**Fig. S1.** Map of the expression vector, pPTRmstE which contains the gpd promoter of *A. nidulans* and the PTR gene as a fungal selective marker.

The pMB1 origin (*ori*) and beta-lactamase (Amp<sup>R</sup>) allow its propagation in *E. coli*. The *mstE* gene encodes the low-affinity glucose transporter of *A. nidulans*.

**Fig. S2.** Schematic diagram of the expression vectors (pPTRreg, pPTRmtt, pPTRcad, pPTRmfs) used for the transformation of the IA high-yielding control strain, *A. terreus* AN37.

The pPTR vector was derived from the pPTRmstE vector in Fig. 2.
**Fig. S3.** Gel-electrophoresis of the colony PCR products from the AN37/cad and AN37/mfs transformants.

PCR products were loaded onto 1% agarose gel. DNA ladder: 1kb ladder; lanes 1-5: promter-cad gene-terminator region (3,324 bp) in the putative transformants of AN37/cad; lanes 6-10: promter-mfs gene-terminator region (3,189 bp) in the putative transformants of AN37/mfs.