

Using Art to Learn Science



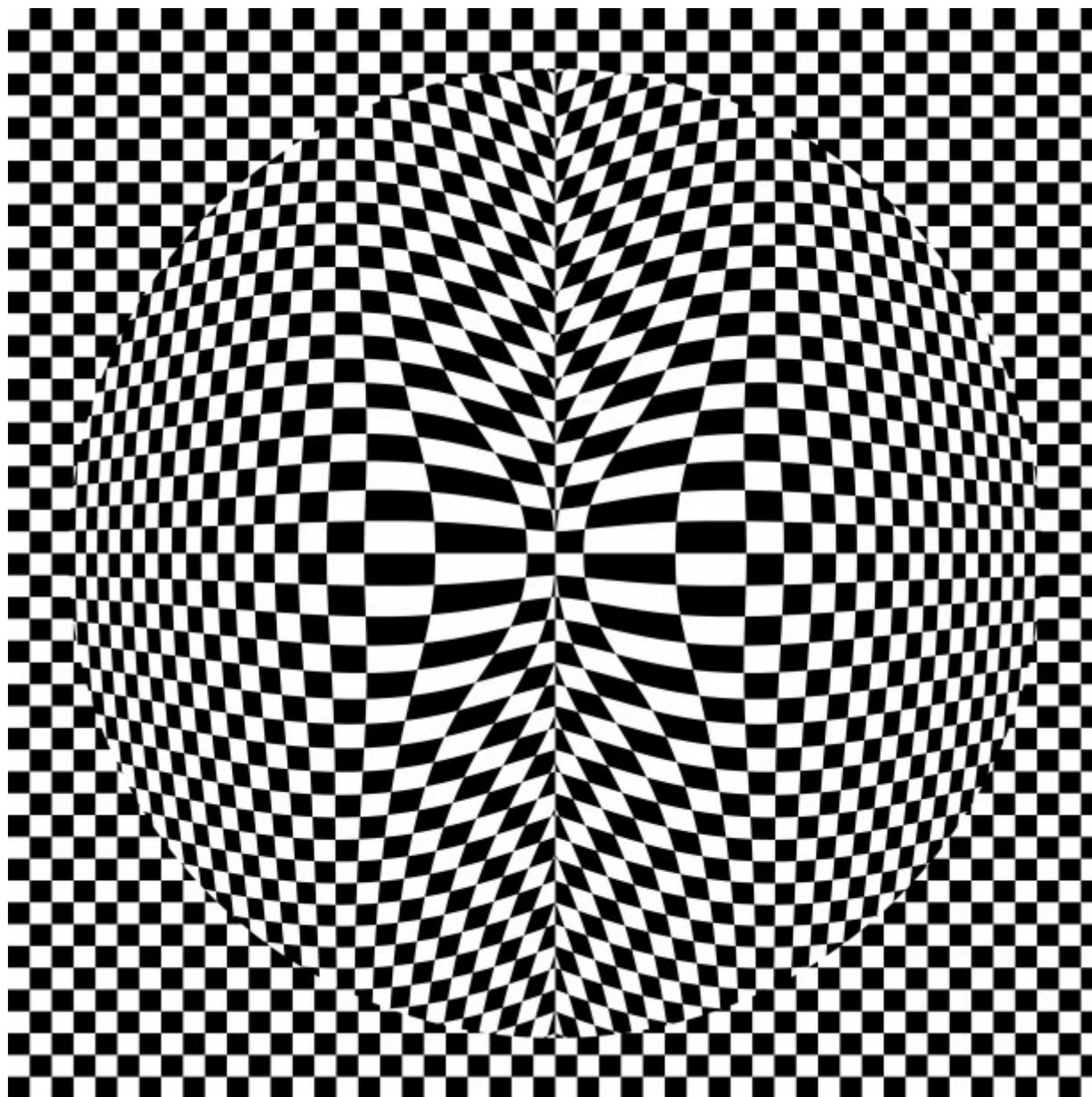
How can you describe microscopic things in detail to show you know what is different between plant and animal cells, as well as different kinds of animal cells?

Careful observation requires seeing your microscopic image in all of its detail. Observations of small things has informed Indigenous inventors and scientists for millennia.





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Artwork by Bev Doolittle

If you only explain what you see from your perspective, you might be missing key details.

The ability to describe what you see is a critical skill in science.

Looking for the slightest variations in patterns can provide a lot of information!

It is important to be aware of your brain trying to tell you what something microscopic is – this is your brain trying to make sense of patterns.



MS LS 1-1: conduct an investigation to provide evidence that living things are made of cells, either one cell or many different numbers and types of cells

MS LS 1-2: develop and use a model to describe the structure and function of a cell as a whole and ways parts of cells contribute to the function

MS LS 1-3: use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells

Describe what you see - not what it is!
No using vocabulary words that could tell
your partner what it is they are drawing.

Things to think about:

Colors

Forms

Shapes



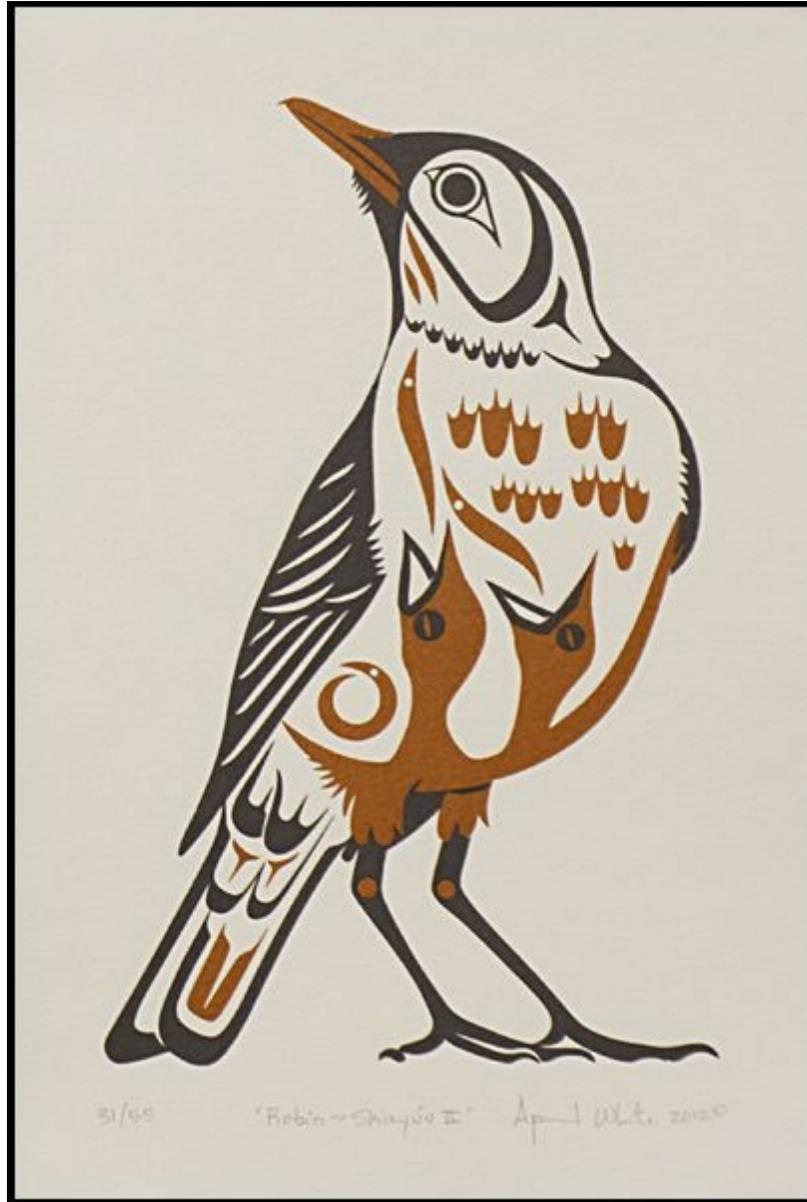
Exercise (begin when I say GO!):

- Form groups of 2 – one person will need to move desk 180 degrees to face away from the board
- You will need a piece of paper and colored pencils or pens
- One person faces the screen the other faces the back wall

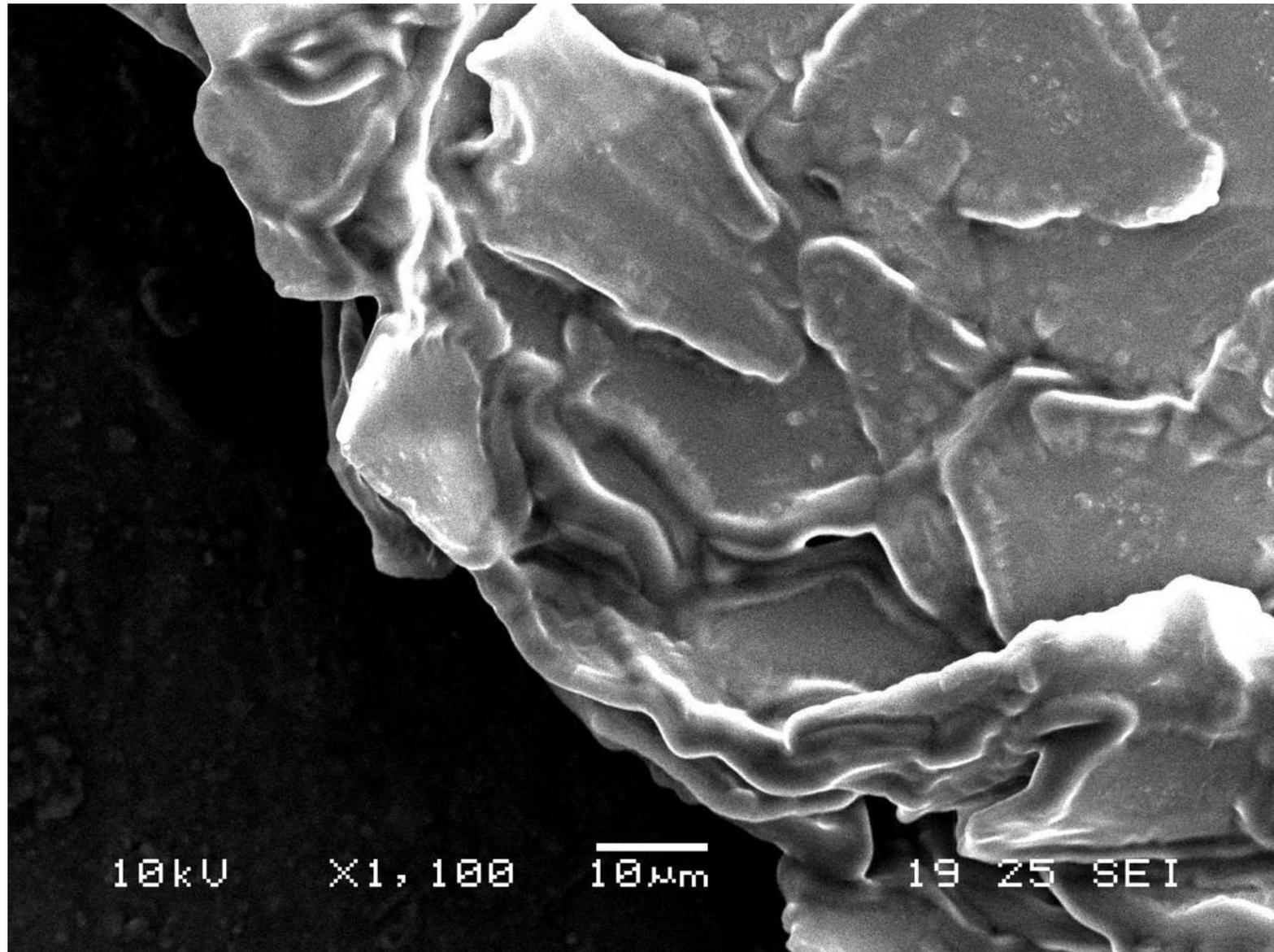


Great Blue Heron

Pauline Bull



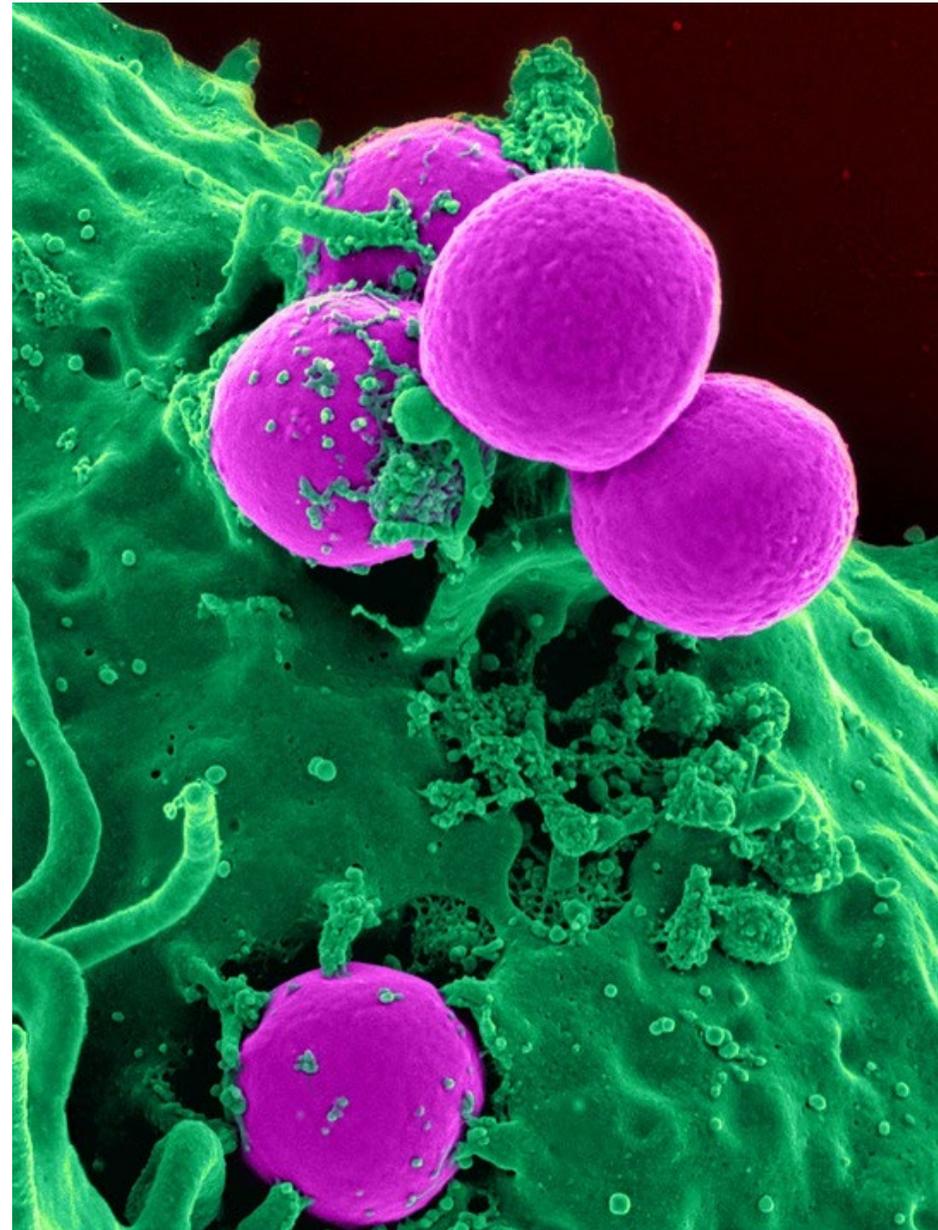
Coastal Salish art by April White
<https://ar.pinterest.com/pin/476044623103242408/?lp=true>



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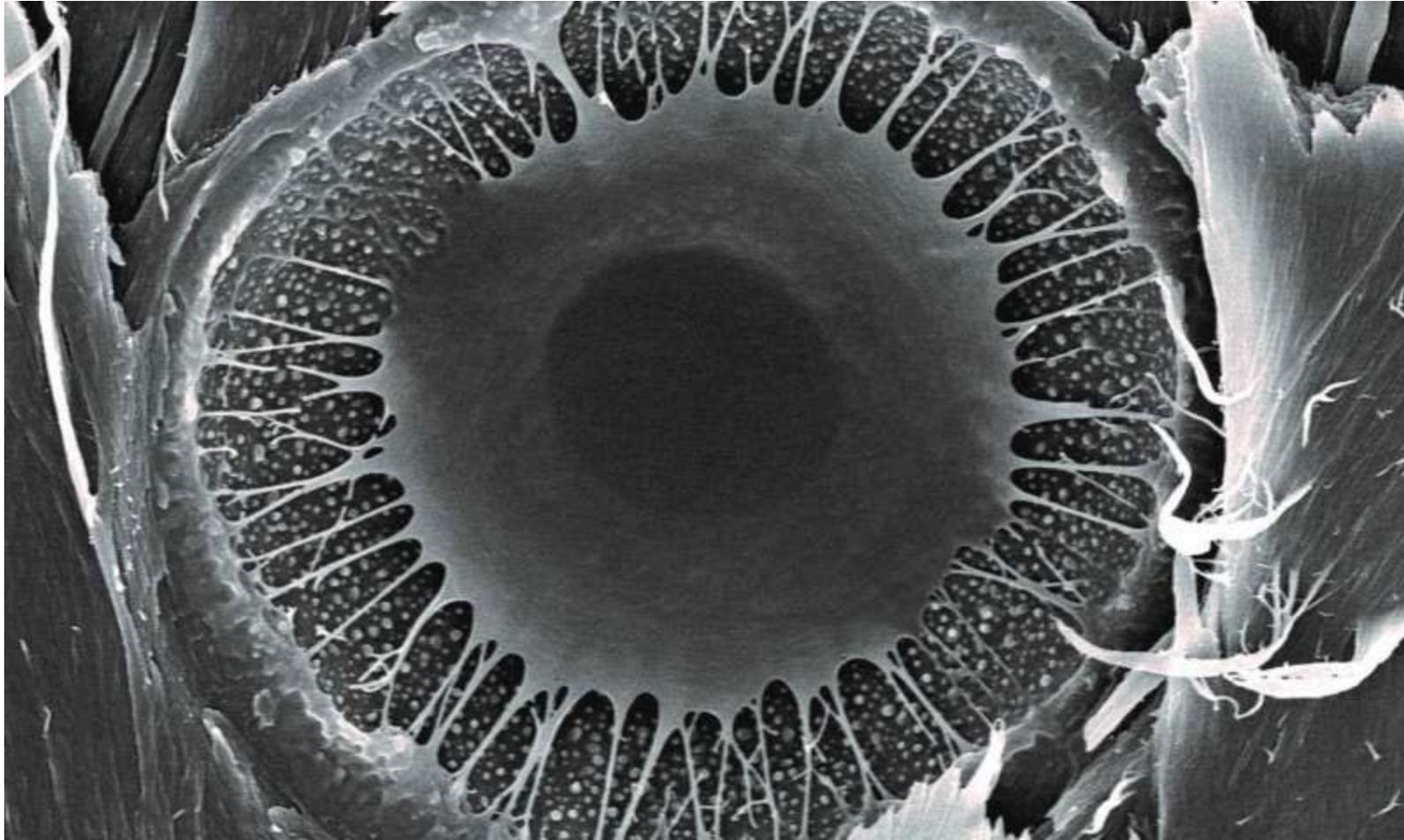


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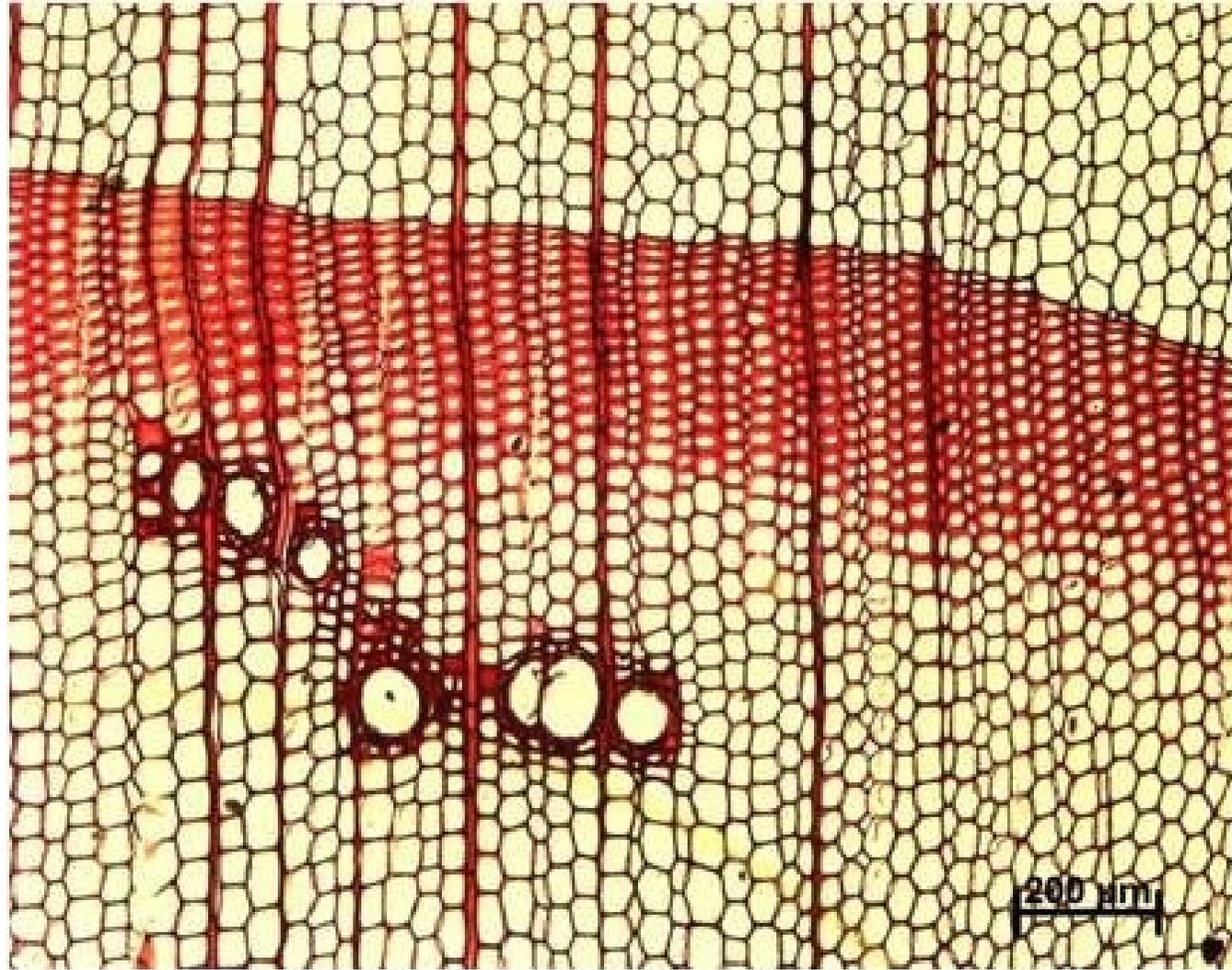
As you are learning about new kinds of cells, try to see each part of each detail before allowing your brain to make an assumption about what the image is representing. The smallest parts make up the whole. Sometimes, the answers are within the smallest parts.

You might cure cancer someday if you see an anomaly!

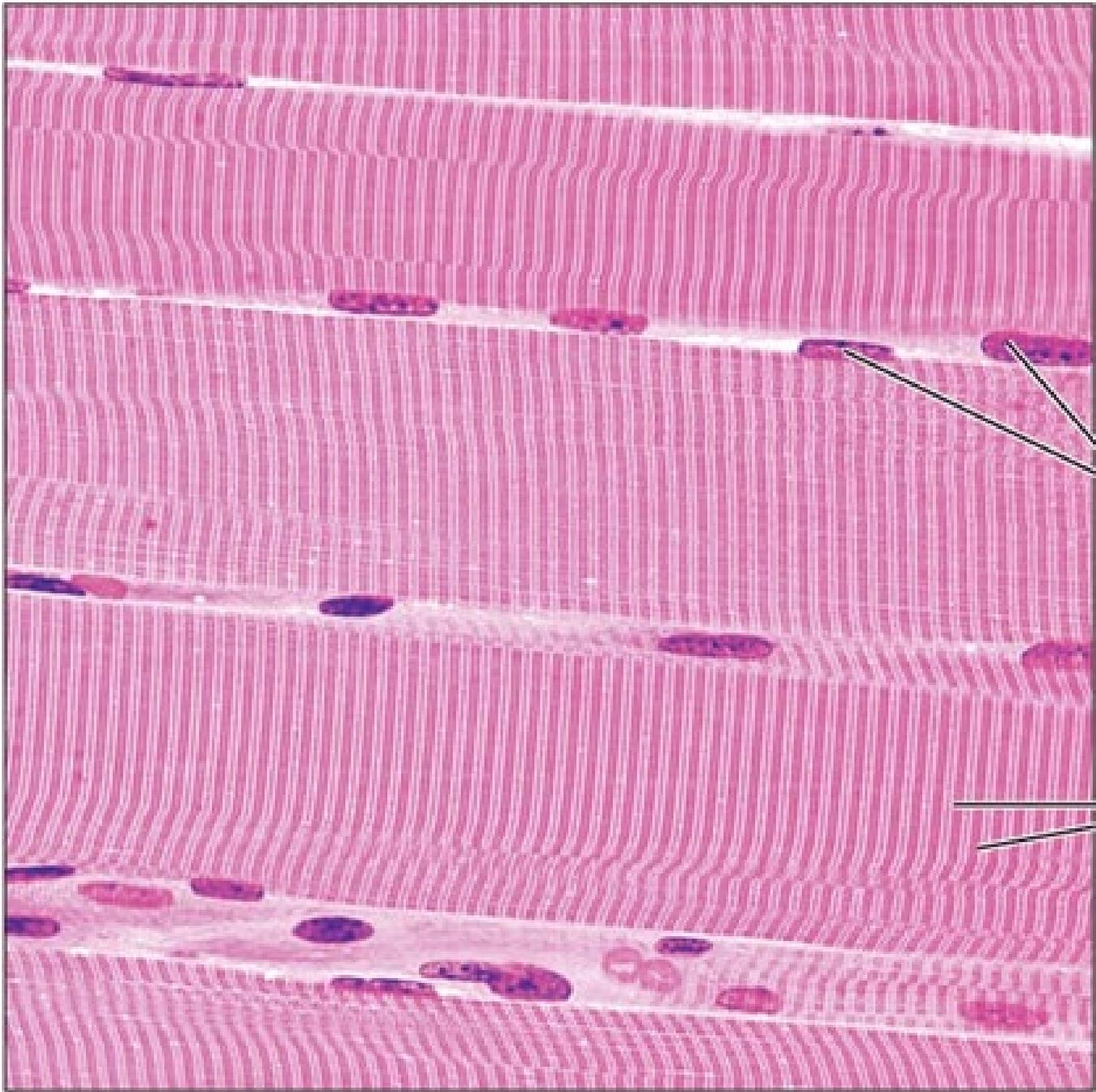




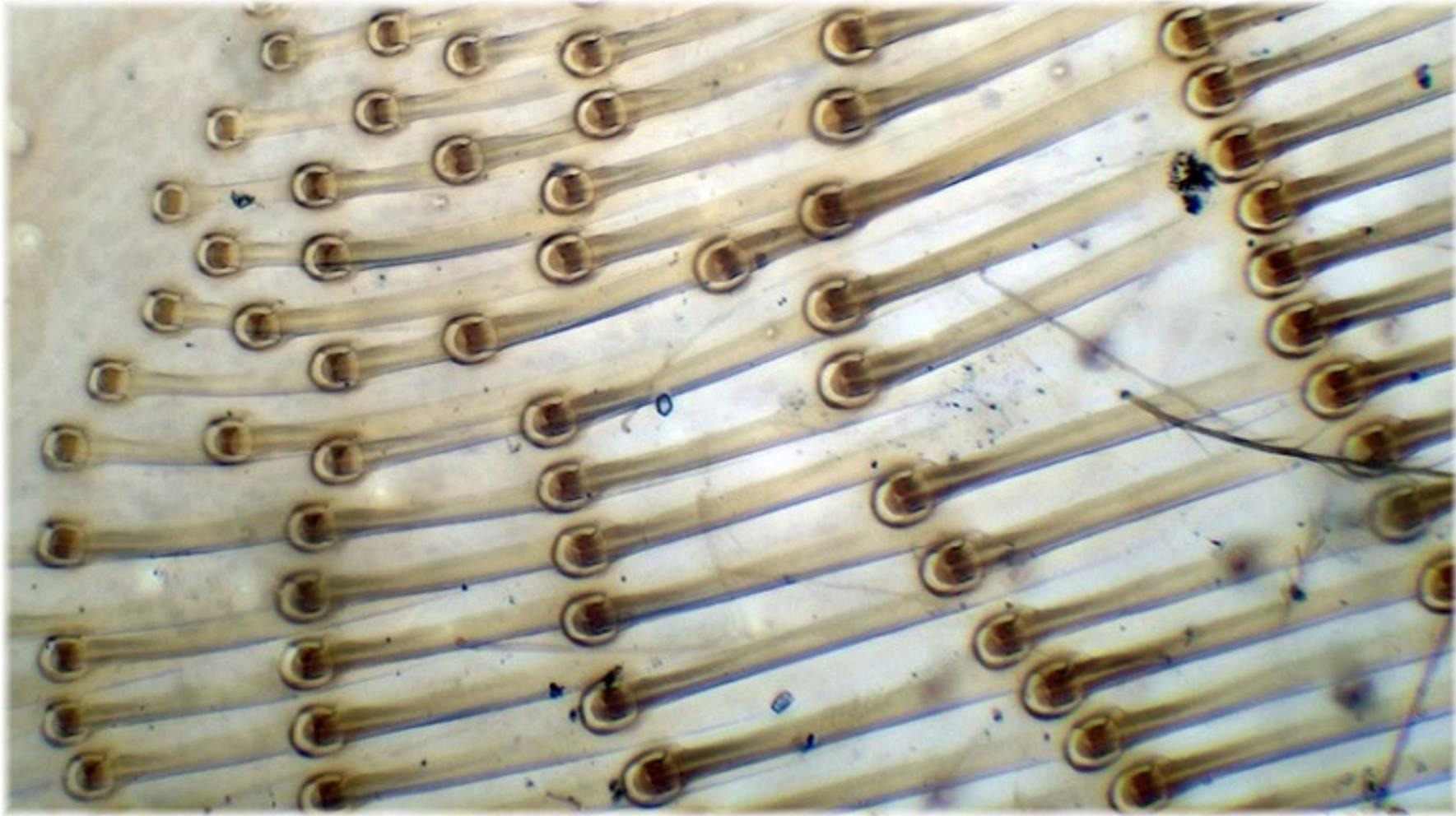
<https://phys.org/news/2019-06-cell-linked-longevity-slow-growing-ponderosa.html>



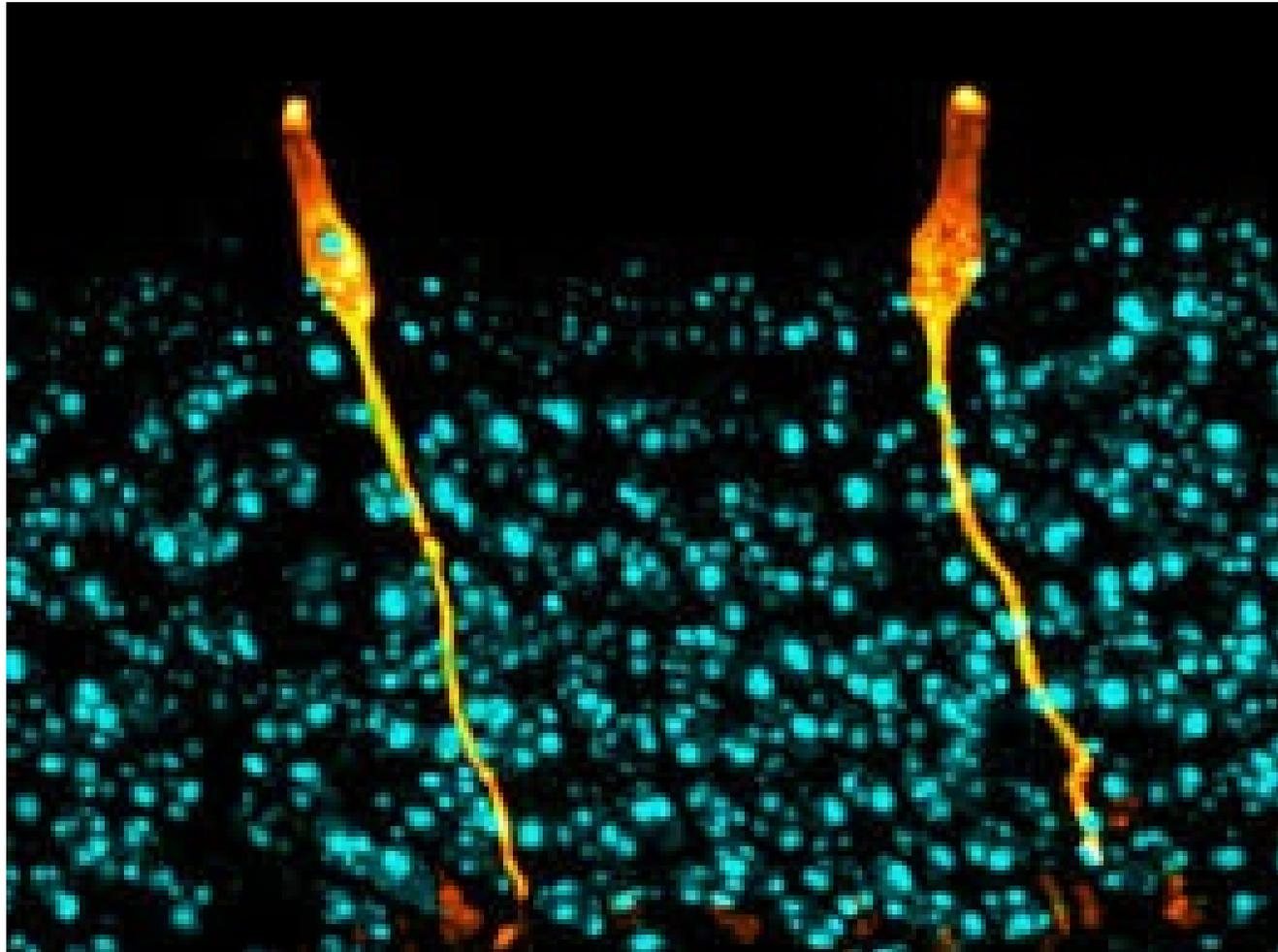
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<https://micromeander.wordpress.com/tag/xylem>



<https://hms.harvard.edu/news/new-lung-cell-type-discovered>



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Key to cell slides:

1. Ponderosa pine cell
2. Douglas fir cells
3. Human smooth muscle cells
4. Bee's leg
5. Newest discovery of a type of lung cell called pulmonary ionocytes
6. Not a cell, just a sea horse