

Obj. 5- Biolistics transformations

This objective is being pursued as time and resources permit. During the quarter, the facility successfully transformed both immature and mature citrus with biolistics and demonstrated that the protocol is reproducible. This has never been reported, and manuscripts are being prepared. As a result, the lab can now supplement plant production using biolistics.

Significant Meetings or Conferences:

Hao Wu, Yosvanis Acanda, and Janice Zale (2015) Mature Transformation to Combat Diseases in Florida. American Society of Horticultural Science, New Orleans, LA, August 4-7.

Obstacles Encountered:

As the facility moves forward there are a number of issues and challenges that have been identified and are being addressed with support from the MCTF Steering Committee:

- Continue to increase the number of high quality genetic constructs for evaluation by the facility. This will require outreach strategies to identify and evaluate potential candidates.
- Leverage the knowledge and experience of Dr. Pena (IVIA Spain) to continue to increase transformation efficiencies of the facility.
- Take measures to ensure a stable supply of healthy, viable rootstocks, including a steady supply of disease free rootstock seed.
- Participate in the discussion of the broader challenge of moving plants forward for subsequent field testing. This topic is being addressed as part of the CRDF Knowledge Mapping exercise.

Breakthroughs:

Biolistics of immature or mature citrus have never been reported. This will be an important technology to transform citrus without pest sequences, which might lessen regulatory hurdles.

Other Information:

None