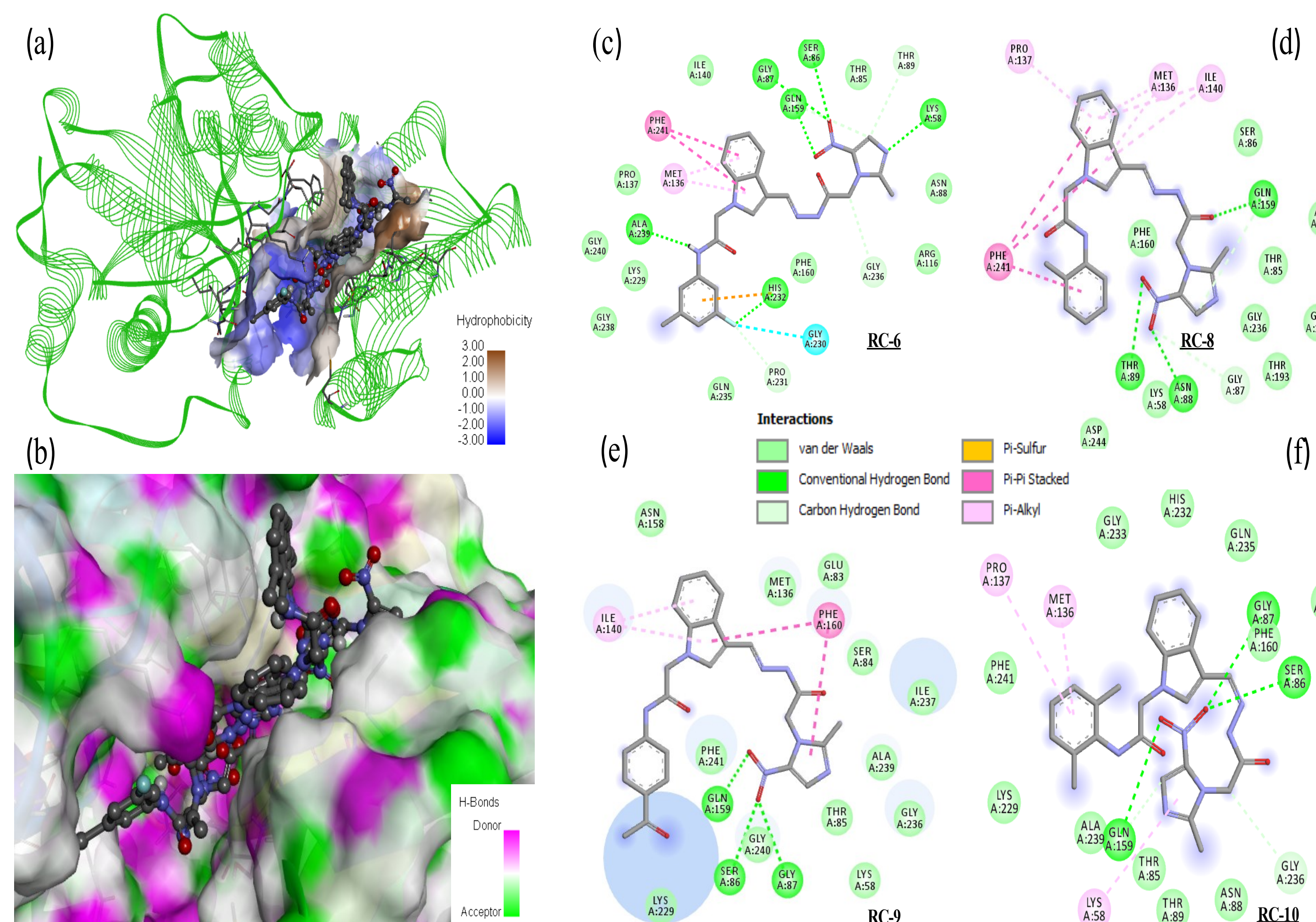
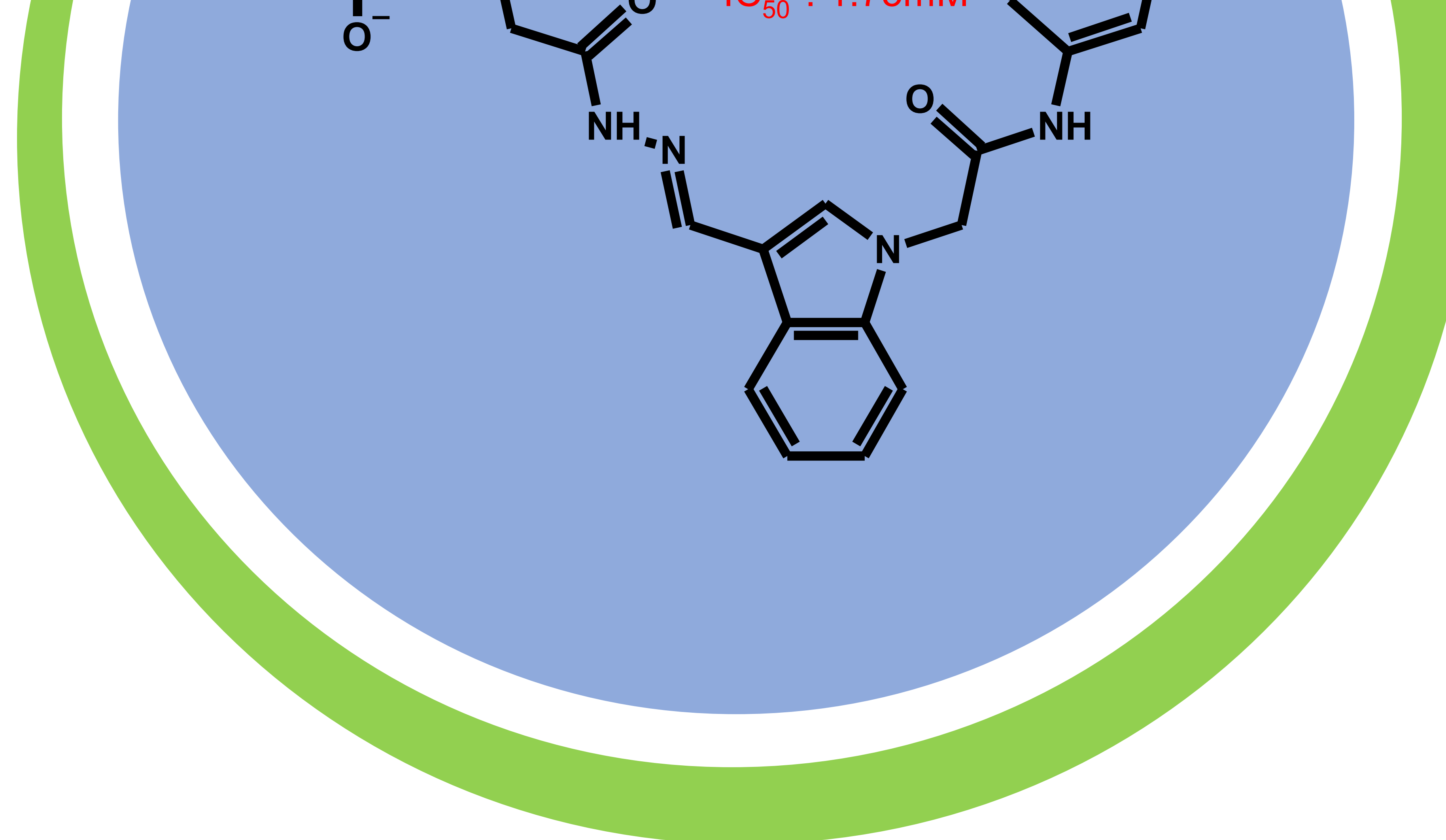


protein (EhOASS) recommended that the addition of a hydrophobic group better fit within enzyme active site leading to enhanced inhibitory activity. All the compounds were less toxic against HeLA cervical cancer cell line. The compounds RC6, RC8, RC9 and RC10 exhibited strong inhibitory *activities*, with IC<sub>50</sub> values of 3.61, 2.08, 1.75, and 1.22mM E. histolytica O-acetyl-serine Sulfohydrolase protein (EhOASS) in vitro respectively. The promising antiameobic activity and enzymatic assay of RC6, RC8, RC9 and RC10 make them promising molecules for further lead optimization in the development of novel antiameobic agent.

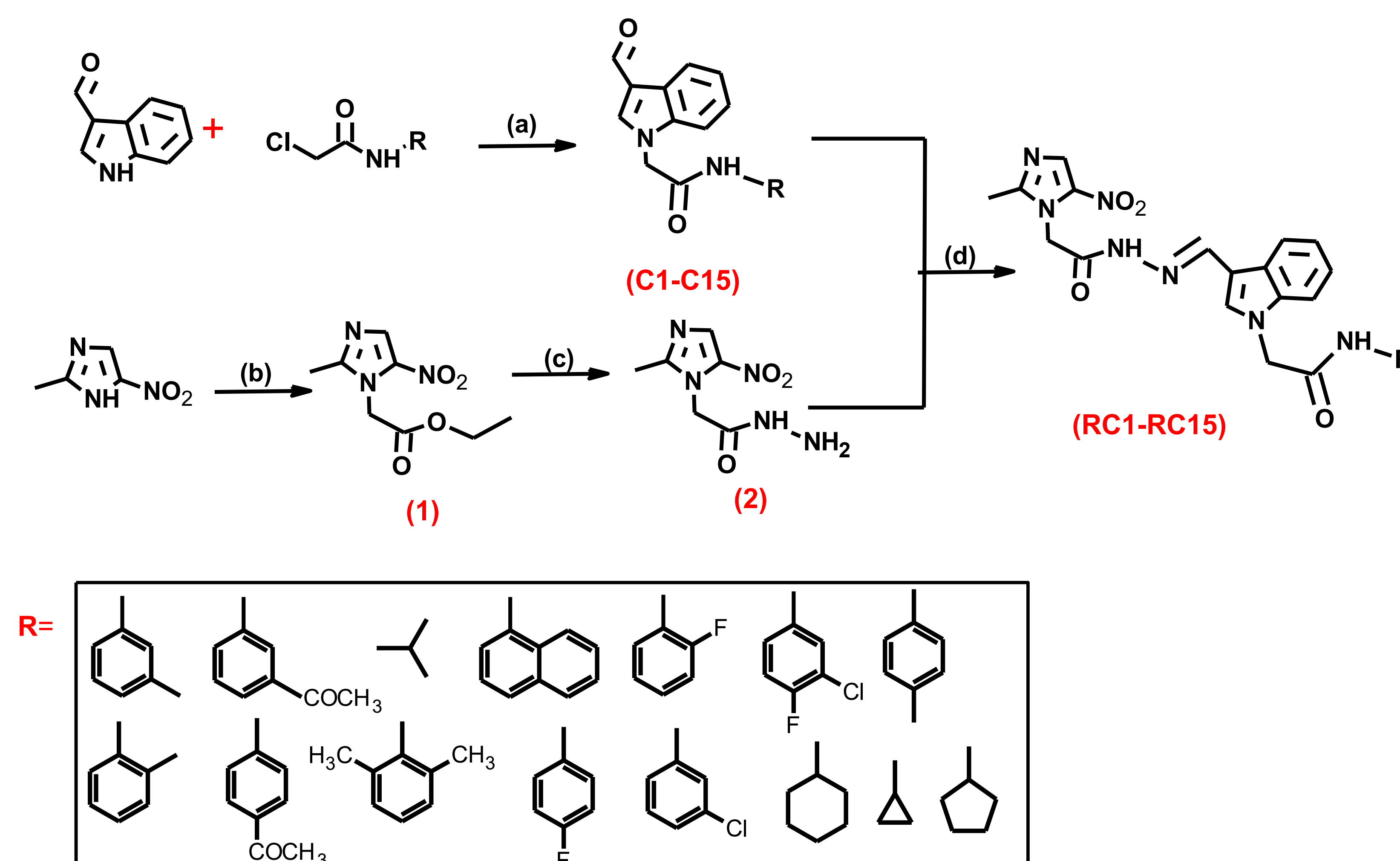
## Molecular Docking



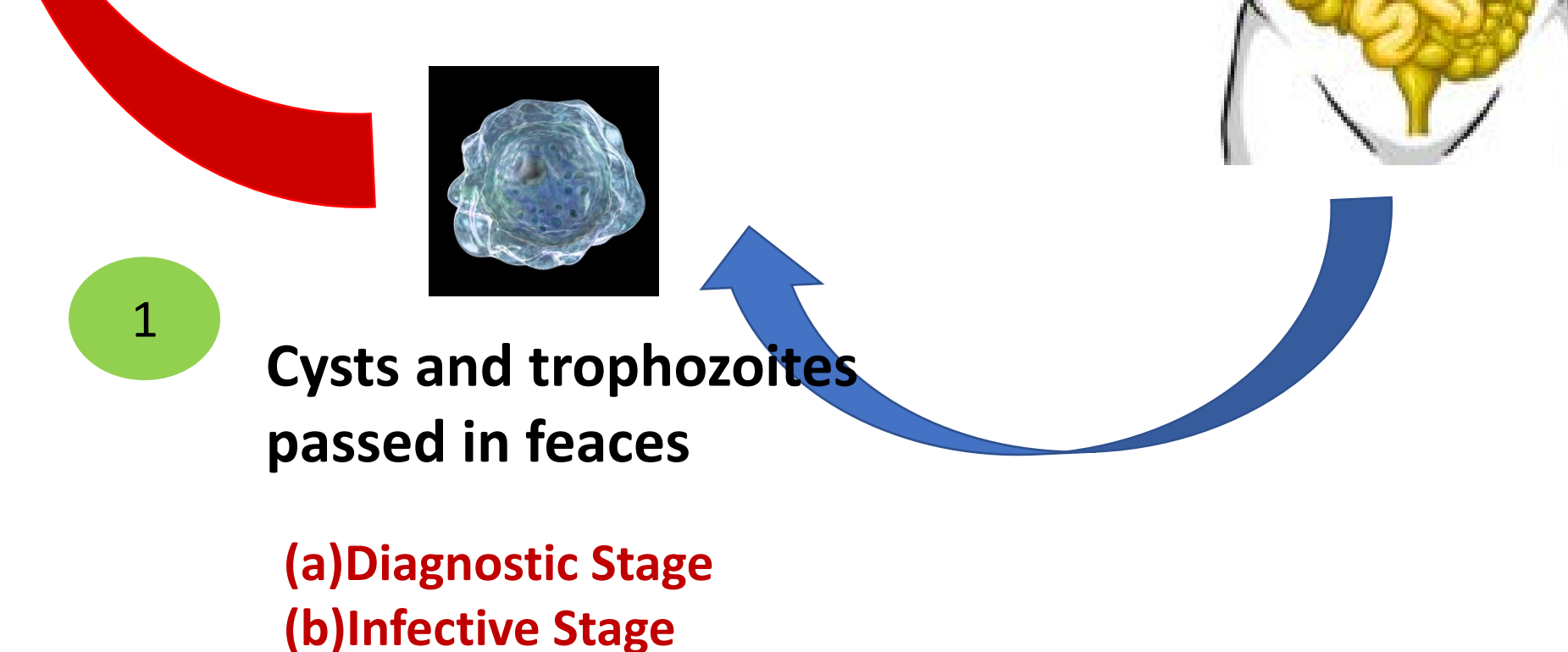
Interaction of O-acetyl-serine sulfohydrolase with compounds (a) Surface potential view of EhOASS binding pocket occupied by compounds, indicating the range of hydrophobicity within the pocket residues and (b) Range of hydrogen bond donor and acceptor within pocket (c) 2D structural representation of EhOASS residues interacting to RC-6 (d) RC-8 (e) RC-9 and (f) RC-10



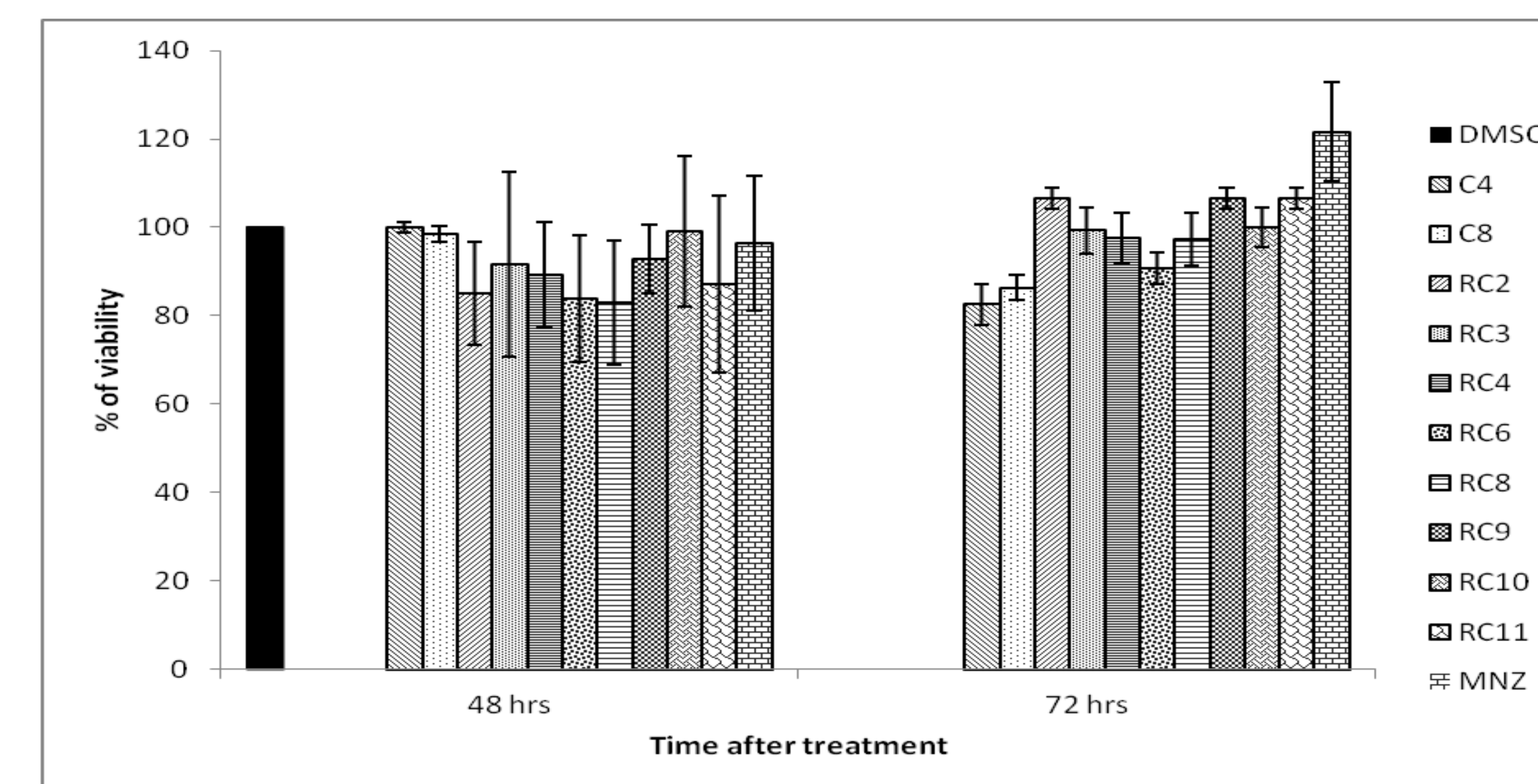
## Scheme



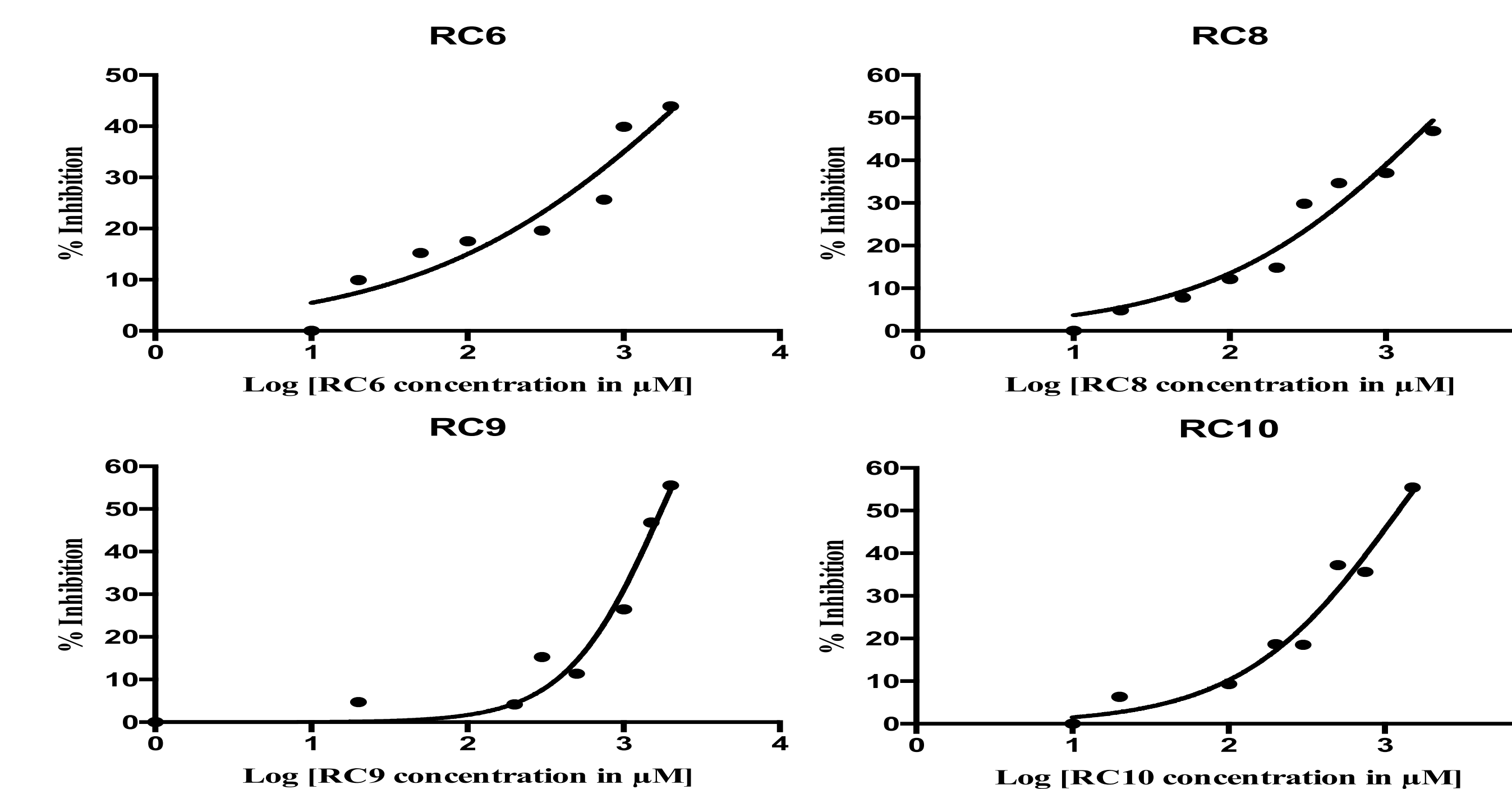
Scheme1: Synthesis of substituted indole 3- carboxaldehydes (C1-C15) and nitroimidazole-indole based hydrazones (RC1-RC15):  
Reagents and Conditions: (a) K<sub>2</sub>CO<sub>3</sub>, Cat.KI, DMF, Reflux (b) Ethylchloroacetate, EtOH (c) N<sub>2</sub>H<sub>4</sub>·xH<sub>2</sub>O, EtOH, reflux (d)EtOH, 1-2 drops H<sub>2</sub>SO<sub>4</sub>.



Amoebiasis is the most aggressive infection of the human gastrointestinal tract caused by the anaerobic protozoan parasite Entamoeba histolytica. The parasite invades the intestinal mucosa causing amoebic dysentery. At times, they migrate towards the liver, causing an amoebic liver abscess. Infection of this parasite is common and occurs in several developing countries with poor sanitation facilities, resulting in 50 million cases of invasive disease and up to 100,000 fatalities per year



Assessment of viability of HeLa cells in response to active compounds.



In vitro enzyme inhibition kinetics plot between the