

1 Extracts of *Hylotelephium erythrostrictum* (Miq.) H. Ohba ameliorate intestinal injury by  
 2 scavenging ROS and inhibiting multiple signaling pathways in *Drosophila*

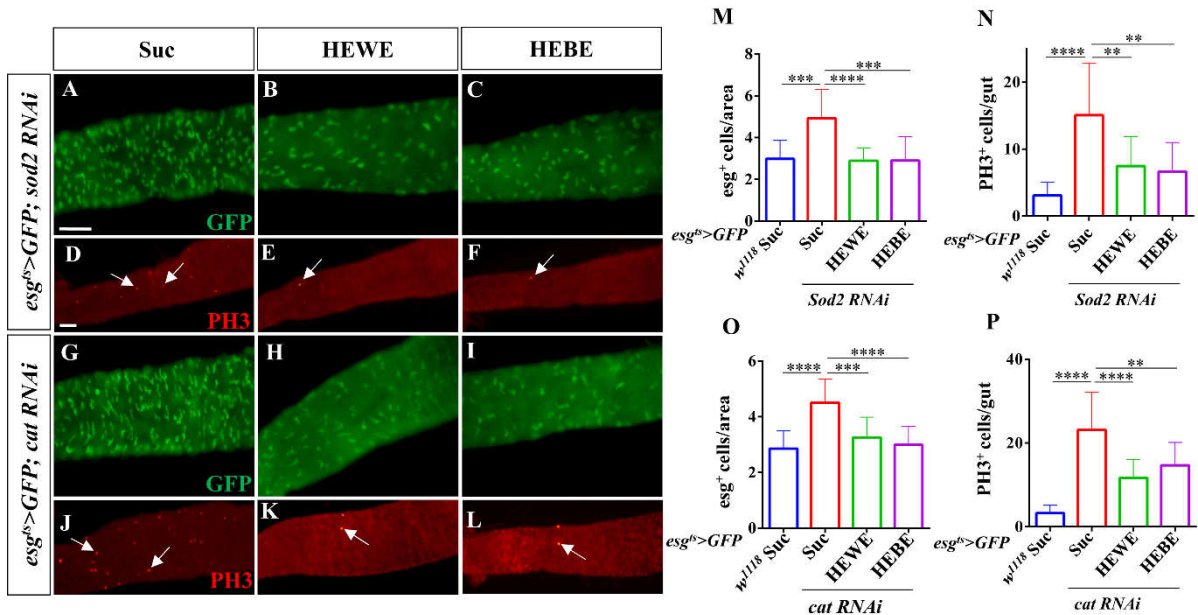
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7 Supplemental information

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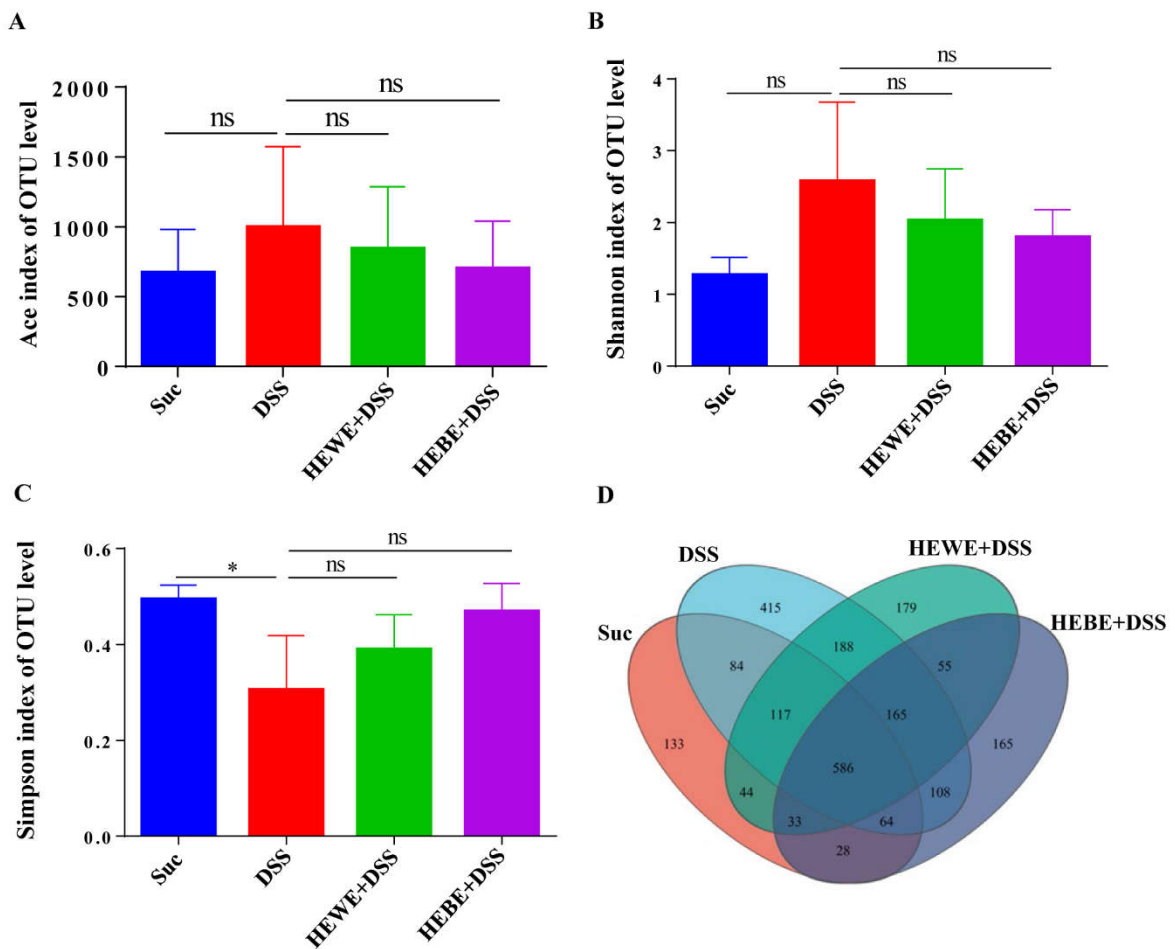
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10 **Figure S1. Both HEWE and HEBE can reduce progenitor proliferation and**  
 11 **differentiation caused by the suppression of antioxidant enzymes.**

12 (A-L) Representative images of the midguts of *esg<sup>ts</sup>>GFP; sod2 RNAi* (A-F) and *esg<sup>ts</sup>>GFP;*  
 13 *cat RNAi* (G-L) transgenic flies at 29 °C for 7 days and stained with anti-GFP (A-C, G-I) and  
 14 anti-PH3 (D-F, J-L) antibodies. The *esg-Gal4/+* flies were used as controls. The numbers of  
 15 *esg<sup>ts</sup>* and PH3<sup>+</sup> cells were significantly greater in the *esg<sup>ts</sup>>GFP; sod2 RNAi* and *esg<sup>ts</sup>>GFP;*

16 *cat RNAi* groups than in the control group. After 4 days of supplementation with HEWE or  
 17 HEBE, the numbers of *esg*<sup>+</sup> and PH3<sup>+</sup> cells decreased significantly. (M-P) Quantification of  
 18 *esg*<sup>+</sup> cells (M, O) in the posterior midgut and PH3<sup>+</sup> cells (N, P) in the whole intestine from A-  
 19 L (n=12-18). Scale bars: 50 μm.

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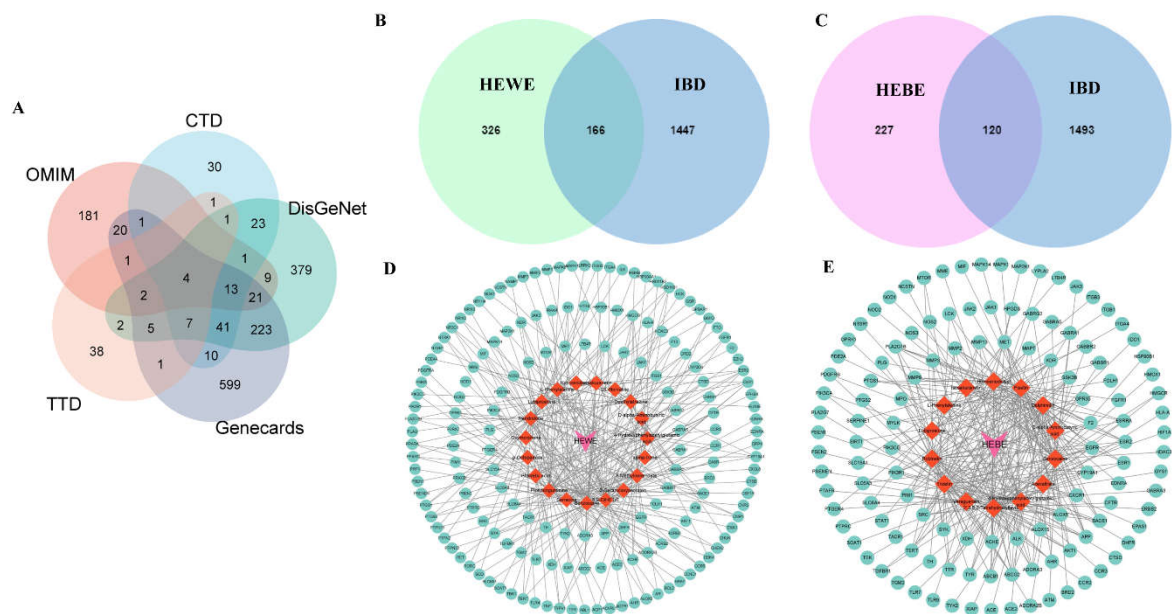
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22 **Figure S2. Alpha diversity and Venn diagram of gut microbiota.**

23 (A-C) Alpha diversity bar charts (Ace, Shannon, and Simpson indices) for each group (n=3).

24 (D) Venn diagram showing OTU overlaps between each group.

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27 **Figure S3. Key compounds and targets of HEWE and HEBE for the treatment of IBD.**

28 (A) Venn diagrams of IBD targets from 5 databases. (B) Intersection of identified targets of  
 29 HEWE and IBD. (C) Intersection of identified targets of HEBE and IBD. (D, E) Network of  
 30 herb-compound–target interactions. The red diamonds are the compounds of HEWE and HEBE,  
 31 and the green circles around them are the targets.

32 **Table S1. Bioactive compounds of HEWE.**

No	Compound name	PubChem CID	Class	GI absorption	DL
1	DL-Norvaline	824	Amino acid and derivatives	High	Yes
2	Deethylatrazine	22563	Triazines	High	Yes
3	D-alpha-Aminobutyric acid	439691	Carboxylic acids and derivatives	High	Yes
4	4-Hydroxyphenylacetylglutamic acid	440731	Glutamic acid and derivatives	High	Yes
5	alpha-Irone	5371002	Prenol lipids	High	Yes
6	8-Methylnonenoate	5365959	Fatty Acyls	High	Yes
7	8-Geranyloxypsoralen	5317564	Coumarins	High	Yes
8	8,9-DiHETrE	3246873	Fatty Acyls	High	Yes
9	Benzocaine	2337	Benzene and substituted derivatives	High	Yes
10	Sarracine	5281746	Alkaloids	High	Yes
11	Piperlonguminine	5320621	Alkaloids	High	Yes
12	Phloretic acid	10394	Phenols	High	Yes
13	p-Octopamine	4581	Phenols	High	Yes
14	Oxymorphone	5284604	Phenanthrenes and derivatives	High	Yes
15	Nandrolone	9904	Steroids and steroid derivatives	High	Yes
16	Lubiprostone	157920	Fatty Acyls	High	Yes
17	L-Phenylalanine	6140	Amino acid and derivatives	High	Yes
18	Kynurenic acid	3845	Alkaloids	High	Yes
19	Isosakuranetin	160481	Flavonoids	High	Yes

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34 **Table S2. Bioactive compounds of HEBE.**

No	Compound name	PubChem CID	Class	GI absorption	DL
1	Homoeriodictyol	73635	Flavonoids	High	Yes
2	Fisetin,	5281614	Flavonoids	High	Yes
3	Delphinidin	68245	Flavonoids	High	Yes
4	D-alpha-Aminobutyric acid	439691	Carboxylic acids and derivatives	High	Yes
5	Benzocaine	2337	Benzene and substituted derivatives	High	Yes
6	Acevaltrate	65717	Iridoids	High	Yes
7	4-Hydroxyphenylacetylglutamic acid	440731	Glutamic acid and derivatives	High	Yes
8	2',3,5,7-Tetrahydroxyflavon	5281610	Flavonoids	High	Yes
9	Veraguensin	443026	Lignans	High	Yes
10	Tricetin	5281701	Flavonoids	High	Yes
11	Robinetin	5281692	Flavonoids	High	Yes
12	Lubiprostone	157920	Fatty Acyls	High	Yes
13	L-Phenylalanine	6140	Amino acid and derivatives	High	Yes
14	Isosakuranetin	160481	Flavonoids	High	Yes

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36 There are no Gels and Blots images in this study. Therefore, we did not provide the full  
37 uncropped Gels and Blots images.