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SUMMER 2018: UTHealth-CPRIT Undergraduate Innovation in Cancer Prevention Research Fellowship: Mentor Research Opportunity

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Faculty Name   Ruosha Li, PhD

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School/Campus   School of Public Health, Houston

Research Projects

Each fellow is expected to spend an average of 40 hours/week on their research project, organized seminars and innovation generation course

==Applicants will click on the titles of projects they are interested in to see the description. Give your project an inviting name!== ==Projects that are not funded can also be submitted.==

1	Title:	Statistical modeling and prediction methods	Funding Source:	NSF
Project Description: (100 words max) Think of this as an ad. Students will select projects based on these descriptions.		Modern clinical studies often collect a variety of biomarkers both at baseline visit and at post-baseline follow-up visits. These biomarkers often carry substantial prognostic value and reflect patients' ever-changing disease severity. This project will design statistical modeling strategies to analyze these biomarkers and to build prediction tools to facilitate disease prognosis and medical decision making.		

Contact with: public ☐   patients ☐   lab samples ☐   animals ☐   none ☒

Project Status	IRB	Yes		No	x		Laboratory safety protocol	Yes		No	x
IRB Number							Protocol Number				

NB: Please do not submit more than two projects. Fill out one form per project

Will the fellow be added to the protocol?   Yes ☐   No ☒

Source of fellow funding: CPRIT Training grant ☒   Preceptor ☐

If mentor funding, will fellow take part in innovation course, seminars and cancer prevention related research?   Yes ☐   No ☐

1. **End Product(s):**

   A. All Fellows:
   1. Complete a mini project explicitly using the tools of innovative thinking
   2. Prepare and present a research poster on their project
   3. Participate in the 90-second elevator speech competition for a prize award
   4. Write a 3-page reflection paper, describing the summer experience, including instances of applying skills for innovative thinking, and in what way, if any, the experience has affected career plans, goals (due one week before his/her last day)

   B. Project specific end products:

   Mentors' please specify, *e.g., GIS map to track whether and other environmental conditions for day laborer "corners" throughout Houston, design for a social network platform for follow-up with research participants, manuscript on xxx to be submitted for publication, abstract on yyy to be submitted to a scientific meeting*
   1.   Carry out statistical analyses and data cleaning in R and/or SAS.
   2.   Use graphs to illustrate the result.
   3.   Participate in manuscript preparation.
   4.
   5.

   Note to mentors: Any confidentiality agreements regarding the project or data you are using (e.g. unpublished results) should be arranged between you and your fellow.

2. **Fellows Activities:**

   A. All Fellows
   1. Complete the Massive Open online Course (MOOC) on Innovation Generation- IMAGINE99x
   2. Apply the tools of innovative thinking in a mini-project
   3. Participate in 1-hour weekly group meetings and seminars in Houston and via ITV
   4. Participate in the elevator speech workshop and feedback sessions
   5. Take part in the mid-course review and brainstorming session on the use of the tools for innovative thinking
   6. Provide bi-monthly feedback to the program coordinator
   7. Meet with the preceptor weekly to discuss the training experience, progress, and challenges: Day and Time

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8. Submit a final review of training experience

B. Project specific trainee activities
Mentors, please specify additional fellow activities, e.g., Fellow will commit to the design, analysis of a mini project XXX as part of a larger project?

1. Fellow will apply statistical analysis methods in standard software.

2. Fellow will participate in data management activities using Excel or SAS.

3.

4.

5.

3. **Learning Objectives:** *By the end of the summer experience, fellow will demonstrate that they can*

A. **All Fellows:**

1. Describe and apply the tools of innovative thinking to increase creativity

2. Describe, in the reflection paper, at least 3 instances of applying one or more tools for innovative thinking

3. Recognize potential conflict(s) of interest in scenarios provided in CITI training

4. Develop interviewing skills for graduate school

5. Develop skills for research poster design and presentation

B. **Project specific learning objectives:**
Mentors, please specify additional learning objectives, e.g. Fellow will be able to write instructions for low literacy audiences, design a mini project with supervision

1. Fellow will learn how to apply data cleaning methods and some regression/prediction modeling techniques in R or SAS.

2. Fellow will learn how to illustrate the results of the analysis using graphical procedures.

3.

4.

5.

4. **Are there special fellow characteristics e.g.,** *major, interests, language, culture or other preferences that would be desirable? Please specify:*

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5.   Mentor Responsibilities

1. Attend the orientation and the elevator speech competition

2. Be available for >8 weeks or have suitable substitute

Will you be out for more than 2 weeks during the training period?   Yes [X]   No [ ]

If yes, when would you be gone and for how long?

May travel for around 3 weeks. The exact date has not been determined yet.

Who would serve as co-mentor during your absence (name and credentials, please specify)?

Name: Chunyan Cai

Job title: Assistant Professor of Biostatistics, Clinical and Translational Science, UTHealth

E-mail: Chunyan.Cai@uth.tmc.edu

Phone number: office: 713-500-7932   Cell:

3. Meet with the fellow weekly – progress, challenges…

4. Encourage the use of the tools for innovative thinking

5. Notify the project coordinator if the fellow is not meeting the agreed upon responsibilities. (This should be as early as possible to allow problem solving.)

6. Complete an evaluation of the fellow at the end of the program

7. Provide feedback on the program experience to the program coordinator

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