

President's *Corner*

REPORTS AND OPINIONS FROM DR. MICHAEL KEATING
ON THE HAPPENINGS OF THE CLL RESEARCH WORLD



SHOOTING FOR THE MOON

On September 21st, 2012, MD Anderson Cancer Center launched its "Moon Shots" Program – a bold initiative to dramatically reduce the number of cancer related deaths by accelerating scientific discoveries into clinical applications. This will be accomplished by spending as much as \$3 billion on research over the next decade. During this past summer, faculty members at MD Anderson were invited to submit proposals and compete for funding for their specific cancer. Proposals were selected based on the potential to make meaningful progress. The CLL group was one of six proposals, which target a total of eight cancers, chosen to be an initial Moon Shot.

"Chronic lymphocytic leukemia, the most common adult leukemia in the United States, is closest to a cure among the eight cancers at which MD Anderson is [funding], according to President Dr. Ronald DePinho."

– Houston Chronicle



*Dr. Michael J. Keating,
president and CEO of
CLL Global Research
Foundation*

This statement is music to my ears. The selection of CLL as a Moon Shot is a reflection of the hard work and dedication of CLL scientists. Little attention has been paid to CLL research by funding agencies and the media because CLL does not affect as many people as some of the big cancers. However, MD Anderson's president, Ronald DePinho, M.D., and the Moon Shots review committee recognized the accomplishments of CLL research and the potential to cure this cancer, bringing extra support and attention to a disease we have been dedicated to eliminating for many years.

The Moon Shots Program provides an opportunity to make substantial improvements for CLL and other cancers. There are several reasons why the time and place are right to make this happen. Continue reading to learn more.



Timing is Everything

- Technology has improved our research tools which has impacted our understanding of CLL and provided enhanced treatment and monitoring options.
- Targeted therapies are changing cancer treatment and have already shown initial improvements in patients' response and toleration compared to older therapies. We are already underway in this field.
- Cancer is a genetic disease. Alterations in genes are central in its development and sustainability. Analyzing genes has not only become easier but significantly cheaper. This has had a huge impact in research and is starting to be implemented clinically.
- There have been dramatic advances in all entities of CLL research. The CLL Moon Shot proposal emphasized the need to converge the improvements made in technology, genetics and targeted treatments.

The CLL Moon Shot approach is comprehensive and systematic. It will follow a series of priorities and milestones that will lead to improvements within this decade. There are short-term and long-term goals for the CLL Moon Shot. Within the next year, the plan is to begin treating all patients with less damaging therapies. The proposed long-term goals include research in genetics, the microenvironment (the tissue environment where CLL cells reside), the immune system and the cause-and-effect of CLL.

A key priority of the CLL Moon Shot is to double survival rates and give all CLL patients the opportunity to live a normal, healthy life span. Patients will be transitioned away from cytotoxic chemotherapy and toward targeted treatments. Forty-five percent of CLL patient deaths are associated with second cancers. This is related to the genetic damage caused by chemotherapy and immune-suppression from the disease. This is unacceptable. Eliminating cytotoxic chemotherapy is essential to improving outcomes for CLL patients.

There are a number of exciting therapeutic agents that are currently in clinical trials. While the goal is to improve outcomes for all patients, we anticipate that newer, targeted treatments will be effective in high-risk patient subgroups. These groups are currently identified based on genetic characterization, such as abnormalities in chromosomes 17p and 11q.

Long-term Moon Shot goals include ways to revitalize patients' immune systems. CLL is a malignancy of B-cells which are important cells of the immune system. In addition to traditional chemotherapies, the CLL itself has a negative impact on immune function. Patients are at increased risk for infections and second cancers. During the Moon Shot presentation, I introduced potential novel strategies to regenerate the immune system to reduce infection, secondary cancers and CLL progression.

While we have ways to attack the disease, we also need to understand it in order to defeat it. With this Moon Shot, genetic features will be



Location, Location, Location

- MD Anderson has the largest CLL program in the world and has been a leader in therapeutic advances.
- The CLL Moon Shot team is highly integrated and multi-disciplined. Members of the CLL Moon Shot have a history of collaboration through the CLL Global Alliance.
- MD Anderson has an extensive, long-standing CLL database which dates back to 1965. Thanks to the willingness of patients, their blood and tissue samples have been stored in a biobank for continued research. The MD Anderson group conducts long term follow-up of patients to monitor survivorship.

identified that correlate with CLL cell survival; ideally these genetic features will become targets for treatments. Fifteen years ago FISH (fluorescent in situ hybridization) changed our understanding of CLL. A tsunami of genetic information emerged, but this was just the beginning. Genetic testing has become remarkably cheaper and faster. We can now sequence every single gene in the DNA of all types of cancer cells. The Moon Shot will provide the means of deciphering the vast amount of information.

The goals listed above may sound like a reiteration of what CLL Global has been doing. They are. CLL is ready for a knock-out punch. It does not matter who delivers the punch as long as it gets done. The magnitude of the Moon Shot endeavor is going to have a grand impact on CLL research. However, we have not come this far because of the innovations of one institution. Members of the CLL research community all over the world continue to plow forward. CLL Global needs support more than ever to ensure all avenues of CLL research, wherever they may be, receive proper funding.

The Moon Shot Program is inspired by a speech President Kennedy gave 50 years ago. President Kennedy said, "We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win, and the others, too." Dr. DePinho must be congratulated for his vision and realistic optimism. I will do my best to see that the CLL Moon Shot and the future of CLL research will result with the same success as President Kennedy's challenge.



Six proposals which target eight cancers have been chosen for initial Moon Shots. The intention of the MD Anderson Moon Shots Program is to focus on these initial six who have the potential to make the greatest impact based on the current state of research, technologies and team at MD Anderson. Subsequent Moon Shots will be awarded. Platforms and resources have been put in place for the Moon Shots, but are available and encouraged for use by all researchers at the institution.

CLICK ON THE TABS TO LEARN ABOUT THE INITIAL MOON SHOTS, THEIR APPROACHES, TEAMS, PATIENT STORIES AND MORE:

BREAST & OVARIAN

LEUKEMIA (AML/MDS)

LEUKEMIA (CLL)

LUNG

MELANOMA

PROSTATE