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| **Table S2. RNA virus vectors developed for virus induced gene silencing (VIGS) with potential for VIGE applications** | | | | | |
| **Virus Name** | **Genus** | **RNA genome** | **Plant of application** | **Host range** | **Reference** |
| ALSV: Apple latent spherical virus | Cheravirus | ssRNA(+) | *N. benthamiana, A. thaliana,* cucurbits, legumes, tomato, pepper, strawberry | N. benthamiana, fruit trees, vegetables, jegumes and ornamental flowers | (Igarashi et al., 2009; Kasajima et al., 2017; Li et al., 2019a; Li et al., 2019b) |
| Bamboo mosaic virus with its associated satellite RNA | Potexvirus | ssRNA(+) | *N. benthamiana,* *Brachypodium distachyon* | Bamboo, *N. benthamiana, Brachypodium distachyon, Gomphrena globosa*, *Chenopodium amaranticolor* | (Liou et al., 2014) |
| BMV: Brome mosaic virus | Bromovirus | ssRNA(+) | Barley, wheat and maize | Poaceae family including Barley, maize, rice and other monocotyledons | (Ding et al., 2006; Pacak et al., 2010) |
| BPMV: Bean pod mottle virus | Comovirus | ssRNA(+) | Glycine max | Legume | (Zhang and Ghabrial, 2006) |
| BSMV: Barley stripe mosaic virus | Hordeivirus | ssRNA(+) | *N. benthamiana,* barley, rice, wheat and maize | Barley, maize, oats, wheat | (Holzberg et al., 2002; Lacomme et al., 2003; Scofield et al., 2005; Jarugula et al., 2018) |
| CGMMV: Cucumber green mottle mosaic virus | Tobamovirus | ssRNA(+) | *N. benthamiana* & Cucurbits (watermelon, melon, cucumber and bottle gourd) | Bitter gourd, bottle gourd, cucumber, melon, pumpkin, ridged gourd, smooth loofah gourd, snake gourd watermelon, West Indian gherkin, white gourd, zucchini, and weeds. | (Dombrovsky et al., 2017; Liu et al., 2020) |
| CMV: Cucumber mosaic virus | Cucumovirus | ssRNA(+) | *N. benthamiana*, chilli peppers, legume species, maize, soybean, tomato | Many monocotyledons and dicotyledons | (Ogawa et al., 2015; Wang et al., 2016) |
| CTV: *Citrus tristeze virus* | Closterovirus | ssRNA(+) | Citrus | Citrus | (Killiny, 2020) |
| CymMV: Cymbidium mosaic virus | Potyviruses | ssRNA(+) | *Phalaenopsis equestris* | Orchidaceae family | (Lu et al., 2007) |
| FoMV: Foxtail mosaic virus | Potexvirus | ssRNA(+) | Green foxtail, maize, sorghum, sweet corn | Multiple monocotyledons | (Mei et al., 2016) |
| PEBV: pea early browning virus | Tobravirus | ssRNA(+) | *N. benthamiana,* *Pisum sativum* | Legumes | (Constantin et al., 2004; Grønlund et al., 2008) |
| PVX: Potato virus X | Potexvirus | ssRNA(+) | *N. benthamiana,* potato, tomato, tobacco | Multiple dicotyledons | (Bilgin et al., 2003; Lu, 2003; Faivre-Rampant et al., 2004; Lin et al., 2008; Wang et al., 2014) |
| TRSV: Tobacco ringspot virus | Nepovirus | ssRNA (+) | *N. benthamiana,* *A. thaliana*, melon, oriental melon, cucumber, Glycine max | Herbaceous and woody plants (soybeans, cucurbits...etc.) | (Zhao et al., 2016) |
| TRV: Tobacco rattle virus | Tobravirus | ssRNA(+) | Apple, citrus, cotton, *Cysticapnos vesicaria*, eggplant, grape berry, kiwifruit, litchi, loquat, lycium, mulberry, peach, pear, pepper, pitaya, sea buckthorn, strawberry, sweet sherry, tomato, *Xanthoceras sorbifolium* | Over 400 host species | (Pang et al., 2013; Liu et al., 2021) |
| TMV: Tobacco mosaic virus | Tobamovirus | ssRNA(+) | *N. benthamiana* | Wide including tobacco and Solanaceae family | (Kumagai et al., 1995) |
| TYMV: Turnip yellow mosaic virus | Tymovirus | ssRNA(+) | *A. thaliana, Brassica rapa* | Brassicaceae family | (Pflieger et al., 2008; Yu et al., 2018) |

**Reference for Supplementary Table 1:**

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