Supplementary Material

# Supplementary Table 1

**Table 1:** Salinity tolerance of some salt-tolerant plant growth-promoting rhizobacteria (PGPR)

| **Salt-tolerant PGPR** | **Salt tolerance level (mM)** | **References** |
| --- | --- | --- |
| *Bacillus licheniformis* | 400 | Nabti et al. (2013) |
| *Ochrobactrum sp.* | 1000 | Principe et al. (2007) |
| *Rhizobium sp.* | 400 | Thrall et al. (2009) |
| *Pseudomonas protegens* | 1199 | Wang et al. (2015) |
| *Klebsiella sp.* | 1530 | Liu et al. (2014) |
| *Azotobacter sp.* | 200 | Rojas-Tapias et al. (2012) |
| *Enterobacter sp.* | 400 | Yang et al. (2016) |
| *Bacillus sp.* | 2911 | Nielsen et al. (1995) |
| *Bacillus subtilis* | 514 | Abeer et al. (2015) |
| *Rhizobium meliloti* | 500 | Talibart et al. (1994) |
| *Paenibacillus sp.* | 1000 | Ali et al. (2012) |
| *Pseudomonas fluorescens* | 600 | Tewari and Arora (2016) |
| *Mesorhizobium loti* | 700 | Kumar et al. (1999) |
| *Bacillus licheniformis* | 1000 | Goswami et al. (2014) |
| *Serratia marcescens* | 1027 | Singh and Jha (2016) |
| *Azotobacter chroococum* | 1369 | Chaudhary etal. (2013) |
| *Pseudomonas sp.* | 1541 | Sharma et al. (2016) |
| *Pseudomonas aeruginosa* | 1600 | Tewari and Arora (2014b) |
| *Bacillus pumilus* | 2000 | Kannan et al. (2014) |
| *Pseudomonas aeruginosa* | 2000 | Tewari and Arora (2014a) |
| *Zhihengliuella sp.* | 2568 | Jha et al. (2011) |
| *Halobacillus sp.* | 3425 | Ramadoss et al. (2013) |
| *Pseudomonas fluorescens* | 400 | Safari et al. (2016) |
| *Rhizobium leguminosarum* | 343 | Moschetti et al. (2005) |
| *Rhizobium fredii* | 400 | Fujihara and Yoneyama (1993) |
| *Burkholderia phymatum* | 400 | Talbi et al. (2013) |
| *Sinorhizobium medicae* | 513 | Elboutahiri et al. (2010) |
| *Sinorhizobium sp.* | 2100 | Abdelmoumen and El Idrissi (2009) |
| *Serratia marcescens* | 1712 | Nakbanpote et al. (2014) |
| *Synorhizobium meliloti* | 684 | Mrabet et al. (2011) |
| *Rhizobium sp.* | 1000 | Trabelsi et al. (2009) |
| *Halomonas sp.* | 3425 | Mapelli et al. (2013) |
| *Bacillus gibsonii* | 200 | Orhan (2016) |
| *Arthrobacter sp.* | 750 | Kataoka et al. (2017) |
| *Kocuria erythromyxa* | 1712 | Karlidag et al. (2013) |
| *Rhizobium leguminosarum bv*  *phaseoli* | 685 | Abdelmoumen et al. (1999) |
| *Bacillus thuringiensis* | 2000 | Timmusk et al. (2014) |
| *Pseudomonas chlororaphis* | 856 | Egamberdieva et al. (2015) |
| *Pseudomonas sp.* | 1712 | Trung et al. (2016) |

# Supplementary Table 2

**Table 2.** Secondary compounds or enzymes produced by salt-tolerant plant growth-promoting rhizobacteria (PGPR)

| **Secondary compounds or enzymes** | **Salt-tolerant PGPR** | **References** |
| --- | --- | --- |
| **Osmolytes** | | |
| **Glycine betaine** | *Pseudomonas alcaligenes* | Jha et al. (2011) |
| *Azospirillum brasilense* | Chowdhury et al. (2007) |
| *Bacillus subtilis* | Bremer and Kramer (2000) |
| **Proline** | *Burkholderia* | Barka et al. (2006) |
| *Bacillus sp.* | Sziderics et al. (2007) |
| *Pseudomonas fluorescens* | Metwali et al. (2015) |
| *Pseudomonas strains* | Naz and Bano (2015) |
| *Pseudomonas pseudoalcaligenes* | Hanson and Nelson (1978) |
| *Azospirillum sp.* | Zarea et al. (2012), Bashan (1999), Casanovas et al. (2003), Bashan and Holguin (1997) |
| *Oceanobacillus profundus* | Qurashi and Sabri (2011) |
| *Exiguobacterium oxidotolerans* | Bharti et al. (2014) |
| *Dietzia natronolimnaea* | Bharti et al. (2016) |
| *Pseudomonas koreensis* | Kasotia et al. (2016) |
| *Pseudomonas sp.* | Bano and Fatima (2009) |
| **Soluble sugars** | *Pseudomonsa mendocina* | Kohler et al. (2009) |
| *Bacillus amyloliquefaciens* | Chen et al. (2016) |
| *Azospirillum brasilense* | Bacilio-Jimenez et al. (2001) |
| *Serratia marcescens* | Singh and Jha (2016) |
| *Bacillus sp.* | Nayer and Reza (2008) |
| *Rhizobium tropici* | Figueiredo et al. (2008) |
| **Alanine, serine, threonine, aspartic acid, and other amino**  **acids** | *Pseudomonas fluorescens* | Paul and Lade (2014) |
| *Azospirillum braziliense* | Hamdia et al. (2004) |
| *Azospirillum lipoferum* | Qudsaia et al. (2013) |
| **Polyamine and amide** | | |
| **Cadaverine** | *Azospirillum brasilense* | Cassan et al. (2009) |
| **N-acetylglutaminylglutamine**  **amide (NAGGA)** | *Pseudomonas putida* | Kets et al. (1996) |
| *Pseudomonas syringae* | Kurz et al. (2010) |
| **Exopolysaccharides** | *Rhizobium sp.* | Ahemad and Khan (2012b), Alami et al. (2000) |
| *Enterobacter cloacae* | Mahmood et al. (2016) |
| *Rhizobium meliloti* | Lloret et al. (1998) |
| *Bacillus megaterium* | Nadeem et al. (2016) |
| *Bacillus sp.* | Ashraf et al. (2004, 2006) |
| *Bacillus tequilensis* | Rolli et al. (2014) |
| *Bacillus circulans* | Khodair et al. (2008) |
| *Pseudomonas putida* | Sandhya et al. (2009) |
| *Zhihengliuella alba* | Siddikee et al. (2011) |
| *Bacillus subtilis* | Han and Lee (2005) |
| *Proteus penneri* | Naseem and Bano (2014) |
| *Pseudomonas sp.* | Singh et al. (1992) |
| *Pseudomonas aeruginosa* | Tewari and Arora (2014a, b) |
| **Stress alleviating enzymes** | | |
| **ACC deaminase** | *Pseudomonas sp.* | Nadeem et al. (2007) |
| *Achromobacter piechaudii* | Mayak et al. (2004) |
| *Pseudomonas fluorescens* | Saravanakumar and Samiyappan (2007) |
| *Burkholderia phytofirmans* | Akhtar et al. (2015) |
| *Bacillus subtilis* | Abeer et al. (2015) |
| *Enterobacter sp.* | Habib et al. (2016) |
| *Bacillus halodenitrificans* | Ramadoss et al. (2013) |
| *Bacillus licheniformis* | Lim and Kim (2013) |
| *Acidovorax sp.* | Esquivel-Cote et al. (2010) |
| *Rhizobium sp.* | Ahmad et al. (2013) |
| *Pseudomonas stutzeri* | Tank and Saraf (2010) |
| *Pseudomonasfluorescens* | Zahir et al. (2009) |
| *Enterobacter sp.* | Kim et al. (2014) |
| *Serratia quinivirans* | Belimov et al. (2005) |
| *Serratia marcescens* | George et al. (2013) |
| *Arthrobacter protophormiae* | Barnawal et al. (2014) |
| *Pseudomonas koreensis* | Kasotia et al.(2016) |
| *Pseudomonas fluorescens* | Nadeem et al. (2016) |
| *Bradyrhizobium japonicum* | Shaharoona et al. (2006) |
| **Reactive oxygen species (ROS) scavenging enzymes** | | |
| **Superoxide dismutase** | *Achromobacter xylosoxidans* | Karthikeyan et al. (2012) |
| *Serratia marcescens* | Singh and Jha (2016) |
| *Pseudomonas putida* | Kang et al. (2014a) |
| **Ascorbate peroxidase** | *Bacillus lentus* | Golpayegani and Tilebeni  (2011) |
| *Bacillus megaterium* | Habib et al. (2016) |
| *Bacillus lentimorbus* | Nautiyal et al. (2008) |
| *Bacillus safensis* | Chakraborty et al. (2013) |
| *Burkholderia cepacia* | Kang et al. (2014b) |
| *Dietzia natronolimnaea* | Bharti et al. (2016) |
| *Pseudomonas stutzeri* | Sharma et al. (2016) |
| *Pseudomonas sp.* |
| **Catalase** | *Enterobacter sp.* | Habib et al. (2016) |
| *Halomonas desiderata* | Bharti et al. (2014) |
| *Pseudomonas mendocina* | Kohler et al. (2010) |
| *Pseudomonas putida* | Shaik et al. (2011) |

# References of Supplementary Figures

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