# **RESEARCH PORTFOLIO**

Chin Nguyen

DDS (Vietnam), MSc Dent (Adelaide)

School of Dentistry Faculty of Health Sciences The University of Adelaide

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## **OVERVIEW**

This research portfolio is submitted as part of the requirements for the degree Doctor of Clinical Dentistry. It consists of two sections:

#### Section one consists of:

#### Introduction

The section provides background information relating to the main research project.

#### Literature review

This review considers in vitro methods for the study of microleakage associated with composite resin restorations and includes: the definition of microleakage; changes in microleakage over time; the adverse effects of microleakage; alternative in vitro methods for assessing microleakage; some technical considerations in designing microleakage studies; and, the results of previous in vitro studies.

#### **Original research**

This work is presented as a manuscript ready for submission to Journal of Adhesive Dentistry. The paper investigates a non-destructive methodology for studying microleakage of resin composites and compares microleakage in a siloxane/oxirane-based resin composite (Filtek Silorane) with a conventional methacrylates-based material (Filtek Supreme XT).

#### Summary

This section reviews the progress toward understanding the effect of microleakage associated with composite restorations and suggests areas for future investigation.

#### Section two consists of other scholarly work:

This section includes electronic versions of all of the other scholarly work undertaken during the three years of the Doctor of Clinical Dentistry programme.

### DECLARATION

This work contains no material which has been accepted for the award of any other degree or diploma in any other 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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Chin Nguyen

Dated this 31st day of August 2011

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