

Marvels of Microscopy: Captivating Close-ups of Tiny Worlds

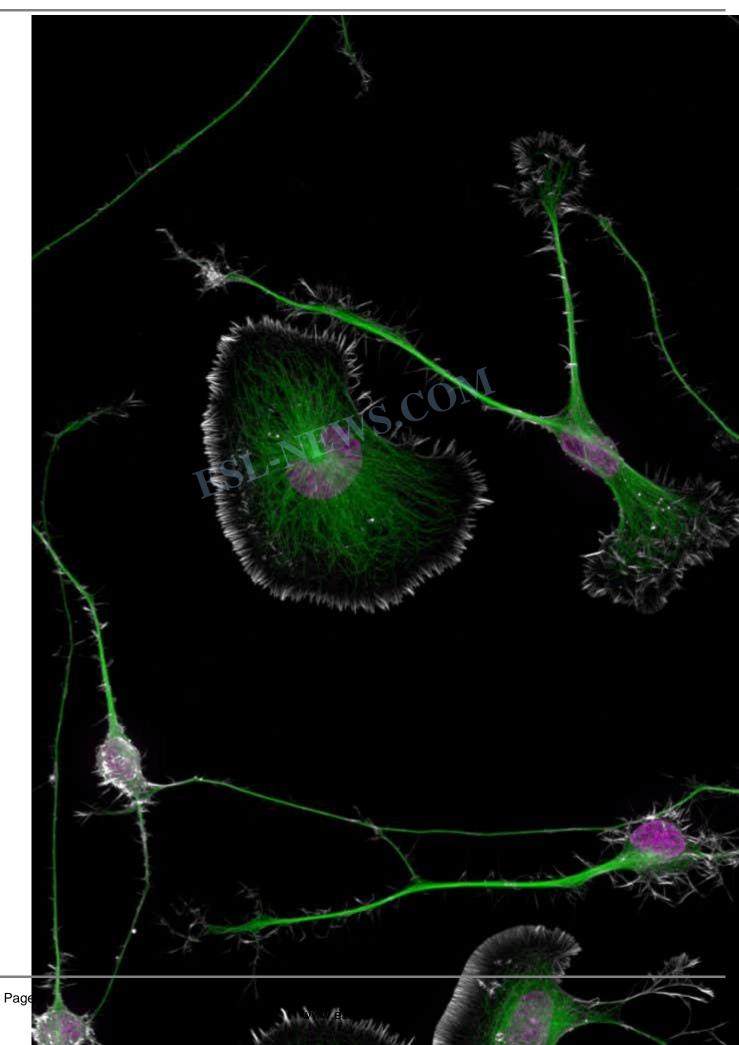
Description

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Tumour cells in a mouse's brain

Bruno Cisterna/Nikon Small World

A remarkable image capturing a delicate network of tumour cells inside a mouse's brain has been crowned the winner of the prestigious Nikon Small World photography competition. The photograph, taken by <u>Bruno Cisterna Irrazabal</u> at Augusta University in Georgia, showcases tightly packed strands of actin protein surrounding green microtubules and a violet nucleus. Cisterna is investigating how the breakdown of these structures could impact the development of neurodegenerative diseases like Alzheimer's.

Another striking entry captures maroon fruiting bodies of slime moulds by <u>Henri Koskinen</u> at the University of Helsinki. The image reveals a delicate net of thick threads enclosing a clump of spores from the species *Cribraria cancellata*.

Photographer Gerhard Vlcek's vibrant cross-section of European beachgrass showcases turquoise vascular bundles alongside orange tissue, highlighting the plant's water and food transportation systems.

Additional captivating images include miniature scales from a Ulysses butterfly's wings, the eight eyes of a green crab spider, translucent water fleas at different reproductive stages, and expressive vascular bundles in a bracken fern stem.

Each photograph offers a unique glimpse into the intricate and fascinating world of microscopy, highlighting the beauty and complexity of the natural world at a microscopic level.

Vocabulary List:

- 1. Tumour /'tju:.mər/ (noun): An abnormal mass of tissue that forms when cells divide uncontrollably.
- 3. Vascular /'væs.kjʊ.lər/ (adjective): Relating to the vessels that carry fluids such as blood or sap in plants and animals.
- 4. **Microscopy** /maɪ'krps.kə.pi/ (noun): The use of a microscope to view small objects that are invisible to the naked eye.
- 5. Fruiting /'fru:.tɪŋ/ (verb): The act of producing fruit or spores typically in plants or fungi.
- 6. **Translucent** /træn'slu:.sənt/ (adjective): Allowing light to pass through but not detailed shapes.

Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)



1. What is the primary purpose of an analgesic?

Option: To alleviate pain Option: To induce sleep Option: To increase heart rate Option: To reduce blood pressure

2. What can lead to frustration when imposed on individuals?

Option: Freedom Option: Restrictions Option: Opportunities Option: Empathy

3. Which medical condition involves abnormal cell growth?

Option: Diabetes Option: Arthritis **Option: Tumour Option:** Asthma

ESL-NEWS.COM 4. Which term is related to blood vessels?

Option: Vascular Option: Digestive Option: Muscular Option: Skeletal

5. Which scientific technique involves studying objects using a microscope?

Option: Microscopy Option: Photography Option: Astronomy **Option: Geology**

6. What is a demand for the release of a captive in exchange for money called?

Option: Bargain Option: Ransom Option: Gift Option: Donation

7. Which term describes obtaining something through coercion?

Option: Negotiation **Option: Extortion Option:** Compromise **Option: Agreement**



8. What does proximity refer to)?			
Option: Distance				
Option: Time				
Option: Weight Option: Volume				
option. volume				
9. What does the term "allure"	mean?			
Option: Repel				
Option: Attract Option: Shine				
Option: Disappear				
10. What does "dwindling" indi	cate?			
Option: Increasing	cate:			
Option: Decreasing				
Option: Stable				
Option: Growing				
Gap-Fill (Fill in the blanks	with the correct	word from the vo	cabulary list.)	
11. An	is a medication t	hat helps	pain.	
12. Cell	is essential for t	the communication	and coordination of w	arious collular
12. Cen				
activities.				
13 a	rises when obstacl	es prevent the acco	mplishment of goals	or fulfillment of
needs.				
14. Navigating through the		of modern life c	an be challenging.	
15. The spy managed to		the enemy camp v	vithout being detecte	d.
16. The undercover agent wen	t on a secret		to gather intelligence	е.
17. Security guards need to sta	ау	to prevent	any breaches.	
18. The company reached the		of success w	ith its latest product	launch.



19. The famous singer is known by the ______ "Queen of Pop."

20. The ______ of the disease has increased over the past decade.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. Patients may experience after undergoing anesthesia.		
22. The care is crucial for the recovery of surgical patients.		
23. There are legal for violating traffic rules.		
24. Strict govern the handling of hazardous materials.		
25. Drug can lead to unexpected side effects.		
26. The process of growing fruit on trees is known as .		
27. The glass allowed light to pass through but blurred the view.		
28. The spy managed to sensitive information from the enemy base.		
29. The beauty of the landscape held a mysterious .		
30. The of international diplomacy require skilled negotiators.		

Answer

Multiple Choice: 1. To alleviate pain 2. Restrictions 3. Tumour 4. Vascular 5. Microscopy 6. Ransom 7. Extortion 8. Distance 9. Attract 10. Decreasing

Gap-Fill: 11. analgesic, alleviate 12. signaling 13. Frustration 14. complexities 15. infiltrate 16. operative 17. vigilant 18. apogee 19. moniker 20. incidence

Matching sentence: 1. Disorientation 2. Postoperative 3. Penalties 4. Regulations 5. Interactions 6. Fruiting 7. Translucent 8. Exfiltrate 9. Allure 10. Complexities

CATEGORY

1. Sci/Tech - LEVEL5

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