14.4: Three-Letter Symbols

It's perfectly acceptable to use a single letter or even two letters. Sometimes, though, multiple traits spelled with the same first letter can get confusing. Using three letters for a gene symbol can make it easier to remember what the letters stand for. In fact, for some model systems those who study them adopt a defined nomenclature system. A plant often used for genetic studies, called *Arabidopsis thaliana*, has a three-letter code ([https://www.arabidopsis.org/portals/nomenclature/namerule.jsp](https://www.arabidopsis.org/portals/nomenclature/namerule.jsp)).

Just as we saw for the one-letter symbols, the dominant allele has the first letter capitalized and the last two letters are lower-case. Recessive alleles are all lower-case. With three letters, you can make gene names that are easier to keep track of. For example, you might see a fly with an extra set of wings. Instead of calling it “w” for “wings” (which is a poor choice because it doesn’t represent the mutant phenotype), you can instead call it “exw” for “extra wings”. Then, when you see it, you can sound out the abbreviation and remember that it stands for the mutation. If the wild-type allele for this is dominant, then you would write that one “Exw”. The first letter indicates that it is the dominant allele. What you can’t tell just from these examples is that wild-type allele is dominant! Appendix 2 will go into an extension of this system so you can add that information to the gene symbol. *Hint: remember in Section 3.2 that the “+” superscript indicates the wild-type allele.*