Mayra Romero (‘18), Julia Carey (‘18), Jay R. Carreon, and Thomas Owen
School of Theoretical and Applied Science, Ramapo College of New Jersey, Mahwah, NJ 07430

Solventless Aldol Condensation

Figure 4: In Step [1], the hydroxy anion removes a proton from the -carbon of the ketone to form a resonance-stabilized enolate. In Step [2], the nucleophilic enolate attacks the electrophilic carbonyl carbon of the aldehyde, forming a new carbon-carbon bond. In Step [3], the alkoxide anion is protonated to form the corresponding -hydroxy ketone. In Step [4], the hydroxide anion removes a proton from the -carbon, thus forming a resonance stabilized enolate. In Step [5], the electron pair of the enolate forms the -bond as the hydroxide anion -and k 0.75 0 0>Tj /-3(e)]TJ 0 4611 Tf 0.599 0 Td (-)Tj 0.001 Tc -0.001 Tw 0.3u 0 Tornud [(e)6(nold [(bo)6(nd)]TJ 0 Tc 0 Tw ( )Tj 0.001 Tc 5.5202 Tw 0.423 0 T

2) Assess the growth inhibitory activity of the chalcones in cervical epithelial carcinoma (HeLa) cell lines by antiproliferative activity studies.

Acknowledgments

Ms. Carol Ichinco and Ms. Elizabeth Miloscia for their laboratory assistance.

NSF-sponsored CWCS “Green Chemistry in Education Workshop” [University of Oregon (Eugene, OR)].

TAS Honors Research Program at Ramapo College of New Jersey.