Technology Licensing Opportunity

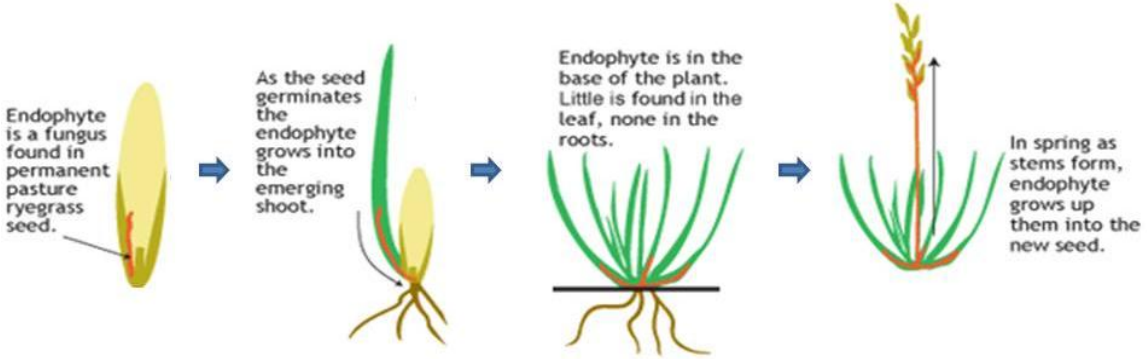
Non-Confidential Summary

New strain of Fungal Endophyte that Improves Stress Tolerance and Productivity

ROI# 08-011

Opportunity:
Researchers at the University of Saskatchewan have isolated a new strain of endophytes that can substantially improve crop performance under low nutrients conditions.

Background:
Endophytes are microbes that colonize living, internal tissues of plants without causing any immediate, overt negative effects. Many varieties of endophytic plants became available on the market in the past few years such as the grass Max-Q Tall Fescue. In addition to their role in improving plant performance endophytes are potential sources of novel natural products for exploitation in medicine, agriculture, and industry



Invention:
Increased demand for green mass due to demand for food and energy puts pressure on the available farmed land. It also directs development towards new crops that require less optimal conditions. Endophytic inoculation can provide a viable solution for such demand. Researchers at the University of Saskatchewan isolated a new endophytic fungal strain that improves tomato tolerance to low nutrients soil conditions and increases the fresh weight by 3 folds. This strain can be hosted by other crops to improve stress tolerance similarly to what have been described in grasses previously.

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Researcher profile:

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Patent Status:
U.S. provisional patent application filed

Selected publications

1. Walker X, Basinger J, Kaminskyj S 2010 Endorhizal fungi associated with Ranunculus in the Canadian Arctic and Prairies. The Open Mycology Journal.
2. Hodson E, Shahid F, Basinger J, Kaminskyj S 2009 pdf Fungal endorhizal associates of Equisetum species from Western and Arctic Canada. Mycological Progress 8: 19-27.
3. Abdellatif L, Bouzid S, Kaminskyj S, Vujanovic V 2009 pdf Endophytic hyphal compartmentalization is required for successful symbiotic Ascomycota association with root cells. Mycological Research 113: 782-791

Development Stage:
Isolated and functionally tested strain

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