

**Table S7:** Enrichment of VDR ChIP-seq peaks among genes responsive to 1,25D treatment. VDR ChIP-seq peaks were obtained from published datasets, while 1,25D responsive genes were obtained among those that were significantly differentially expressed in response to different 1,25D treatment conditions, from the linear mixed-effects and Cormotif analyses. Enrichment of VDR peaks was calculated using Fisher's exact test, comparing DE genes to non-DE genes.

Treatment	DE genes	DE genes with VDR binding site	Proportion of DE genes with VDR binding site	Non-DE genes	Non-DE genes with VDR binding site	Proportion of Non-DE genes with VDR binding site	Enrichment p-values
<b>Linear mixed-effects model</b>							
V vs. E	2887	202	0.07	8071	300	0.04	$4.56 \times 10^{-11}$
V + L vs. E	4720	335	0.07	6238	280	0.04	$3.97 \times 10^{-8}$
V + L vs. L	2405	209	0.09	8554	466	0.05	$1.54 \times 10^{-7}$
<b>Cormotif Analysis</b>							
1,25D response ("All", "All except V+L", "1,25D" and "1,25D-all" Cormotifs)	2761	189	0.07	5737	186	0.03	$3.28 \times 10^{-12}$
1,25D response: ("1,25D" and "1,25D-all" Cormotifs)	1132	114	0.10	5737	186	0.03	$3.33 \times 10^{-18}$