

Assignment & Rubric Independent Genetics Project

This project will emphasize three vital skills common to all scientists and useful to all working people: independent research, written communication, and oral communication.

The assignment is to select a **genetic disorder** and study it in depth. You must use information from the Human Genome Project and may use other reputable sources. You must cite at least three reputable sources (you may also cite wikipedia as a source but it does not count towards your three sources). You may not use unaffiliated or corporate websites as they are not reliable.

You may select any disorder that has its primary genes fully identified (this excludes cancer, diabetes, heart disease, obesity and autism as they are not yet completely understood). You may use a chromosomal abnormality or a prion disease as well. Samples from class include phenylketonuria, cystic fibrosis, galactosemia, sickle-cell anemia, Huntington's disease, Down syndrome and albinism.

You must include ALL of the following in your research paper, which must be no more than 3 pages:

Date of discovery	Name of gene(s)	Activity of protein(s)	All signs & symptoms
Discoverer	Name of protein(s)	Reason for defect(s)	Inheritance pattern
Reason for name	Chromosome(s) of gene(s)	Risk factors	Pedigree if available
All treatments	Available tests if any	Levels of severity	Availability of cure

If any of the above information is not known, this *must* be addressed and not excluded (example: mechanism of Huntingtin not yet fully understood).

The paper will be graded according to the rubric provided. In addition, each student will present their findings to the class, including only the vital information, in 3 minutes, using a powerpoint presentation. Presentations will be cut off at the 3-minute mark so be sure to practice!

Alternatively you may also choose to play a 3-minute youtube video of your own construction presenting the information for you. You may NOT use youtube videos created by professional companies (no plagiarism). However since you are not profiting you may use other media such as sound clips and images from other resources, such as your book and wikimedia.

Please ask any questions anytime if you are unclear about any part of the assignment!

Topic	What I am looking for...	Points	Deductions
Presentation	Concisely relaying key info in 3 minutes	5 pts	-2 for being cut off at 3min
Information	Includes all required information	5 pts	-1 for each excluded info
Paper length	Adheres to page limit	5 pts	-3 for each page over 3
Grammar	Uses good grammar/spelling/syntax	5 pts	-1 for each error
Citations	Uses good sources, uses APA format	5 pts	-2 for each bad source
TOTAL		25	

NOTE: Citations page does not count towards 3 page limit, also may include appendix with images

NOTE: Deductions are cumulative and may result in a negative score for a last-minute terrible paper