Department of Biochemistry
and Sports Science
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BIOCHEMISTRY SEMINAR SERIES

Guest Speaker Seminar

RNAi-mediated resistance to cassava brown streak disease

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Cassava production in Eastern and Central Africa is constrained by two viral diseases, cassava mosaic disease (CMD) and cassava brown streak disease (CBSD). While resistance is available against CMD, robust resistance to CBSD has, to date, not been identified in the existing cassava germplasm. CBSD is caused by two whitefly transmitted virus species: *Cassava brown streak virus* (CBSV) and Ugandan cassava brown streak virus (UCBSV) (Genus: *Ipomovirus*, Family *Potyviridae*). The disease causes necrotic root rot, rendering affected storage roots unsuitable for food or feed. The presentation describes how ribonucleic acid interference (RNAi) was used to target partial coat protein sequences of the two causative viruses, resulting in strong resistance against the viruses. Evidence of the effectiveness of this technology in the green house and the field will also be discussed.

Henry Wagaba is currently a plant molecular biologist at the National Crops Resources Research Institute (NaCRRI) of the National Agricultural Research Organisation (NARO). He obtained his doctorate in Plant Breeding and Biotechnology from Makerere University in 2013. For his thesis he studied the use of RNA interference for resistance to cassava brown streak viruses. Henry has a BSc Biochemistry (Major), 2 MScs in Molecular Biology and a wealth of experience in plant pathogen interactions, tissue culture systems and transformation.

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