SUPPLEMENTAL DATA

Table S1. Effect of *Sl*PRALF on media pH

	HEPES pH 6 Buffered PGM		Un-buffered PGM	
+/- *Sl*PRALF	+	-	+	-
Pre-pollen addition	6.03 ± (0.01)	6.03	6.17 ± (0.14)	6.07 ± (0.07)
0 min	5.98 ± (0.01)	6.05 ± (0.01)	6.08 ± (0.06)	6.06 ± (0.05)
15 min	6.02	5.97	6.13 ± (0.06)	6.06 ± (0.04)
30 min	6.04	5.96	6.04 ± (0.05)	6.02 ± (0.03)
45 min	6.02	5.93 ± (0.01)	6.11 ± (0.01)	6.01 ± (0.01)
60 min	6.00 ± (0.03)	5.93 ± (0.01)	6.01 ± (0.05)	5.99 ± (0.04)

Pollen was added to pollen germination media (PGM) containing 0.1 µM *Sl*PRALF peptide and the pH was tracked every 15 min for 1 h from three flowers ± SEM. n = 3.

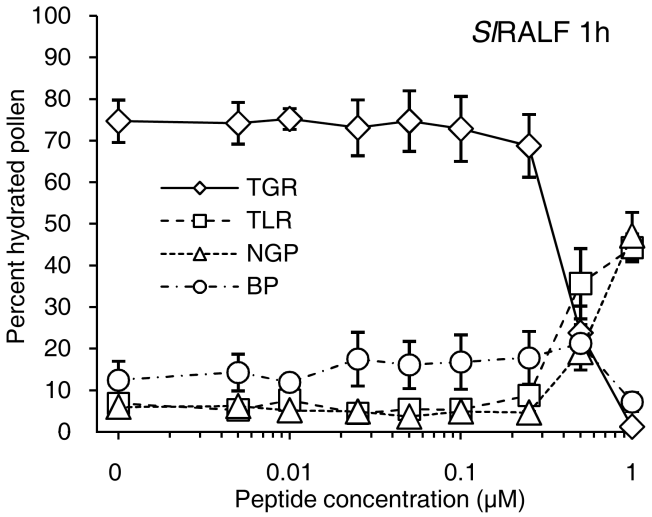

Figure S1. Vegetative *Sl*RALF has a reduced effect on pollen. Pollen was exposed to exogenous *Sl*RALF peptide at concentrations from 0.005 to 1 μM for 1 h, and classified according to morphology using methods identical to those used to generate Fig. 6. The average percent of hydrated pollen in each classification group (pollen with tubes greater than the radius (TGR), pollen with tubes less than the radius (TLR), non-germinated pollen (NGP), and burst pollen (BP)) ± SEM is shown at each concentration of *Sl*RALF peptide. n ≥ 100 for each treatment.

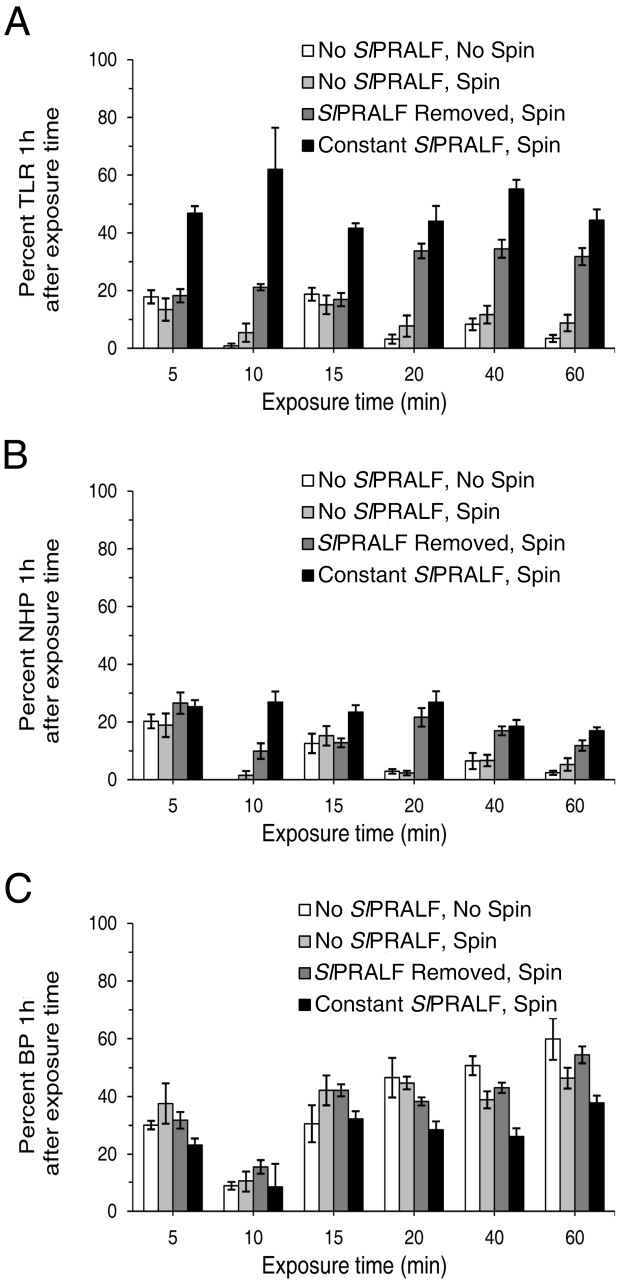

Figure S2. *Sl*PRALF inhibition reversibility for abnormal pollen morphology classes. Histograms show percent hydrated pollen in each class +/- SEM 1 h after time-limited treatment with 0.1 μM *Sl*PRALF A, pollen with tubes less than the radius of the grain (TLR). B, Non-germinated pollen (NGP). C, Burst pollen (BP). Pollen was treated with peptide for designated exposure times, pelleted by centrifugation and resuspended in medium containing 0.1 μM *Sl*PRALF (Constant *Sl*PRALF, Spin = black bars) or no peptide (*Sl*PRALF Removed, spin = dark gray bars). Samples not treated with peptide were analyzed without centrifugation (No *Sl*PRALF, No Spin = white bars) or with centrifugation (No *Sl*PRALF, Spin = light gray bars). n $\geq$ 100 for each treatment.