

Gigantic tomato mitochondria seen with the naked eye

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Abstract

Mitochondria are essential organelles of virtually all eukaryotic cells. It is now generally accepted that, for studying mitochondrial ultra-structure, the use of the microscopes is obligatory. Here I show that red tomatoes contain the gigantic mitochondria (5-10 cm size). These results open a promising possibility to investigate mitochondria without using expansive equipment. I expect that the red tomato will now be a model object for all mitochondriologists.

Keywords

Mitochondria, tomato, brilliant research.

Introduction

One sunny summer day, I went into the market to buy some vegetables. When I came home I started to cut the red tomatoes that I bought.

Materials and Methods

Red tomatoes were bought in the market near Yugo-Zapadnaya subway station (Moscow, Russia). Cutting was performed using the stainless steel kitchen knife (Samura, Japan). Pictures were captured with the help of Nokia N8 mobile phone.

Results and Discussion

Surprisingly, I found that the whole red tomato is one single mitochondrion (see Figure 1). One can clearly see both outer and inner membrane (the latter is characterized by the typical bends and twists) and even ATP-synthase conglomerates associated with the inner membrane. It is possible, however, that this is not ATP-synthase but the ribosomes. Unfortunately, this is impossible to check in frame of this work as I don't have any microscope at home. Nevertheless, these findings will definitely make a revolution in mitochondriology. Any researcher, using just simplest light microscope, might be able to see individual mitochondrial proteins, its genomic DNA and even the components of organellar membranes. I am ready to share these giant tomato mitochondria with every research lab.

Acknowledgements

I would like to thank my wife for making a decision to prepare a vegetable salad and for forcing me to go to the market.

Figure(s)

