Q9. Mentor Research Application for Summer 2020 (June 1 - August 7)

Welcome to the UTHealth - Cancer Prevention & Research Institute of Texas (CPRIT) Fellowship in Innovation for Cancer Prevention Research - UTHealth’s training program for undergraduates, pre- and post-doctoral fellowships in cancer prevention.

This program goes beyond being a quality cancer education and career development program to focus on helping those seeking a career in cancer prevention and control research to learn to ask the important research questions, apply cutting-edge methods, and move the field of cancer forward.

We appreciate your willingness to take on the mentorship of one of our undergraduate trainees. This application will help orient you with the goals and expectations of our summer mentors and trainees.

All applications must be submitted by 11:59 PM on Friday, January 17, 2020.

Q10. Faculty Mentor Information

Q1. First name

Mary

Q2. Last name

Farach-Carson

Q11. Phone number

713-486-4438

Q12. E-mail address

Mary.C.FarachCarson@uth.tmc.edu

Q4. School/Campus Affiliation

- UTHealth School of Public Health - Houston
- UTHealth School of Biomedical Informatics
- UTHealth School of Dentistry
Q13. **Research Projects**

Each fellow is expected to spend an average of 40 hours/week on his/her 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! Acceptable projects do not need to be externally funded.

Q15. Project title

| Bioengineering a Colon Cancer Avatar for New Approaches to Early Detection and Treatment |

Q14. Lay summary of the project (100 words maximum). Examples of project descriptions can be found [here](#). If pasting or deleting text into this field, please make sure to press the space bar after the last word in order to see your accurate word count.

Colon cancer will lead to the deaths of over 50,000 Americans in 2020. It is almost entirely preventable by early detection, but it continues to occur because most people don’t want to have a colonoscopy. Who can blame them? We are working with a team at MD Anderson to develop a non-invasive means to detect polyps and early cancerous lesions using Magnetic Resonance Imaging (MRI). Our lab is tissue engineering a colon cancer avatar to develop new targeting agents for detecting a variety of polyp types. With us you would learn lots of cool cell culture methods.
Q16. Project will require contact with:

- Public
- Patients
- Biological samples
- Animals
- None of these

Q17. Does the project require IRB approval?

- Yes
- No

Q18. If yes, please provide the IRB number below.

This question was not displayed to the respondent.

Q19. Does the project have a Laboratory Safety Protocol?

- Yes
- No

Q20. If yes, please provide the Protocol Number below.

IBC-17-070

Q21. Will the summer fellow be added to the protocol?

- Yes
- No

Q22. **End Products of Summer Fellowship**

Q23. **End products for all Fellows:**
1. Complete a project explicitly using the tools of innovative thinking.
2. Prepare and present a research poster on their project, including how you applied tools for innovative thinking.
3. Participate in the 90-second elevator speech competition.

Q25. **Project-specific end products (determined by Mentor):**

Examples:
1. GIS map to track whether and other environmental conditions for day laborer “corners” throughout Houston
Q27. Fellows' Activities

Q28. Activities for all fellows:
1. Complete the Massive Open Online Course (MOOC) on Innovation Generation
2. Participate in weekly MOOC reviews and occasional cancer-related seminars in Houston and/or remotely via ITV
3. Apply the tools of innovative thinking in project discussions
4. Participate in two elevator speech workshops
5. Provide mid-course and final evaluation feedback
6. Meet with the preceptor or representative to discuss the training experience, progress, and challenges
7. Prepare and present a poster on the summer research
8. Present a 90-second elevator speech

Q29. Project-specific Trainee Activities (determined by Mentor):
Example: Fellow will commit to the design and analysis of a mini project YYY as part of a larger project

1. Understanding of cancer progression and the role that early detection can play in reducing cancer incidence and mortality. 2. Basic understanding of how to use online resources to develop a hypothesis-based project that uses the scientific method, proper controls, and that can produce data from which new conclusions can be drawn. 3. Be able to prepare and present an oral presentation to the full research group at the end of the summer project. 4. Participate in all lab data meetings and literature sessions. 5. Working along with a graduate student mentor, be able to culture colon cancer cell lines and image them by immunofluorescence microscopy. 6. Understand the basic principles of MRI. 7. Participate in the School of Dentistry Summer Research Showcase if in town.

Q31. Learning Objectives:
By the end of the summer experience, the following objectives should be achieved.

Q32. Objectives for all fellows:
1. Describe and apply the tools of innovative thinking to increase creativity
2. Develop communication and presentation skills

Q33. Project-specific Learning Objectives (determined by Mentor):
Examples:
1. Fellow will be able to write instructions for low literacy audiences
2. Fellow will design a mini project with supervision
1. Critical thinking to include understanding of how proper positive and negative controls must be included in experiments in order to generate interpretable data. 2. Thorough understanding of scientific method and hypothesis-based research. 3. Understanding of the impact of colon cancer on society. 4. Understanding of how communities can adopt early detection methods to reduce cancer mortality.

Q34. Are there any special fellow characteristics that would be desirable? 
Examples: major, interests, language, or culture

Eager to learn! Interest in post-graduate degree, either medicine, dentistry or graduate school.

Q35. Mentor Responsibilities
1. Attend the closing ceremony (elevator speech competition and poster presentation) on August 7, 2020.
2. Provide feedback on the program experience to the program coordinator.
3. Meet with the fellow weekly to discuss training experience, progress, and challenges.
4. Encourage the use of the tools for innovative thinking.
5. Notify Dr. Mullen if the intern is not meeting the agreed upon responsibilities as early as possible to allow problem-solving.
6. Complete an evaluation of the fellow at mid-course and end of the program.

Q36. If you plan to delegate some of the supervision to another lab member, please list their name and contact information so that we can copy them on all correspondence.

<table>
<thead>
<tr>
<th>Full name</th>
<th>Saleh Ramezani</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest degree held</td>
<td>M.S.</td>
</tr>
<tr>
<td>Job title</td>
<td>Graduate Assistant</td>
</tr>
<tr>
<td>E-mail address</td>
<td><a href="mailto:Saleh.Ramezani@uth.tmc.edu">Saleh.Ramezani@uth.tmc.edu</a></td>
</tr>
<tr>
<td>Phone number</td>
<td>318-267-2340</td>
</tr>
</tbody>
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Q37. Will you be out of lab for more than 2 weeks during the training period (June 1, 2020 - August 7, 2020)?

- Yes
- No
Location: [29.722793579102, -95.425102233887]
Source: GeoIP Estimation