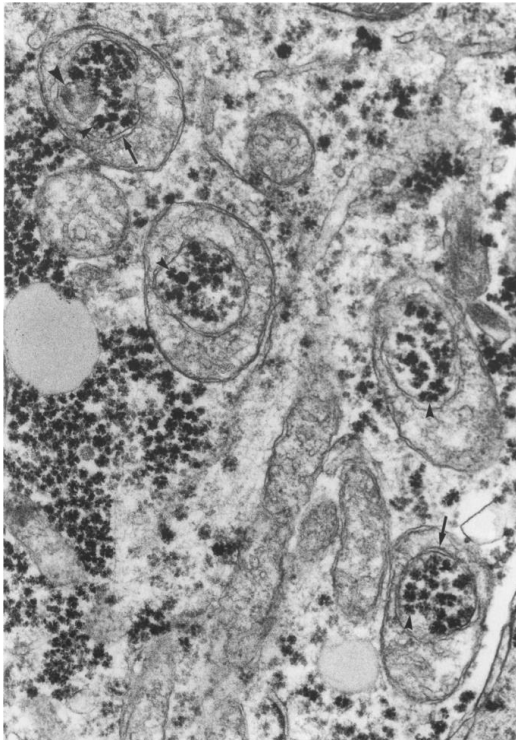


5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix

Chapter 3 : mitochondria

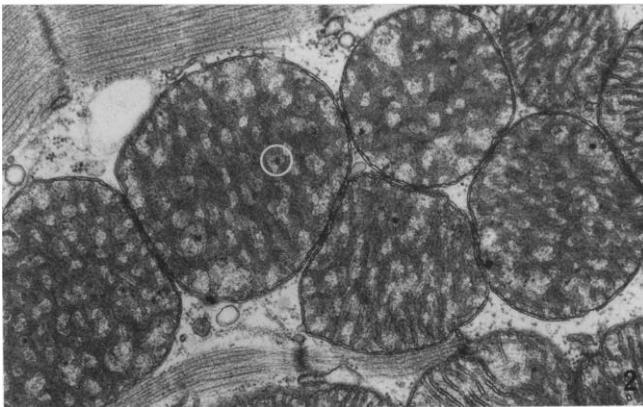
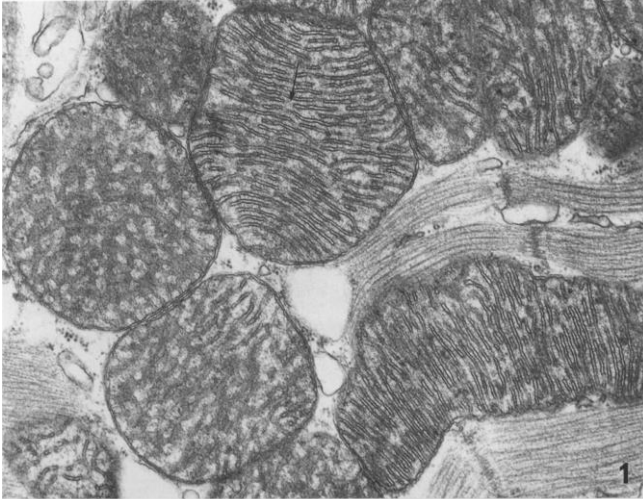


Kyriacos Kyriacou, PhD

Emeritus Professor

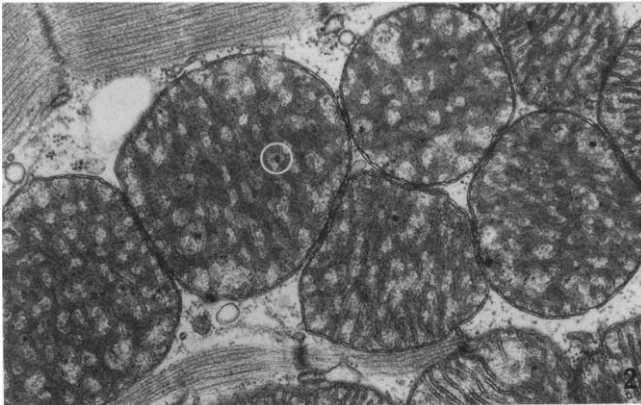
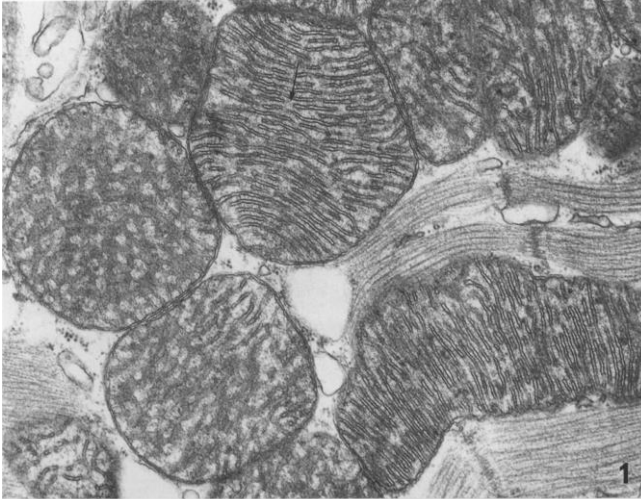
The Cyprus Institute of Neurology
and Genetics

5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



Q1 Who coined the term mitochondrion
and where did this word originated
from?

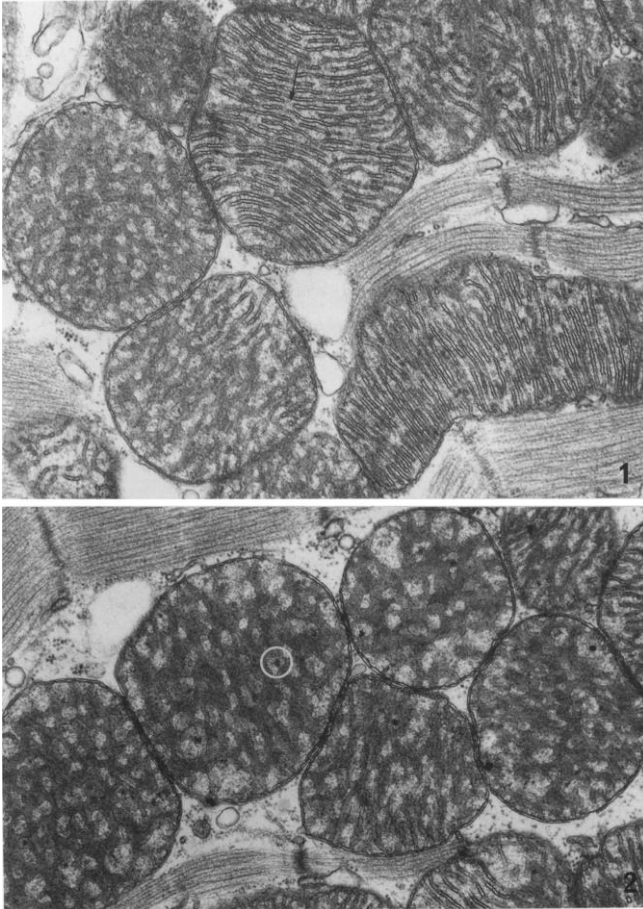
5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



Q1 Who coined the term mitochondrion and where does the word and originated from?

The answer is on page 138

5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria

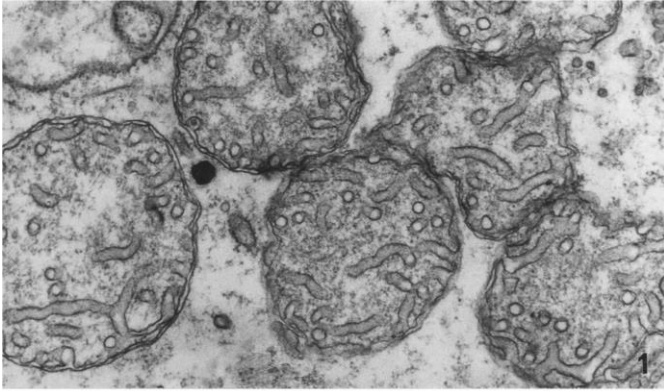


Q1 Answer provided: just as an appetizer.

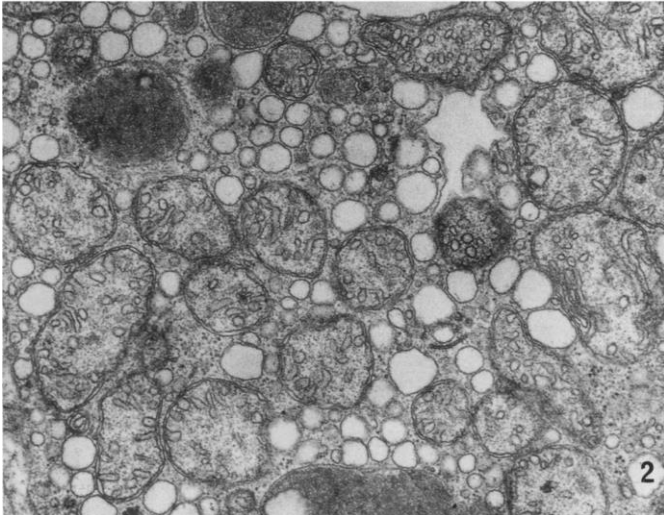
The name mitochondrion was coined by Carl Benda in 1898, and originates from the combination of two Greek words:

“μ ί τ ο ς” (mitos) meaning “thread,” and
“χ ο ν δ ρ ί ο ν” (chondrion) meaning
“granule,” or “grain-like”

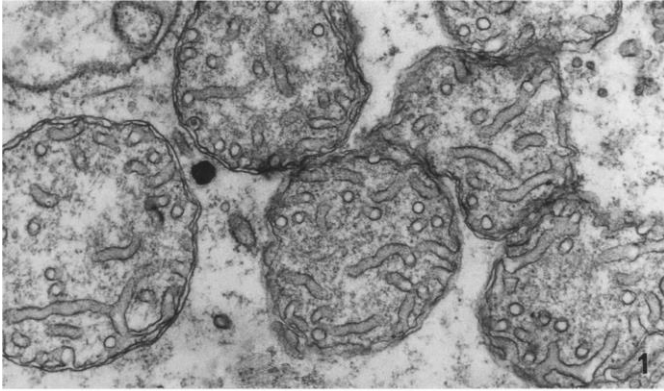
5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



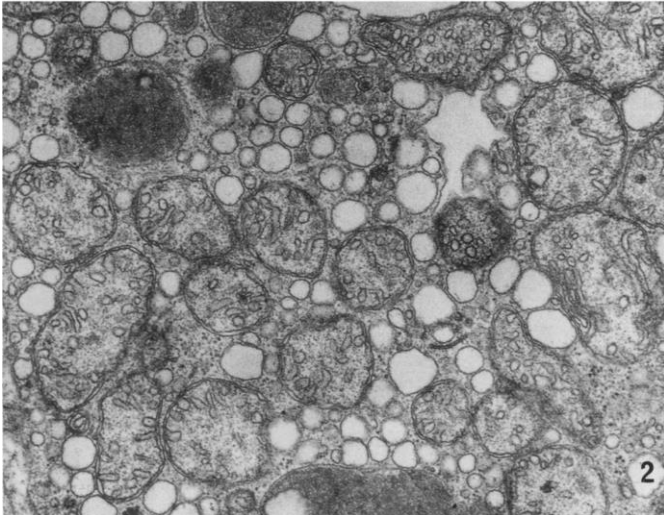
Q2 What type of cristae are these and in fig 1 which organism are these kind of mitochondria found?



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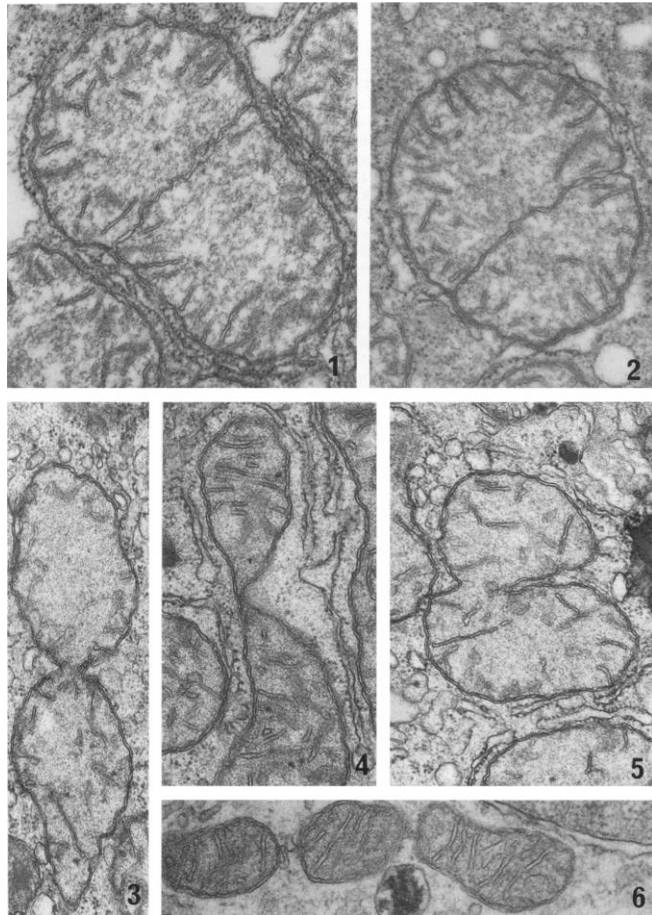


Q2 What type of cristae are these and in fig 1
which organism are these kind of mitochondria
found?



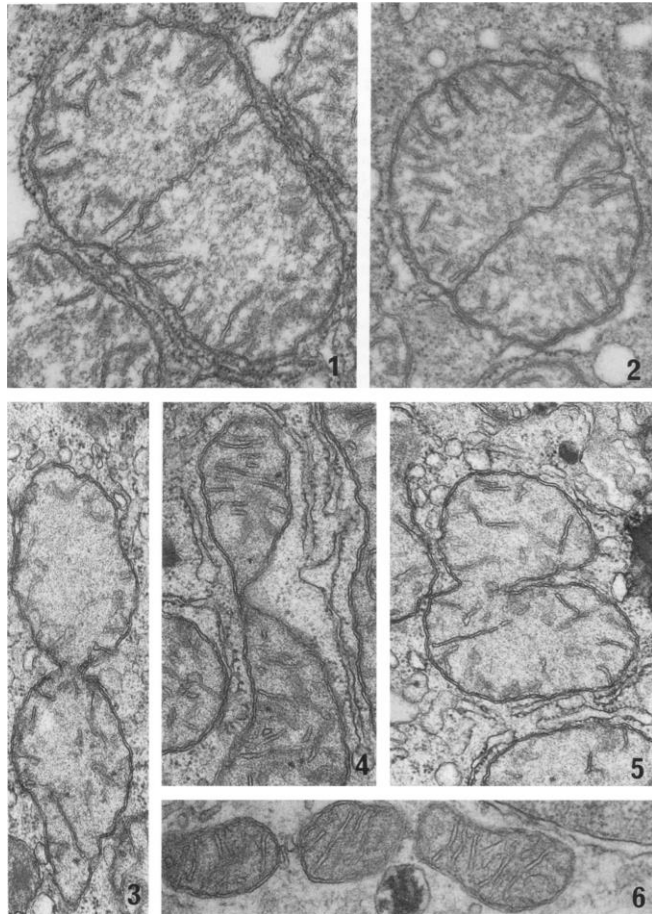
Answer on page 143 Plate 3.4

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Q3 What is the phenomenon that is displayed by these mitochondria?

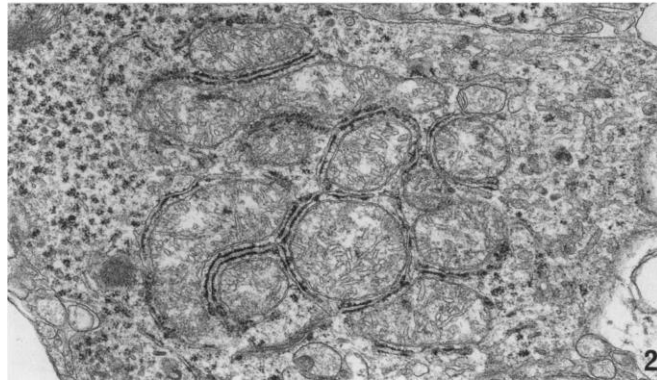
5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



Q3 What is the phenomenon that is displayed by these mitochondria?

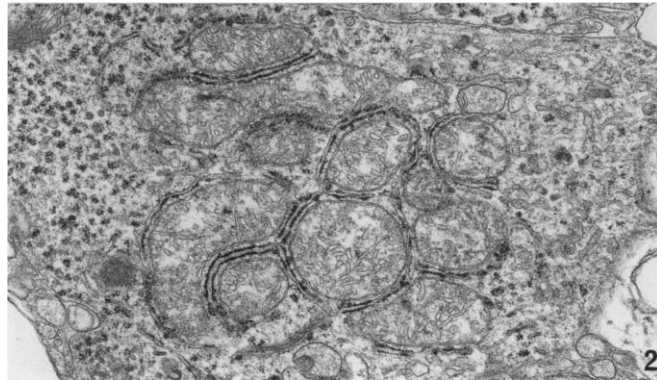
Answer on page 152, plate 3.13

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Q4 What are the structures displayed
in these electron micrographs?

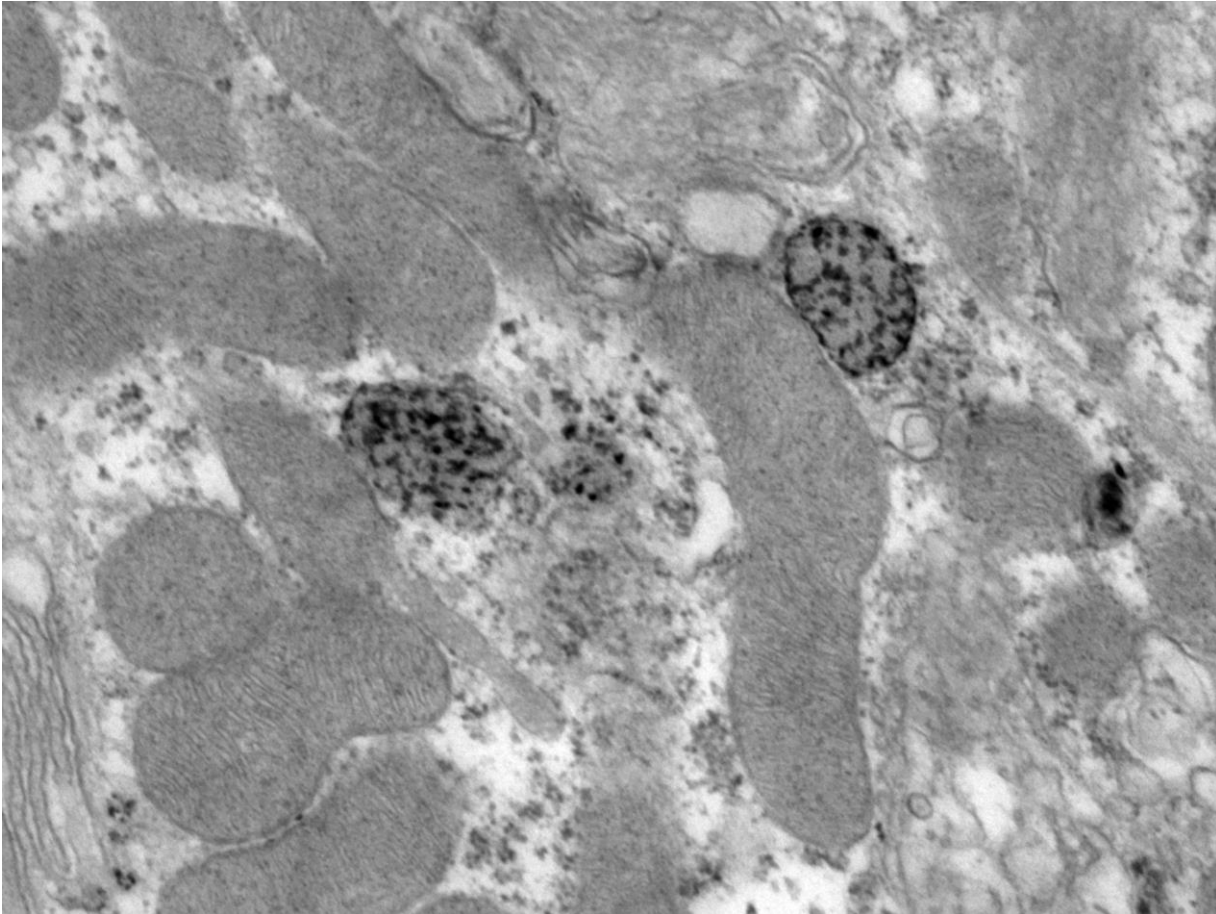
5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



Q4 What are the structures displayed
in these electron micrographs?

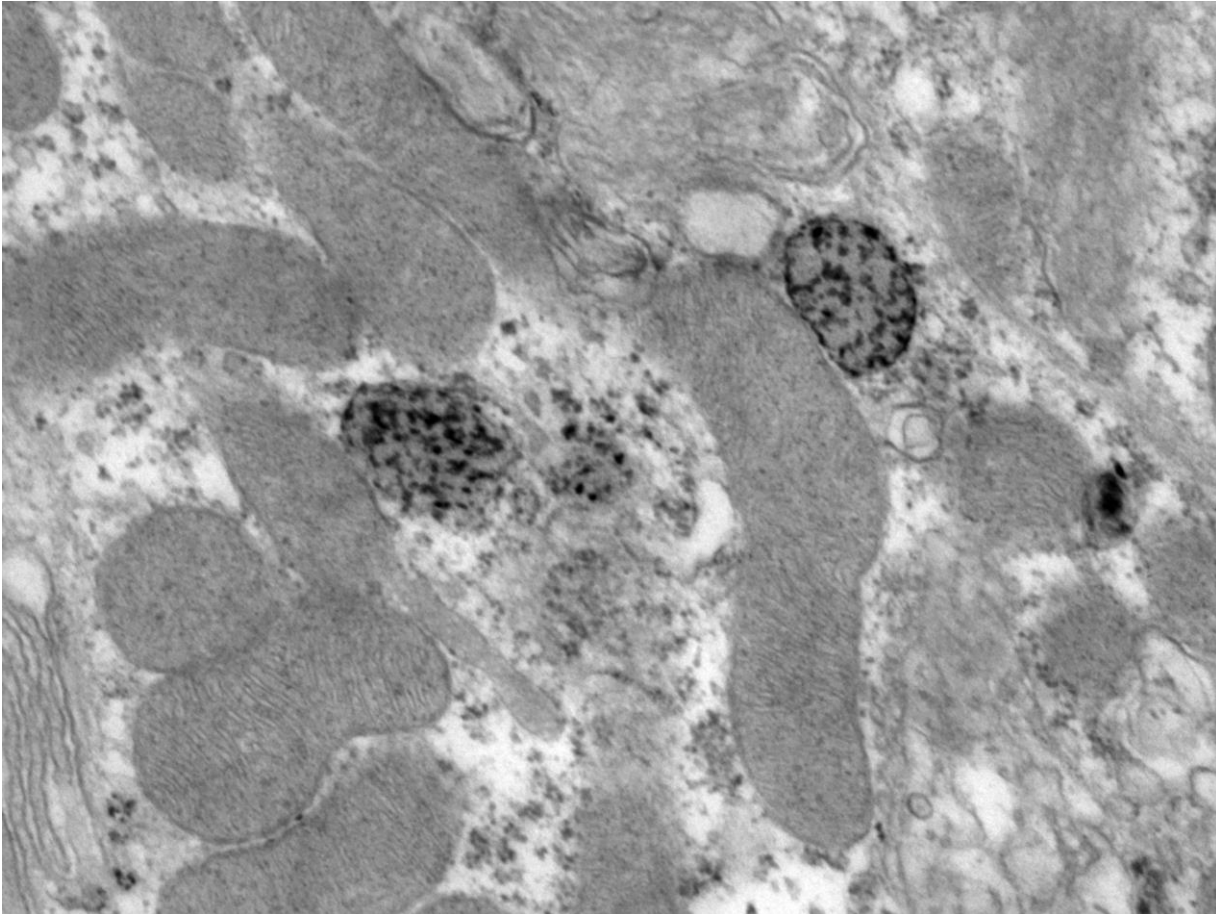
Answer on page 160, Plate 3.20

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Q5 What causes the accumulation of dense granules in mitochondria?

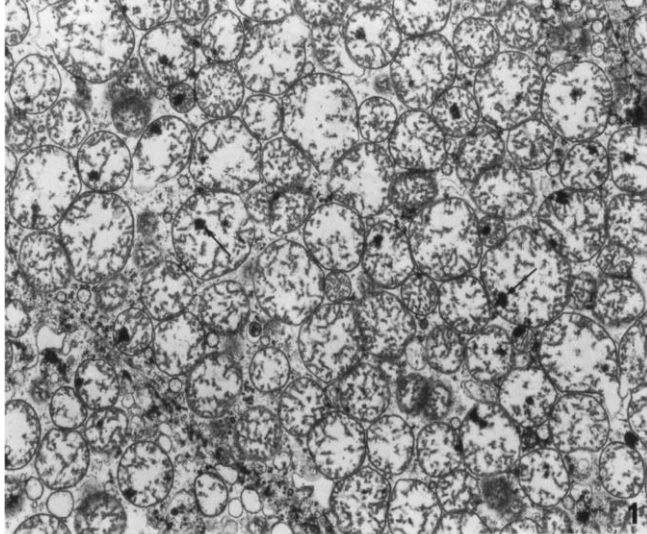
5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



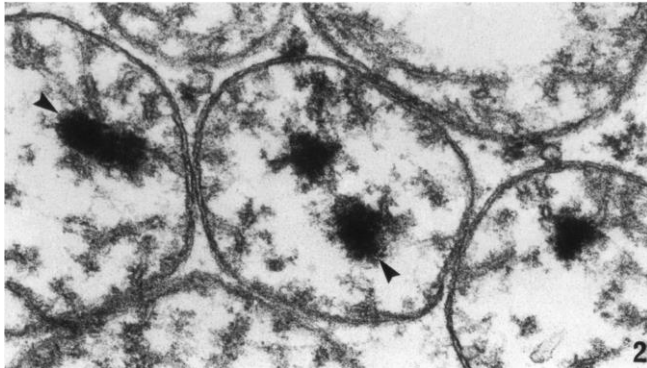
Q5 What causes the accumulation of dense granules in mitochondria?

Answer on page 162, Plate 3.21

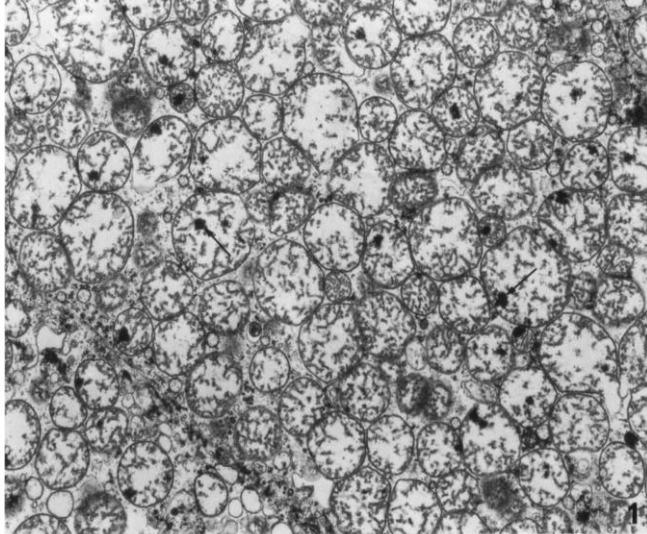
5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



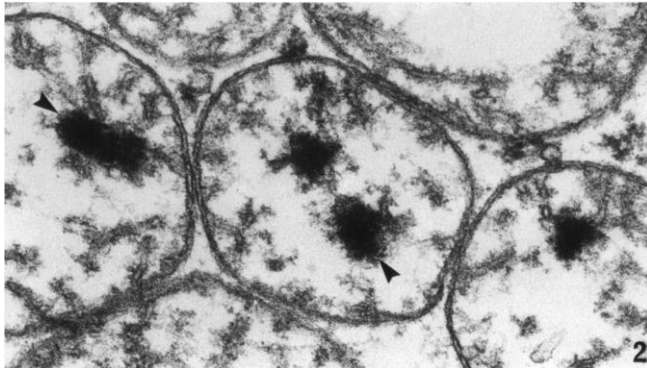
Q6 What are the inclusions in the mitochondria called and what is their significance?



5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria

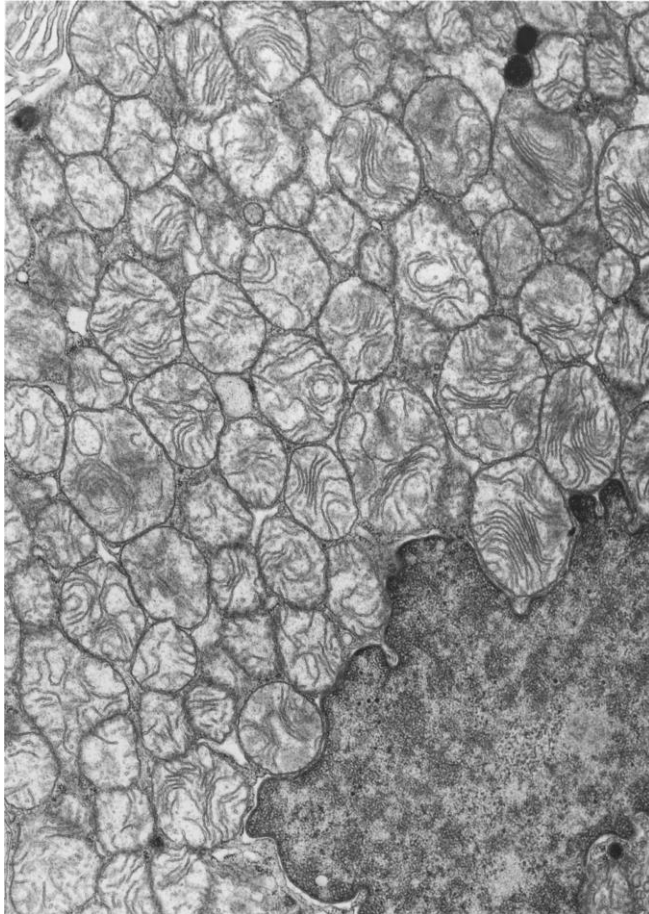


Q6 What are the inclusions in the mitochondria called and what is their significance?



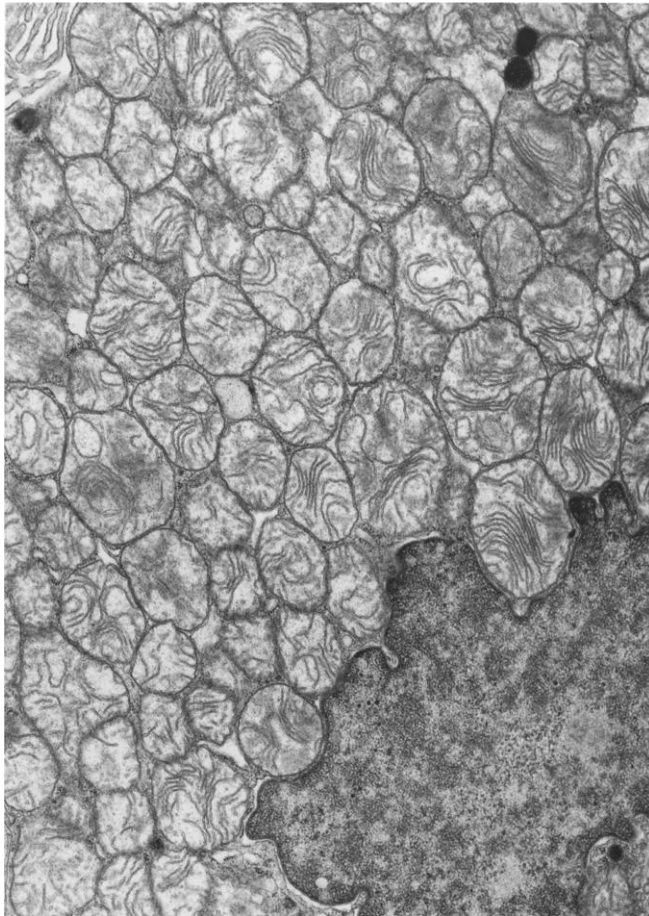
Answer on page 169, Plate 3.32 and in text on the same page, in the last but one paragraph on the right hand column

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Q7 What type of cell is this?

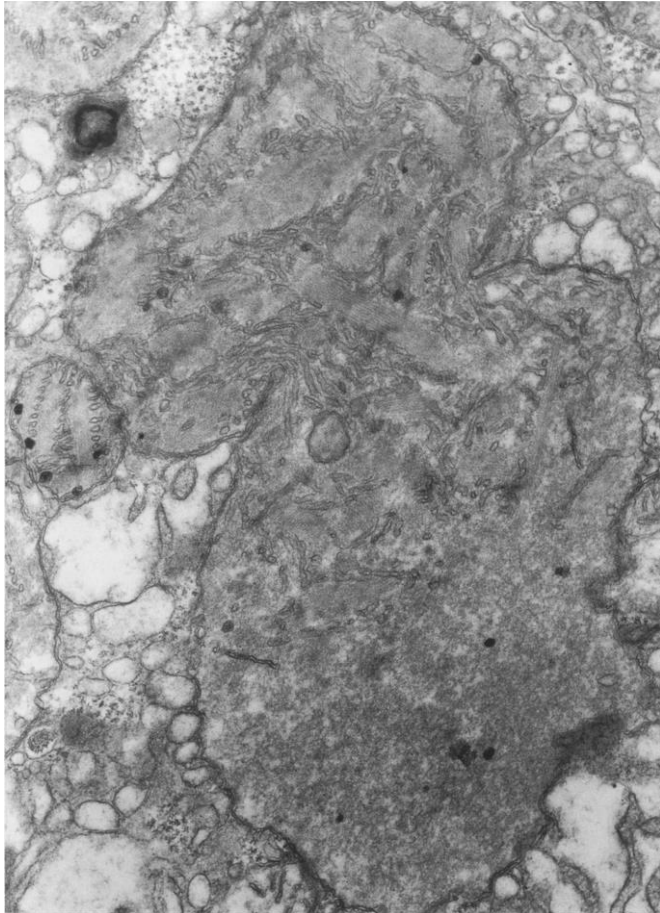
5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



Q7 What type of cell is this?

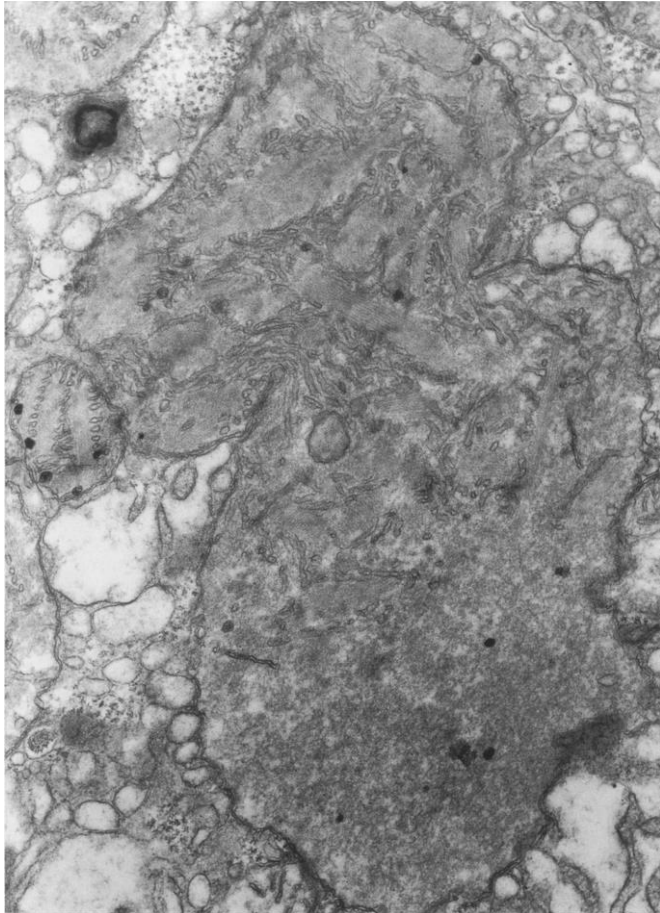
Answer on page 171 , Plate 3.33

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Q8 What is the name of the structure displayed?

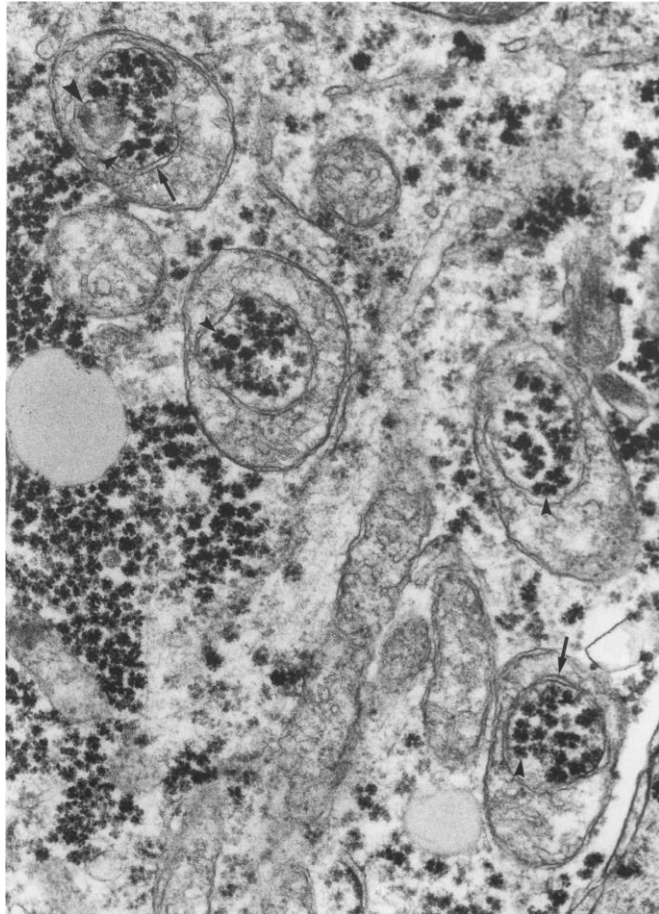
5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



Q8 What is the name of the structure displayed?

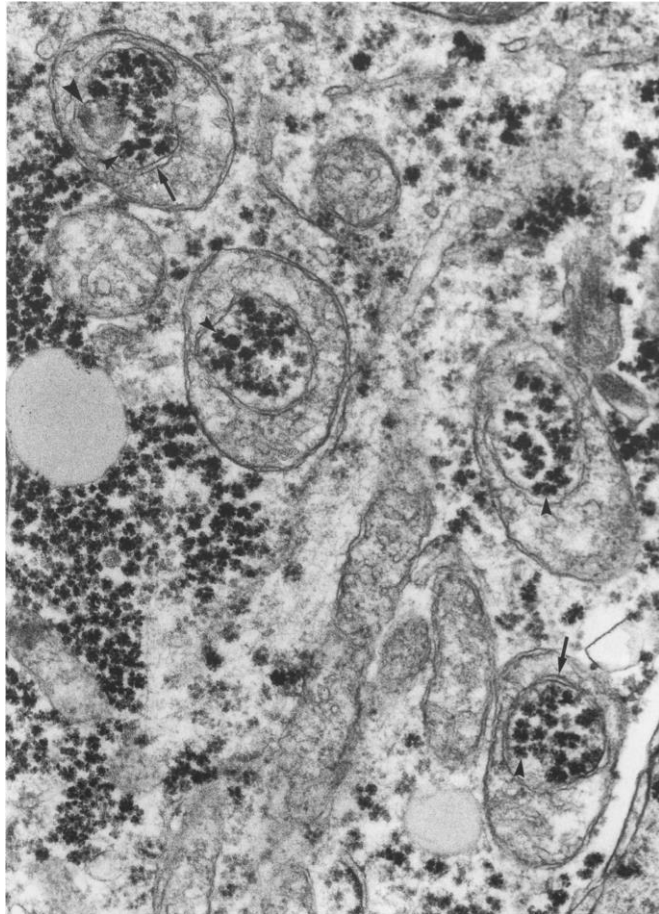
Answer on page 178, Plate 3.41

5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



Q9 What are the inclusions in the mitochondria and in what conditions may they be found?

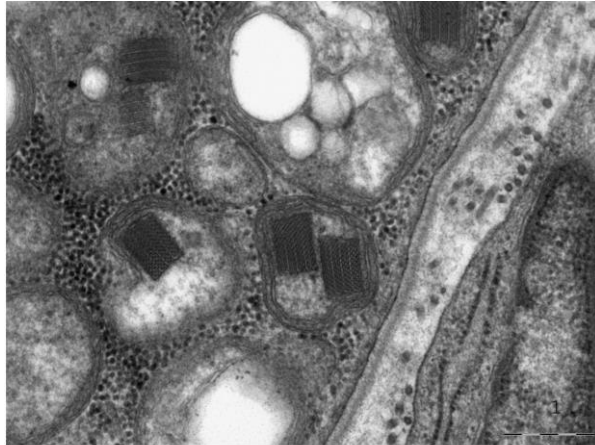
5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria



Q9 What are the inclusions in the mitochondria and in what conditions may they be found?

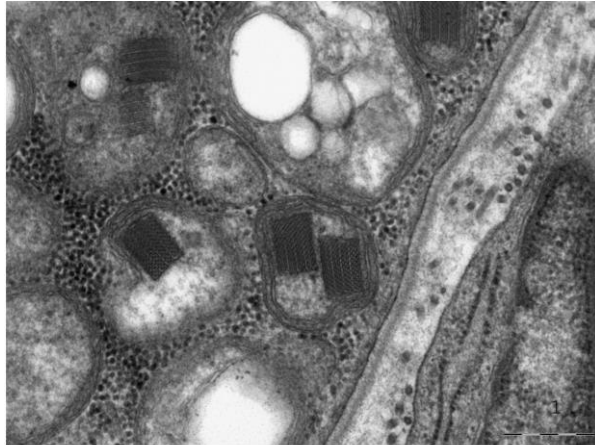
Answer on page 186, Plate 3.50 and page 187 left column

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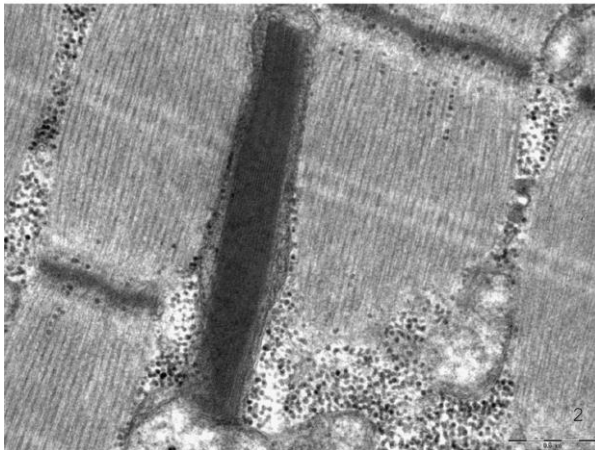


Q10 What are the mitochondrial inclusions called and in what situations are they found?

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Q10 What are the mitochondrial inclusions called and in what situations are they found?



Answer on page 193 , Plate 3.57

5th Edition of Ghadially's Ultrastructural Pathology of the Cell and Matrix Chapter 3 : mitochondria

Looking forward to the next edition and
in incorporating the explosive knowledge
as well as in embracing the new
generation of talented microscopists.

