



**Figure 1.** Mouse models to study genomic imprinting that allow the maternal and paternal chromosome to be distinguished. Mammals are diploid and inherit a complete chromosome set from the maternal and paternal parent. However, mice can be generated that (1) inherit two copies of a chromosome pair from one parent and no copy from the other parent (known as UPD), (2) inherit a partial chromosomal deletion from one parent and a wild-type chromosome from the other parent, and (3) inherit chromosomes carrying single-nucleotide polymorphisms (known as SNPs) from one parent and a wild-type chromosome from the other parent. Offspring with UPDs or deletions are likely to display lethal phenotypes, whereas SNPs will allow the production of viable offspring.