

 INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI SHORT ABSTRACT OF THESIS	
Name of the Student	: Santa Mondal
Roll Number	: 176122110
Programme of Study	: Ph. D.
Thesis Title	: Reactivity Studies of 4-Hydroxydithiocoumarin: Design & Synthesis of Novel Bioactive Molecules
Name of Thesis Supervisor(s)	: Professor Abu Taleb Khan
Thesis Submitted to the Department/ Center	: Chemistry
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Key words for description of Thesis Work	: 4-Hydroxydithiocoumarin, 3-Sulfenylindole, α -thiocarbonyl compounds, Vinyl sulfide, Thioether, 1,4-Oxathiin, β -Hydroxysulfide, β -Aminosulfide

SHORT ABSTRACT

The thesis entitled “Reactivity Studies of 4-Hydroxydithiocoumarin: Design & Synthesis of Novel Bioactive Molecules” has been compiled into six chapters based on the experimental results and findings carried out by me during the entire research period.

Chapter 1 provides a brief overview of organosulfur compounds and their importance. In addition, the reason for choosing 4-hydroxydithiocoumarin as the key starting material for the synthesis of novel bioactive molecules.

Chapter 2 elaborates on the synthesis of 3-sulfenyl derivatives.

Chapter 3 describes the synthesis of α -thiocarbonyl compounds.

Chapter 4 illustrates the synthesis of vinyl sulfides and thioethers.

Chapter 5 demonstrates the synthesis of 1,4-oxathiin derivatives.

Chapter 6 elucidates the synthesis of β -hydroxysulfides and β -aminosulfides by ring-opening reactions.