



## **Research Agenda Update – October 2006**

In June, ACCRF announced its initial Research Agenda that aims to develop improved therapies for patients as quickly as possible. By laying out the nature and sequencing of its coordinated projects, ACCRF hopes to avoid any duplication of efforts and to ensure the rapid dissemination of research findings and outputs to interested researchers.

While those of us in the patient community always aspire for faster progress, there are some significant achievements that have been made in just the past four months:

**1. Animal Model Development** – Dr. Christopher Moskaluk of the University of Virginia has developed some mouse models of ACC (known as xenografts) that he has offered to make available to ACCRF. In addition, Johns Hopkins University and the MD Anderson Cancer Center have received administrative approval to begin the creation of ACC mouse models. The Dana Farber Cancer Institute (DFCI) is very close to receiving such administrative approval, whereupon the Massachusetts Eye and Ear Infirmary and the Massachusetts General Hospital will seek approval to assist DFCI in its efforts. Clearly, these efforts have spanned the premier cancer institutions in the world, and have been facilitated by exemplary collaboration among researchers. The importance of animal models is elaborated upon in the next two points.

**2. Drug Screening** – Animal models are useful in testing existing and novel compounds for toxicity and efficacy prior to their use in human clinical trials. ACCRF has contracted with the Institute for Drug Development – a non-profit research institution in San Antonio, TX that is expert in the management of animal models – to consolidate, expand and test drugs on the colonies of xenografts provided by the various academic cancer centers mentioned above. The existing inventory of drugs to test on ACC is large, as is the pipeline of new drugs that are being developed.

**3. Cell Line Development** – Cell lines are human tumors that grow in glass dishes. They are less expensive to maintain and may retain the characteristics of the original human tumors for longer than animal models, making them a valuable research resource for drug screening as well as studies of tumor biology. ACC researchers have attempted to grow cell lines directly from human tissues, but have been successful in creating only one cell line (called “ACC3”). Some researchers anticipate that it will be easier to generate new ACC cell lines from animal models than directly from human tumors, making the development of xenografts an important stepping stone in the development of cell lines. Ideally, researchers would have access to many cell lines that reflect the variety of ACC tumor types. Some of the institutions involved in creating animal models are also attempting to create ACC cell lines.

**4. Genomics** – As with all cancers, ACC is most likely caused by mutations (changes) in the genes of normal cells. If researchers knew how ACC tumors differed in their genetic code from normal tissues, they might be able to target those differences with the



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appropriate drugs in order to counteract the disease. Rather than screening all available drugs, researchers armed with genomic data may be able to narrow down intelligently which drugs (or drug combinations) are more likely to be effective. ACCRF has received and is evaluating proposals to undertake deep sequencing of ACC tumors to generate that genomic data. Just as importantly, ACCRF has identified a sufficient number of appropriate tumors to be included in the genomics project.

Each of the projects mentioned above is an important building block for researchers as they attempt to improve therapies for ACC. ACCRF will continue to push for parallel progress across these and other projects in our Research Agenda.