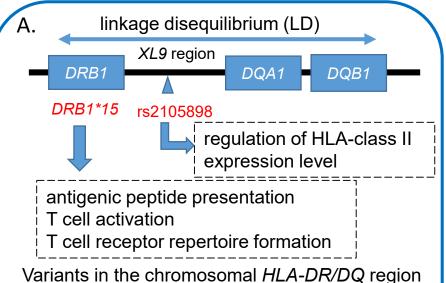
## From Molecular and Genetic Epidemiology Laboratory

Genetic dissection of *HLA-DRB1\*15:01* and XL9 region variants in Japanese patients with systemic lupus erythematosus (SLE): primary role for *HLA-DRB1\*15:01*.

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associated with SLE susceptibility and their putative molecular mechanisms of association.

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| haplotype    |                    | SLE            |            |          |
|--------------|--------------------|----------------|------------|----------|
| HLA-<br>DRB1 | rs2105898<br>(XL9) | susceptibility | population | LD       |
| *15:01       | Т                  | risk           | European   | strong   |
| *15:03       | Т                  | risk           | African    | strong   |
| *15:01       | Т                  | risk           | lananasa   | moderate |
| *15:02       | Т                  | non-risk       | Japanese   |          |

Due to strong LD between *HLA-DRB1\*15* and XL9 region variants, it was impossible to dissect genetic contributions from both variants in the European or African populations, which was not the case in the Japanese population.

|            | P<br>unconditional   | P conditional on<br>DRB1*15:01 | P conditional on<br>rs2105898 |
|------------|----------------------|--------------------------------|-------------------------------|
| DRB1*15:01 | 5.1x10 <sup>-8</sup> | -                              | 7.6x10 <sup>-6</sup>          |
| rs2105898  | 0.0017               | 0.83                           | -                             |

Conditional logistic regression analysis supported a primary role of *DRB1\*15:01* in the Japanese population.

Reference: Aya Kawasaki et al., *RMD Open* 2023;**9:**e003214. Contact: Aya Kawasaki, Naoyuki Tsuchiya

## SUMMARY

Leveraging the differences in the genetic background among populations, we demonstrated that *DRB1\*15:01*, rather than XL9 region variants, is primarily associated with SLE in the Japanese population.