**Table S5: Autosomal sites mis-mapping to sex chromosomes compared to Kasimatis**

We compare our results for excluding sites due to mis-mapping to the results from Kasimatis et al., 2020. In Kasimatis et al., they analyzed SNPs in the UK BioBank genotype array and removed from their analysis any loci in a region which had greater than 90% identity with either sex chromosome, as well as being on a probe 40bp or longer in length. In our study, we identified loci in autosomal regions with significant identity—greater than 90% in (A) and 75% in (B)—with the sex chromosomes by BLAST. Here, we compare our BLAST results (“This Study”) with the list of loci found to be significant in the Kasimatis et al. study. We find that the number of genotype array sites mis-mapping to the sex chromosomes was in general 6.305% of genotype array sites mis-mapped to the sex chromosomes in our study, and 0.872% of sites were found to be mis-mapping in both studies when using a 90% BLAST identity threshold; and in general 10.074% of genotype array sites mis-mapped to the sex chromosomes in our study, and 1.844% of sites were found to be mis-mapping in both studies when using a 75% BLAST identity threshold.

**(A)**

|  |  |  |
| --- | --- | --- |
| **90% BLAST Identity Threshold** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 5,408 (0.872%) | 15,120 (2.439%) |
| **Kasimatis et al. Not Mis-map** | 39,094 (6.305%) | 560,418 (90.384%) |

**(B)**

|  |  |  |
| --- | --- | --- |
| **75% BLAST Identity Threshold** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 11,435 (1.844%) | 9,093 (1.467%) |
| **Kasimatis et al. Not Mis-map** | 62,465 (10.074%) | 537,047 (86.615%) |

**Supp Table. Autosomal sites mis-mapping to sex chromosomes compared to Kasimatis (90% Threshold)**

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| --- | --- | --- |
| **African (afr)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 5,408 (0.87%) | 15,120 (2.44%) |
| **Kasimatis et al. Not Mis-map** | 39,090 (6.30%) | 560,423 (90.38%) |

|  |  |  |
| --- | --- | --- |
| **Latino (amr)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 5,392 (0.87%) | 15,136 (2.44%) |
| **Kasimatis et al. Not Mis-map** | 39,004 (6.29%) | 560,509 (90.40%) |

|  |  |  |
| --- | --- | --- |
| **Ashkenazi Jewish (asj)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 5,141 (0.83%) | 15,387 (2.48%) |
| **Kasimatis et al. Not Mis-map** | 37,392 (6.03%) | 562,121 (90.66%) |

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| --- | --- | --- |
| **East Asian (eas)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 3,112 (0.50%) | 17,416 (2.81%) |
| **Kasimatis et al. Not Mis-map** | 24,295 (3.92%) | 575,218 (92.77%) |

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| **Finnish (fin)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 5,405 (8.72%) | 15,123 (2.44%) |
| **Kasimatis et al. Not Mis-map** | 39,084 (6.30%) | 560,429 (90.39%) |

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| --- | --- | --- |
| **Non-Finnish European (nfe)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 5,408 (0.87%) | 15,120 (2.44%) |
| **Kasimatis et al. Not Mis-map** | 39,091 (6.30%) | 560,422 (90.38%) |

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| --- | --- | --- |
| **Other (oth)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 5,408 (0.87%) | 15,120 (2.44%) |
| **Kasimatis et al. Not Mis-map** | 39,089 (6.30%) | 560,424 (90.38%) |

**Supp Table. Autosomal sites mis-mapping to sex chromosomes compared to Kasimatis (75% Threshold)**

|  |  |  |
| --- | --- | --- |
| **African (afr)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 11,435 (1.84%) | 9,093 (1.47%) |
| **Kasimatis et al. Not Mis-map** | 62,462 (10.07%) | 537,051 (86.62%) |

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| --- | --- | --- |
| **Latino (amr)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 11,404 (1.84%) | 9,124 (1.47%) |
| **Kasimatis et al. Not Mis-map** | 62,307 (10.05%) | 537,205 (86.64%) |

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| --- | --- | --- |
| **Ashkenazi Jewish (asj)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 10,851 (1.75%) | 9,677 (1.56%) |
| **Kasimatis et al. Not Mis-map** | 59,645 (9.62%) | 539,867 (87.07%) |

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| --- | --- | --- |
| **East Asian (eas)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 6,520 (1.05%) | 14,008 (2.26%) |
| **Kasimatis et al. Not Mis-map** | 38,382 (6.19%) | 561,130 (90.50%) |

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| --- | --- | --- |
| **Finnish (fin)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 11,429 (1.84%) | 9,099 (1.46%) |
| **Kasimatis et al. Not Mis-map** | 62,448 (10.07%) | 537,064 (86.62%) |

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| --- | --- | --- |
| **Non-Finnish European (nfe)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 11,435 (1.84%) | 9,093 (1.47%) |
| **Kasimatis et al. Not Mis-map** | 62,462 (10.07%) | 537,051 (86.62%) |

|  |  |  |
| --- | --- | --- |
| **Other (oth)** | **This Study Mis-map** | **This Study Not Mis-map** |
| **Kasimatis et al. Mis-map** | 11,435 (1.84%) | 9,093 (1.47%) |
| **Kasimatis et al. Not Mis-map** | 62,462 (10.07%) | 537,051 (86.62%) |