Table S3. Glyceollin toxicity study in mice.

Toxicity Measures	Vehicle	Glyceollin Dosage (mg/kg) 5	20	50	100	200
Total Body Weight (g)						
	23.70 ± 1.52	23.95 ± 0.41	27.13 ± 0.98	23.91 ± 0.61	22.60 ± 0.57	19.78 ± 1.45
Liver						
Extramedulary hematopoiesis	0/5	2/5	1/5	1/5	1/5	1/5
Lymphoplasmacytic hepatitis	0/5	0/5	1/5	0/5	0/5	0/5
Necrosis with infarction (focal)	0/5	0/5	0/5	0/5	0/5	1/5
Lung						
Pulmonary vein mineralization	0/5	0/5	0/5	1/5	0/5	0/5
Alveolar hemorrhage (focal)	0/5	1/5	1/5	1/5	0/5	0/5
Renal						
Angiectasis (focal)	0/5	0/5	0/5	1/5	0/5	0/5

Glyceollin toxicity study. To examine the potential toxicity of supradietary doses of purified glyceollins in a rodent model, a dose response study was conducted in mice. No specific treatment-related changes were seen on gross evaluation, including whole body weights (**Table S3**). Histological examination of tissues harvested at day 20 revealed no significant treatment effects (summarized in **Table S3**). Uteri were atrophic in all animals with no evidence of estrogenic effects (e.g., stromal edema). Liver, lung, and renal changes were considered incidental. No heart or adrenal gland changes were observed.

Methods. Immunocompromised Nu/NU female mice (4-6 weeks old) were obtained from Charles River Laboratories (Wilmington, MA). The animals were allowed a period of adaptation in a sterile and pathogen-free environment with

food and water ad libitum. Mice were randomized to 6 groups (N=5) and treated for 20d with 0, 5, 20, 50, 100, or 200 mg/kg glyceollins (groups 1-6, respectively). Treatment (Glyceollins in DMSO/PBS) or vehicle (DMSO/PBS) injections were administered intraperitoneally daily. Animals were euthanized by cervical dislocation after exposure to CO_2. Liver, lungs, heart, kidneys, adrenal glands, and uteri were removed and fixed in 10% formalin. Following fixation, tissues were embedded in paraffin and sectioned at 5 µm for routine hematoxylin and eosin (H&E) staining. H&E-stained slides were evaluated qualitatively for microscopic changes by a board-certified pathologist blinded to treatment groups. Histologic changes across groups were compared using a Fisher's Exact Test. All procedures involving these animals were conducted in compliance with State and Federal laws, standards of the U.S. Department of Health and Human Services, and guidelines established by Tulane University Animal Care and Use Committee. The facilities and laboratory animals program of Tulane University are accredited by the Association for the Assessment and Accreditation of Laboratory Animal Care.