



SIR Foundation Summer Medical Student Internship Program

Proposal:

Institution Name: University of Arizona

Responsible mentoring physician: Shamar Young

Length of proposed curriculum: 8 weeks, 40 hours/week.

A. Please provide a brief description of how each of the following curriculum elements will be demonstrated/taught through your program.

The medical student will join myself and my team during one of our "brainstorming session". These sessions are primarily for the team to identify holes in the literature and develop a study to answer it. I will then personally go over a particular subject with the student, after asking them to read some pertinent papers. They will then help us collect data and discuss analysis with myself. We also have a very interesting line of laboratory study going on around iodine symporters. The student will spend a minimum of 1-2 weeks in the lab shadowing a resident, PhD student, and senior members of the lab learning some of these basic techniques. A portion of this study will include an animal study in a murine model which the student will be able to participate in. Finally, the student will spend time with me discussing trial design, the steps that are required to complete a study from start to finish (including regulatory etc), and how to construct and write a strong paper.

Mandatory elements:

We have several ongoing projects. The general focuses of the research are listed below. I would guarantee that the student was put in a situation to finish a project we choose together within the timeframe.

Subjects:

- TARE dosing
- Dose thresholds for tumors
- Importance of DVH
- Normal tissue toxicity limits
- Liver cryoablation
- Ablation zone modeling
- Renal cryoablation in T1b lesions
- Laboratory/animal study focused around iodine symporter.
- Portal hypertension perfusion applications.
- Splenic embolization in cirrhotic patients for traumatic reasons.



As the committee is well aware research is an organic process and while these are the areas myself and team are active other opportunities may arise around the time the student would visit if we are chosen as a site.

B. Please provide a brief outline of available research topics, one of which the student will select for completion as part of the program.

We have weekly didactics as an IR group. The medical student would join in this. As part of the yearly curriculum, we have a lecture series on research which covers a wide range of topics from trial design, statistics, literature review, grant writing, manuscript writing, etc. If chosen as a participating site, we would ensure that this portion of our didactic course would coincide with the medical student's internship. I would also have weekly meetings with the medical student to discuss research and make sure they are on track with their assigned project. As I mentioned we have several active bench top and animal studies on going. The medical student would be expected to spend at least 1-2 weeks working with the lab group and join in regular lab meetings. Regular verbal questioning would be carried out by myself and my colleagues. This would typically cover topics which had previously been discussed and articles sent to the student for pre-reading.