Claims

[Claim 1]. A *Corynebacterium glutamicum* cell expressing a functional heterologous enzyme with tyrosine ammonium lyase (TAL) activity and further expressing, a functional 4-coumarate-CoA ligase (4CL) and a functional benzalacetone synthase (BAS), and further expressing a heterologous benzalacetone reductase (BAR), wherein the cell produces at least 5mg/L raspberry ketone when cultures in the absence of p-coumaric acid.

[Claim2]. The cell according to claim 1, wherein:
- the functional heterologous enzyme with TAL activity is from *Rhodobacter capsulatus*, *Saccharothrix espanaensis*, or *Flavobacterium johnsoniae*;
- the functional 4CL is 4CL from *Nicotiana tabacum*, *Arabidopsis thaliana*, *Physcomitrella patens* or *Streptomyces coelicolor*, or the functional BAS is BAS from *Rubus idaeus* or *Rheum palmatum*; and
- the BAR is from *Rubus idaeus*.

[Claim 3]. The cell according to claim 1, wherein:
- the functional heterologous enzyme with TAL activity is from *Rhodobacter capsulatus*;
- the functional 4CL is 4CL from *Physcomitrella patens* and the functional BAS is BAS from *Rheum palmatum*; and
- the BAR is from *Rubus idaeus.*

[Claim 4]. The cell according to claim 1, wherein:
- the functional heterologous enzyme with TAL activity has at least 60% sequence identity with SEQ ID NO: 1, SEQ ID NO: 3, or SEQ ID NO: 5, or is encoded by a polynucleotide which has at least 60% sequence identity with SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6;
- the 4CL has at least 60% sequence identity with SEQ ID NO: 7, SEQ ID NO: 9, SEQ ID NO: 11, or SEQ ID NO: 13, or is encoded by a polynucleotide which has at least 60% sequence identity with SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, or SEQ ID NO: 14;
- the BAS has at least 60% sequence identity with SEQ ID NO: 15 or SEQ ID NO: 17, or is encoded by a polynucleotide which has at least 60% sequence identity with SEQ ID NO 16 or SEQ ID NO: 18;
- the BAR has at least 60% sequence identity with SEQ ID NO: 19 or is encoded by a polynucleotide which has at least 60% sequence identity with SEQ ID NO: 20.

[Claim 5]. The cell according to claim 1, wherein the polynucleotide sequence encoding at least one of said enzymes is codon optimized.

[Claim 6]. The cell according to claim 1, wherein the cell is *Corynebacterium glutamicum* ATCC13032.

[Claim 7]. The cell according to claim 1, wherein at least two of the enzymes are encoded by a single recombinant polynucleotide construct.

[Claim 8]. The cell according to claim 1, wherein the cell is *Corynebacterium glutamicum* cell capable of producing at least twice as much L-Tyrosine as compared to *Corynebacterium glutamicum* ATCC13032.

[Claim 9]. A method for the production of a cell according to claim 1, comprising

- contacting a *Corynebacterium glutamicum* cell with an expression construct encoding a functional heterologous enzyme with tyrosine ammonium lyase (TAL) activity, and
- contacting that *Corynebacterium glutamicum* cell with an expression construct encoding a functional 4-coumarate-CoA ligase (4CL) and a functional benzalacetone synthase (BAS), and
- contacting that *Corynebacterium glutamicum* cell with an expression construct encoding a heterologous benzalacetone reductase (BAR).

[Claim 10]. A method for the production of raspberry ketone, comprising:

- culturing a cell according to claim 1 under conditions conducive to the production of raspberry ketone and,
- isolating and/or purifying the raspberry ketone from the cell and/or the culture medium.