Fruit acidity starts to increase early in fruit development. It peaks when fruit reaches about 50% of its final volume, and declines towards maturation. This scheme summarizes our current knowledge about the acidity of citrus fruit, and the pathways leading to citric acid accumulation in the juice sac cell of the fruit. Current projects in the lab include the understanding of the step catalyzed by aconitase, and its regulation, the biosynthetic pathway of citramalte, a potent inhibitor of aconitase, and the fate of citrate during acid decline stage.