
Research interaction and Guest lecture by Dr. Mohammad Azhar Aziz organised by Department of Biosciences

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**A Report on Interactive Session by Dr. Mohammad Azhar Aziz
on
Thursday, 19th September 2024
by
Department of Biosciences**

On Thursday, 19th September 2024, the Department of Biosciences organized a highly engaging guest lecture and interactive session by **Dr. Mohammad Azhar Aziz**, Founder & Director, Cancer Consortium and Associate Professor, Interdisciplinary Nanotechnology Unit, AMU. Dr. Aziz is a globally recognized molecular biologist specializing in cancer biology, particularly in colorectal cancer research. With his interdisciplinary training, Dr. Aziz has made groundbreaking contributions in the field of targeted leukaemia therapy using nanoparticles and revolutionized colorectal cancer research by identifying novel genes associated with the disease. His leadership at Aligarh Muslim University led to the establishment of the **Cancer Nanomedicine Consortium**, a pioneering initiative aimed at finding translational solutions for cancer treatment. Dr. Aziz's impressive global research experience spans prestigious institutions like Case Western Reserve University and King Abdullah International Medical Research Center (KAIMRC), where he spearheaded a robust colorectal cancer program. His work with the National Cancer Institute's Integrative Cancer Biology Program has connected him with top-tier institutions, including Harvard, MIT, and Duke University, contributing to cutting-edge integrative cancer therapies.

The session was graced by the presence of **Prof. Javed Musarrat**, Honourable Vice Chancellor of Integral University, **Prof. Wahajul Haq**, Dean of Research & Development, Integral University and **Prof. Snober S. Mir**, Head of the Department of Biosciences, Integral University. Faculty members from Biosciences & Bioengineering Departments, passionate research scholars and eager students, were among the enthusiastic attendees. The event commenced with a warm floral welcome for Dr. Aziz, followed by an introduction to his remarkable achievements by **Dr. Durdana Yasin**. Dr. Aziz then delivered an insightful lecture on the topic: "**Drug Nanoparticle Conjugates for Cancer Immunotherapy**", where he elaborated cutting-edge strategies in cancer treatment using nanotechnology, offering a glimpse into the future of cancer immunotherapy.

Dr. Mohammad Azhar Aziz started his lecture by sharing the inspiring story behind the creation of the Cancer Nanomedicine Consortium at Aligarh Muslim University (AMU). He emphasized that in cancer research, **collaboration is not just an option but an absolute necessity**. Dr. Aziz pointed out that **Data Science** will play a crucial role in the future, becoming indispensable for addressing the complexity of the disease. He then introduced the audience to the fascinating world of **nanotechnology**, providing an

overview of its applications in medicine, particularly in cancer treatment. Dr. Aziz highlighted several leading corporations that are actively engaged in developing nanotechnology solutions for medical purposes, underscoring the growing significance of this interdisciplinary field. Delving deeper into his own research, Dr. Aziz elaborated on his work targeting the **PD-L1 receptor**, a key protein in cancer immunotherapy. He explained that blocking the interaction between PD-L1 and PD-1 enables T cells—the body's immune cells—to become activated and attack cancer cells more effectively. Dr. Aziz then shared his findings on the docking of drugs with gold and silver nanoparticles (NPs) and how these nanoparticles interact with the targeted PD-L1 receptor. He demonstrated how nanotechnology can be harnessed to increase the precision and efficacy of cancer drugs, improving their ability to inhibit cancer cell growth while minimizing side effects.

In conclusion, Dr. Aziz discussed potential avenues for collaboration, inviting the audience to consider engaging with the Cancer Nanomedicine Consortium through various means. Opportunities for collaboration include joint research projects, becoming an ad hoc consortium member, participating in student exchange programs, offering consultancy, or even obtaining full consortium membership. After Dr. Aziz's insightful address, Prof. Javed Musarrat, the Honorable Vice-Chancellor, took the stage, sharing his profound expertise and vast experience in the field of nanotechnology. He urged the faculty to strive for excellence in their research and to pursue greater collaborations to meet the evolving demands of ever-evolving field of science. **Prof. Mir** extended her thanks to **Prof. Javed Musarrat** for gracing the event with his esteemed presence and expressed her heartfelt gratitude to **Dr. Aziz** too, for his enlightening lecture and for taking time from his busy schedule. She also acknowledged the presence of **Prof. Haq**, appreciating his support during the session.

The session, attended by an enthusiastic audience of **140**, not only provided participants with invaluable insights but also ignited lively discussions on innovative nanotechnology approaches in cancer research, making it a resounding success. The lecture was followed by the visit of Dr. Aziz to **ICEIR** facility and interaction with PIs & Research scholars working in the field of nanotechnology, further enhancing the collaborative spirit of the event.



Best Regards
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