A team of doctors and researchers right here in Lafayette are researching causes and cures of cancer and infectious diseases that plague Acadiana

The electricity is off. Angry drivers sit at darkened stoplights, soap opera maven curse at blank screens, and office workers stare in terror at stilled air conditioning vents.

At University Medical Center, Dr. Gene Beyt is on the phone. He's trying to get through to the lab of the Acadiana Medical Research Foundation on the fifth floor of USL's Wharton Hall. Nothing comes over his phone but honks and squawks; without electricity the campus phone system can't forward his call to the lab.

A few moments later, one of the research associates from the lab— who can dial out—reaches Beyt at his desk.

"Are you still without power?" he asks. The power is back on.

"Well, " he asks then, "did you lose the experiment?"

His face lightens. Back at the lab, they've said that the afternoon's work won't have been lost to the power outage.

Later, at the lab himself, Beyt points out some emergency features on a few pieces of lab equipment that would save lab materials in the case of an extended outage, and reports that a local radio station has proposed donating a power generator for such emergencies if a way to install and maintain it can be figured out.

If the donation of the generator does work out, it would be typical of the scrappy, scavenging enterprise with which the Acadiana Medical Research Foundation has been put together, funded, and run.

Until AMRF came along, folks in Acadiana who thought about cancer research, if they thought about cancer research at all, may have pictured a big white building somewhere far away—probably in the northeast or in

Beyt views cancer cells "Study the problem you have"

California—where dozens of test-tube toting, balding scientists watched rats guzzle diet soda or warmed them with blasts as asbestos-laden hair dryers. A research lab was something big, sterile, distant, and didn't have anything to do with south Louisiana.

But for Beyt and for Dr. John Rainey, co-directors of research for AMRF, cancer research is something local—both because it can be done here and because it has a great deal to do with south Louisiana.

For one thing, we've seen cancer—more lung cancer in white males than any other state in the U.S., relatively common gastric cancer, and hundreds of annual cases of cancer that could be related to carcinogens encountered in occupations or through drinking water. Figures from the American Cancer Society and the National Cancer Institute project that 14,000 Louisiana residents will become cancer victims in the next year—and that 7,300 of those, including 2,000 lung cancer victims—will be dead within five years.

We've also been identified as spawning grounds for various kinds of infectious diseases. Both the cancer rate and incidence of infectious diseases may be related to the warm, moist south Louisiana climate. And a group of Tulane University doctors have speculated in a British medical journal that south Louisiana's cancer rate may be related to genetic or dietary factors associated with the region's Acadian heritage.

For Rainey and Beyt, both LSU faculty members working at the LSU unit of the new University Medical Center, that all adds up to a clear mandate as to how to apply their medical research experience and expertise. "The logical thing to do," Beyt says, "is to study the problem you have."

The two doctors began an effort to create a research center here in Acadiana that would focus on cancer and disease problems unique or prevalent in Acadiana. They had both worked in multi-million dollar hospital research wings—but told a continually growing band of supporters that meaningful research could begin on a much more accessible scale.

Early in the effort, Beyt called local attorney Lane Roy and asked him to head up a new group to be called the Acadiana Medical Research Foundation.

"I don't know why he called me," Roy chuckles. "But what he was proposing sounded worthwhile, so I said I'd help him in whatever way I could." A handful of local citizens joined Roy in the effort. Meanwhile, Dr. Curtis Prejean was writing support letters and helping to line the two doctors up with the many resources and funds needed. USL science dean David Andrew and Microbiology head Dr. Joe Sobek came up with the corner room on the top floor of Wharton Hall. Odd pieces of lab equipment and even desks and tile cabinets were borrowed from UMC, USL, or LSU. For LSU, Rainey and Beyt's research activity would fall into one of the medical school's important areas of concern—research.

Soon, Roy, Rainey, and Beyt were at work in the lab—painting it. Six different paint stores had donated paint for the lab, and Roy, now president of AMRF, and its co-directors of research worked with a group of volunteers slapping paint on the walls.

"Almost all of what we're using in our research effort was already here," Beyt says. "John and I are with UMC's LSU unit, the USL microbiology department has both facilities and excellent, well-trained personnel, and our test subjects are drawn through cooperation with local doctors and commercial test labs.

What AMRF has done is to draw these resources together and focused them for research, and the project expertise and personnel for the research. A trio of research associates, Susan Kilgore, Missy Woods, and Denise Klimas-Sherrill, were employed by AMRF to work on the Foundation's projects in the lab (Rainey and Beyt, full-time LSU medical faculty, receive no salaries from the Foundation).

In its two areas of concern, cancer research and infectious disease
research, AMRF, does basic and applied research; it also offers specialized clinical techniques for diagnosis and treatment as well as undertaking educational efforts. It offers some techniques that might otherwise be available locally because they are not cost-effective to hospital or lab administrators keeping their eyes on their responsibilities to the bottom line.

For instance, AMRF conducts patient applicable tumor stem cell assay. The cancer cells of a patient are isolated and then grown in a culture in several isolated containers in the lab. Different chemotherapies that might be thought to be effective against that patient's cancer are tried on the samples. Whichever brings a response or brings the greatest response will then be likeliest as chemotherapy for the patient, who risks only the side effects of a drug indicating possible effectiveness for his own particular cancer.

Ultimately, Beyt says, labs like AMRF may be cloning cancer-killing "T-cells" that destroy tumors. "Cancer research embraces a wide range of approaches," he says. "Each unique problem has a unique way to be dealt with." Research into how antibodies are formed, for instance, could be useful in both detection of cancer at an early stage—as soon as the recognized antibody appears—and in mass-reproducing the antibody for treatment.

AMRF wants to examine Acadiana's high cancer rates with a major epidemiology study that will go beyond what such studies have done here in the past.

"Cancer patients are currently being studied from a retrospective standpoint," reads an introduction to a study project the Foundation proposes. AMRF wants to study a group in a prospective fashion; that is, look at a large group for a long period, and by seeing which ones get cancer and which don't, learn something about cancer cause. A thousand subjects are proposed to begin with, but, "this study hopefully can be expanded to include the entire Acadiana population over the next several years if necessary funding is forthcoming."

In the area of infectious disease, Beyt has a $33,720 grant from the Louisiana State Board of Regents to study diarrheal diseases in southwest Louisiana. Lab samples from victims are analyzed for the presence of virus, and correlations of the disease with various pathogens may establish some casual links.

The current fiscal budget for the Foundation is approximately $112,000,
about half of which goes for salaries for the research associates who work full time in the lab. If that seems like not much money for a lot of cancer research, well, it isn't.

"The total amount of equipment we've had to buy costs about $100,000," Roy says. "While that's a serious amount of money, it's really not much at all when you compare it to the value. The biggest costs is the personnel to conduct the research. There are no administrative costs or salaries.

That financial picture has been one reason the Foundation has had such immediate success in fundraising. Since the basic facilities are provided by cooperation among USL, LSU, and UMC, each dollar that flows to the Foundation has a high profile effect of the research.

"Someone who donates money to AMRF," Roy says, "sees that every penny goes for research, just for research, and that the money is being spent locally for problems that are very local." Some civic groups have given specific pieces of equipment; one donor even agreed to pay for a fundraising Jazz Brunch this spring.

"Federal and state grant money are drying up," Beyt says. "Research centers like ours are dependent on community support, and like what they see because there is so efficiently focused on research. Beyt also points out that by raising its own funds rather than being dependent on government grants, AMRF can operate more efficiently. An instrument bought through the state bid process might not be the same piece that a researcher would choose—and may not last as long as what he would select if free to make his own decision. "John and I saw an ad once for shelves for $8 at Sears," he says. "We went that day and bought them, saving possibly hundreds of dollars compared to what a bid process might have dictated."

By doing everything from scouting the sales at Sears to working cooperative agreements with local institutions to displaying careful focus on Acadiana's unique cancer and disease problems, the Acadiana Medical Research Foundation has made cancer research a valuable reality in our community. "A community-supported foundation is the way to go," Beyt says. "We have everything here we need to do the research, and we've got our own problems that deserve and warrant the attention."

And, he adds with a grin, "John and I are research oriented, and we like it here."

-JAMES EDMUNDS