

CONTENTS

Preface
Acknowledgement

CHAPTER 1

1. Introduction 1-8

CHAPTER 2

2. Results and Discussion

2.1 *Syntheses of Potassium and/or Sodium 2-[[*(E)*-1-(2-hydroxyaryl)-alkylidene]amino]acetate* 9-11

2.2 *Triorganotin(IV) Complexes of 2-[[*(E)*-1-(2-hydroxyaryl)alkylidene]amino]acetic Acid*

2.2.1 Syntheses of Triorganotin(IV) Complexes, R_3SnLH ($R=Me, {}^nBu$ or Ph) 11-13

2.2.2 Spectroscopic Characterization of Triorganotin(IV) Complexes 13-17

2.2.3 X-ray Structures for Ph_3SnL^1H and Me_3SnL^4H 17-24

2.3 *Diorganotin(IV) Complexes of 2-[[*(E)*-1-(2-hydroxyaryl)alkylidene]amino]acetic Acid*

2.3.1 Syntheses of Diorganotin(IV) Complexes, $R_2SnL.nH_2O$ ($R=Me, Vin, {}^nBu$ or Ph) 24-26

2.3.2 Spectroscopic Characterization of Diorganotin(IV) Complexes 26-31

2.3.3 X-ray Structures for Ph_2SnL^4 , Ph_2SnL^6 and $Vin_2SnL^4.OH_2$ 31-37

2.4 *Dinuclear Organotin(IV) Complexes of 2-[[*(E)*-1-(2-hydroxyaryl)-alkylidene]amino]acetic Acid*

2.4.1 Syntheses of Dinuclear Organotin(IV) Complexes, $R_2SnL.R'_nSnCl_{4-n}$ ($R = Ph$ or iBu and $n = 2$ or 3) 37-38

2.4.2 Spectroscopic Characterization of Dinuclear Organotin(IV) Complexes 38-43

2.4.3 X-ray Structures for Ph_2SnL^4 , Ph_3SnCl and ${}^iBu_2SnL^4$, iBu_2SnCl_2 43-47

2.5	<i>Biological Properties of Organotin(IV) Complexes</i>	
2.5.1	Evaluation of Antitumour Properties of Organotin(IV) Complexes	48-49
CHAPTER 3		
3.	Conclusion	50-56
CHAPTER 4		
4.	Experimental Section	
4.1	<i>General Procedure</i>	
4.1.1	Synthetic Techniques	57
4.1.2	Starting Materials	57
4.1.3	Instrumental Methods	57-58
4.2	<i>Synthetic Procedures</i>	
4.2.1	Preparation of L^4HK	58-60
4.2.2	Preparation of L^4HNa	60-61
4.2.3	Preparation of Ph_3SnL^4H	61
4.2.4	Preparation of Me_3SnL^4H	61
4.2.5	Preparation of Bu_3SnL^4H	62
4.2.6	Preparation of ${}^nBu_2SnL^4.OH_2$	62
4.2.7	Preparation of Ph_2SnL^4	62
4.2.8	Preparation of $Vin_2SnL^4.OH_2$	62-63
4.2.9	Preparation of $Ph_2SnL^4.Ph_3SnCl$	63
4.3	<i>Single Crystal X-ray Structural Analysis</i>	
4.3.1	General Procedure	63
4.3.2	X-ray Structural Data	64-70
4.4	<i>Experimental Protocol for biological work</i>	71
	References	72-76