

Blood, guts & glue

Story by Megan Otts
Photos by Megan Otts and Todd Paris



I am strapped to a gurney, blood dripping sluggishly from a gash above my eye. A hard plastic brace holds my head and neck immobile. Nylon straps crisscross my body, securing me to the backboard. My badly broken leg is stretched and locked in a traction splint that runs from ankle to thigh.



Kyle Monahan, left, with help from Fairbanks Memorial Hospital volunteer Wade Stoddard, operates on a pig eye at the ocular surgery station in an operating room at FMH. One of the most difficult aspects, students reported, was using the microscope rather than relying on their own vision.

It seems like an eternity before the paramedics haul me out of the ambulance and roll me into Fairbanks Memorial Hospital. We come to a stop in one of the trauma bays and I'm lifted — backboard and all — onto a hospital bed.

Monitors are stuck on my chest, arm and finger. My eyes are checked and my head wound treated. They have me wiggle my toes and tell them what hurts. Then the dressings covering my broken leg are pulled back and everyone gets an eyeful of the jagged, bloody femur poking through my thigh.

"Oh my God!"

"Wow."

"Holy cow!"

If my injuries were real, I'd probably be a bit disconcerted by their reactions.

Luckily, my wounds are mostly stage makeup, rubber and mortician's putty, and my "doctors" are high school students participating in the Alaska Summer Research Academy's biomedicine module.

Learning in the operating room

In the first week of ASRA, we toured nearly every area of the hospital, from labor and delivery to the morgue and even the laundry facility, but Lori Gibertoni, a registered nurse and one of our instructors, saved the best for last.

We spent Saturday morning in the operating room, an area usually off limits to the general public. Two surgical suites had been divided into stations to teach us about everything from scrubbing in to administering anesthesia and performing laparoscopic surgery.

You've got to want it

ASRA debuted in 2001 as a weeklong science outreach program for students in grades 8 – 12. It had 21 participants.

The program has grown since then, with modules added in engineering and the arts and the format expanded to two weeks.

In 2009, ASRA hosted a record 146 kids from 13 states and nearly 60 Alaska communities. Of the 16 modules offered, five were remote modules

around the state, including studying earthquakes in Denali National Park and Preserve, marine mammals and seabirds on Bristol Bay's Round Island, and marine biology in Kachemak Bay.

While he used to have trouble filling some of the modules, ASRA's director, Jeff Drake, said the program is now at maximum capacity, and that students go through a competitive application process before being placed. For

example, biomed — one of the most popular modules — had 40 students apply for the nine available spots last year.

"I think it's cool that you actually have to want it," said Sarah Cobb, 16, who made it into biomed. "It's not some place you just get sent to. We are all here by choice. We are willing to work for it."



At one station, we learned about ocular surgery and got to practice our technique on pig eyes.

“It was incredibly hard,” said Bert Williams, 16. “I accidentally cut through the lens and the cornea. That pig is never seeing again.”



Top: Nick Fisher and Shay Stickwan try on medics' gear at the Evergreen Helicopters hangar on Fort Wainwright. Middle: Bert Williams plays an unusually cheerful trauma victim as he's lifted into a Warbelow's Air Ambulance plane by other ASRAns. Right: Sarah Cobb, Kari Pedersen, Jessica Lingaas, Stickwan and Eva Eliassen ham it up for the camera.

“That pig is never seeing again.”

In the other room, Kari Pedersen, 14, who had nearly passed out while getting her blood typed, sliced into a pig's heart, eagerly examining its structure.

“This is probably one of the coolest things I've ever done,” she said, laughing as she scraped a blood clot from one of the chambers. “Definitely not a bad way to spend a Saturday.”

From strangers to a family

Seven of the nine biomed kids chose to live in the dorms instead of commuting each day. While there were a few complaints about roommates' sleeping habits, the squeaking shower on the fourth floor and having to take out the trash, all the kids said they enjoyed the friendships they'd made and the freedom of living away from home for a couple weeks.

“It feels like we've been here the entire summer,” Pedersen said. “Each day feels like a week because you do so much stuff. We eat meals together and hang out during activities and just always get along.”

“It's hard to put on paper how much fun it is.”

Marsha Panfil, who worked double duty as a biomed instructor and resident assistant, said the group spent nearly every waking moment together, from 7:30 a.m. when they got up for breakfast until lights out at 11 p.m.

“We are ASRAns. We stick together,” explained Kyle Monahan, 17. “You meet each other the first day and it's like glue.”

“We're a family,” Jessica Lingaas, 14, added. “We're inseparable.”

On Sunday, which was scheduled as a day of rest and relaxation, the biomed kids even signed up together for a trip to Denali National Park and Preserve with Panfil, who fell and broke her wrist while they were hiking.



“We offered to splint her arm for her, but for some reason she just didn't want us to,” Monahan said, laughing.

“That was a good day. Well, they were all good days”

One night after dinner, the kids looked back on everything they'd experienced at ASRA and tried to pick out their favorite parts.

There was the histology lab, where everyone got to hold frostbitten toes, freeze-dried tendons, fetuses and pieces of brain.

Dissecting the pig hearts and lungs in the OR.

The trips to Warbelow's Air Ambulance and Evergreen Helicopters were highlights for Sarah Cobb, who wants to be a flight nurse.

And what about the reindeer necropsy?

"Before it started, we were somewhat apprehensive because it really smelled bad and we weren't sure what cutting into a reindeer was going to be like," said Eva Eliassen, 14. "But once he started cutting we actually started getting really into it."

And the best part, they agreed, was when Gibertoni showed up with reindeer sausage afterward.

"What I will remember most is that we are always laughing," Pedersen said. "It's hard to put on paper how much fun it is."

The worst part of ASRA, they said, was having to say goodbye to everyone they'd met, especially Gibertoni.

"Lori is definitely awesome," said Shay Stickwan, 15. "She makes biomed."

"She's like the energy," Pedersen said. "She's always happy and smiling."

"She just loves our cute little faces!" Parker Mills added, stealing one of her catch phrases.

As the group started looking forward to next summer, some of the older students lamented the fact that they'd be too old to attend.

"You can be an intern," Cobb suggested. "You can come back, be an RA. Maybe I'll just come back until college."

Hard to say goodbye

The entire camp came together on the last day to share what they'd learned in their modules. At the beginning of the morning, spirits were high and excitement buzzed through the packed auditorium on the Fairbanks campus.

The mood changed after lunch, though, as the last few groups gave their presentations. Everyone seemed to realize that ASRA was actually over and the dreaded goodbyes were drawing near.

"I am blown away by each of you,"

ASRA Director Jeff Drake said. "You are all part of the ASRA family now. You are the generation who is going to make the impossible possible."

“You are
all part of the ASRA
family now.”



Megan Otts, '08, is the multimedia coordinator for UAF Marketing and Communications. She and co-worker Amber Fath, both fans of the Discovery Health Channel, thoroughly enjoyed participating in the biomedical activities alongside the ASRA students.



Watch students in action and learn some really random facts at www.uaf.edu/aurora/.

