Slide 3: (left) "Riding Shotgun" by Steve Jurvetson (http://www.flickr.com/photos/jurvetson/57080968/, accessed Jan 25, 2016). Available under a Creative Commons Attribution 2.0 Generic license (https://creativecommons.org/licenses/by/2.0/).

(right) NASA (https://www.jpl.nasa.gov/news/news.php?feature=7056, accessed on Feb 7, 2019). Public domain.

- Slide 4: Personal Genetics Education Project (Patricia Hautea).
- Slide 5: "Wanted" poster courtesy of Bo Bigelow, founder USP7 foundation (https://www.usp7.org/, accessed Oct 4, 2018).
- Slide 6: "Angelina Jolie" by Gage Skidmore (https://www.flickr.com/photos/gageskidmore/4860509634/, accessed Jan 25, 2016). Available under a Creative Commons Attribution-ShareAlike 2.0 Generic license (https://creativecommons.org/licenses/by-sa/2.0/).
- Slide 7: Adapted from http://www.ensrmedical.com/pharmacogenetics/
- Slide 8: Personal Genetics Education Project (Patricia Hautea).
- Slide 9: "8-cell human embryo, day 3" by ekem, Courtesy: RWJMS IVF Program (https://commons.wikimedia.org/wiki/File:Embryo,_8_cells.jpg, accessed Jan 13, 2017). Public domain.
- Slide 10: Photo via Sacramento county police department
- Slide 11 Educational purposes only, https://www.wmtw.com/article/maine-man-to-stand-trial-for-1993-alaska-murder-after-genetic-genealogy-tied-him-to-crime-scene-dna/36292803
- Slide 12: Data from: Data from Kaiser Family Foundation analysis of CDC Behavior Risk Factor Surveillance System (2014): https://www.kff.org/report-section/key-factson-health-and-health-care-by-race-and-ethnicity-section-2-health-access-and-utilization/
- Slide 13: "Navajo Nation flag" by dbking (https://flic.kr/p/8tW3e9, accessed Oct 4, 2018). Available under a Creative Commons Attribution 2.0 Generic license (https://creativecommons.org/licenses/by/2.0/).

Slide 16: Image: "CRISPR Cas9" by Ernesto del Aguila III, accessed February 05, 2020 (https://www.flickr.com/photos/nihgov/41124064215/in/photolist-25DZzxV-ZZM4aG- GKPyT4-2dg5nVs-GRLDp2-jR9gc-ZZM4gJ-RdHQX8-2az1MzU-dAausS-2az1MNQ-Yoax7G-ZZM3Zm-2az1MUb-GP4zR6-YLKyN8-pgBYK3-ACo21-ybZbZ3-YJdu4y-ysEjeQ- ZZM475-R3PK5C-ysCUjh-ysCSuq-WQmDqw-2ceKuAW-YoayiQ-yrfMxq-28vLdcd-ybXr89-2fb9Cow-25a5gZa-YLKykp-2g9mKKf-2g9mmDX-2g9mkNo-yrgw1w-2g9mjjw- 2g9miRT-2g9mFNn-2g9mkeH-yujLht-2g9mGXm-2g9mhPC-YLKyZF-2g9mjBk-ybZrzf-yujhna-yujwnK). Public domain.

Slide 17: Personal Genetics Education Project (Patricia Hautea).

Slide 18: Adapted from https://www.mskcc.org/blog/car-t-cell-therapy-growing-area-research

T cell image from "The Hematopoietic System of the Bone Marrow" by OpenStax College

(https://commons.wikimedia.org/wiki/File:2204_The_Hematopoietic_System_of_the_Bone_Marrow_new.jpg, accessed Oct 16, 2018). Available under a Creative Commons Attribution 3.0 Unported license (https://creativecommons.org/licenses/by/3.0/deed.en). Image cropped.

Intravenous bag image from "Intravenous (IV) Bag Flat Icon Vector" by VideoPlasty.com

(https://commons.wikimedia.org/wiki/File:Intravenous_(IV)_Bag_Flat_Icon_Vector.svg, accessed Oct 16, 2018). Available under a Creative Commons Attribution-ShareAlike 4.0 International license (<u>https://creativecommons.org/licenses/by-sa/4.0/deed.en</u>).

- Slide 21: Ken Burns Presents The Gene: An Intimate History (https://ny.pbslearningmedia.org/resource/9795d5d3-2b03-4d50-b193-ae6eb918392f/genomeediting-and-crispr/, accessed May 11, 2020)
- Slide 22: (right) "B0000521 SEM sickled and other red blood cells" by Wellcome Images, Credit: EM Unit, UCL Medical School, Royal Free Campus (https://www.flickr.com/photos/wellcomeimages/7112270353/, accessed Jan 12, 2017). Available under a Creative Commons Attribution-NonCommercial-NoDerivs 2.0 Generic License (https://creativecommons.org/licenses/by-nc-nd/2.0/). No changes made.

(left) "Blausen gallery 2014" by Blausen.com staff, Wikiversity Journal of Medicine (https://commons.wikimedia.org/wiki/File:Blausen_0286_CysticFibrosis.png, accessed Jan 12, 2017). Available under a Creative Commons Attribution 3.0 Unported License (https://creativecommons.org/licenses/by/3.0/deed.en). No changes made.

Slide 23: "Harvest Mouse (7)" by Lex McKee (https://www.flickr.com/photos/lex-photographic/16744172269, accessed Jan 13, 2017). Available under a Creative Commons Attribution-NonCommercial 2.0 Generic License (https://creativecommons.org/licenses/by-nc/2.0/). No changes made.

- Slide 24: "Cerditos" by Maidiel1 (https://commons.wikimedia.org/wiki/File:Chanchitos.jpg, accessed Jan 13, 2017). Available under a Creative Commons Attribution-ShareAlike 4.0 International License (https://creativecommons.org/licenses/by-sa/4.0/deed.en). No changes made.
- Slide 25: "Malaria room" by YoHandy (https://www.flickr.com/photos/thefinessimo/2164822357, accessed Jan 13, 2017). Available under a Creative Commons Attribution-NonCommercial-NoDerivs 2.0 Generic License (https://creativecommons.org/licenses/by-nc-nd/2.0/). No changes made.

Slide 26: Educational purposes:

https://pubmed.ncbi.nlm.nih.gov/30905296/#:~:text=Mice%20Against%20Ticks%20is%20a,ticks%20in%20eastern%20North%20America.

- Slide 27: Slide 13: "Second International Summit on Human Genome Editing, Hong Kong, Day Two, Nov. 28", by National Academy of Sciences (https://www.flickr.com/photos/nationalacademyofsciences/46085235431/, accessed Jan 15, 2019). Available under a Creative Commons Attribution-NonCommercial-ShareAlike 2.0 Generic License (https://creativecommons.org/licenses/by-nc-sa/2.0/). No changes made.
- Slide 29: Burlington Free Press, October 29, 1926, p. 1. Clipping from Paul Amos Moody Papers, Box 181, Truman Allen file, University of Vermont Archives. Courtesy of Vermont Eugenics: A Documentary History (http://www.uvm.edu/~eugenics/images/hpbfp102926.html, accessed Oct 10, 2018).
- Slide 30: Image: "Exhibit of work and educational campaign for juvenile mental defectives", 1906. Source: American Philosophical Society, ERO, MSC77,Ser1,Box35: Trait Files. Accessed via the Eugenics Image Archive, Dolan DNA Learning Center, Cold Spring Harbor Laboratory, ID# 348 (http://www.eugenicsarchive.org/eugenics/view_image.pl?id=348, accessed March 2, 2020). pgEd has cropped the original image.
- Slide 31: "Justice Oliver Wendell Holmes," circa 1924, United States Library of Congress. (http://loc.gov/pictures/resource/npcc.26412/, accessed Feb 1, 2016).
- Slide 32: Image: "Family-stock of a woman sterilized by the state of Maine", circa 1935. Source: The Harry H. Laughlin Papers, Truman State University, Lantern Slides, IBM Box,Box 10. Accessed via the Eugenics Image Archive, Dolan DNA Learning Center, Cold Spring Harbor Laboratory, ID# 958 (http://www.eugenicsarchive.org/eugenics/view_image.pl?id=958, accessed March 2, 2020).

Slide 36: Image (top-left): "Cassava root 2" by Neil Palmer, accessed February 05, 2020 (https://www.flickr.com/photos/ciat/4627298692/in/photostream/). Available under a Creative Commons Attribution-ShareAlike 2.0 Generic license (https://creativecommons.org/licenses/by-sa/2.0/).

Image (top-right): Public domain picture, accessed February 05, 2020. (https://www.pxfuel.com/en/free-photo-xaizx)

Image (middle): "'I'iwi - Vestiaria coccinea" by USFWS - Pacific Region, accessed February 05, 2020 (https://www.flickr.com/photos/usfwspacific/36474996884/in/photolist-npj4sr-agb8jE-iVSK5i-QTfSa9-bsZRZr-XzaTNC-Yymcbo-YymaNd-wUE7m-4Wh3K5-4WgVnfdvuz71-agb8hj-4Warst-4WeE03-4Waswx-4WgEiL-ag8n28-4WeHBL-DVaASc-4WapjV-4Wh2Wo-4WhaKN-8WFCfh-ag8m1r-9V1gHh-29L7nri-MQqdKq). Available under a Creative Commons Attribution-NonCommercial 2.0 Generic license (https://creativecommons.org/licenses/by-nc/2.0/).

Image (bottom): "Woolly Mammoth" by Mammut, accessed February 05, 2020 (https://commons.wikimedia.org/wiki/File:Woolly_mammoth.jpg). Available under a Creative Commons Attribution-Sharealike 2.0 Generic license (https://creativecommons.org/licenses/by-sa/2.0/).

Slide 38: Image (left): "NP Cassava processing 6" by Neil Palmer, accessed February 05, 2020 (https://www.flickr.com/photos/ciat/5867707606). Available under a Creative Commons Attribution-ShareAlike 2.0 Generic license (https://creativecommons.org/licenses/by-sa/2.0/).

Image (middle): "A group work to peel the cassava for processing" by IFPRI -IMAGES, accessed February 05, 2020 (https://www.flickr.com/photos/ifpri/14664017485). Available under a Creative Commons Attribution-NonCommercial-NoDerivs 2.0 Generic license (https://creativecommons.org/licenses/by-nc-nd/2.0/).

Image (right): "Vietnam cassava processing 16" by Neil Palmer, accessed February 05, 2020 (https://www.flickr.com/photos/ciat/4071072936/in/photostream/). Available under a Creative Commons Attribution-ShareAlike 2.0 Generic license (https://creativecommons.org/licenses/by-sa/2.0/).

Slide 39: Image: "Peeled cassava soaked in a tub for fermentation" by IITA, accessed February 05, 2020 (https://www.flickr.com/photos/iita-medialibrary/4535105072/in/photolist-qQQiDy-6W2ghP-2dtKUFA-2cseyvw-PN3p7H-2ejmsZY-28TApDd-ZAvhkT-DP5tJQ-24vtKGg-7UKAJL-2aXhHqx-qtAA6u-cKbhwYmUj5QZ-mUm62q-mUj5vk-mUj5ka-rpnyA6-bQaEP8-mUm5uJ-mUm423-pRZGJ-71WUAa-qtAtnj-SfQqju-RmEqek-SYQEnY-23Mvrvz-7gH4B1-HWUtWG-8r2Lq7-PawwES-t7EXys-9z7Fxn). Available under a Creative Commons Attribution-NonCommercial-ShareAlike 2.0 Generic license (https://creativecommons.org/licenses/by-nc-sa/2.0/).

- Slide 40: Schematic: created by pgEd (Nadine Vincenten). Using open access illustration on Pixabay.com, accessed February 05, 2020. (https://pixabay.com/vectors/america-cassava-edible-food-manioc-1299770/)
- Slide 41: Image: "Cassava root 2" by Neil Palmer, accessed February 05, 2020 (https://www.flickr.com/photos/ciat/4627298692/in/photostream/). Available under a Creative Commons Attribution-Sharealike 2.0 Generic license (https://creativecommons.org/licenses/by-sa/2.0/).

Slide 42: Educational purposes only. Via IGI. https://www.technologyreview.com/2022/06/14/1053843/carbon-capture-crispr-crops/

Slide 43: https://www.nature.com/articles/s41438-020-00428-4

Slide 44: https://www.frontiersin.org/articles/10.3389/fsufs.2021.685801/full and

Slide 45: pgEd