**Supplemental Table 1**. The patterns of oxalate fluxes and electrical parameters across isolated, shortcircuited segments of cecum from non-colonized WT wild type C57BL/6, single knockout (KO), and double knockout (dKO) all fed a diet supplemented with 1.5% oxalate.

Group	$J_{ms}$	$J_{sm}$	$\Delta J_{net}$	I <sub>sc</sub>	G <sub>T</sub>
WT	49.3 ± 12.5	41.5 ± 12.5	7.8 ± 1.2	$2.2 \pm 0.3$	18.7 ± 2.5
	n=7	n=7	n=7	n=7	n=7
AGT KO	29.1 ± 5.7	19.6 ± 2.6	9.5 ± 2.8	$1.0 \pm 0.3$	17.5 ± 1.0
	n=10	n=10	n=10	n=10	n=10
PAT1/AGT dKO	11.0 ± 2.6	18.1 ± 2.2	-7.1 ± 1.1	1.4 ± 0.2	13.7 ± 0.7
	n=10	n=10	n=10	n=10	n=10
DRA/AGT dKO	27.4 ± 7.0	23.6 ± 6.2	3.7 ± 4.3	$5.5 \pm 0.4$	19.0 ± 1.1
	n=7	n=7	n=7	n=7	n=7

Oxalate fluxes are given in pmol/cm<sup>2</sup>/h, transepithelial conductance ( $G_T$ ) is given in mS/cm<sup>2</sup> and short-circuit current ( $I_{sc}$ ) is given in  $\mu$ Eq/cm<sup>2</sup>. (n) = the number of tissue pairs in each series.

**Supplemental Table 2**. The patterns of oxalate fluxes and electrical parameters across isolated, shortcircuited segments of distal colon from non-colonized WT wild type C57BL/6, single knockout (KO), and double knockout (dKO) all fed a diet supplemented with 1.5% oxalate.

Group	$J_{ms}$	$J_{sm}$	$\Delta J_{net}$	I <sub>sc</sub>	G <sub>T</sub>
WT	30.8 ± 4.6	34.9 ± 3.9	-4.2 ± 1.6	1.5 ± 0.2	15.5 ± 1.7
	n=7	n=7	n=7	n=7	n=7
	20.8 ± 1.9	27.2 ± 2.0	-6.5 ± 0.6	$2.2 \pm 0.3$	15.9 ± 0.6
AGT KO	n=10	n=10	n=10	n=10	n=10
PAT1/AGT	12.4 ± 1.4	26.7 ± 2.4	-13.1 ± 1.6	1.7 ±0.2	11.6 ± 0.5
dKO	n=8	n=8	n=8	n=8	n=8

DRA/AGT	26.8 ± 3.2	43.6 ± 3.6	-16.9 ± 1.4	3.0±0.4	17.7 ± 1.4
dKO	n=7	n=7	n=7	n=7	n=7

Oxalate fluxes are given in pmol/cm<sup>2</sup>/h, transepithelial conductance ( $G_T$ ) is given in mS/cm<sup>2</sup> and short-circuit current ( $I_{sc}$ ) is given in  $\mu$ Eq/cm<sup>2</sup>. (n) = the number of tissue pairs in each series.

**Supplemental Table 3**. Oxalate excretion, µmoles/24 h in urine of the four mouse genotypes included in this study before and after artificial colonization with OXWR.

Group	PAT 1 KO	DRA KO	PAT1/AGT dKO	DRA/AGT dKO
Baseline	3.6 ± 0.6	$0.8 \pm 0.2$	4.8 ± 0.2	1.44 ± 0.2
	n=9	n=7	n=7	n=11
Post	0.5 ± 0.1*	$0.5 \pm 0.03^{*}$	$0.4 \pm 0.1^{*}$	1.64 ± 0.2
gavage	N=9	n=16	n=10	n=11

Values are the means  $\pm$  SE for the mean of duplicate determinations on each 24 h urine collection. Baseline values reflect oxalate excretion when mice are fed the oxalate-supplemented diet (1.5% Ox – 0.5% Ca<sup>2+</sup>). Post gavage urine collections were conducted between 12-15 days after the gavage procedure during which time all mice were still being fed the oxalate-supplemented diet. These values are also included in the text of the results as appropriate for correlation purposes with the changes observed in transmural oxalate fluxes. \*Significantly different from baseline (P < 0.05). Note that the DRA/AGT dKO group were not colonized at the time the post-gavage 24 h urine was collected whereas all other animals were confirmed colonized.