2012- current
Royal College of Surgeons of Edinburgh Specialty Membership Examiner	2012- current
Royal College of Physician & Surgeons of Glasgow MFDS	2014- current

Internal College Examiner

MSc Endodontic Programme	2014- current
MSc Prosthodontics Programme	2014- current
Thesis Defence Committee- Endodontic, Paediatric & Rest-Pros	2014- current

International Duties

Commonwealth Scholarship Commission Academic Advisory Panel	2010- current
Academic Advisory Panel, CPD-Dubai	2012- current
External panellist, KSA Dental Scientific Committee	2013- current
International Adviser to UAE for the Royal College of Physicians and Surgeons of Glasgow	2014- current

PREVIOUS APPOINTMENTS

Dubai School (College) of Dental Medicine (DSDM/ DCDM), Dubai, UAE **2012 - 2014**

Chair of Restorative Dentistry Department, Dubai School of Dental Medicine.
Programme Director of Endodontics MSc, Dubai School of Dental Medicine,
Programme Director of Prosthodontics MSc, Dubai School of Dental Medicine

Recruited to set up a new postgraduate Dental College (DSDM) within Dubai Healthcare City and to prepare, organise and establish Ministry of Higher Education accreditation of all Restorative postgraduate programmes. Responsible for implementation and recruitment of both Faculty and Residents to new Endodontic, Prosthodontic and Periodontology 3 year MSc advanced specialty clinical training programmes. All 3 Restorative programmes written by myself and fully accredited by Commission of Academic Accreditation (MOHESR) within 4 months. All 3 programmes were fully implemented and second cohorts of residents were successfully undertaking training in all 3 Restorative programmes before my recruitment to current position at EUC.

MANAGEMENT RESPONSIBILITIES

Chair of Restorative Department	- 2012 - 2014
School Executive Committee	- 2012 - 2014
Curriculum Development Committee	- 2012 - 2014
Programme Directors Committee	- 2012 - 2014
College Faculty Promotions and Appointments Committee	- 2012 - 2014
Interview Committee for resident applications to postgraduate programmes	- 2012 - 2014
Faculty Appointments Committee	- 2012 - 2014

TEACHING (Clinical & Didactic)

MSc in Endodontics Programme (Clinical & Didactic)	- 2012 - 2014
MFDS Preparatory Course, Dubai- Lecturer on Prosthodontics	- 2012 - 2014
MFDS Preparatory Course, Dubai- Lecturer on Endodontics	- 2012 - 2014
MFDS Preparatory Course, Saudi Arabia- Lecturer on Prosthodontics	- 2012 - 2014
MFDS Preparatory Course, Saudi Arabia- Lecturer on Endodontics	- 2012 - 2014
MFDS Preparatory Course, Saudi Arabia- Lecturer on Periodontology	- 2012 - 2014
MFDS Preparatory Course, Saudi Arabia- Lecturer on Implantology	- 2012 - 2014
MSc in Periodontics, Prosthodontics, Paediatrics (Clinical & Didactic)	- 2012 - 2014

Internal Examiner

MSc Endodontic Restorative Course	- 2012 - 2014
MSc Paediatric Restorative Course	- 2012 - 2014
MSc Periodontology Restorative Courses	- 2013 - 2014
MSc Prosthodontic Restorative Courses	- 2013 - 2014

International Duties

Commonwealth Scholarship Commission Academic Advisory Panel	- 2010 - current
Advisory Panel, CPD-Dubai	- 2012 - current

External Examiner

Final Clinical/Oral Examination of the Saudi Board- Restorative, Riyadh, KSA	- 2013 - current
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Clinical Duties

Private practise specialist clinical sessions in Endodontics, Prosthodontics and Restorative dentistry

**Professor (Full Professor)/ Honorary Consultant in Restorative Dentistry,
University of Glasgow Dental School & Hospital, UK**

2009- 2012

Head of Clinical Dentistry, University of Glasgow Dental School, UK
Departmental Chair of Restorative Dentistry, University of Glasgow Dental School
Education Lead, Restorative Dentistry, University of Glasgow Dental School
Clinical Director for Endodontics, Glasgow Dental Hospital & School

<http://www.gla.ac.uk/schools/dental/management/clinicaldentistryexecutive/>

Senior leadership role overseeing all clinical teaching activities within the School and helped guide the School towards achieving its ultimate status as the number 1 Dental School within the UK for several consecutive years during my senior appointment.

TEACHING

Undergraduate

Academic Clinical Director for Prosthodontics, University of Glasgow	- 2006- 2009
BDS4 Undergraduate Elective Supervisor	- 2006- 2012
BDS5 teaching on Restorative referral clinics	- 2006- 2012
Clinical teaching of BDS2 in Restorative Dentistry	- 2006- 2012
Clinical teaching of BDS3 in Restorative Dentistry	- 2006- 2012
Clinical teaching of BDS4 in Restorative Dentistry	- 2006- 2012
Clinical teaching of BDS5 in Restorative Dentistry and Endodontics	- 2006- 2012
Delivery of lectures in Restorative Dentistry to BDS2, BDS3 and BDS4	- 2006- 2012
Delivery of small group seminars in Endodontics to BDS5	- 2006- 2012
Director for Undergraduate Endodontic Teaching	- 2006- 2012
Director of Restorative Dentistry Teaching Synopsis	- 2006- 2012
Director BDS5 Specialist Endodontic Course	- 2007- 2012
Educational Mentor for BDS1 to BDS5 undergraduates	- 2004- 2012
Implant teaching to BDS5 on both surgical and restorative phases of treatment	- 2006- 2012
Internal Examiner BDS Finals Examination, University of Glasgow	- 2006- 2012
Restorative Clinical Director for Endodontics	- 2009- 2012
Restorative Mentor for BDS5 undergraduates	- 2006- 2008
Restorative Tutor for BDS4 undergraduates	- 2008- 2012

Postgraduate

Clinical Trainer of Dentists with Special Interests in Endodontics (MSc)	- 2006- 2012
Clinical Trainer of Specialist Registrars in Restorative Dentistry (ISFE/ CCST)	- 2006- 2012
Clinical Trainer of Specialist Registrars in Periodontics (MRD/ CCST)	- 2006- 2012
Course Co-ordinator MSc Prosthodontics	- 2008- 2012
Delivery of Basic Science Module on MSc (Primary Dental Care) Core course	- 2006- 2012
Delivery of seminars to Specialist Registrars in Restorative Dentistry	- 2006- 2012
Delivery of seminars to Enhanced Practitioner postgraduate students	- 2006- 2012
Director MSc (Primary Dental Care) in Endodontics	- 2006- 2012
Director Restorative In-Service Training Days/ Staff Training	- 2007- 2012
Dental Nurse CME Clinical Update Courses	- 2009- 2012
Educational Supervisor for Dental Foundation Trainees/ Senior House Officers	- 2006- 2012
Educational Supervisor for Specialist Registrars in Restorative Dentistry	- 2006- 2012
MFDS Preparatory Course, RCPSG- Lecturer on Removable Prosthodontics	- 2005- 2012
MFDS Preparatory Course, RCPSG- Lecturer on Endodontics	- 2006- 2012
Postgraduate Student Research Supervisor (MSc and PhD)	- 2006- 2012
Postgraduate Prosthodontic and Endodontic Teaching	- 2006- 2012
Postgraduate Student Adviser	- 2006- 2012
Programme Director MSc Endodontics	- 2010- 2012
Restorative Dentistry Director in Endodontics	- 2007- 2012

Restorative Lead in Fixed and Removable Prosthodontics	- 2006- 2009
Restorative SHO Induction Course Lead in Endodontics	- 2006- 2012
Senior House Officer Induction Training Courses	- 2005- 2012
CPD Postgraduate Teacher in Endodontics to General Dental Practitioners	- 2005- 2012
Supervision of staff undertaking audit projects investigating endodontic services, implant services, impression quality, prosthodontic services	-2006- 2012

ADMINISTRATION

Management

Academic Representative on Faculty Appointments Advisory Committee for Restorative Dentistry Consultant posts	- 2008- 2012
Academic Clinical Director for Prosthodontics, University of Glasgow Dental School & Hospital	- 2006- 2009
Appraisal Panellist for Senior House Officer and Dental Foundation Trainees	- 2006- 2012
Board of Examiners Committee	- 2009- 2012
Chairman, Restorative Department Executive Committee	- 2006- 2009
Chairman, 2008 OMIG Biennial Postgraduate Research Conference, Glasgow	- 2007- 2008
Dental Material Science Working Group	- 2010- 2012
Dental School Management Executive, University of Glasgow Dental School	- 2009- 2012
Dental School University NHS Liaison Group Committee	- 2009- 2012
Director, 2006 Scottish Restorative Specialist Registrar Masterclass	- 2006
Head of Clinical Dentistry Section, University of Glasgow Dental School	- 2009- 2012
Infection and Immunity Section Executive Committee	- 2006- 2012
Information Services Committee, University of Glasgow Dental School	- 2006- 2009
Interview Panellist for SHO and Dental Foundation Trainee appointments	- 2006- 2012
In-Service Training Day Director, Restorative Section	- 2007- 2012
Laboratory Liaison Group, Glasgow Dental School & Hospital	- 2006- 2010
Postgraduate Management Committee University of Glasgow Dental School	- 2009- 2012
Promotions and Advancement Committee	- 2009- 2012
Programme Co-ordinator MSc (Prosthodontics)	- 2008- 2011
Programme Director MSc (Endodontics): Programme written by myself and academic accreditation achieved	- 2010- 2012
Restorative Clinical Director in Endodontics	- 2007- 2012
Restorative Education Lead, University of Glasgow Dental School	- 2008- 2012
Restorative Lead, Dental School Website Management Committee	- 2008- 2011
Restorative Representative, Dental School Refurbishment Committee	- 2008- 2012
Specialist Training Committee for Restorative Dentistry (National Panel)	- 2009- 2012
Undergraduate Research/ Elective Development Committee	- 2005- 2007
University of Glasgow, Restorative Section Executive Committee Chairman	- 2006- 2012

Examiner Duties

BDS2 Examiner- written examination	- 2006- 2012
BDS3 Examiner- written examination and OSCE	- 2006- 2012
BDS4 Examiner- written examination	- 2006- 2012
BDS4 Finals Case Presentation Examiner	- 2006- 2012
BDS4 Finals	- 2006- 2012
BDS5 OSCE exam	- 2009- 2012
Examiner on Core Module MSc (Primary Dental Care)- written examination	- 2007- 2012
Examiner Year 2 MSc (Primary Dental Care)	- 2008- 2012
Examiner Year 3 MSc (Primary Dental Care)	- 2008- 2012
Examiner MSc (Endodontics)	- 2012- 2012
International Qualifying Examination National Board of Examiners	- 2004- 2007

International Duties

Commonwealth Scholarship Commission Academic Advisory Panel - 2009- 2012

Budgetary Responsibilities

Preclinical Skills budget	GBP 60, 000 per annum	- 2009 -2012
Clinical Dentistry Section budget	GBP 20, 000 per annum	- 2009 -2012

Line Management Responsibilities

Responsible for faculty recruitment, induction, development, line management and disciplinary procedures through HR of 70 clinical teaching Faculty staff within Clinical Dentistry Section comprising Paediatric, Orthodontic, Oral surgery, Periodontology, Endodontic, Prosthodontic, Operative Faculty and administrative/ support staff.

Clinical Responsibilities

Referral Consultant clinics in Restorative Dentistry patients with:

- Endodontic problems including management of:
 - Fractured posts and instruments, failed orthograde root canal treatment, failed retrograde root canal treatment, root perforations and other iatrogenic damage, management of open apices, internal and external root resorption and cases with sclerosed or complex root canal systems using operating microscope.
- Removable Prosthodontic problems including treatment planning and management of:
 - Complex failed partial and complete removable prostheses, maxillofacial prosthodontics for patients suffering major trauma, oral cancer, cleft lip-palate defects, hypo/oligodontia requiring implant-retained removable prostheses or patients with advanced toothwear.
- Periodontal problems incorporating management of patients with:
 - Advanced periodontal destruction from chronic and aggressive periodontal diseases, localised sites with advanced periodontal loss of attachment and patients requiring non-surgical or surgical management of periodontal conditions
- Fixed Prosthodontic problems comprising patients with:
 - Failed crown and bridgework, advanced toothwear necessitating a fixed prosthodontic approach, hypodontia requiring osseointegrated implants, amelogenesis imperfecta or aesthetic problems.
- Combined Multidisciplinary Clinics
 - Oral Surgery/ Endodontic multidisciplinary specialist clinics for advice, management and treatment of patients with periradicular diseases.

- Orthodontic/ Restorative multidisciplinary clinics for management of patients requiring a combined approach to treatment such as hypodontia or osteotomy procedures.

Specialist clinical treatment sessions for patients requiring:

- Orthograde and retrograde (surgical) root canal treatment procedures utilising microsurgery skills, operating microscope, rotary nickel titanium instrumentation (ProTaper, GT Rotary), ultrasonics and advanced warm thermal obturation techniques (System B, Obtura etc)
- Advanced Removable Prosthodontic treatment including complex partial and complete removable prostheses, implant-retained prostheses (Nobel Biocare or Straumann systems) and obturator removable prostheses.
- Advanced fixed prostheses rehabilitation of patients such as toothwear cases requiring full mouth rehabilitation and patients with extensive failing fixed extracoronary restorations and hypodontia cases requiring implant treatment or resin bonded bridges.
- Specialist periodontal care encompassing open flap curettage surgical procedures or surgical procedures such as root resection and gingivectomy procedures. Non-surgical procedures of advanced periodontal disease requiring maintenance. Guided tissue regeneration with BioOss and membranes (BioGuide).

PREVIOUS APPOINTMENTS/ contd.

Clinical Senior Lecturer/ Honorary Consultant in Restorative Dentistry,
University of Glasgow Dental School & Hospital, UK -2006 - 2009

Clinical Lecturer / Honorary Specialist Registrar in Restorative Dentistry,
University of Glasgow Dental School & Hospital, Glasgow, UK -1998 - 2006

Academic Responsibilities

TEACHING

Undergraduate Teaching

Clinical teaching to 2nd Year in Restorative Dentistry disciplines - 1998- 2006
Clinical teaching to 3rd Year in Restorative Dentistry disciplines - 1998- 2006
Clinical teaching to 4th Year in Restorative Dentistry disciplines - 1998- 2006
Clinical teaching to Final Year in Restorative Dentistry disciplines - 1998- 2006
Delivery of lectures to 2nd, 3rd and 4th Year in Restorative Dentistry - 1998- 2006
Delivery of seminars to 3rd and 4th Year in Restorative Dentistry - 1998- 2006
Internal examiner of BDS Finals examination, University of Glasgow - 1998- 2006
Dental Elective Supervisor for 11 Final Year undergraduate elective projects.
5 undergraduate projects awarded prizes for most outstanding
elective research projects - 1998- 2012
Pre-clinical skills operative teaching to 3rd and 4th Year BDS undergraduates - 1998- 2004
Clinical teaching on Final Year undergraduate Specialist Endodontic Clinics - 2002- 2006
Implant (surgical and restorative phases) teaching to Final Year BDS - 2003- 2006
Restorative mentor for Final Year undergraduates - 2004- 2006
Academic mentor, BDS1 undergraduates - 2005- 2006

Postgraduate Teaching

Teaching of overseas candidates undertaking the LDS Entrance Exam - 1999- 2003
Continuing Professional Development (CME) courses to Dental Care
Professionals in Periodontics - 2000- 2003
Section 63 postgraduate CME dental education courses in Periodontics
to General Dental Practitioners - 2000- 2004
Section 63 postgraduate CME dental education courses in Endodontics
to General Dental Practitioners - 2000- 2006
Supervision of SHO staff on several audit projects completed within
Restorative disciplines - 2001- 2006
Teaching of candidates undertaking the International Qualifying Examination - 2002- 2004
Restorative SHO Induction Course teacher in Crown and Bridge - 2003- 2005
Restorative SHO Induction Course teacher in Endodontics - 2005- 2006
Appraisal Panellist for Senior House Officer and Dental Foundation Trainees - 2004- 2006
Educational Supervisor for Dental Foundation Trainees/ Senior House Officers - 2004- 2006
Teaching of candidates undertaking the Overseas Registration Examination - 2007- 2008

ADMINISTRATION

Managerial

Organiser of dental practical seminars, RCPS, Glasgow
to school children on scientific visitations to the College - 1998- 2000
Training Grade Staff Association Committee, GDH&S - 1998- 2003

Curriculum Development Committee, University of Glasgow Dental School	- 1998- 2004
Information Services Committee, University of Glasgow Dental School	- 2001- 2006
Coordinator, LDS Clinical Examination, RCPS Glasgow	- 2000 -2003
Director, Operative Dentistry Journal Club	- 2002- 2005
Organiser, Restorative SpR didactic teaching programme	- 2002- 2006
Organiser, Scottish Restorative SpR Masterclass, Glasgow Dental Hospital	- 2003
Specialist Registrar Trainer-Trainee Meeting Co-ordinator	- 2003- 2005
Director, Senior House Officer in Restorative Induction Course	- 2003- 2005
Undergraduate Research/ Elective Development Committee	- 2005- 2006

Examiner Duties

2 nd Year BDS Examiner	- 1998- 2006
3 rd Year BDS Examiner	- 1998- 2006
4 th Year BDS Examiner	- 1998- 2006
5 th Year BDS Finals Internal Examiner	- 1998- 2006
LDS Entrance Exam for overseas candidates, Examiner	- 2000- 2003
International Qualifying Examination (IQE) Board of Examiners	- 2002- 2006

Key Clinical Skills

Patient treatment during Higher Specialist Clinical Training comprising:

Full mouth rehabilitation of patients requiring specialist care in fixed prosthodontics with bridgework, crowns and inlays and fixed implant retained prostheses (Straumann and Nobel Biocare implant systems) as a consequence of failed fixed prostheses, hypodontia, toothwear and dental syndromes.

Specialist Endodontic treatment in surgical and non surgical procedures utilising surgical operating microscope, ultrasonics, rotary nickel titanium preparation techniques (ProTaper, System GT and Profile), warm thermal obturation techniques (Thermafill, System B and Obtura), guided tissue regeneration in through and through defects and repair of perforations and root end resections with MTA.

Implantology specialist training with placement and restoration of endosseous implants using fixed and removable prostheses in hypodontia, oligodontia, cleft lip palate, major trauma and oral and maxillofacial cancer patients.

Advanced treatment in patients requiring specialist care in Removable Prosthodontics for both complete and partial prostheses. Significant training in Oral and Maxillofacial Prosthodontics in the treatment of cancer patients, cleft lip and palate patients and patients with major trauma.

Specialist periodontal treatment encompassing surgical and non-surgical techniques for various periodontal diseases. Advanced training in open flap curettage surgical procedures, free gingival grafting, guided tissue regeneration, and use of diode lasers, electrosurgery and conventional blade resection of hyperplastic tissues.

Attendance at consultant clinics for assessment and treatment planning of new patient referrals with endodontic, fixed and removable prostheses and periodontal problems from General Dental Practitioners.

Attendance at interdisciplinary joint clinics between Restorative Disciplines and Orthodontics, Paediatrics, Oral Surgery or Oncology departments.

**Royal Navy Dental Officer, UK Armed Forces
Surgeon Lieutenant Commander (D)** **1991-1998**

BRITANNIA ROYAL NAVAL COLLEGE, Dartmouth **18/08/91 - 03/12/91**

Naval officer training with primary emphasis on development of budgetary, managerial and leadership skills and responsibilities.

HMS NELSON, Portsmouth **03/12/91 - 03/05/93**

General Dental Vocational Training, Wessex VT Scheme. Dental Officer serving in nine chair dental centre. Delegated responsibility for training, management, performance assessment, annual reporting and career progression of 18 Dental Care Professionals, comprising dental technicians, dental hygienists and dental nurses (Divisional Officer- DO).

British Forces Gibraltar **04/05/93 - 02/05/94**

Senior Dental Officer in charge of managing RAF Gibraltar Dental Services. Responsible for provision of treatment and overseeing oral health services to Service personnel and dependents. Delegated responsibility for training, management, performance assessment, annual reporting and career progression of 6 medical and dental staff (DO) and Departmental Budget Holder.

Royal Hospital HASLAR, Gosport **03/05/94 - 16/05/95**

Advanced resuscitation, triage and anaesthetic training for frontline combat.

HMS CARDIFF/ HMS CORNWALL/ RFA BAYLEAF **17/05/94 - 30/01/95**

Dental Officer in command of dental service provision to 600 personnel on ships involved in Gulf Patrol. Secondary duties included Officer of the Watch, Duty Medical Officer and First Aid Officer.

HMS NELSON/Flag Officer Portsmouth **31/01/95 - 18/03/96**

Dental Officer in command for co-ordinating and providing dental services to personnel aboard Royal Navy ships based within HMS Nelson Dockyard, Flag Officer Portsmouth Area Dental Team. Divisional Officer Duties for staff appraisal and development.

Royal Hospital HASLAR, Gosport **19/03/96 - 21/04/97**

Singular Senior House Officer in Department of Oral & Maxillofacial Surgery with clinical and management responsibilities to six OMFS & Oral medicine consultants. During this time, I was elected Royal Hospital HASLAR Social Secretary 1996-97.

HMS NEPTUNE, UK and BATUS, Canada **22/04/97 - 16/10/98**

Senior Dental Officer responsible for management of dental department, departmental budget and dental service provision to Army personnel based in Canada. Also responsible for delivery of oral healthcare to Naval personnel and dental staff development at Faslane Submarine Base. Managerial responsibilities included divisional officer responsibilities for junior dental staff and performance and development review of dental care professionals.

MEMBERSHIP OF PROFESSIONAL BODIES AND LEARNED SOCIETIES

Association of Consultants and Specialists in Restorative Dentistry
British Association of Teachers in Conservative Dentistry
British Endodontic Society
British Society of Periodontology
British Society of Restorative Dentistry
British Society for the Study of Prosthetic Dentistry
European Prosthodontic Association
European Endodontic Society
General Dental Council
International Association of Dental Research
Medical and Dental Defence Union of Scotland
Oral Microbiology and Immunology Group, BSDR
Scottish Society for Experimental Medicine
The Glasgow Odontological Society
The Royal Odonto-Chirurgical Society of Scotland
The Royal College of Physicians and Surgeons of Glasgow
The Royal College of Surgeons of Edinburgh
The Scottish Microbiology Society

LOCAL COMMITTEE APPOINTMENTS

Training Grade Staff Association Committee, GDH&S	- 1998- 2003
University of Glasgow BDS Curriculum Development Committee	- 1998- 2004
Board of Examiners, University of Glasgow Dental School	- 1998- 2012
Information Services Committee, University of Glasgow Dental School	- 2001- 2006
Dental Material Science Short Life Working Committee	- 2006- 2008
Infection and Immunity Section Executive Committee	- 2006- 2008
Chairman, Restorative Section Executive Committee	- 2008- 2009
Chairman, Restorative Dentistry Group	- 2009- 2012
Clinical Dentistry Section Education Leads Committee	- 2009- 2012
Dental School Management Executive Committee	- 2009- 2012
Dental School- NHS Liaison Committee	- 2009- 2012

NATIONAL COMMITTEE APPOINTMENTS

Scottish Advisory Committee on the Dental Workforce	- 2000 -2003
Scottish Committee for Hospital Dental Services	- 2000 -2003
Scottish Committee for Postgraduate Medical and Dental Education, Dental Committee	- 2000- 2002
Scottish Junior Doctors Committee	- 2000 -2003
Specialist Registrars in Restorative Dentistry Conference Committee	- 2000 -2001
Specialist Registrars in Restorative Dentistry Group Committee	- 2000- 2003
The Glasgow Odontological Society Council	- 2000- 2003
NHS Education for Scotland, Dental Committee	- 2001- 2004
Scottish Specialist Training Committee in Restorative Dentistry	- 2004- 2006
Royal Odonto-Chirurgical Society of Scotland, Council	- 2006 -2009
Oral Microbiology and Immunology Group (BSDR) UK Committee	- 2006- 2009
Specialist Training Committee for Restorative Dentistry	- 2009- 2012

POSTGRADUATE AWARDS/ CERTIFICATION

Awarded prize for most outstanding oral presentation; Armed Forces Annual Dental Conference	- 1997
British Society of Dental Research Bursary Award, Lancaster, BSDR Conference	- 2000
Oral and Dental Research Trust Award	- 2000
University of Glasgow Teaching and Learning Service, New Lecturer Teaching Certificate- Certificate in Learning and Teaching in Higher Education	- 2000
British Society of Dental Research Bursary Award, University of Belfast, BSDR	- 2001
British Society of Dental Research Bursary Award, University of Cardiff, Pan European Federation of Oral Science	- 2002
Royal College of Surgeons of Edinburgh, Training the Trainers	- 2002
Sedation Certificate, University of Glasgow Dental School and Hospital	2003- 2004
Supervisors and Examiners Workshop, Faculty of Medicine, University of Glasgow	- 2006
Completion of Research Training Programme, Faculty of Medicine, University of Glasgow	- 2005
NHS Management Course for Specialist Registrars, NES Scotland	2004- 2006
Certificate of Completion of Specialist Training (CCST) in Restorative Dentistry	-2006
Accredited DENTSPLY teacher for introductory root canal treatment postgraduate courses	- 2007
Accredited DENTSPLY trainer for advanced root canal treatment postgraduate courses	-2009
Accredited DENTSPLY trainer for WaveOne postgraduate courses	-2009
Accredited VDW trainer for Reciproc postgraduate courses	-2010
Ionizing Radiation Medical Exposure Regulations (IRMER) certified	- 2012
Royal College of Surgeons of Edinburgh, Examiner Training certified	- 2013
Basic Life Support Certificate	- 2014

ESTEEMED RESEARCH AWARD

University of Glasgow, Faculty of Medicine- Bellahouston Medal for most outstanding Faculty of Medicine PhD Thesis submitted by a clinician - 2006

NATIONAL TEACHING AWARDS

University of Glasgow Dental School- nomination for UK Dental Teacher of the Year, 2007
University of Glasgow Dental School- nomination for UK Dental Teacher of the Year, 2008

RESEARCH GRANT FUNDING

Implant training within BDS curriculum. CA Murray, A Bell, D Robertson. Nobel Biocare 2012-2015 £24, 000.

Peer Assisted Learning: a study of student mentoring within a syndicate group learning environment. D Cameron, CA Murray, R McKerlie, DJ Jagger. University of Glasgow Chancellor's Fund 2011- 2013 £3,000.

Bacteria in diseased aortic tissue of subjects with and without rheumatic disease. MP Riggio & CA Murray. MRC Scholarship 2009-2012 £60, 000.

Immunomodulatory effects of Tygacil and its antimicrobial effects against Gram negative CF pathogens. G Ramage. CA Murray & C Williams. Wyeth, 2008-2010 £38, 000.

Development of a biologically relevant gingivitis model system. G Ramage, CA Murray & S Culshaw. GlaxoSmithKline, 2008-2011: £142, 986.

Treatment and prevention of *Candida albicans* biofilms in denture stomatitis. A Jose, G Ramage, CA Murray & F McCord. British Society for the Study of Prosthetic Dentistry, 2008-2009: £1,000.

Fungal and bacterial interactions within the cystic fibrosis lung. Yorkhill NHS Trust and Pfizer - PhD studentship G Ramage, CA Murray, C Williams & B Jones, 2007 – 2010: £50,500.

Investigation into the contribution of IL-17A versus TNF α in chronic inflammation by blockade with an anti-human IL-17A antibody or in combination with a TNF α inhibitor, Enbrel or Humira. Immunohistochemical expression analysis of IL-17A and key associated molecules in skin biopsies from subjects with psoriasis and psoriatic arthritis. CA. Murray & IB McInnes. Astra Zeneca/ Cambridge Antibodies Technology, 2007-2008: £138, 000.

Does photoactivated disinfection (PAD) improve clinical outcomes of root canal re-treatment in vivo and is it effective upon in vitro root canal biofilms? CA Murray, J Whitters, G Ramage & M Riggio. European Society of Endodontology- Annual Research Prize, 2006-2007: 10, 000 Euro.

Investigation of ligands of Toll-like receptors in atherosclerotic tissue. C Murray, C Erridge & M Riggio. Synergy Pump Priming Competition, 2006-2007: £4, 000.

Does Interleukin 18 (IL-18) contribute towards the perpetuation of periradicular periodontitis? CA. Murray & IB McInnes. Oral & Dental Research Trust, 2001-2002: £2, 000.

A potential role for Interleukin 18 (IL-18) in the perpetuation of periradicular periodontitis. CA Murray & IB McInnes. BDA Research Foundation Shirley Glasstone Hughes Memorial Prize Fund, 2001-2003: £9, 800.

A potential role for Interleukin 18 (IL-18) in the perpetuation of periradicular periodontitis. CA Murray. Edinburgh Dental Alumni Annual Research and Travel Award, 2001: £1000.

POSTGRADUATE SUPERVISION

Honours Project:

Development of a sensitive and specific molecular method to detect bacteria remaining in the root canal following treatment. Jennifer Hart 2007-2008

MSc/ MRes Theses:

A study comparing the effectiveness of photoactivated disinfection (PAD) against conventional root canal disinfection methods. Rancin Mohammad 2006- 2007

Properties of novel injection moulding materials: A comparison between conventional PMMA and injection moulding material. Beth Young 2007- 2010

Establishment of PCR techniques to identify bacteria recovered from root canals following treatment by photoactivated disinfection (PAD). Sadiq Akbarjen 2007- 2008

Assessment of a referral proforma for clinical pathways of Endodontic patients for undergraduate treatment. James Donn 2008-2010

Immunomodulatory effects of Tygacil and its antimicrobial effects against Gram negative CF pathogens. Ryan Quinn 2009- 2011

Effects of a denture cleanser upon oral pathogens Adriana Zalewska 2009- 2011

Effectiveness of CBCT in assessment of PRD Navid Saberi 2009- 2011

Knowledge of dental trauma management within a remote and rural population Stavros Karampatos 2009- 2011

Attitudes of general dental practitioners in development of a Managed Clinical Network (MCN) in endodontics David McCulloch 2009- 2011

Prosthodontic laboratory procedures within Scotland Alan Ovenstone 2009- 2011

Knowledge in the use of ceramic materials Hans Brown 2010- 2012

Specialist knowledge in the relationship between bisphosphonate treatment and root canal treatment Calum Jack 2010- 2012

Root canal treatment and sedation Peter Walker 2010- 2012

Detection of periradicular disease by CBCT within a Scottish sub population Gareth Calvert 2012- 2014

A comparison in the use of 2 new rotary file systems by undergraduates and postgraduates Norren Kamal 2014- 2014

What is the most successful treatment in the mandibular anterior region? A systematic review Miryam Ishak 2014- 2015

Are direct composite veneers as good as indirect ceramic veneers? Salaim Salaim 2014- 2015

Cantilever bridgework- what's the clinical success of zirconia? A systematic review Randa Karessa 2014- 2016

Levels of microbial contamination in dental laboratories within the United Arab Emirates	Surror Hussein	2014- 2017
An in vivo study on the osseintegration of zirconia dental implants	Besher Turk	2015- 2018
Strategies to reduce shrinkage in composite resin placement, an in vitro study	Shaikha Al Ali	2015- 2018
What provides greater clinical success onlays or crowns? A systematic review	Rezvan Farahbahksh	2015- 2018

PhD Theses:

Fungal and bacterial interactions within the cystic fibrosis lung	Susan McChlery	2007- 2010
Development of a biologically relevant gingivitis model system	Anto Jose	2008- 2011
Bacteria in diseased aortic tissue of subjects with and without rheumatic disease. (MRC Scholarship)	Samuel Curran	2009- 2012
Antimicrobial effects of Fulvic acid	Leighann Sherry	2010- 2014
Quantitative analysis of tooth wear <i>in-vivo</i> using 3D scanning technology	Khaled Ahmed	2010- 2014

Ed.D Thesis:

Teaching dental technology to dental students; a comparison of approaches.	Donald Cameron	2005-2007
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JOURNAL PANEL OF REVIEWERS

British Dental Journal	2001- current
Clinical Anatomy	2000- current
International Journal of Oral and Maxillofacial Surgery	2004- current
Rheumatology	2002- current
Saudi Endodontic Journal	2012- current
Journal of Prosthodontics	2016- current

EDITORIAL PANEL

Clinical, Cosmetic & Investigational Dentistry	2005- current
Frontiers in Dentistry	2009- current
Journal of Dental Health, Oral Disorders & Therapy	2014- current
Saudi Dental Journal (Section Editor)	2013- current
Asnanportal.com	2014- current
E Cronicon Dental Science Journal	2014- current

BIBLIOGRAPHY

THESIS

Periradicular disease (PRD): Development of a novel explant culture model to investigate the cytokine network. Murray CA. 2006 PhD thesis, University of Glasgow Faculty of Medicine, Scotland, UK.

TEXTBOOK CHAPTERS

Endodontology- Colour Atlas of Oral Medicine Eds R Beer. M Baumann: Root canal treatment and general health. 2007, Thieme, Stuttgart.

Endodontology- Colour Atlas of Oral Medicine Eds R Beer. M Baumann: Immunopathogenesis of periradicular disease. 2007, Thieme, Stuttgart.

Oral and Maxillofacial Surgery, Eds L Andersson, KE Kahnberg & Pogrel MA: Endodontic Surgery, 2010, Blackwell Munksgard, Oxford.

Bone response to dental implant materials Ed A Piattelli, Implant primary stability and occlusion, 2016, Elsevier. ISBN: 978-0-08-100287-2

PEER-REVIEWED PAPERS

Root canal treatment and general health: a review of the literature. Murray CA & Saunders WP. *International Endodontic Journal* (2000) **33**:1-18.

An assessment of the incidence of punctures in latex and non-latex dental examination gloves in routine clinical practice. Murray CA, Burke FJT & McHugh S. *British Dental Journal* (2001) **190**: 377-380.

Wurzelkanalbehandlung und Gesundheit- Eine Literaturübersicht. Murray CA & Saunders WP. *Endodontie* (2002) **11**:143-153.

Dental pain and analgesia. Dickson M, Orchardson R, Haughney M & Murray CA. *CPD Dentistry* (2002) **3**: 48-54.

Peer review amongst restorative specialists on the quality of their communication with referring dental practitioners. Ricketts DNJ, Scott BJJ, Ali A, Chadwick RG, Murray CA, Radford JR & Saunders WP. *British Dental Journal* (2003) **195**: 389-393.

Pain on injection of dental local anaesthesia. Dickson M, Gray G Martin I & Murray CA. *CPD Dentistry* (2004) **4**: 81-86.

An evaluation of the use of tooth temperature to assess human pulp vitality. Smith E, Dickson M, Evans AL, Smith D & Murray CA. *International Endodontic Journal* (2004) **37**: 374-380.

Identification of bacteria associated with spreading odontogenic infections by 16S rRNA gene sequencing. Riggio MP, Aga H, Murray CA, Lennon A, Hammersley N & Bagg J. *Oral Surgery Oral Pathology Oral Medicine Oral Radiology and Endodontics*: (2007) **103**; 610-617.

A survey of denture identification marking within the United Kingdom. Murray CA, Boyd PT, Young BC, Dhar S, Dickson M & Currie JNW. *British Dental Journal* (2007) **203**: E24. Epublication available online.

Care home staff knowledge of oral care compared to best practice: A West of Scotland pilot study. Young BC, Murray CA & Thomson J. *British Dental Journal* (2008) **205**:E15. Epublication available online.

Vascular cell responsiveness to Toll-like receptor ligands in carotid atheroma. Erridge C, Burdres A, Jackson A, Murray CA, Riggio M, Lappin D, Milligan S, Spickett CM & Webb DJ. *European Journal of Clinical Investigation* (2008) **38**; 713-720.

Attachment of *Candida albicans* to denture base acrylic resin processed by three different methods. Young B, Jose A, Cameron D, McCord F, Murray CA, Bagg J and Ramage G. *International Journal of Prosthodontics* (2009) **22**: 151-152.

A review of dental implants and infection. Pye AD, Lockhart DEA, Dawson MP, Murray CA & Smith AJ. *Journal of Hospital Infection* (2009) **72**; 104-110.

Reducing the Incidence of denture stomatitis: are denture cleansers sufficient?. Jose A, Coco B, Milligan S, Young B, Lappin D, Bagg J, Murray CA & Ramage G. *Journal of Prosthodontics* (2010) **19**: 252-257.

In vivo biocompatibility of nanostructured implants, Gadegaard N, Murray CA, Marshall G, Riehle MO, Wilkinson CCD, & Curtis ASG. *Biomaterials* 2009.

Efflux pumps may play a role in tigecycline resistance in the Burkholderia species. Rajendran R, Quinn R, McCulloch E, Murray C, Williams C and Ramage *International Journal of Antimicrobial Agents*. (2010) **36**; 151-154.

Commercial mouthwashes are more efficient than azole antifungals against *Candida albicans* biofilms in vitro. Ramage G, Jose A, Coco B, Rajendran R, Rautemaa R, Murray CA, Lappin DF, Bagg J. *Oral Surgery Oral Pathology Oral Medicine Oral Radiology and Endodontics*: (2011) **111**; 456-60.

Carbohydrate Derived Fulvic Acid (CHD-FA) is a novel antifungal product. Sherry L, Murray CA & Ramage G. *Journal of Infection* (2011) **63**: E99-E99

Impact of retained separated endodontic instruments during root canal treatment on clinical outcomes remains uncertain. Murad M, Murray CA. *Journal of Evidence-Based Dental Practice* (2011) **11**;87-88.

Availability of manufacturers' information on efficacy and compatibility of detergents used for cleaning dental instruments. Calvert G, Murray CA, Hurrell D, Smith AJ *British Dental Journal* (2012) **10**:E16. Epublication available online.

Carbohydrate Derived Fulvic Acid: An in vitro Investigation of a Novel Membrane Active Antiseptic Agent Against *Candida albicans* Biofilms. Sherry L, Jose A, Murray CA, Williams C, Jones B, Millington O, Bagg J, & Ramage G. *Frontiers in Microbiology* (2012) **3**: 116.

A comparative in vitro study of two denture cleaning techniques as an effective strategy for inhibiting *Candida albicans* biofilms on denture surfaces and reducing inflammation. Ramage G, Zalewska A Cameron DA, Sherry L, Murray CA Finnegan MB, Loewy ZG, Jagger DC. *Journal of Prosthodontics* (2012).

Investigating the biological properties of carbohydrate derived fulvic acid (CHD-FA) as a potential novel therapy for the management of oral biofilm infections. Sherry L, Millhouse E, Lappin DF, Murray CA, Culshaw S, Nile CJ & Ramage G. *BMC Oral Health* (2013) **13**:47.

Bacteria in the adventitia of cardiovascular disease patients with and without rheumatoid arthritis. Curran SA, Hollan I, Erridge C, Lappin DF, Murray CA, Sturfelt G, Mikkelsen K, Førre OT, Almdahl SM, Fagerhol MK, Goodyear CS, Riggio MP *PLOS* (2014) 9(5): e98627. doi:10.1371/journal.pone.0098627.

A prospective survey of secondary care tooth wear referrals: demographics, reasons for concern and referral outcomes. Ahmed K, Murray CA & Whitters JC. *British Dental Journal* (2014) **216**, E9.

Resin retained bridgework to replace missing teeth- A review and case report Kerassa R & Murray CA. *EUC Journal* (2015) **2**.

A Proposed Methodology to Assess the Accuracy of 3D Scanners and Casts and Monitor Tooth Wear Progression in Patients. Ahmed K, Whitters J, Ju X, Pierce SG, MacLeod CN, Murray CA. *International Journal of Prosthodontics* 2016;29:514–521. doi: 10.11607/ijp.4685

Clinical monitoring of tooth wear progression in patients over a period of one year using CAD/CAM Ahmed K, Whitters JC, Xiangyang J, Pearce GS, MacLeod C & Murray CA. *International Journal of Prosthodontics* 2017;30:153-155. doi: 10.11607/ijp.4990

Longevity of Fiber-Reinforced Composite Fixed Partial Dentures (FRC FPD) - Systematic Review and Meta-Analysis. Ahmed K, Li K.Y. & Murray C A. *Journal of Dentistry* 2017;61:1-11. <https://doi.org/10.1016/j.jdent.2016.08.007>

3-D assessment of dimensional accuracy and dimensional stability of casts fabricated from hydrocolloids and elastomers over a one-month period. Ahmed K, Whitters JC, Xiangyang J, Pearce GS, MacLeod C & Murray CA. *International Journal of Prosthodontics* (2017 In press).

MANUSCRIPTS IN PREPARATION

The potential role for interleukin-18 in the perpetuation of periradicular disease. Murray CA, Gracie JA & McInnes IB. For submission to *Journal of Immunology*.

The contribution of periradicular disease (PRD) fibroblasts to inflammatory processes. Murray CA, Lappin DF, Gracie JA & McInnes IB. For submission to *International Endodontic Journal*.

Proinflammatory pathways within human periradicular disease are driven by IL-17A. Murray CA, Gracie JA & McInnes IB. For submission to *Journal of Dental Research*.

Contribution of the RANKL/ Osteoprotegerin (OPG) regulatory axis to human periradicular disease. Murray, CA, Gracie, JA & McInnes IB. For submission to *Journal of Endodontics*.

A novel explant culture system to investigate cytokines in periradicular disease (PRD). Murray CA, Gracie JA, Gilmour A & McInnes IB. For submission to *Journal of Dental Research*.

Defining TH1/ TH2 pathways within human chronic periradicular disease. Murray, CA, Gracie JA and McInnes IB. For submission to *International Endodontic Journal*.

PUBLISHED PEER-REVIEWED ABSTRACTS

The alteration in mandibular posture by vibration of posterior fibres of the Temporalis muscle. Dickson M, Lyons MF & Murray CA. *Journal of Oral Rehabilitation* 2001:**29**: 886.

Surface porosity of dental casts: the effect of material used and orientation during setting. Dickson M, Broad M, Murray CA & McKerlie R. *Journal of Dental Research* 2001:**80**: 1179.

A potential role for interleukin-18 in the perpetuation of periradicular disease. Murray CA, Gilmour A, Kitson S, Gracie JA, McInnes IB, Saunders WP & MacDonald DG. *Journal of Dental Research* 2001:**80**:1174.

Incidence of punctures in latex and non-latex dental examination gloves in routine clinical practice. Murray CA, Burke FJT & McHugh S. *Journal of Dental Research* 2001.

A pilot trial of a patient recorded oral hygiene diary. Dickson M, Murray CA, Gray EA, McChlery LA & Ross MK. *Journal of Dental Research* 2001:**80**: 1174.

An assessment of the matrix impression system for fixed prosthodontics. Dickson M, Murray CA & MacGregor AMP. *Journal of Dental Research* 2001:**80**: 1163.

Chronic periradicular disease: a novel human explant system used to investigate the role of interleukin-18 (IL-18). Murray CA, Lappin D, Gracie JA, Saunders WP & McInnes IB. *International Endodontic Journal* 2003:**36**: 921.

The effect of needle bevel orientation on the pain of skin. Dickson M, Sharp T, Murray CA & Wilson WS. *Journal of Dental Research* 2004: **83**: (Spec Iss C)-563.

The use of light cured acrylic to customise bite force transducer plates. Dickson M, Donaldson A, Murray CA & Lyons MF. *Journal of Dental Research* 2004: **83**: (Spec Iss C)-539.

The use of PTFE tape to adapt a new restoration to an existing denture rest. Dickson M, Murray CA, MacGregor AMP & Lyons MF. *Journal of Dental Research* 2004: **83**: (Spec Iss C)-571.

Evidence for Interleukin 18 (IL-18) as a novel mediator in chronic periradicular disease. Murray CA, Gilmour A, Kitson SM, Gracie JA, Saunders WP & McInnes IB. *Journal of Dental Research* 2004:**83**: (Spec Iss C)-506.

A survey of pain levels reported at different injections stages. Dickson M, Gray G, Martin I & Murray CA. *Journal of Dental Research* 2005:**84**: (Spec Iss B)-0200.

Comparison of conventionally and functionally generated occlusal surfaces. Dickson M, Murray CA, MacGregor AMP, Byrne P, MacDougall P & Strawbridge K. *Journal of Dental Research* 2005:**84**: (Spec Iss B)-0159.

Effect of internal surface on cusp strength in machined cavities. Dickson M, Whitters CJ, MacGregor AMP, Hibbert R, Murray CA. *Journal of Dental Research* 2005:**84**: (Spec Iss B)-0181.

Impact of supplementary visual aids on oral hygiene levels. Chisholm J, Dickson M, Henvey L, Murray CA. *Journal of Dental Research* 2005:**84**: (Spec Iss B)-0080.

Molecular identification of bacteria associated with spreading odontogenic infections Riggio MP, Aga H, Murray CA, Jackson MS, Lennon, A, Hammersley, N, Bagg J. *Journal of Dental Research* 2006:**85**: (Spec Iss C)-0525.

A novel explant culture system to investigate cytokines in PRD. Murray CA, Gracie JA, Gilmour A & McInnes IB. *Journal of Dental Research* 2007;**86**: (Spec Iss B)-0242.

A survey of denture identification marking within the United Kingdom. Boyd PT, Murray CA, Dickson M, Young B, Currie J & Dhar S. *Journal of Dental Research* 2007;**86**: (Spec Iss B)-0130.

Are dentists adequately trained for treating irreversible pulpitis? Lombard DS, Murray CA & Whitters CJ. *Journal of Dental Research* 2007;**86**: (Spec Iss B)-0121.

Are we meeting oral health needs of nursing home populations? Young B, Colgan L, Cross N, Yule PL, Thompson JA & Murray CA. *Journal of Dental Research* 2007;**86**: (Spec Iss B)-0004.

Student and tutor agreement in assessment of laboratory tasks. Cameron DA, Murray CA & McHugh S. *Journal of Dental Research* 2007;**86**: (Spec Iss B)-0234.

Defining a role for IL-17 in the immunopathology of PRD. Murray CA, Gilmour A, Gracie JA & McInnes IB *Journal of Dental Research* 2008;**87**: (Spec Iss C)-0788.

Antifungal susceptibilities of oral candidal isolates from Glasgow Dental Hospital. Shammaa Y, Cross J, Jackson M, Murray CA, Ramage G, Smith A. *Journal of Dental Research* 2008;**87**: (Spec Iss C)-0778.

Evaluation of RCT case complexity on dental undergraduate clinics using a modified case assessment form. R. McFadzean, K Pettigrew, J. Donn & C.A. Murray. *International Endodontic Journal* 2009.

Dimensional accuracy of denture base materials processed by two methods. Young B, Ramage G, Cameron D, Murray CA, McCord JF *Journal of Dental Research* 2009;**88**: (Spec Iss C)-

Effects of denture processing upon *Candida albicans* and subsequent treatment. Young B, Jose A, Ramage G, Cameron D, Murray CA, McCord JF *Journal of Dental Research* 2009;**88**: (Spec Iss C)-

Microbiological outcomes of failed RCT and the effect of PAD. Crane L, Whitters J, Ramage G, Robertson D, Murray CA *Journal of Dental Research* 2009;**88**: (Spec Iss C).

Frequent Denture Cleansing is Effective for *Candida* Biofilm Disinfection. Zalewska A, J, Ramage, Murray CA, Whitters J *Journal of Dental Research* 2011;**90**: (Spec Iss A).

Calibration of 3D scanners for quantification of tooth wear. Ahmed, K.E., Pierce, S.G., Ju, X-Y., Whitters, C.J., Murray, C.A., Macleod, C.N. 2013. International Association for Dental Research (IADR) - Continental European and Scandinavian Divisions meeting. *Journal of Dental Research*, 2013;**93**: (Spec Iss A).

A Novel Tooth Wear Index based-on in-vivo 3D Scanning Analysis. Ahmed K, Pearse G, Whitters J, Murray CA. *Journal of Dental Research* 2015; **94** ((Spec Iss A):1827)

Longevity of Fiber-Reinforced Composite Fixed Partial Dentures (FRC FPD) - Systematic Review Ahmed K, Murray CA *Journal of Dental Research* 2016; **95** ((Spec Iss A):)

SELECTED SCIENTIFIC/ CONFERENCE PRESENTATIONS

An audit of complications following two different surgical techniques undertaken during lower third molar removal. Murray CA, Armed Forces Annual Dental Conference, 1997. Oral presentation.

A potential role for interleukin-18 in the perpetuation of periradicular disease. Murray CA, Gilmour A, Kitson S, Gracie JA, McInnes IB, Saunders WP and MacDonald DG. British Society for Dental Research, Belfast, 2001. Oral presentation.

A pilot trial of a patient recorded oral hygiene diary. Dickson M, Murray CA, Gray EA, McChlery LA and Ross MK. British Society for Dental Research, Belfast, 2001. Poster presentation.

Alteration in mandibular posture by vibration of posterior fibres of the temporalis muscle. Dickson M, Lyons MF & Murray CA. Store Kro Conference, Switzerland, 2001. Poster presentation.

An assessment of the matrix impression system for fixed prosthodontics. Dickson M, Murray CA and MacGregor AMP. British Society for Dental Research, Belfast. 2001. Poster presentation.

Surface porosity of dental casts: the effect of material used and orientation during setting. Broad M, Dickson M, Murray CA and R McKerlie. British Society for Dental Research, Belfast, 2001. Poster presentation.

The effect of needle bevel orientation on the pain of skin. Dickson M, Sharp T, Murray CA, Wilson WS. Pan European Federation of Oral Sciences Conference, Cardiff, 2002. Poster presentation.

The use of light cured acrylic to customise bite force transducer plates. Dickson M, Donaldson A, Murray CA, Lyons MF. IADR Pan European Federation, Cardiff, 2002. Poster presentation.

A patient recorded oral hygiene diary: initial results. Dickson M, Murray CA, Gray EA, McChlery LA, Ross MK. Australian National Dental Hygienist's Conference, 2001. Poster presentation.

Dental Dexterity. Dickson M, Gordon N, O'Neill J, Murray CA. British Dental Association Conference, Belfast 2002: Poster presentation. BDA/ Dentsply Student Clinician Prize Entry.

Evidence for Interleukin 18 (IL-18) as a novel mediator in chronic periradicular disease. Murray CA, Gilmour A, Kitson S, Gracie JA, Saunders WP and McInnes IB. IADR Pan European Federation, Cardiff, 2002. Oral presentation.

The use of PTFE tape to adapt a new restoration to an existing denture rest. Dickson M, Murray CA, MacGregor AMP & Lyons MF. IADR Pan European Federation, Cardiff, 2002. Poster presentation.

Chronic periradicular disease: a novel human explant system used to investigate the role of interleukin-18 (IL-18). Murray CA, Lappin D, Gracie JA, Saunders WP, McInnes IB. European Society of Endodontology, Biennial Research Meeting, Athens, 2003. Oral presentation. Research Prize Entry.

Immunopathogenesis of periradicular disease. Murray CA. Association of Consultants and Specialists in Restorative Dentistry, Scottish Meeting, Stirling, 2003. Oral presentation.

Periradicular perambulations. Murray CA. University of Glasgow Dental School Research Meeting, 2003. Oral presentation.

A survey of pain levels reported at different injections stages. Dickson M, Gray G, Martin I, Murray CA. British Society for Dental Research, Birmingham, 2004. Poster presentation.

Comparison of conventionally and functionally generated occlusal surfaces. Dickson M, Murray CA, MacGregor AMP, Byrne P, MacDougall P, Strawbridge K. British Society for Dental Research, Birmingham, 2004. Poster presentation.

Effect of internal surface on cusp strength in machined cavities. Dickson M, Whitters CJ, MacGregor AMP, Hibbert R, Murray CA. British Society for Dental Research Birmingham, 2004. Poster presentation.

Impact of supplementary visual aids on oral hygiene levels. Chisholm J, Dickson M, Henvey L, Murray CA. British Society for Dental Research Birmingham, 2004. Poster presentation.

Periradicular perambulations, Royal College of Surgeons of Edinburgh- Royal Odonto Chirurgical Society of Scotland, 2005. Invited lecture.

Role of the Restorative specialist. Training Grade Staff Association Careers Evening, 2005. Invited lecture.

A potential role for interleukin-17 in the immunopathogenesis of periradicular disease. Research collaborative meeting with Astra Zeneca, 2006. Oral presentation.

Periradicular disease- a novel immunological explant model. University of Glasgow Dental School Research Meeting, 2006. Oral presentation.

Molecular identification of bacteria associated with spreading odontogenic infections. Riggio MP, Aga H, Murray CA, Jackson MS, Lennon A, Hammersley N & Bagg J. IADR Pan European Federation, 2006. Oral presentation.

Periradicular disease- a novel explant culture model to explore inflammation. Glasgow Caledonian University Research Seminar, 2006. Invited lecture.

A study comparing the effectiveness of photoactivated disinfection (PAD) against conventional root canal disinfection methods Mohammad R, Murray CA, Ramage G. Infection & Immunity Research Day, 2007.

A novel explant culture system to investigate cytokines in PRD. Murray CA, Gracie JA, Gilmour A & McInnes IB. Joint Scientific Meeting of British Society of Dental Research & NOF, 2007. Oral presentation.

A survey of denture identification marking within the United Kingdom. Boyd PT, Murray CA, Dickson M, Young B, Currie J& Dhar S. Joint Scientific Meeting of British Society of Dental Research & NOF, 2007. Oral presentation.

Are dentists adequately trained for treating irreversible pulpitis? Lombard DS, Murray CA & Whitters CJ. Joint Scientific Meeting of British Society of Dental Research & NOF, 2007. Oral presentation. Junior Colgate Research Prize Entry.

Are we meeting oral health needs of nursing home populations? Young B, Colgan L, Cross N, Yule PL, Thompson JA & Murray CA. Joint Scientific Meeting of British Society of Dental Research & NOF, 2007. Oral presentation.

Student and tutor agreement in assessment of laboratory tasks. Cameron DA, Murray CA & McHugh S. Joint Scientific Meeting of British Society of Dental Research & NOF, 2007. Oral presentation.

Role of the academic dentist. BDS5 Careers Evening, Royal College of Surgeons and Physicians of Glasgow, 2007. Invited lecture.

Defining a role for IL-17 in the immunopathology of PRD. Murray CA, Gilmour A, Gracie JA & McInnes IB. IADR Pan European Federation, London, 2008. Poster presentation.

Antifungal susceptibilities of oral candidal isolates from Glasgow Dental Hospital. Shamma Y, Cross J, Jackson M, Murray CA, Ramage G, Smith A. IADR Pan European Federation, London, 2008. Poster presentation.

Microbial Interactions of Cystic Fibrosis Pathogens. Mowat E, McChlery S, Williams, Murray CA & Ramage G. SGM Meeting, 2008. Poster Presentation.

Evaluation of RCT case complexity on dental undergraduate clinics using a modified case assessment form. McFadzean R, Pettigrew K, Donn J & Murray CA.. European Society of Endodontology Meeting, Edinburgh, 2009. Poster presentation.

Dimensional accuracy of denture base materials processed by two methods. Young B, Ramage G, Cameron D, Murray CA, McCord JF. British Society of Dental Research, Glasgow, 2009. Oral presentation.

Effects of denture processing upon *Candida albicans* and subsequent treatment. Young B, Jose A, Ramage G, Cameron D, Murray CA, McCord JF. British Society of Dental Research, Glasgow, 2009. Poster presentation.

Microbiological outcomes of failed RCT and the effect of Photoactivated disinfection (PAD). Crane L, Whitters J, Ramage G, Robertson D, Murray CA. British Society of Dental Research, Glasgow, 2009. Poster presentation.

A Retrospective Review of Implant Survival at Glasgow Dental Hospital. O'Leary E, Auld D, H Critchlow H, Smith AJ, Murray CA. British Society of Dental Research, Glasgow, 2009. Poster presentation.

Frequent denture cleansing is effective for *Candida* biofilm disinfection. Zalewska A, Murray CA, Finnegan MB, Cameron D, Loewy Z, Ramage G. International Association of Dental Research, San Diego, 2010. Oral presentation.

An update on core CPD activities for dentistry. Murray CA. Leeds. 2010.

Carbohydrate-derived fulvic acid is a novel antifungal product. Sherry L, Murray C, Jones B, Williams C, Ramage G. 21st European Congress of Clinical Microbiology and Infectious Diseases and the 27th International Congress of Chemotherapy, 2011. Oral presentation.

Frequent Denture Cleansing is Effective for *Candida* Biofilm Disinfection. International Association of Dental Research, 2011. Oral presentation.

Availability of manufacturers' information on efficacy and compatibility of detergents used for cleaning dental instruments. Calvert G, Murray CA, Hurrell D, Smith AJ. British Society of Dental Research, 2011. Oral presentation.

Quantitative PCR analysis of *Enterococcus faecalis* in failed endodontic treatment: evaluation of efficacy of photoactivated disinfection (PAD). Beacher N, Murray CA, Ramage G. British Endodontics Society Spring Scientific meeting, 2012. Poster Presentation.

When Post Preparations go Awry: a Case Report. Keys W, Murray CA. British Society for Prosthetic Dentistry, 2012. DFT Poster Prize.

Virdi Modified Dam. Virdi RS, Murray CA. British Society of Restorative Dentistry Spring Scientific Meeting 2012: Sensible solutions to frequent problems in dentistry, Poster Presentation.

Postgraduate Dental Education: Dawn of a New Era, Dubai School of Dental Medicine Conference 2012. Invited Oral Presentation.

An update in endodontics. Grand Rounds, Dubai Healthcare City, Dubai, UAE, 2013. Oral Presentation

Periradicular disease; prevalence and relevance for healthcare workers. Murray CA Excellence in oral and dental health, Gulf Medical University, 5th Annual Dental Conference April 2013. Invited Oral Presentation.

Gulf Medical University, 5th Annual Dental Conference April 2013. Invited Chairman of Scientific session.

Calibration of 3D scanners for Quantification of tooth wear. Ahmed K, Pearse G. Murray CA. International Association for Dental Research - Continental European and Scandinavian Divisions meeting, 2013. Poster presentation.

Great aesthetics, but what about the periodontal maintenance? 5th Dental- Facial Cosmetic International Conference November, Dubai, UAE 2013. Invited Oral presentation.

Prevention in restorative dentistry, where are we at? 5th Saudi Dental Society Conference, January 2014, KSA. Invited Oral Presentation.

The Fourth Annual Residents Day & Scientific Dental Meeting, Saudi Dental Board, April 2014, KSA. Invited External Panelist of Scientific session.

36th Asia Pacific Dental Congress, June 2014, Dubai, UAE. Invited Chairman for Scientific session.

Implants and long term maintenance, what's the evidence? Abu Dhabi, November 2014. Invited Oral Presentation.

Implants and long term maintenance, what's the evidence? Ras Al Khaimah, December 2014. Invited Oral Presentation.

Prevention in Restorative Dentistry, is this an achievable goal? AEEDC, February 2015, Dubai, UAE. Oral Presentation.

A Novel Tooth Wear Index based-on in-vivo 3D Scanning Analysis. IADR/AADR/CADR General Session, 2015. Boston USA. Oral presentation.

Caries Management in the Adult Dentition- controversies. AEEDC, February 2016, Dubai, UAE, Oral Presentation

Workplace Based Assessments- Challenges and Rewards. AEEDC, Education Symposium, February 2016, Dubai, UAE, Oral Presentation

Socioeconomic deprivation and toothwear IADR/AADR General Session, 2016. Seoul, South Korea, Poster presentation.

Longevity of Fiber-Reinforced Composite Fixed Partial Dentures (FRC FPD) - Systematic Review. 2017, IADR, San Francisco, USA. Poster presentation

INVITED COMMENTARIES

Pinhole defects in nitrile gloves, Commentary. Murray CA. *British Dental Journal*. 2003;**195**: 505.