

Molecular Mechanisms of Targeted Cancer Therapies

2023 Annual Video Challenge for High School Students

Judging Criteria

In the 2023 challenge we are focusing on three examples of targeted cancer therapies:

1. Fighting breast cancer by targeting HER2 receptor
2. Preventing blood vessel formation in tumors by targeting the VegF receptor
3. Interrupting cancer cell growth by targeting the G12C variant of ras protein

The **qualifying*** entries describing one of these therapies will be judged on the following criteria:

30% Quality of the Narrative Storytelling

- 10% Is the story engaging and coherent with a clear structure and logical progression of ideas?
- 10% Are the visual elements used in a meaningful way to support the understanding of the narrated content?
- 10% Is the story told/narrated at a pace that allows the viewer to follow along without replaying the video?

30% Quality of Science Communication

- 10% Does the story explain the concept of targeted cancer therapies in a clear, understandable way?
- 10% Does the story explain the function of one of the target proteins (HER2 receptor, VegF receptor, or ras protein) using molecular visualizations in a meaningful way?
- 10% Does the story explain the molecular mechanism by which the cancer cells respond to targeted therapy. Are molecular images used in a meaningful way to help viewers understand the process?

20% Originality and Creativity

- 10% Does the team use an original and creative approach to the story?
- 10% Does the team use visually appealing and original images/footage to illustrate the story?

Visit pdb101.rcsb.org for detailed information about the challenge.



*Does my entry qualify for judging (and winning) the challenge?

Use this checklist to find out:

- The story part of my entry does not exceed 2 minutes
- My entry does not contain major scientific inaccuracies
- My entry uses visualizations of proteins from the Protein Data Bank in a meaningful way
- My entry does not contain any copyrighted materials (images/sound)
- My entry was submitted between January 17 and April 24, 2023 at 11:59 pm PST using the PDB-101 registration form
- Each team member submitted Parent Permission Form and, if applicable, Actor Release Form
- My team consists of US high school students (or US based homeschooling equivalent)

10% Quality of Production

- 10% Is the quality of the video good on the auditory and visual level?

10% Proper Accreditation

- 10% Does the video correctly credit PDB and any reference materials used including:
 - PDB IDs of proteins shown in the video
 - References to the research materials and Creative Commons images/music used
 - PDB-101 branding slide