Chemical-Genetic Interactions of *Bacopa monnieri*Constituents in Cells Deficient for the DNA Repair Endonuclease *RAD1*Appear Linked to Vacuolar Disruption

Chananya Huangteerakul ¹, Hsu Mon Aung ¹, Thitipa Thosapornvichai ¹, Marisa Duangkaew ², Amornrat Naranuntarat Jensen ^{3,4}, Suchada Sukrong ⁵, Kornkanok Ingkaninan ⁶ and Laran T. Jensen ^{1,*}

- Department of Biochemistry, Faculty of Science, Mahidol University, Bangkok 10400, Thailand; c.huangteerakul@gmail.com (C.H.); drhsumonaung87@gmail.com (H.M.A.); pa_lim_piim@hotmail.com (T.T.)
- ² Toxicology Graduate Program, Faculty of Science, Mahidol University, Bangkok 10400, Thailand;
 - who-miss@hotmail.com
- ³ Department of Pathobiology, Faculty of Science, Mahidol University, Bangkok 10400, Thailand; amornrat.nar@mahidol.edu
- ⁴ Center of Excellence on Environmental Health and Toxicology (EHT), Bangkok 10400, Thailand
- ⁵ Research Unit of DNA Barcoding of Thai Medicinal Plants, Department of Pharmacognosy and Pharmaceutical Botany, Faculty of Pharmaceutical Sciences, Chulalongkorn University, Bangkok 10400, Thailand; suchada.su@chula.ac.th
- ⁶ Department of Pharmaceutical Chemistry and Pharmacognosy, Faculty of Pharmaceutical Sciences and Center of Excellence for Innovation in Chemistry, Naresuan University, Phitsanulok 65000, Thailand; k_ingkaninan@yahoo.com
- * Correspondence: laran.jen@mahidol.edu; Tel.: +66-2-201-5460

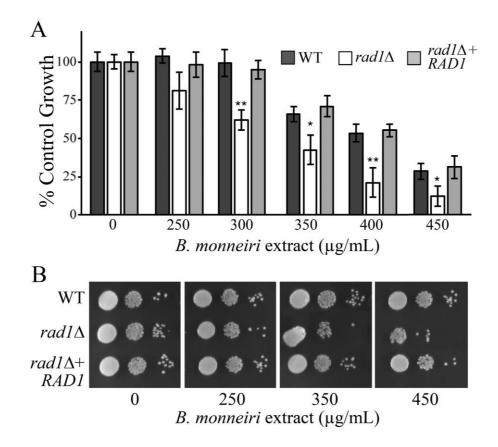


Figure S1: Sensitivity of $rad1\Delta$ yeast toward *B. monnieri* extracts is rescued by episomal expression of RAD1. (**A,B**) Yeast strains WT and $rad1\Delta$ (12806) transformed with the control plasmid (pRS315) and $rad1\Delta$ transformed with pLJ540 (RAD1) were grown in synthetic medium lacking leucine with 2% glucose in the presence of 2% DMSO and 0.2% Tween 80 (vehicle control) or *B. monnieri* extracts at the concentrations listed. Values are mean \pm SD (n =3). Growth was monitored by measuring OD at 600 nm with vehicle control (0) set at 100%. Statistical analysis employed Student's t-test with ** p < 0.01, * p < 0.05. (**B**) Serial dilutions of liquid cultures from A were spotted onto solid synthetic medium lacking leucine with 2% glucose as described in Figure 3. Samples were incubated for 3 days and photographed.