

IARC Meeting 55: May 26th 2020: minutes

The meeting commenced at 10:30 UTC. AC, MO, MC, CS and WL were in attendance. Corey Watson also attended.

1. The minutes of Meeting 54 were approved.
2. Discussion continued to try to establish principles by which submitted light chain sequences could be judged by the IARC. MO spoke of Linnea's analysis comparing TIgGER and IgDiscover inferences, as well as the 3' end issue for different germline genes. Trimming varies between genes, and does not seem to vary between alleles. This does not seem to be related to the frequency of gene usage. For most genes, it should be possible to affirm all but the final two nucleotides. Inferences can only be supported by haplotyping in rare cases. It was noted that both TIgGER and IgDiscover missed sequences that were inferred by the other utility. TIgGER appears to find fewer sequences from the distal IGK locus. This may reflect the relatively low utilization frequencies of genes in the distal locus, and TIgGER may require more sequences if it is to make an inference. Concern was expressed that IARC might need to judge setting and versions as well as the basic inference tools. Concern was also expressed regarding the notion that the IARC could recommend settings for the tools. Amongst other concerns, this advice could be compromised by modifications to the utilities over time. A positive aspect of light chain inferences is that false negatives appear to be more of a problem than false positives. That is good for the IARC process, but the AIRR community needs to be aware of this.
3. The usefulness of a manuscript was again discussed. A manuscript would allow the IARC to raise awareness of the light chain challenges. The meeting agreed that a manuscript should have a broad light chain focus, rather than simply targeting those interested in submitting light chain inferences. Authorship should also be broader than the core IARC group.
4. The next meeting (Meeting 56) will be held on Monday June 15th at 10:30 UTC. Gur Yaari will be invited to attend the meeting, to provide expert advice on TIgGER, and to bring his experiences with light chain inferences before the committee.

The meeting ended at 11:30 UTC.