

## البحث الثاني

G.M. El-Garhy, H.H.Azzaz, <b>A.M. Abd El-Mola</b> and G.A. Mousa (2020). <b>Fungal Pectinase Production Optimization and its Application in Buffalo's Diets Degradation.</b> <i>Int. J. Zoo. Animal Biol.</i> 2020, 3(1): 000199.	البحث الثاني
مشارك مع آخرين من داخل وخارج التخصص – منشور في مجلة دولية Q3 مستخلص من رسالة	2

<b>Title</b>	<b>Fungal Pectinase Production Optimization and its Application in Buffalo's Diets Degradation.</b>
<b>Participants</b>	El-Garhy GM <sup>1</sup> , Azzaz HH <sup>2</sup> , Abd El-Mola AM <sup>1</sup> and Mousa GA <sup>1</sup> <sup>1</sup> <i>Animal Production Department, Faculty of Agriculture, Fayoum University, Egypt.</i> <sup>2</sup> <i>Dairy Department, National Research Centre, 33 Buhouth St., Dokki, Giza, Egypt.</i>
<b>Journal</b>	<i>Int. J. Zoo. Animal Biol.</i> 2020, 3(1): 000199

### ABSTRACT

Pectinase production for improving buffalo's diets digestion is the main objective of this work. Effects of fungal strains and different cultivation conditions on pectinase production have been studied. In vitro batch culture technique was used for investigate impact of the produced pectinase compared with commercial pectinase (SMIZYME®) on rumen fermentation parameters and diet degradation. *Penicillium chrysogenum* exhibited the highest pectinase activity at 3 days of incubation period, initial pH 4 of the growth medium, yeast extract as a sole nitrogen source and pomegranate peel as a carbon source at a concentration of 15 % (W/V). Three (g/kg) of the both enzymes supplementation significantly increased treated diet's dry matter (DM), neutral detergent fiber (NDF), acid detergent fiber (ADF) degradability with increase total gas production (TGP) and short chain fatty acids (SCFA) concentration. The enlargement of pectinase production locally will lead to animal production improvement, encourage self-reliance and reduce the cost of enzymes importation.