THE ROLE OF THE OSTEOCYTE IN
ORTHODONTIC TOOTH MOVEMENT IN
THE RAT DENTO-ALVEOLAR COMPLEX

Doctor of Clinical Dentistry (Orthodontics)
Thesis
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2011
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### Glossary of Abbreviated Terms

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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ab</td>
<td>Antibody</td>
</tr>
<tr>
<td>ABC</td>
<td>Avidin-biotin complex</td>
</tr>
<tr>
<td>AEC</td>
<td>3-Amino-9-ethylcarbazole</td>
</tr>
<tr>
<td>Ag</td>
<td>Antigen</td>
</tr>
<tr>
<td>ALP</td>
<td>Alkaline phosphatase</td>
</tr>
<tr>
<td>ATP</td>
<td>Adenosine-5′-triphosphate</td>
</tr>
<tr>
<td>BMP</td>
<td>Bone morphogenetic protein</td>
</tr>
<tr>
<td>BMU</td>
<td>Basic metabolic unit</td>
</tr>
<tr>
<td>Ca2+</td>
<td>Calcium ions</td>
</tr>
<tr>
<td>cAMP</td>
<td>Cyclic adenosine monophosphate</td>
</tr>
<tr>
<td>CGRP</td>
<td>Calcitonin gene related peptide</td>
</tr>
<tr>
<td>CSF</td>
<td>Colony stimulating factor</td>
</tr>
<tr>
<td>DNA</td>
<td>Deoxyribonucleic acid</td>
</tr>
<tr>
<td>ECM</td>
<td>Extracellular matrix</td>
</tr>
<tr>
<td>EDTA</td>
<td>Ethylenediaminetetra-acetic acid</td>
</tr>
<tr>
<td>ER</td>
<td>Oestrogen receptor</td>
</tr>
<tr>
<td>hMSC</td>
<td>Human mesenchymal stem cells</td>
</tr>
<tr>
<td>Ig</td>
<td>Immunoglobulin</td>
</tr>
<tr>
<td>IGF</td>
<td>Insulin-like growth factor</td>
</tr>
<tr>
<td>IL</td>
<td>Interleukin</td>
</tr>
<tr>
<td>IMVS</td>
<td>Institute of Medical and Veterinary Science</td>
</tr>
<tr>
<td>IP3</td>
<td>Inositol triphosphate</td>
</tr>
<tr>
<td>IR</td>
<td>Immunoreactive</td>
</tr>
<tr>
<td>IU</td>
<td>International units</td>
</tr>
<tr>
<td>K</td>
<td>Potassium</td>
</tr>
<tr>
<td>LRP 5/6</td>
<td>Lipoprotein receptor related protein 5/6</td>
</tr>
<tr>
<td>M</td>
<td>Molar (molarity)</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>M¹</td>
<td>Maxillary first molar</td>
</tr>
<tr>
<td>M²</td>
<td>Maxillary second molar</td>
</tr>
<tr>
<td>M-Csf</td>
<td>Macrophage colony-stimulating factor</td>
</tr>
<tr>
<td>MEPE</td>
<td>Matrix extracellular</td>
</tr>
<tr>
<td>MMP</td>
<td>Matrix metalloproteinases</td>
</tr>
<tr>
<td>mRNA</td>
<td>Messenger ribonucleic acid</td>
</tr>
<tr>
<td>MSC</td>
<td>Mesenchymal stem cells</td>
</tr>
<tr>
<td>NGS</td>
<td>Normal goat serum</td>
</tr>
<tr>
<td>NHS</td>
<td>Normal horse serum</td>
</tr>
<tr>
<td>NO</td>
<td>Nitric oxide</td>
</tr>
<tr>
<td>NT</td>
<td>Neurotrophin</td>
</tr>
<tr>
<td>O.C.T.</td>
<td>Optimal cutting temperature</td>
</tr>
<tr>
<td>OTM</td>
<td>Orthodontic tooth movement</td>
</tr>
<tr>
<td>PBS</td>
<td>Phosphate buffered solution</td>
</tr>
<tr>
<td>PDL</td>
<td>Periodontal ligament</td>
</tr>
<tr>
<td>PTH</td>
<td>Parathyroid hormone</td>
</tr>
<tr>
<td>PTHrP</td>
<td>Parathyroid hormone-related protein</td>
</tr>
<tr>
<td>RANKL</td>
<td>Receptor activator of nuclear factor kappa-β ligand</td>
</tr>
<tr>
<td>RER</td>
<td>Rough endoplasmic reticulum</td>
</tr>
<tr>
<td>RNA</td>
<td>Ribonucleic acid</td>
</tr>
<tr>
<td>TBS</td>
<td>Tris Buffered Solution</td>
</tr>
<tr>
<td>TGF</td>
<td>Transforming growth factor</td>
</tr>
<tr>
<td>TNF</td>
<td>Tumour necrosis factor</td>
</tr>
<tr>
<td>TRAP</td>
<td>Tartrate-resistant acid phosphatase</td>
</tr>
<tr>
<td>Trk</td>
<td>Tyrosine receptor kinase</td>
</tr>
</tbody>
</table>
Abbreviations of length

mm  Millimetre  
µm  Micron  
nm  Nanometre

Abbreviations of time

d  Day  
h  Hour  
min  Minute  
s  Second  
wk  Week  
y  Year

Abbreviations of volume

l  Litre  
ml  Millilitre  
µl  Microlitre

Abbreviations of weight

g  Gram  
kg  Kilogram  
mg  Milligram  
ng  Nanogram
Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Dr Dinesh Sanmuganathan

Dated:
Acknowledgements

I express my appreciation and gratitude to the following people for their invaluable assistance in the completion of this thesis.

Professor Wayne J. Sampson, P.R. Begg Chair in Orthodontics, University of Adelaide.

Associate Professor Craig W. Dreyer, Orthodontics Unit, School of Dentistry, University of Adelaide.

Dr. Angela Pierce, School of Dentistry, University of Adelaide.

Dr Kencana Dharmapati, Anatomical Sciences, School of Medicine, University of Adelaide.

Dr. Henry S.H. Ho, Specialist Orthodontist, Sydney, New South Wales.

Dr. James Moses, Specialist Orthodontist, Adelaide, South Australia.

Mrs Nadia Gagliardi and Ms. Gail Hermanis, Technical Officers, Anatomical Sciences, School of Medicine, University of Adelaide.

Mr Thomas Sullivan, Statistician, Data Management and Analysis Centre, University of Adelaide.

Ms. Sandie Hughes, Laboratory Officer, Oral Pathology, University of Adelaide.

Professor P. Mark Bartold, Director, Colgate Dental Research Centre, Adelaide Dental Hospital, Adelaide.

Australian Society of Orthodontists Foundation for Research and Education for their funding.

My parents, Lilani and Rudran, brother Rumesh and sister Shanya for their support.