Article

Phytochemical Analysis and Establishment of Embryogenic Cell Suspension and Agrobacterium-mediated Transformation for Farmer Preferred Cultivars of West African Plantain (Musa spp.)

Supplementary Materials: The following are available online at www.mdpi.com/xxx/s1, Figure S1: Transient expression of gusA gene across the various treatments and co-cultivation periods of Agrobacterium-mediated transformation of different plantain cultivars; Agbagba, Obino l’Ewai, and Orishele, Table S1: Various components of reaction for determination of total antioxidants, Table S2: Components of reaction mix for determination of total phenolics, Table S3: Reaction mixture for determination of total flavonoids, Table S4: Reaction mixture for determination of Tannin content.
Figure S1: Transient expression of gusA gene across the various treatments and co-cultivation periods of Agrobacterium-mediated transformation of different plantain cultivars; Agbagba, Obino l’Ewai and Orishele.
Table S1: Various components of reaction mix for determination of total antioxidants.

| Sample ID     | Concentration of calibration standards (µg)/ml | Volume of calibration standards (µl) | Volume of 60mM DPPH (µl) |
|---------------|-----------------------------------------------|-------------------------------------|--------------------------|
| C-000(Methanol)| 0                                             | 50                                  | 50                       |
| C-001         | 5                                             | 50                                  | 50                       |
| C-002         | 10                                            | 50                                  | 50                       |
| C-003         | 20                                            | 50                                  | 50                       |
| C-004         | 30                                            | 50                                  | 50                       |
| C-005         | 40                                            | 50                                  | 50                       |
| C-006         | 50                                            | 50                                  | 50                       |
| Sample        | -                                             | 50                                  | 50                       |

Table S2: Components of reaction mix for determination of total phenolics.

| Sample ID     | Concentration of calibration standards (µg)/ml | Volume of calibration standards (µl) | Volume of Folin-Ciocalteu Phenol solution, 0.2 N (µl) | Volume of Na₂CO₃, 7% (µl) |
|---------------|-----------------------------------------------|-------------------------------------|------------------------------------------------------|---------------------------|
| C-000(Methanol)| 0                                             | 20                                  | 100                                                  | 80                        |
| C-001         | 10                                            | 20                                  | 100                                                  | 80                        |
| C-002         | 20                                            | 20                                  | 100                                                  | 80                        |
| C-003         | 40                                            | 20                                  | 100                                                  | 80                        |
| C-004         | 60                                            | 20                                  | 100                                                  | 80                        |
| C-005         | 80                                            | 20                                  | 100                                                  | 80                        |
| C-006         | 100                                           | 20                                  | 100                                                  | 80                        |
| Sample        | -                                             | 20                                  | 100                                                  | 80                        |

Table S3: Reaction mixture for determination of total flavonoids.
| Sample ID     | Concentration of catechin acid calibration standards (µg)/ml | Volume of calibration standards (µl) | Volume of water(µl) | Volume of 5 % NaNO\(_2\) (µl) | Volume of 10 % AlCl\(_3\) (µl) | Volume of 2M NaOH (µl) |
|--------------|-------------------------------------------------------------|-------------------------------------|---------------------|-------------------------------|-------------------------------|-----------------------|
| C-000(Methanol) | 0                                                          | 20                                  | 80                  | 10                            | 10                            | 80                    |
| C-001         | 10                                                         | 20                                  | 80                  | 10                            | 10                            | 80                    |
| C-002         | 20                                                         | 20                                  | 80                  | 10                            | 10                            | 80                    |
| C-003         | 40                                                         | 20                                  | 80                  | 10                            | 10                            | 80                    |
| C-004         | 60                                                         | 20                                  | 80                  | 10                            | 10                            | 80                    |
| C-005         | 80                                                         | 20                                  | 80                  | 10                            | 10                            | 80                    |
| C-006         | 100                                                        | 20                                  | 80                  | 10                            | 10                            | 80                    |
| Sample        | 20                                                         | 80                                  | 10                  | 10                            | 10                            | 80                    |

Table S4. Reaction mixture for determination of Tannin content.

| Sample ID     | Concentration of Tannic acid calibration standards (µg)/ml | Volume of calibration standards (µl) | Volume of Folin-Denis solution, 20% (µl) | Volume Na\(_2\)CO\(_3\) of 7% (µl) |
|--------------|-------------------------------------------------------------|-------------------------------------|------------------------------------------|-----------------------------------|
| C-001(Methanol) | 0                                                          | 50                                  | 50                                       | 100                               |
| C-002         | 20                                                         | 50                                  | 50                                       | 100                               |
| C-003         | 40                                                         | 50                                  | 50                                       | 100                               |
| C-004         | 60                                                         | 50                                  | 50                                       | 100                               |
| C-005         | 80                                                         | 50                                  | 50                                       | 100                               |
| C-006         | 100                                                        | 50                                  | 50                                       | 100                               |
| Sample        | 50                                                         | 50                                  | 50                                       | 100                               |