Genomic Medicine and Polygenic Risk Scores



## Overview

This activity will walk through how to use an online polygenic risk score (PRS) calculator, as well as how to interpret the outcome. Students will also compare calculations using different superpopulations, demonstrating the importance of diverse ancestry in PRS interpretation.

**Duration:** Approximately 2-3 hours

## Learning Objectives

1. Calculate and interpret polygenic risk scores.
2. Compare risk percentiles using different ancestral superpopulations.
3. Identify and critique scientific issues relating to society or ethics (see [GSA](https://genetics-gsa.org/education/genetics-learning-framework/) core competencies).

## Materials and Setup

* Students will need:
  + An internet connection for this activity. Students will use this website: <https://prs.byu.edu/calculate_score.html>.
* Data hosting: LINK
* Download the R student activity as:
  + [Web page](https://genomicseducation.org/module/genomic_med_prs_student_guide.html)
  + [Quarto (qmd)](https://github.com/fhdsl/GEMs/blob/main/module/genomic_med_prs_student_guide.qmd)
  + [Word (docx)](https://github.com/fhdsl/GEMs/raw/main/docs/docx/module/genomic_med_prs_student_guide.docx)
  + Google Doc - coming soon!
* Google Slides presentation available for borrowing images here.
* Answer key available here.

## Scientific Topics

Coming soon!

## Outline

Coming soon!