

## **Understanding the importance of dietary inositol for poultry production**

### **Project outline:**

Poultry do not produce effective quantities of endogenous phytase (PHY), the enzyme that can hydrolyse the ester bonds between the phosphate groups and the inositol ring in phytates. As a result, supplementation of poultry diets with commercially produced PHY is routine. The beneficial effect of PHY is understood to be due to the direct hydrolytic effects on phytate and the subsequent improvement in the availability of minerals, amino acids and energy, concomitant with reduced endogenous losses from the gastrointestinal tract (GIT). The dephosphorylation of phytate, IP<sub>6</sub>, however, releases lower myo-inositol phosphates and free myo-inositol (MYO). There are strong indications that MYO may be an efficacious feed supplement for use in broiler chickens to enhance growth production performance. The proposed programme of work aims to establish the efficacy of MYO for this application and explores the associated mechanisms.