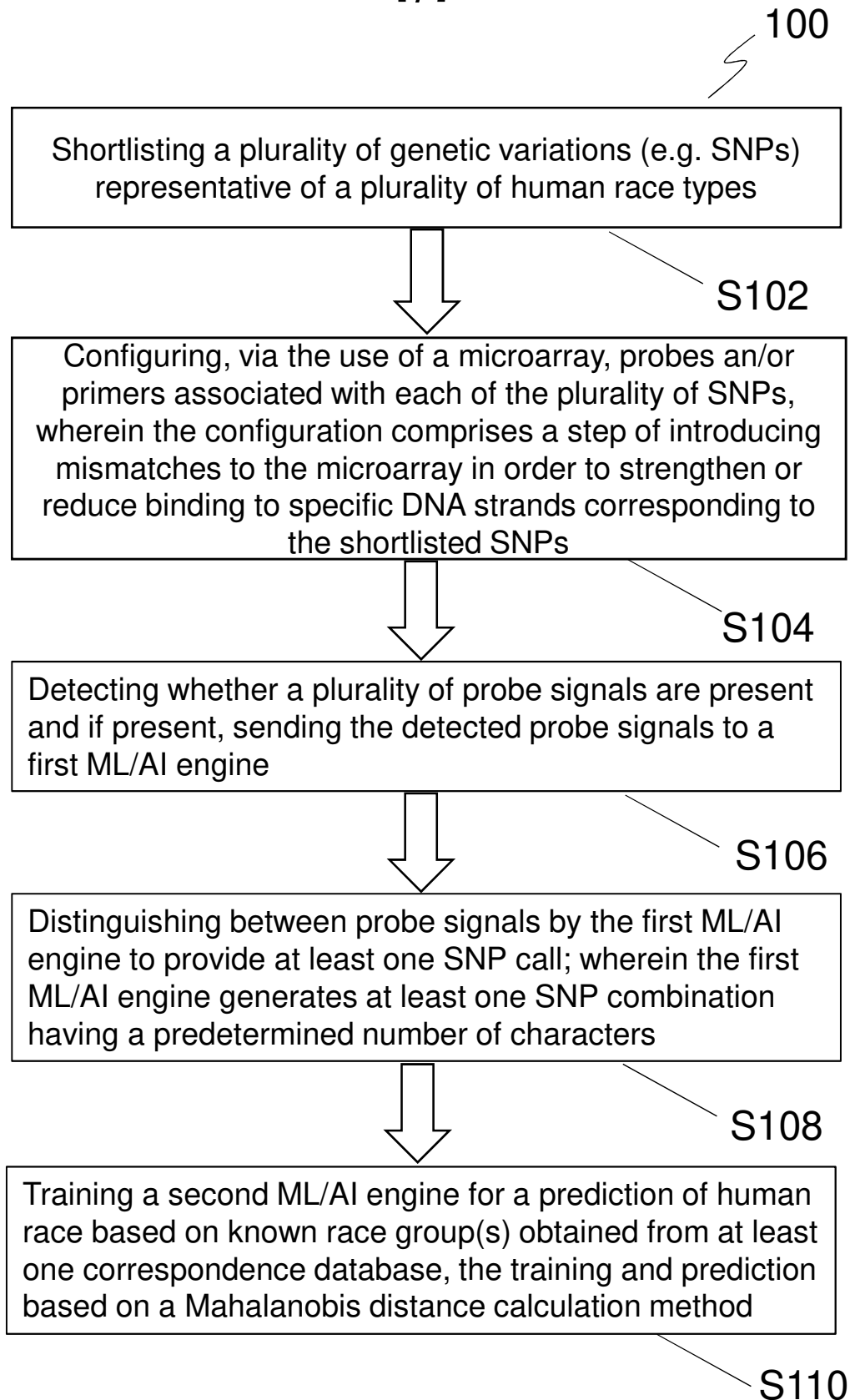
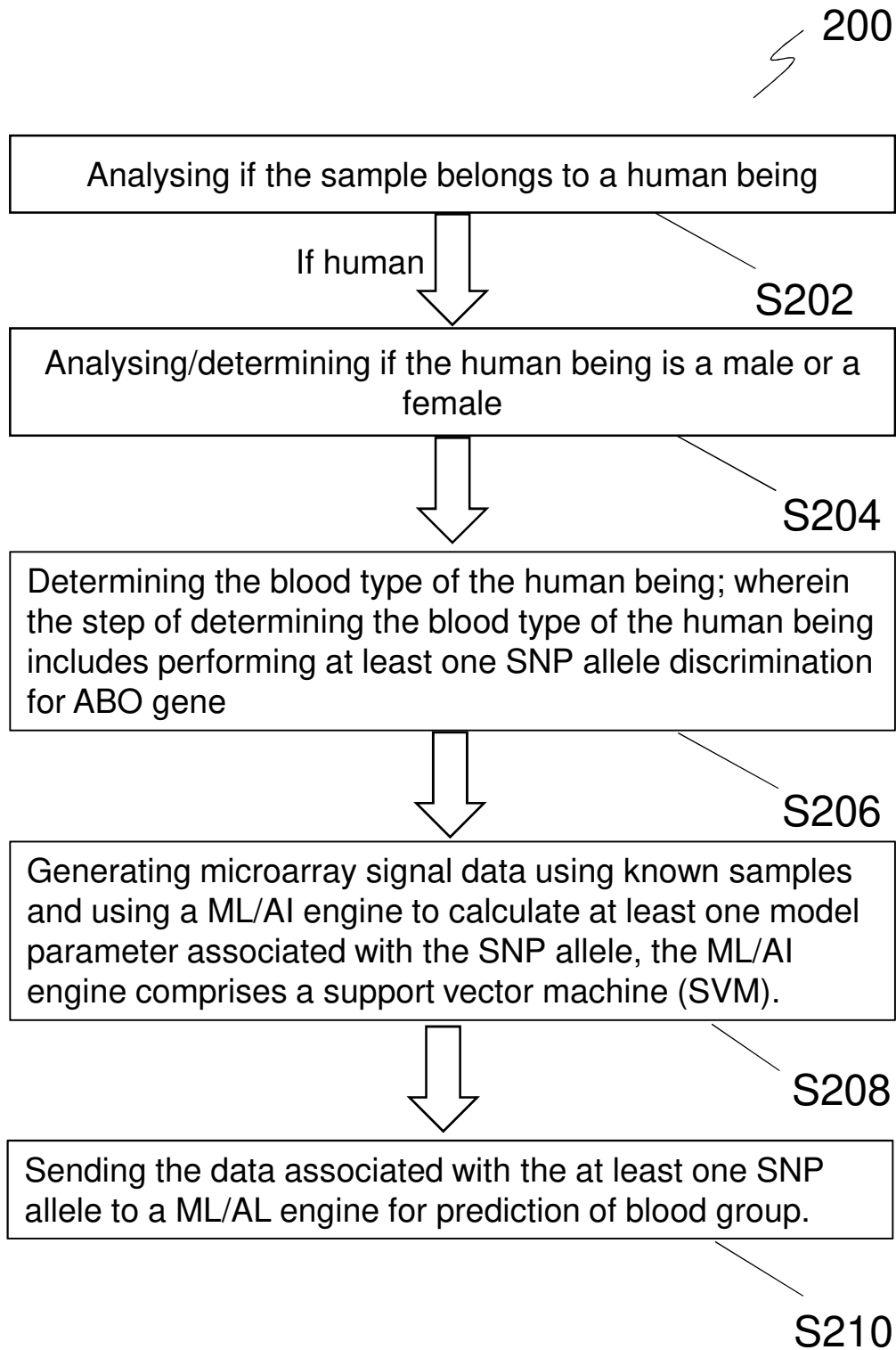


**Figure. 1**

**Figure. 2**

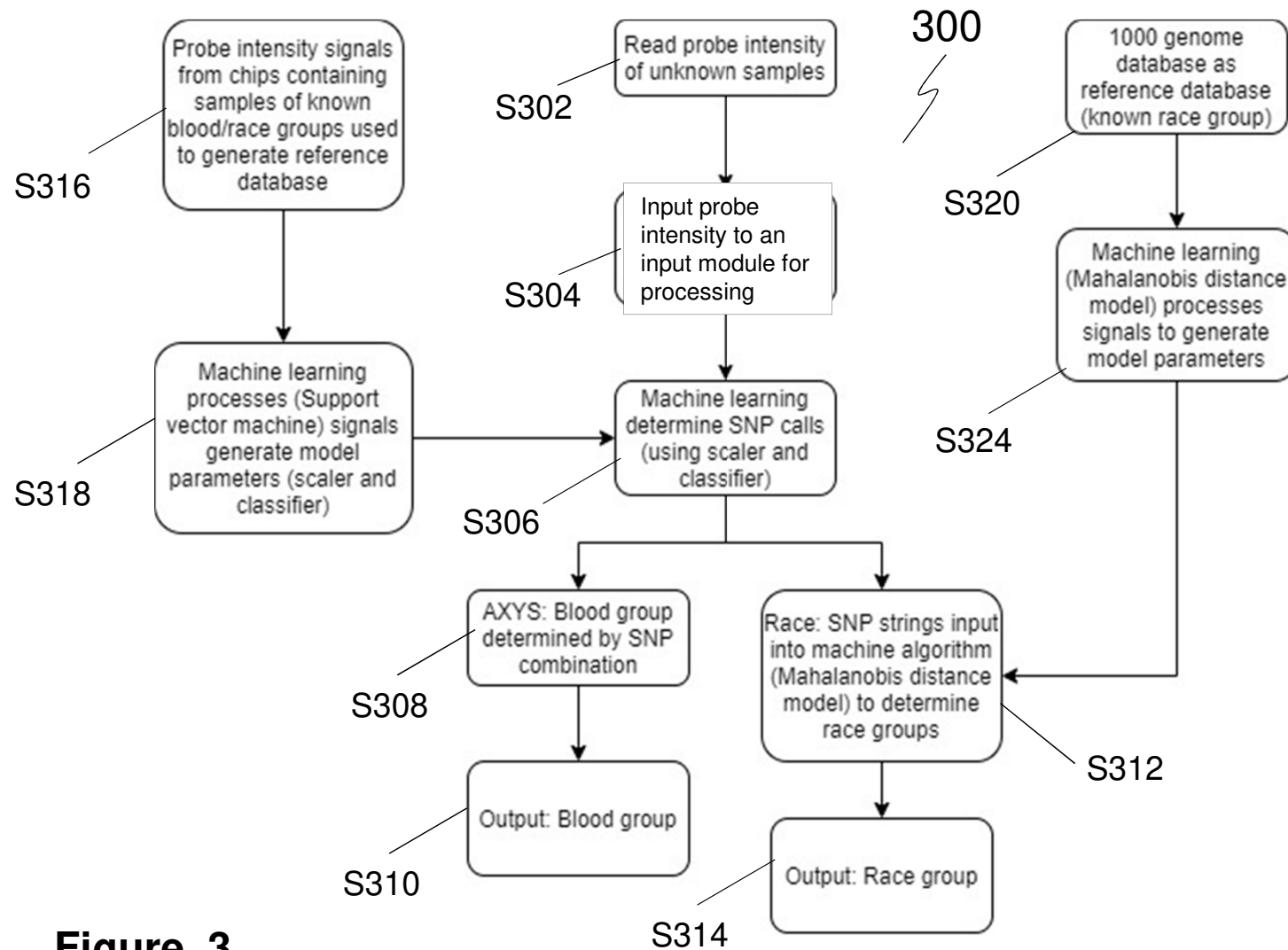


Figure. 3

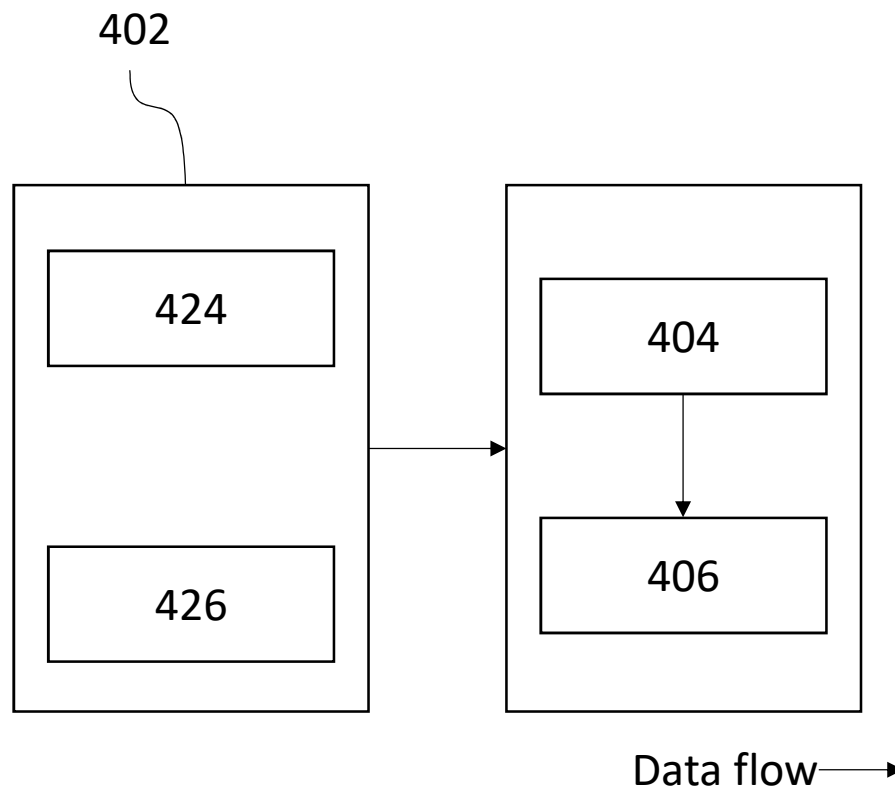


Figure. 4

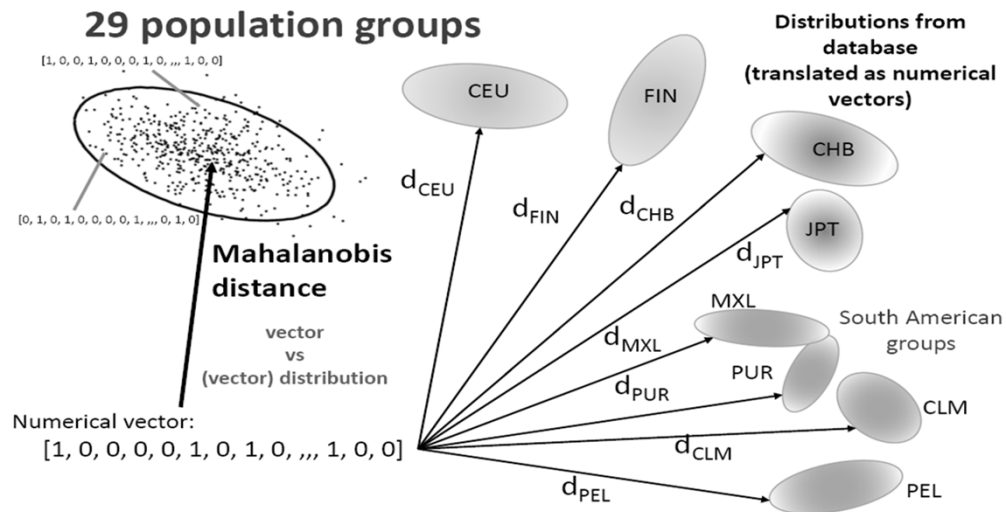


Figure. 5a

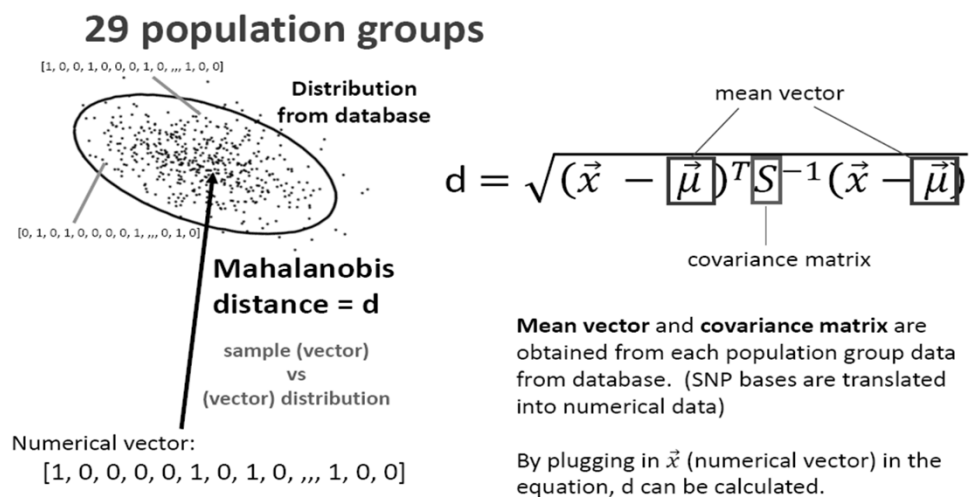


Figure. 5b

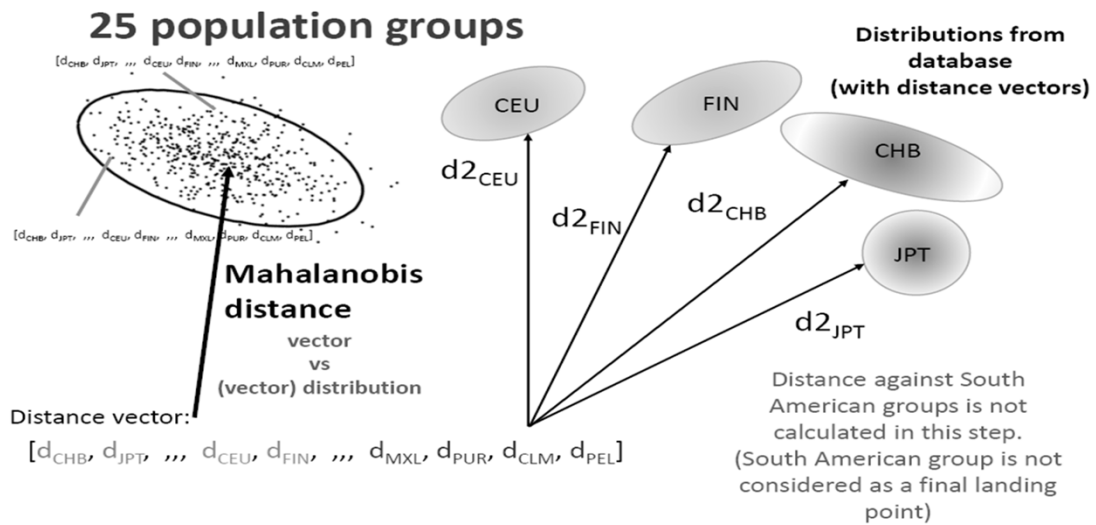


Figure. 5c

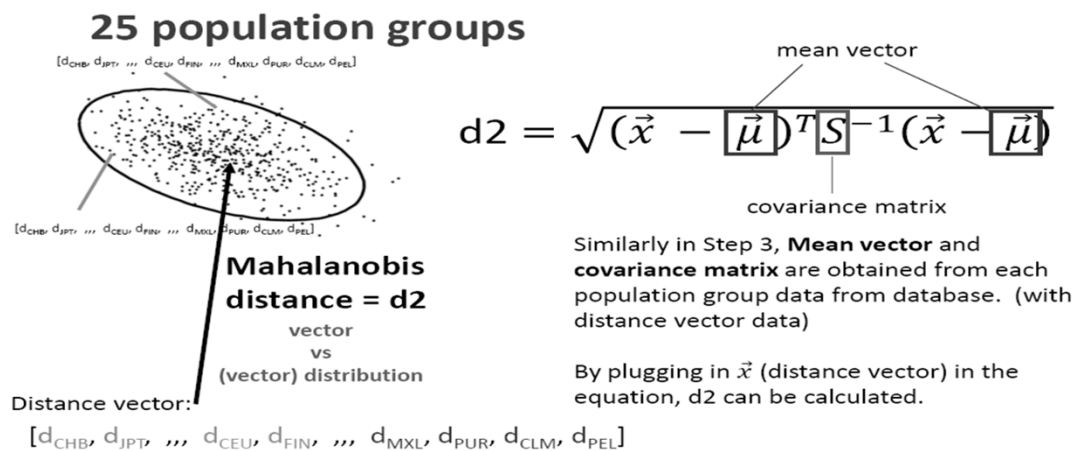


Figure. 5d

Second distance vector: distance data against 25 population groups

$$[d2_{CHB}, d2_{JPT}, \dots, d2_{CEU}, d2_{FIN}, \dots]$$

Distance is converted to probability with following formula;

ex. probability for CHB:

$$p_{CHB} = \frac{\exp(-1 \times d2_{CHB})}{\sum_{group=1}^{group=25} \exp(-1 \times d2_{group})}$$

Figure. 5e