



# e-newsletter

*Building a sustainable bioeconomy in eastern Africa*

## New BiInnovate Africa projects

**S**ustainable bioeconomy is increasingly becoming a key international development and growth strategy that also helps countries to mitigate and adapt to climate change and conserve biodiversity. In eastern Africa, a sustainable bioeconomy presents opportunities for innovation along supply chains of various biobased goods and services, thereby creating new exciting opportunities for youth employment and increasing the rate of economic growth. Of particular interest are carbon reducing biobased solutions, like biomaterials, biowaste converters, biofuels, and indigenous medicine among others, which have the greatest potential to add value to the region's biological resources. BiInnovate Africa continues to foster the development of a sustainable bioeconomy in the region by supporting innovation collaboration projects between academia, industry, and government to take research ideas and inventions to market. BiInnovate Africa has been onboarding new projects that were selected for grant funding in the current phase. The projects include:

- Rhizobia-mycorrhizae-based biofertilizer for smallholders farmers, led by the Evangelical University in Africa in Democratic Republic of the Congo (DR Congo). Other partners include Hope Africa University in Burundi, University of Nairobi in Kenya, and ITRACOM/ FOMI-Private fertilizer company in Burundi.
- Deployment of a novel biodegradable carrier (from banana fibre) for efficient crop protection, led by the International Institute of Tropical Agriculture, Tanzania. Other partners include International Fertilizer Development Corporation in Uganda, icipe in Kenya, and Bio-Corn Products EPZ Limited in Kenya.
- Development of nano encapsulated-bromelain from pineapple and seafood waste for improved livestock production, led by the Jomo Kenyatta University of Agriculture and Technology in Kenya. Other partners include: Université Evangélique en Afrique, Bukavu in DR Congo, Sokoine University of Agriculture in Tanzania, and Vetcare® Africa in Kenya.
- Development of biobased supplements to artemisinin-based combination therapy for malaria treatment, led by the Pharmaceutical Society of Uganda. Other partners include University of Bahr El Ghazal in South Sudan, Université Officielle de Bukavu in DR Congo, and Jena Herbals (Uganda) Limited.
- Upscaling novel bio-rational products for controlling *Tungiasis* in East Africa, led by the Masinde Muliro University of Science and Technology (Centre for African Medicinal and Nutritional Flora and Fauna) in Kenya. Other partners include Kenya Agricultural and Livestock Research Organization-Biotechnology Research Institute, Gulu University in Uganda, and AtoZ Group of Companies (Vector Health International, Africa Technical Research Centre) in Tanzania.
- Production of biofungicides for the management of coffee wilt disease in East Africa, led by the Kaffabio Control Agro-Industry Private Limited Company in Ethiopia. Other partners include Kenya Agricultural and Livestock Research Organization-Coffee Research Institute in Kenya, and Tanzania Coffee Research Institute.
- Developing eco-friendly packaging products from cassava wastes and other biowastes in East Africa, led by Kyambogo University in Uganda. Other partners include Institute of Policy Analysis and Research in Rwanda, Ardhi University in Tanzania, and Oribags Innovations (Uganda) Limited.

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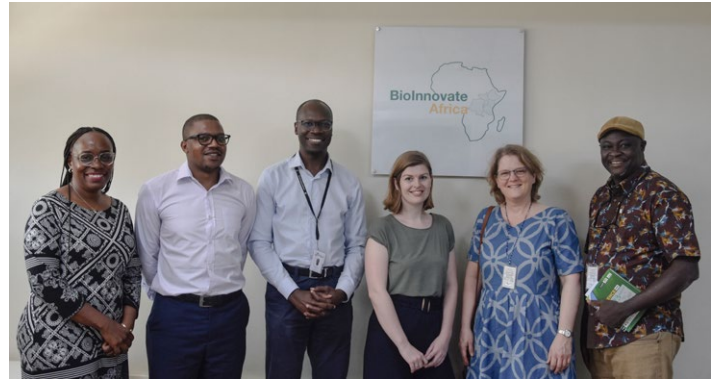
**Cassava biowaste could be a gamechanger in the development of bioplastics as eco-friendly packaging materials**



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## PARI Coordinator and Senior Researcher visits BiInnovate Africa

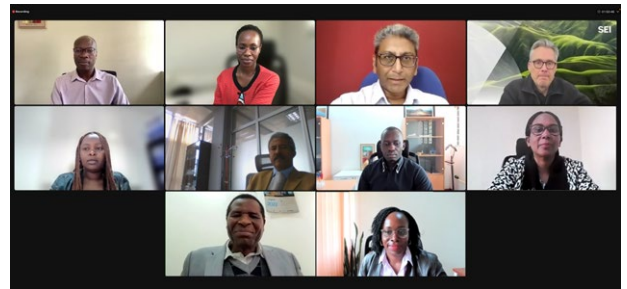
On 13 March 2023, Dr Heike Baumüller, the Coordinator and Senior Researcher, Program of Accompanying Research in Agricultural Innovation (PARI) Germany, paid a visit to BiInnovate Africa and discussed the connection between bioeconomy, agriculture and climate, and possible topics and opportunities for research collaboration. In attendance were Ms. Friederike Schilling, who is a visiting researcher and Ph.D. candidate from the University of Bonn, Germany, hosted by *icipe* BiInnovate Africa and researching the economics of carbon sequestration in African agriculture; and Dr Fatunbi Oluwole, a Senior Technical Cluster Leader of Innovation Systems at the Forum for Agriculture Research in Africa (FARA), based in Ghana.



Left to Right: Shira Mukiibi, Business Development Manager, BiInnovate Africa; Dr Kelvin Mulungu, Postdoctoral Fellow, *icipe*; Dr Julius Ecuru, Manager, BiInnovate Africa; Ms Friederike Schilling; Dr Heike Baumüller; and Dr Fatunbi Oluwole.

## Seventeenth BiInnovate Africa Programme Advisory Committee meeting

The 17<sup>th</sup> BiInnovate Africa PAC meeting was held virtually on 30 March 2023. The meeting discussed strengthening the development of bioeconomy in eastern Africa, including strategic partnerships for BiInnovate Africa and opportunities for resource mobilization.



## BiInnovate Africa annual review meeting

On 25 May 2023, Dr Claes Kjellström from the Swedish International Development Cooperation Agency (Sida) and *icipe* senior Management held the 2023 Annual Review Meeting at *icipe* Duduville Campus in Nairobi, Kenya. The meeting discussed the implementation progress of BiInnovate Africa, and interacted with one of the newly funded projects that is developing banana fibre technology for the control of cyst nematodes, a pest of economic important to potato farmers in eastern Africa.



## BiInnovate Africa exhibits at the launch of Grand Challenges Rwanda



On 18-19 May 2023, BiInnovate Africa featured in the *icipe* exhibition at the launch of the Grand Challenges Rwanda, an initiative spearheaded by Rwanda's National Council for Science and Technology (NCST) to support and promote research, development, and innovation for socio-economic transformation. The exhibition amplified the existing collaborations between BiInnovate Africa and Rwanda on bioscience research and innovations, and opportunities for new partnerships. Read more [here](#).

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## Cohort III of TEA online course successfully completed

BiInnovate Africa and the Thayer School of Engineering, Dartmouth College, USA, are collaborating to build capacity for technoeconomic analysis (TEA) of innovation projects in eastern Africa through a six-month tailor-made online course. Students who apply for the course are competitively selected from BiInnovate Africa participating universities in eastern Africa. In January 2023, a total of seven students comprising the third cohort, commenced the course and completed successfully by end of June 2023. The profile of the students can be viewed on the BiInnovate Africa website.