



AFRICA'S MOST PROMISING BIOTECH VENTURES

Reflecting on Success Stories of ABBC2023



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ABBC Principal Convenor:

Margaret Karembu, PhD, MBS - Director, ISAAA AfriCenter



OVERVIEW

One of the major highlights of the 5th edition of the Africa Biennial Biosciences Communication (ABBC2023) symposium hosted in Nairobi, Kenya in August 2023 was the inaugural Bioscience Entrepreneurial Pitching Competition. Dubbed '*Africa's Most Promising Biotechnology Ventures: A presentation by next-generation innovators in Africa*', the competition celebrated our continent's potential to inspire transformation and greatness through modern bioscience innovations in agriculture. The session, pulling together visionaries, entrepreneurs, and innovators thrilled the delegates with excitement and insights on emerging bioscience opportunities and promising innovations.

Eight innovative ideas from young innovators were selected from a thorough screening process and pitched during the session. Innovators whose innovations emerged tops were recognized. Innovations were scored based on their novelty, innovativeness, patentability, feasibility, scalability, presentation quality, timeliness and clarity. An eminent panel of judges, including experts, investors, and industry leaders from academia and private sector giants like Kenya Breweries Limited and Elgon Kenya Limited conscientiously listened to the pitches. Each pitching team had five minutes to impress the judges and two extra minutes to respond to judges' questions.

'Shamba Assistant': Sustainable Protein Production and Waste Management using Black Soldier Fly



The 'Shamba Assistant', presented by Peter Ndegwa and Peter Nduta, students at Kenyatta University (Kenya) was the winning pitch. The 'Shamba Assistant' is a fascinating innovation that seeks to provide alternative protein sources and sustainably address the challenge of organic waste management. Using a portable kit named 'shamba assistant', Ndegwa and his team have demonstrated proficiency in measuring, optimizing and monitoring nutrients and soil moisture in Black Soldier Fly (BSF) farming ecosystem. This ground-breaking approach also offers a sustainable and commercially viable solution for nutrient-rich frass fertilizer that can be utilized in agriculture. The young innovators envisage a future where the 'shamba assistant' empowers a more sustainable and nutritious food system, powered by the remarkable potential of BSF farming. Further, this technology opens avenues for provision of affordable soil testing services to farmers thus increasing crop productivity and creating market for nutrient rich frass.



It is an incredible honor and validation of our dedication, creativity and potential to impact on the world through biotechnology. We are thrilled and motivated to pursue our vision even with greater motivation.

Peter Ndegwa, Co-winner

Solar Powered Micro Silage Vacuum Packaging Machine



Pitched by Patience Mueni of Chandaria Business Innovation and Incubation Centre, Kenyatta University, this innovation won the first runner-up recognition. The student is developing a less capital intensive solar powered machine that processes and preserves fodder at an optimal moisture content. The innovation has a potential of mitigating post-harvest losses among small scale dairy farmers in eastern Kenya. This innovation is poised to contribute positively towards increased milk production among target farmers.

Wilt-resistant fungicide- free CRISPR Tomato



Tomato is a vegetable that is widely consumed globally due to high nutrients hence a high value cash crop for small and medium size farmers. However, it suffers from fungal and bacterial disease requiring high usage of chemical pesticides that are often misused posing serious health concerns. Therefore, this innovation by Uganda's Andrew Kiggundu seeks to address this challenge by developing disease-resistant genome-edited tomato. This will reduce the need for farm chemical spraying pre-and post-harvest periods. This innovation won the second runner-up recognition.

The winning pitch has the unique opportunity of further development through AfriBiohub, a program aimed at nurturing and incubating ground-breaking biotech innovations. The AfriBiohub, is an initiative under the Feed the Future Striga Smart Sorghum for Africa project funded by the United States Agency for International Development.



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As we embark on this journey of discovery and inspiration, let us remember that innovation knows no boundaries. The ideas presented today hold the potential to transform lives, industries, and communities.

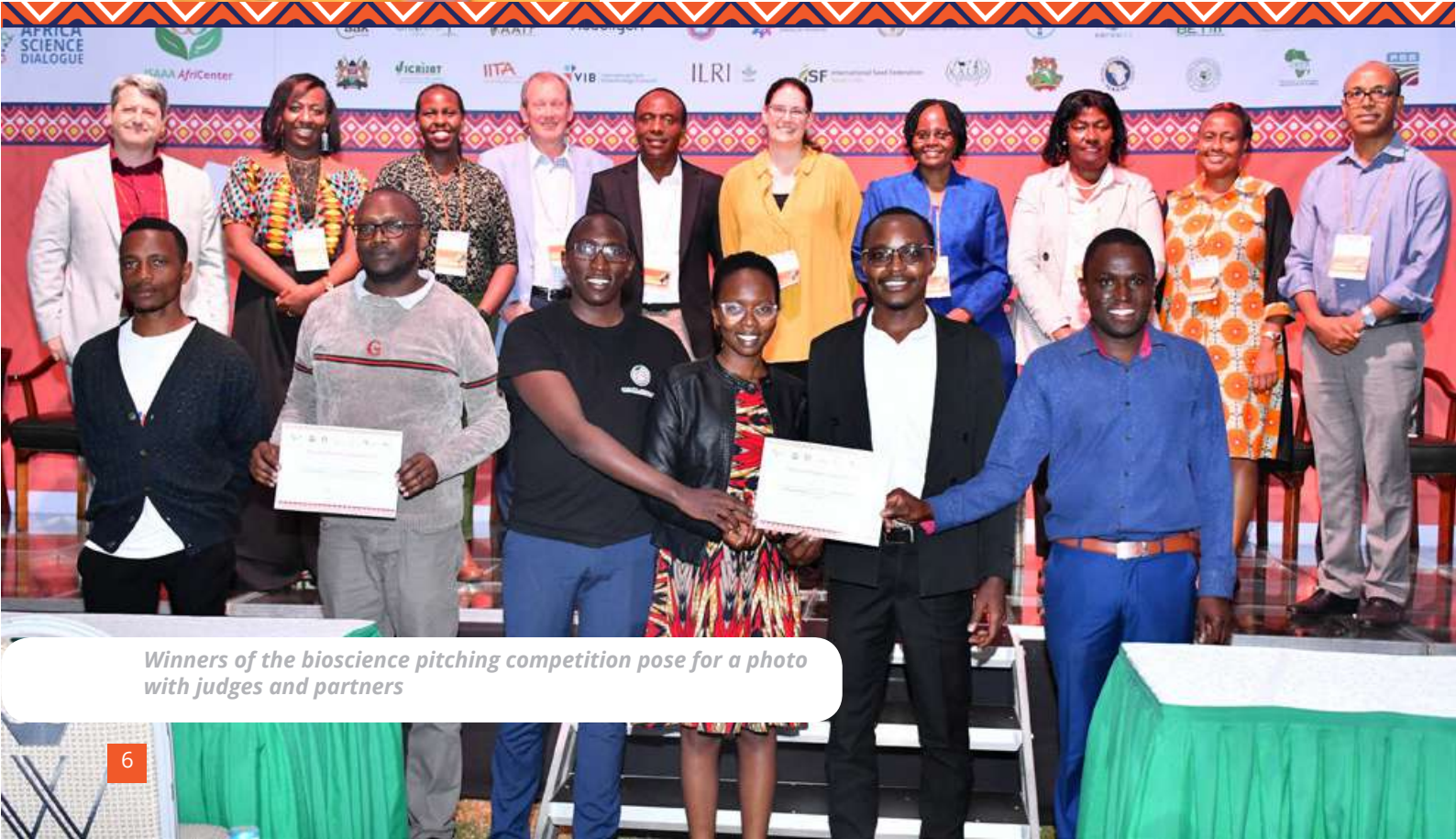
Dr. Dianah Ngonyama, Research Integrity Officer, Iowa State University



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The AfriBIOHub, whose establishment is co-supported by Beneficial Bio, presents a huge opportunity to actualize innovation ideas like the excellent ideas shared in this pitching session.

Dr. Jenny Molloy, Executive Director, Beneficial Bio, UK



Winners of the bioscience pitching competition pose for a photo with judges and partners

