

Assays and Combinatorial Chemistry

1. Based on the available scientific literature, propose an assay for screening for inhibitors of the viral enzyme helicase-primase. Your description should reflect your own understanding of the method (i.e. do not copy-paste-rearrange text that you do not understand). Your answer should contain one image that you have created yourself using an appropriate computer graphics program (e.g. Adobe Illustrator, Photoshop, POV-RAY (<http://hof.povray.org/>)) and illustrates the essence of that assay. Make sure to include appropriate images. Students are allowed to work in their original groups while answering this question. (5 pts)

2. Propose specific starting compounds and auxiliary reagents that are needed for the preparation of combinatorial library of 1,4-benzodiazepine analogs that is shown below. Propose a plausible chemical mechanism for the ring-opening step during the formation of 1,4-benzodiazepines. Briefly discuss what is known about the structure-activity relationships of various 1,4-benzodiazepines. Students should work independently while answering this question. (5 pts)

