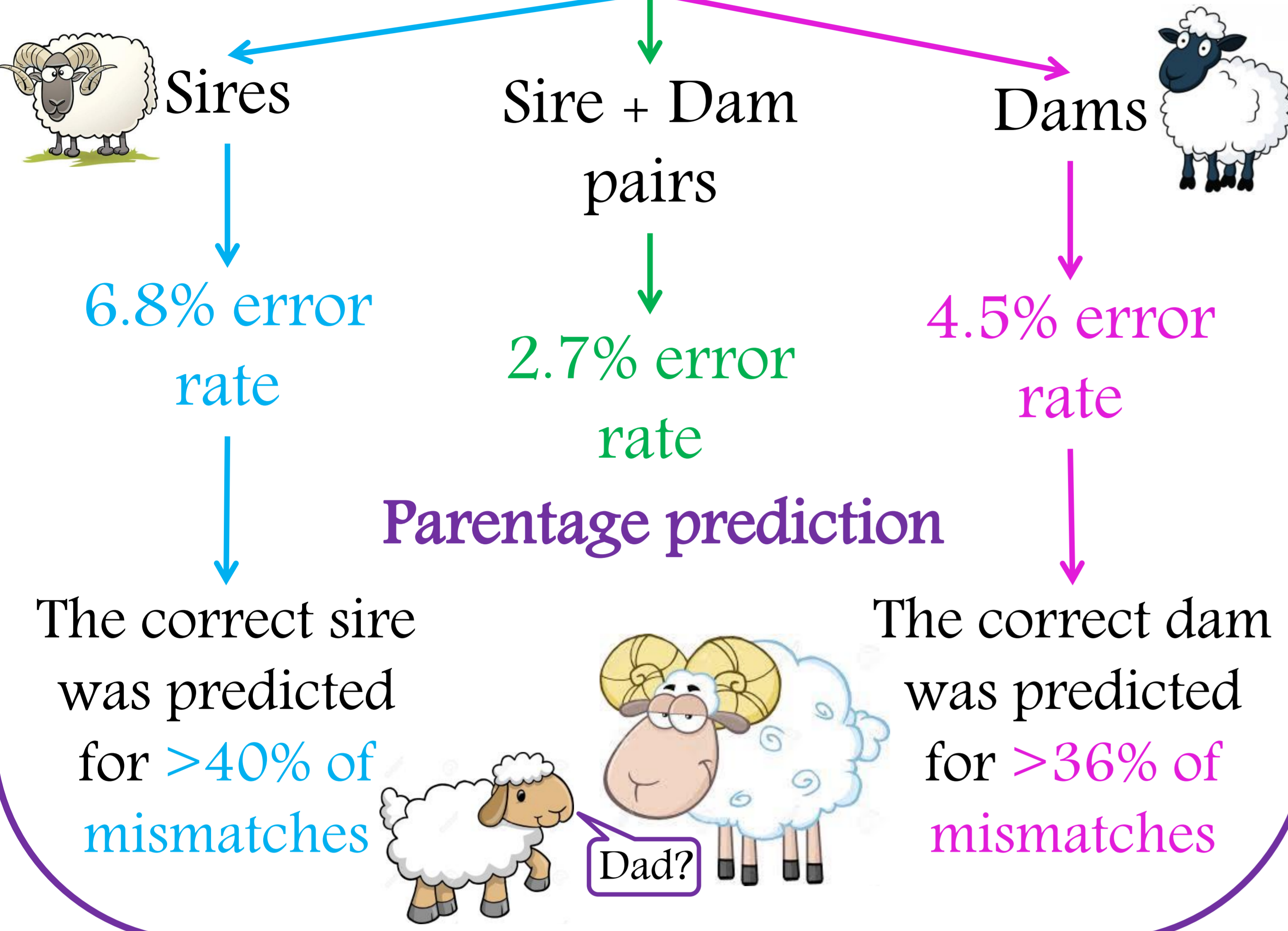


Parentage

21,955 Irish animals genotyped

11,963 had a parent genotyped



Karyotyping

Karyotype = a "picture" of the chromosomes in the cell of an animal

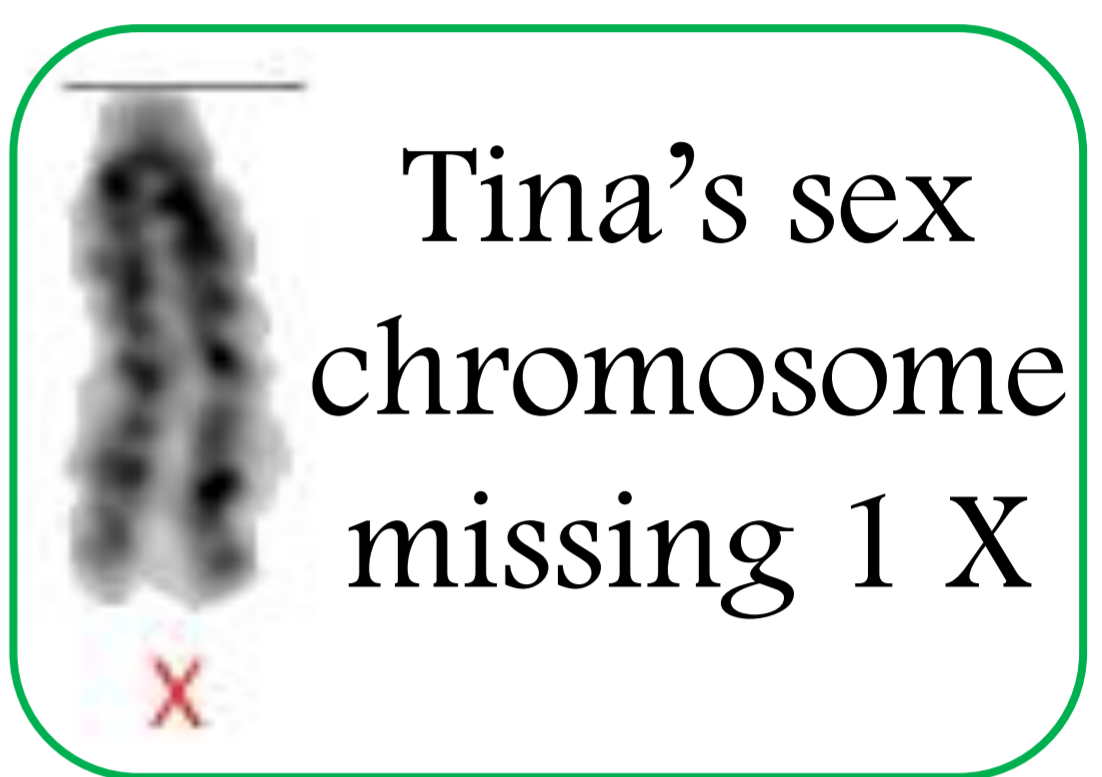
Sex chromosomes
Always in pairs

Male
X Y

Female
X X



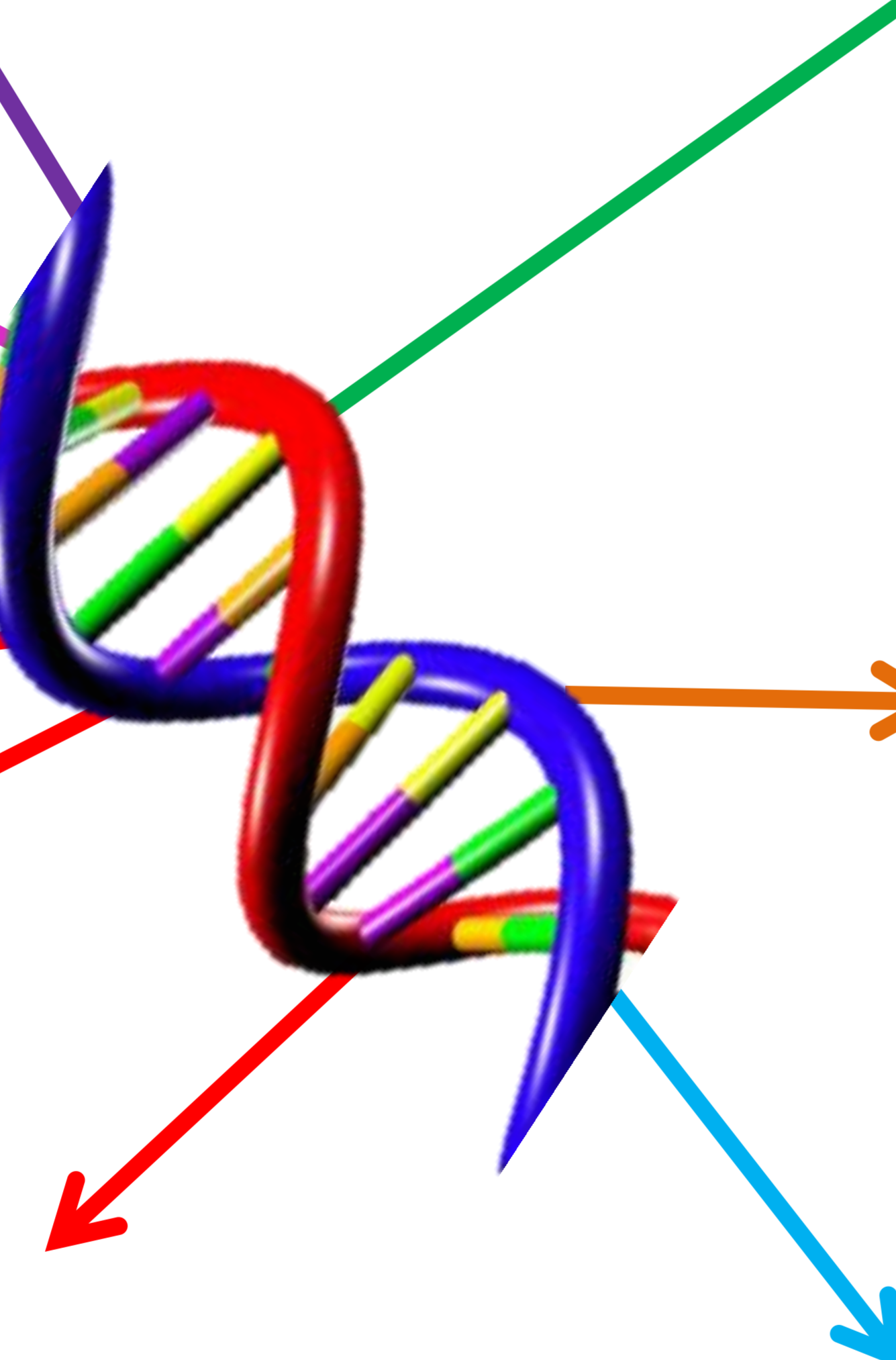
Tina
(the sheep)
has **Turner Syndrome**



- Missing one X chromosome
- Looks normal
- Loss of ovarian function
- Will **NEVER** become pregnant
- Can be detected at birth

Genomic predictions

- Mating advice
- Inbreeding
- Monitoring lethal genes
- Precision management



Monitoring major genes

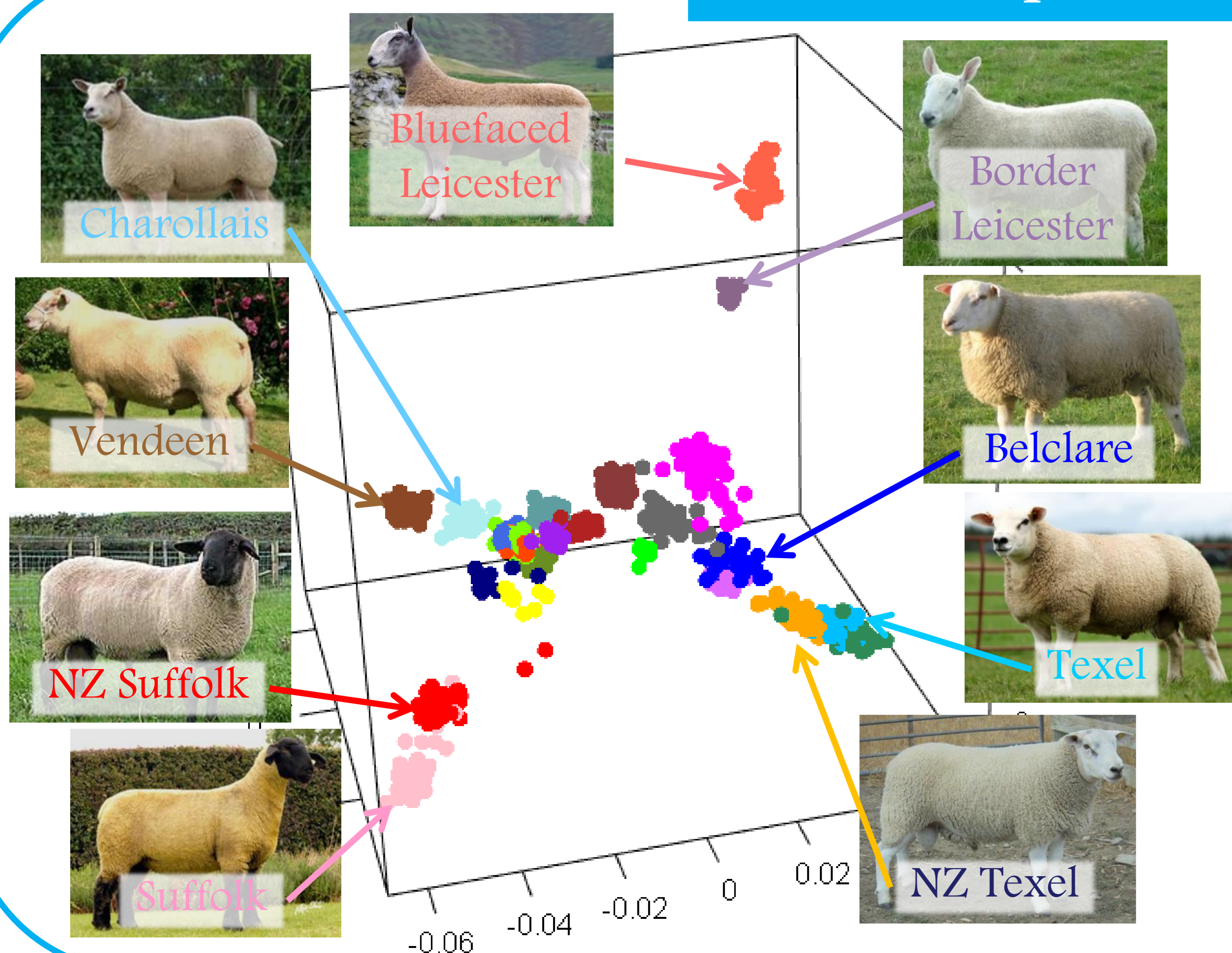
BMP15

- associated with more lambs born
- 1 copy = increased ovulation rate
- 2 copies = sterile animal

Genotyped animals	Frequency
All Irish population	0.07%
Belclares only	9.78%

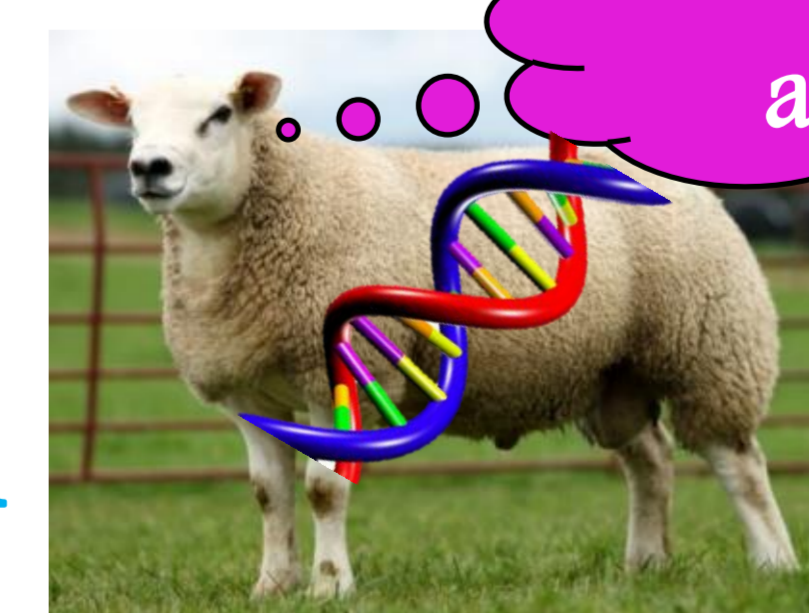
+0.53 lambs born

Breed composition & prediction



Breed prediction uses

Purebred verification



Yes, 100% Texel

Crossbred breed composition



51% Charollais
12% Texel
37% Suffolk