

## The Huntsman Cancer Institute *PathMaker Bridge* Program for Educators

### Program Information

The *PathMaker Bridge* Summer Research Program for Educators at the Huntsman Cancer Institute is a two-year summer research and curriculum development experience for middle and high school science teachers. In this program, middle and high school science teachers who work with students from underrepresented groups will spend six weeks during each of two consecutive summers working in an HCI cancer research laboratory. Participants will translate their experience to the classroom by developing and testing curriculum materials related to their research as appropriate. Prior to and after the six week experience, teachers will participate in pre- and post- online professional development courses delivered by science education professionals from the University of Utah Genetic Science Learning Center (GSLC). Participants of the *PathMaker Bridge* program will receive a generous stipend in addition to 10 credit hours of graduate work per year, thus, earning 20 graduate level credits during their two years of participation.

The *PathMaker Bridge* Program has two components:

1. pre- and post- research experience online courses
2. 6 week on-campus research experience

1. The pre and post research experience courses have been designed to prepare you for the research experience and support you in developing level-appropriate curriculum materials related to your research. They will take place online and include work at your own pace and some whole-group video conferences.

The pre-research experience course will:

- Update and build science content knowledge needed for the research experience. The first year's focus will be on genetics and the second year's focus will be on cell biology.
- Provide training on how to read and understand scientific papers in preparation for the research experience.
- Require roughly 4 weeks to complete

The post-research experience course will:

- Focus on curriculum development, refinement, implementation and assessment
- Include collaboration and peer review
- Be completed in stages during the school year, equivalent to a six-week time period total

2. The 6 week on-campus research experience portion will begin on June 15<sup>th</sup> and end on July 23<sup>rd</sup>. Participants will be partnered with a research lab at the Huntsman Cancer Institute for a one-on-one mentored research experience in basic, clinical, or population-based science. Additionally, participants will engage in weekly meetings with other participants in the cohort, and begin work to build innovative curriculum materials with a science education specialist. Educators are expected to commit 40 hours a week to the program activities, including their individual research lab and other program-related activities.

Questions??

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Program Dates: June – August 2020

Research Experience: June 15<sup>th</sup> – July 23<sup>rd</sup>, 2020

Application Deadline: 11:59pm on Sunday, March 8<sup>th</sup>, 2020

Eligibility Criteria:

- Applicant must be a current middle school or high school teacher employed and engaged in science teaching
- Applicant must be willing to commit to 2 consecutive years, equivalent of at least 3 months of full-time effort each year, including a 6-weeks lab experience during the summers, plus a pre- and post- research professional development program
- Applicant must be interested in learning more about cancer research
- Applicant must demonstrate strong interest in designing innovative curricular activities to engage students in science
- Applicant must demonstrate commitment to encouraging students of all backgrounds to pursue science, and in particular, careers in biomedical research
- Special consideration will be given to applicants who are themselves from a historically underrepresented group in biomedical research, or, who work with large population of students from such groups
- Special consideration will be giving to teachers from the same district who apply as a pair. Teachers earlier in their careers are encouraged to apply.
- Applicant must be available to commit 40 hours per work week to the program during the 6-week lab experience

Program Timeline:

| Year 1  |   |   |
|---|---|---|
| May – June 2020   | June 15 – July 23, 2020   | 2020-2021 Academic Year                             |
| - Pre-research Experience Course: Genetics (online)     | - Research Experience (6 weeks)<br>- Weekly connection meetings for (5 weeks)<br>- Curriculum Development Workshop (1 week)<br>- Research Presentations | - Post-research Experience Course: Level 1 (online) |
| Year 2  |   |   |
| May – June 2021   | June 14 – July 23, 2021   | 2021-2022 Academic Year                             |
| - Pre-research Experience Course: Cell biology (online) | - Research Experience (6 weeks)<br>- Weekly connection meetings for (5 weeks)<br>- Curriculum Development Workshop (1 week)<br>- Research Presentations | - Post-research Experience Course: Level 2 (online) |

Benefits: → Accepted teachers will be receive a **stipend of \$10,800 per year** for their successful participation in the pre- and post- professional development course, and the 6 week lab experience.

- **10 credit hours of graduate work** per year.
- On-campus **housing** will be provided for participants who live over 1 hour driving distance (limited housing available).
- **Child Care** supplements of \$400 for eligible teachers.
- **Travel stipends** will support teachers who need financial assistance in travel to and from Salt Lake City and their home for the 6 week research experience (only available to participants who stay in on-campus housing).
- Accepted teachers will have the opportunity to apply and **attend a regional or national conference** to present their finished work, all conference expenses and travel will be paid for by the program.
- Teachers will gain **mentorship**, improved **research skills**, and an increased understanding of **science, cancer research, and biomedical career options**.
- **Development of innovative curriculum** materials in accordance with the Next Generation Science Standards (NGSS).

Expectations:

- Participants must commit 40 hours per week to program activities during their 6 week long individual research experience (lab experience, workshops, and meetings).
- Participants must attend all pre- and post- online meetings and workshops.
- Participants must complete the pre- and post- online professional development course.
- Participants will prepare and present a research poster that summarizes their 6 week research experience.
- Participants will be expected to develop innovative lesson plans based on their research experience in support from the professional development program.

**Applications must include...**

- Completion of online application form
- 1-page single space personal statement describing your interest in developing innovative science curricula, commitment to encouraging students of all backgrounds to pursue science, and in particular, careers in biomedical research; interest in this particular program and qualities and experiences that have prepared you to participate in this program
- Principal letter of support
- Application conditions and certification