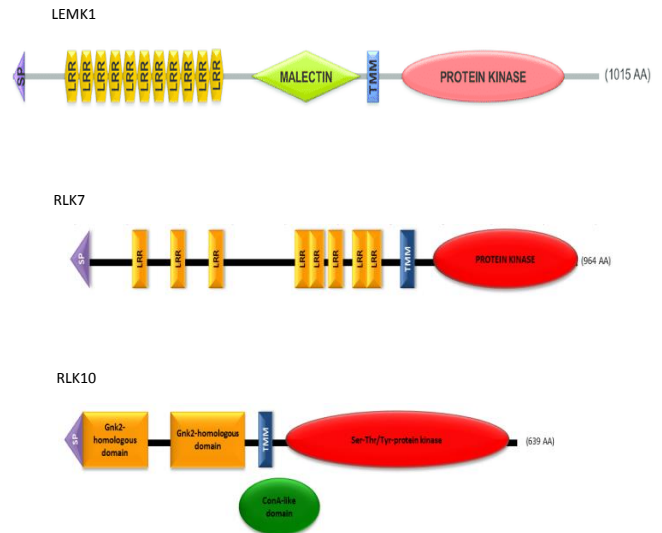


## Unravelling the genetics of non-host resistance in cereals

The research programme on non-host resistance in cereals has been on-going in the research group of Dr Lesley A Boyd since 2006.

Working in collaboration with Dr Patrick Schweizer, IPK, Gatersleben, Germany we are currently characterising three barley Receptor-Like Kinase (RLK) genes; we have over-expressed HvLEMK1, HvRLK7 and HvRLK10 in wheat behind rice actin promoters. Schweizer has demonstrated that transient silencing of these RLK genes in barley results in an increase in the formation of haustoria when inoculated with the wheat powdery mildew pathogen *Blumeria graminis* f. sp. *tritici*.



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Partners within the ERA-CAPS 2 project: DURESTrit

**13 ERA-CAP (BB/M004929/1):** Functional characterisation and validation of non-host components in Triticeae species for durable resistance against fungal diseases (Acronym: **DURESTrit**). November 2014 – April 2018

**ERA-PG (BB/G024987/1):** Integrative genomic and genetic analysis of nonhost resistance across Triticeae species (Acronym: **TritNONHOST**). April 2009 - March 2012

**CIGAR Generation Challenge Programme: CEREAL IMMUNITY** January 2006 – January 2010

**Researchers who have worked on the programme in the Boyd Group include:**

[Dr Anna Gordon](#)

Ms Mathilde Daniau (PhD student)

Dr Francesca Stefanato

Dr Hale Tufan

Dr Graham McGrann

### References:

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Wheat infected with *Blumeria graminis* f. sp. *tritici* 2 days after inoculation

