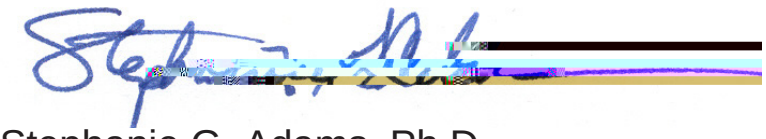
illuminator

a monthly publication of the Batten College of Engineering and Technology

This time of year, we are reminded of how grateful we are for the potential we hold to change the world through unparalleled research and innovative teaching and learning, all thanks to your support.

May this holiday season bring joy, hope, peace and prosperity to you and your family.



Stephanie G. Adams, Ph.D.
Dean, Batten College of Engineering and Technology

# Cold Qlasma Uechnology Neets Nechanobiology

## Working across departments to find medical breakthroughs


Mounir Laroussi


Venkat Maruthamuthu

By Keith Pierce

In the world of biomedical research, collaboration is key. When that research is combined with educating the next generation of scientists and engineers, such collaboration is even more important. That's why when Electrical & Computer Engineering professor, Mounir Laroussi, Ph.D., known worldwide for his cold plasma research, needed a better understanding of how plasma affects cell migration such as during metastasis, he turned to cell mechanics expert, Venkat Maruthamuthu, Ph.D., an assistant professor in Mechanical and Aerospace Engineering. Together, they are discovering new possibilities in the ght against cancer.

According to Maruthamuthu, the two initially met over lunch and began discussing their work. Before they knew it, they discovered a synergy between Laroussi's plasma research and Maruthamuthu's study of cell movement.

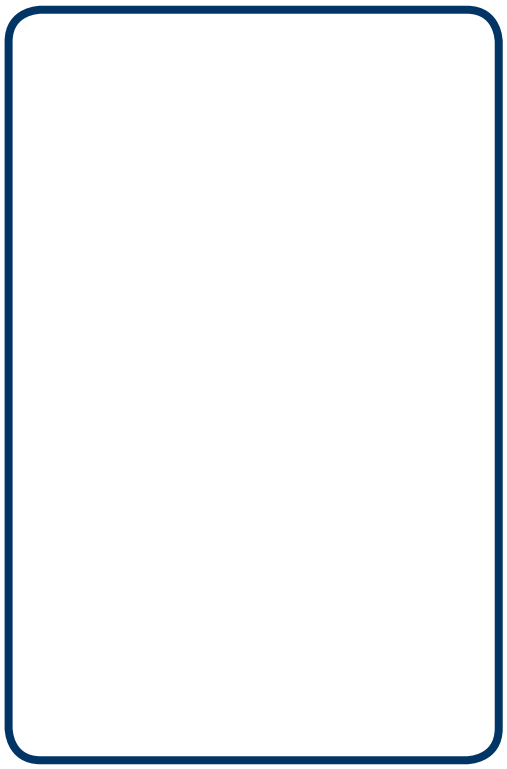
"Cell movement is basically a mechanical process," said Maruthamuthu. "I study multiple aspects of cells, including how they move, stick to their surroundings and proliferate or multiply."

For Laroussi, the conversation generated Jmmediate F Y D J U F N F O U B C P V U U I F Q P T T J C J M J U J F T.

"Before I started working with Venkat, all of our cancer-related work was focused on killing cancer cells. What was missing, however, was how plasma might affect the proliferation and migration of normal cells," said Laroussi. "Venkat is an expert on how cells attach to each other and to surfaces, so that made him the perfect collaborator to help answer that question."

There was one other motivating factor

Graduate student and research assistant, Hamid Razavi, (left), Electrical & Computer Engineering professor, Mounir Laroussi, Ph.D., (center) and Mechanical and Aerospace Engineering professor, Venkat Maruthamuthu, gather around the Pyrex chamber, where the plasma pencil ignites a large volume of plasma.



Appearing relaxed in a comfortable chair as she addressed the audience of faculty, students, community leaders and guests, American anthropologist and former director of the Smithsonian National Museum of African Art, Johnnetta B. Cole, Ph.D., combined inspiration, passion and humor while delivering a message of diversity and inclusion at Old Dominion University.

After a formal reception in Broderick Dining Commons, rather than a standard speech, Cole sat with Stephanie Adams, dean of the Batten College of Engineering and Technology, for a casual, "Oprah-style" conversation. Among several key points, Cole stressed the importance of understanding the role bias plays in impeding the growth and success of women and people of color – particularly in math and science  elds.

"When we understand that bias, mitigate against it and begin to bring increasing numbers of women and people of color into engineering, we are doing one of the most important things that can be done to contribute to greater diversity," Cole said.

Earlier that day, following a meeting with the Batten College of Engineering and Technology leadership team, Cole met with ODU provost and vice president for academic a airs, Austin Agho, who shared an unexpected connection with the legendary educator.

"When most people ask me, 'where are you from' and I tell them Africa or Nigeria, the conversation normally ends there," Agho said while introducing Cole. "But she [Cole] asked me where I was from 'in'