

# Wound-Induced Respiration and Pyrophosphate:fructose-6-phosphate Phosphotransferase in Potato Tubers

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A seven fold increase in the rate of respiratory O<sub>2</sub> uptake was observed 24 h after slicing of potato tuber disks. The maximum activity of pyrophosphate:fructose-6-phosphate phosphotransferase (PFP) was 5–7 times greater than that of ATP-dependent phosphofructokinase (PFK) in fresh or aged potato slices. Thus, PFP may participate in glycolysis which supplies respiratory substrate in potato tubers. The PFP activity of desalted extracts determined in the absence of fructose-2,6-bisphosphate (F2,6BP) increased by 4.5 fold 24h after slicing. However, maximal PFP activity determined with saturating (1 μM) F2,6BP was not changed. The *K<sub>a</sub>* values of PFP for F2,6BP was lowered from 33 to 7 nM after 24 h of aging treatment. This increased susceptibility of the PFP activity to its allosteric activator, F2,6BP, may be involved in the increased respiration in wounded disks of potato tubers. Immunoblotting experiments indicated that both the α (66 kDa) and the β (60kDa) subunits of PFP were present in fresh or 24h aged tuber slices.