

# OTAGO CENTRE FOR ELECTRON MICROSCOPY

<http://ocem.otago.ac.nz>

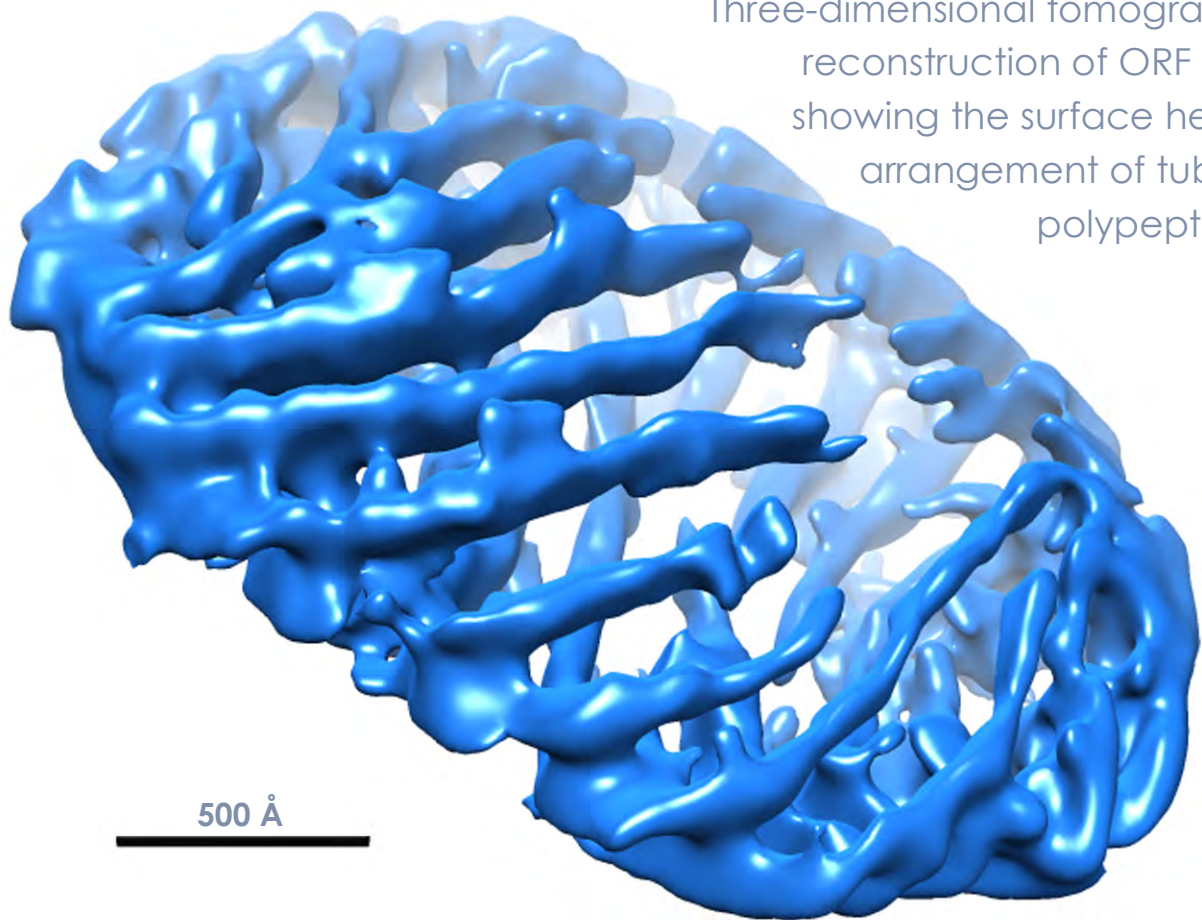
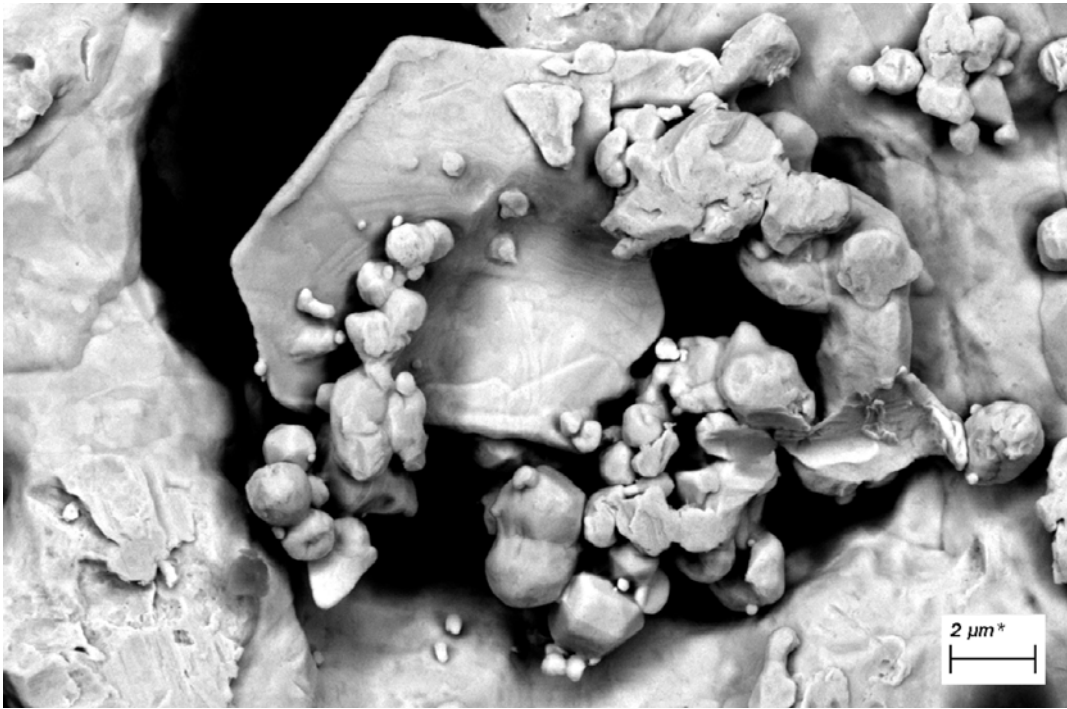


Image credit: Mariya Yevstigneyeva, Mihnea Bostina,  
Richard Easingwood and Andy Mercer.

# 2016



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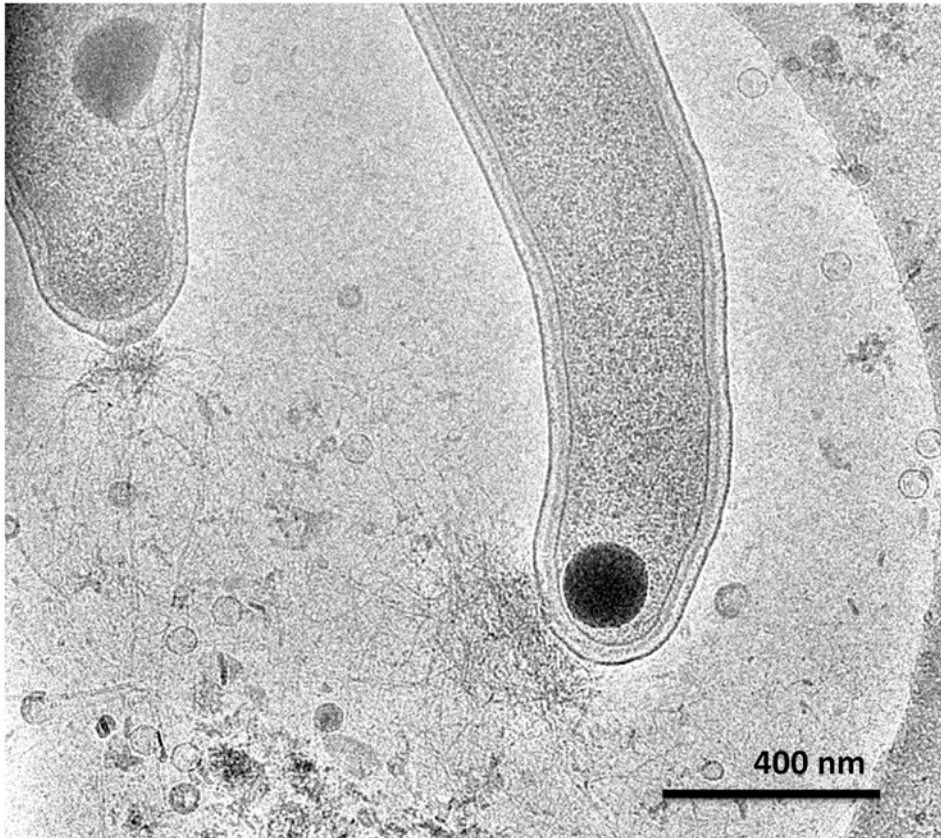
New gold crystals growing on the surface of a gold nugget from Central Otago. **Kat Lilly and Dave Craw.**

For details see *New Zealand Journal of Geology and Geophysics* 58.2:123-136 (2015).

# January

# 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31



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Cryo-electron micrograph of *Pseudomonas syringae* showing storage granule, pili and secreted vesicles.

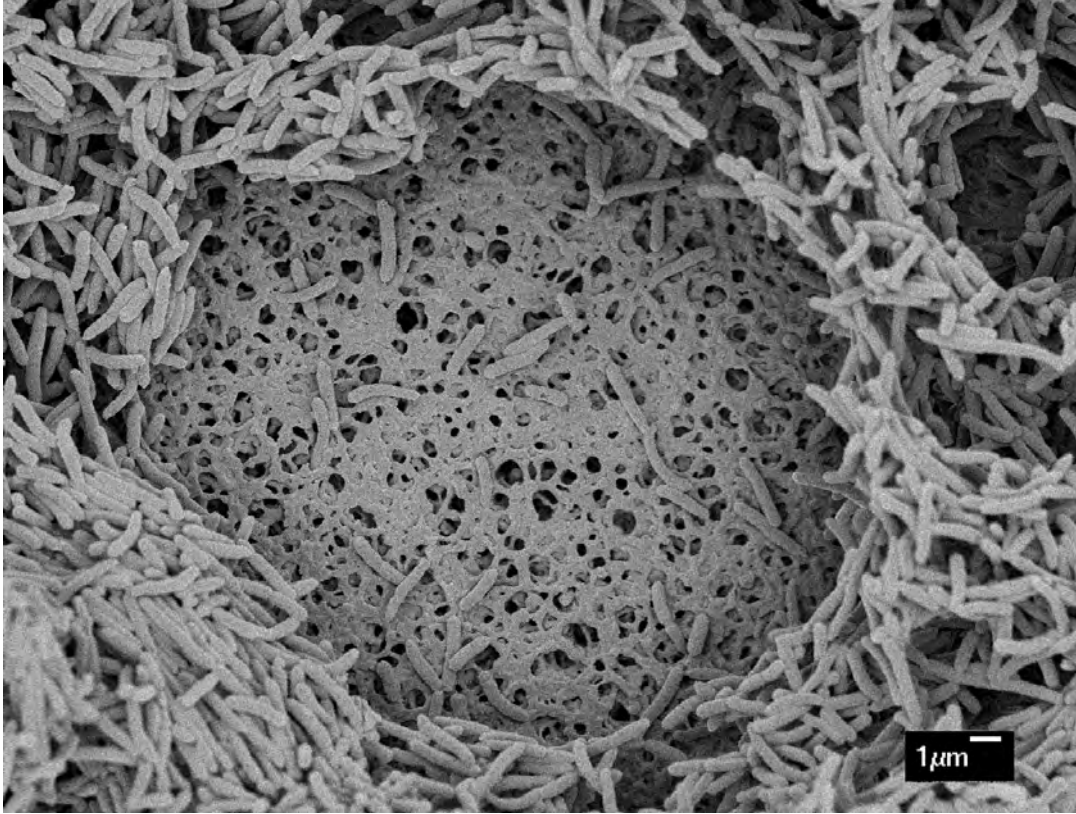
**Chelsea Harris.**

# February

# 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2	3	4	5	Waitangi Day 6	7
Waitangi Day Observed 8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
Semester 1 Begins 29						





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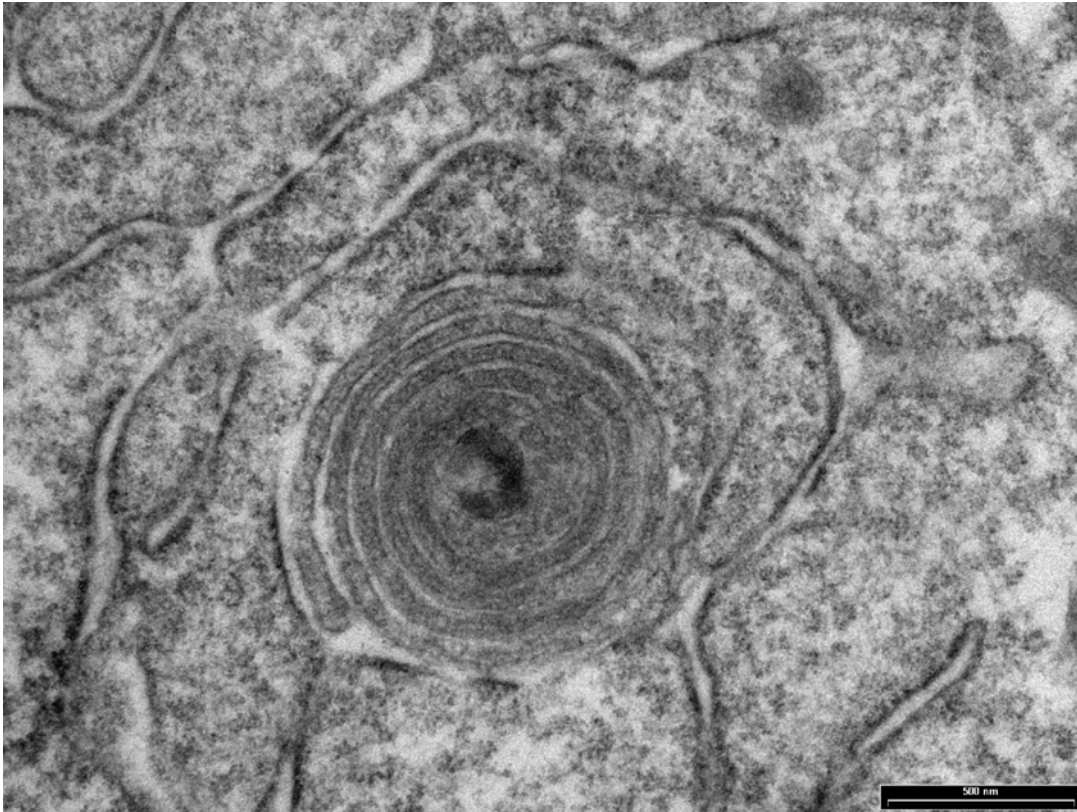
SEM of an *Escherichia coli* biofilm treated with our formulated silver nanoparticle biomedical gel - delivered within the central circle, the lysed dead cells can be clearly observed.

**Gemma Cotton.**

# March

# 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	Good Friday		
Easter Monday	Otago Anniversary Day Observed					



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Electron micrograph of a lamellar body in the somatodendritic region of a dopaminergic neuron in the ventral tegmental area of a rat brain. Lamellar bodies are cytoplasmic organelles involved in the production and storage of lipids.

**Rachael Sizemore and  
Dorothy Oorschot.**

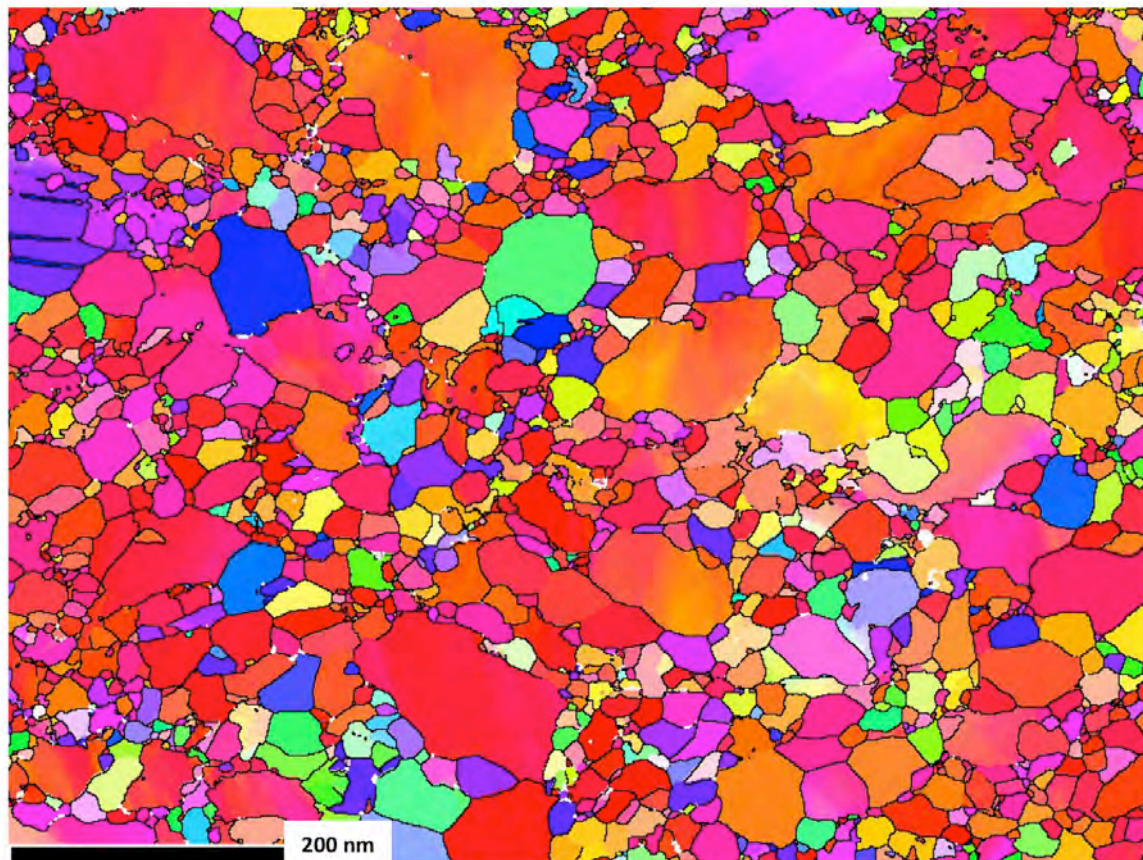
For details see *Journal of Comparative Neurology* 524:1062-80 (2016).

# April

# 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				EM Student Award Application Closing Date 1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	
ANZAC Day						





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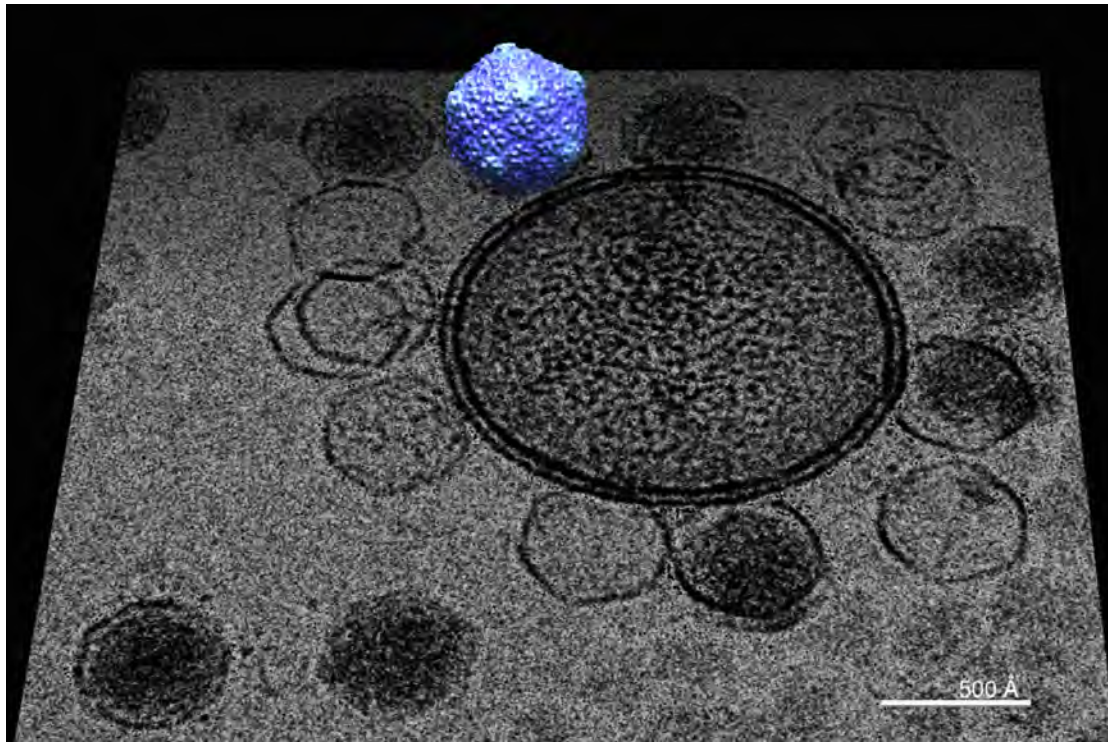
Microstructural map of an experimentally deformed ice sample obtained using electron backscatter diffraction. Colours show different orientations of crystals within the ice sample. Large grains are preserved from the starting material and show internal deformation (subtle colour variations), smaller grains have recrystallized during the experiment. [Chao Qi and David Prior](#).

For details see *Journal of Microscopy* 259:237-56 (2015).

# May

# 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					



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Microscopy**  
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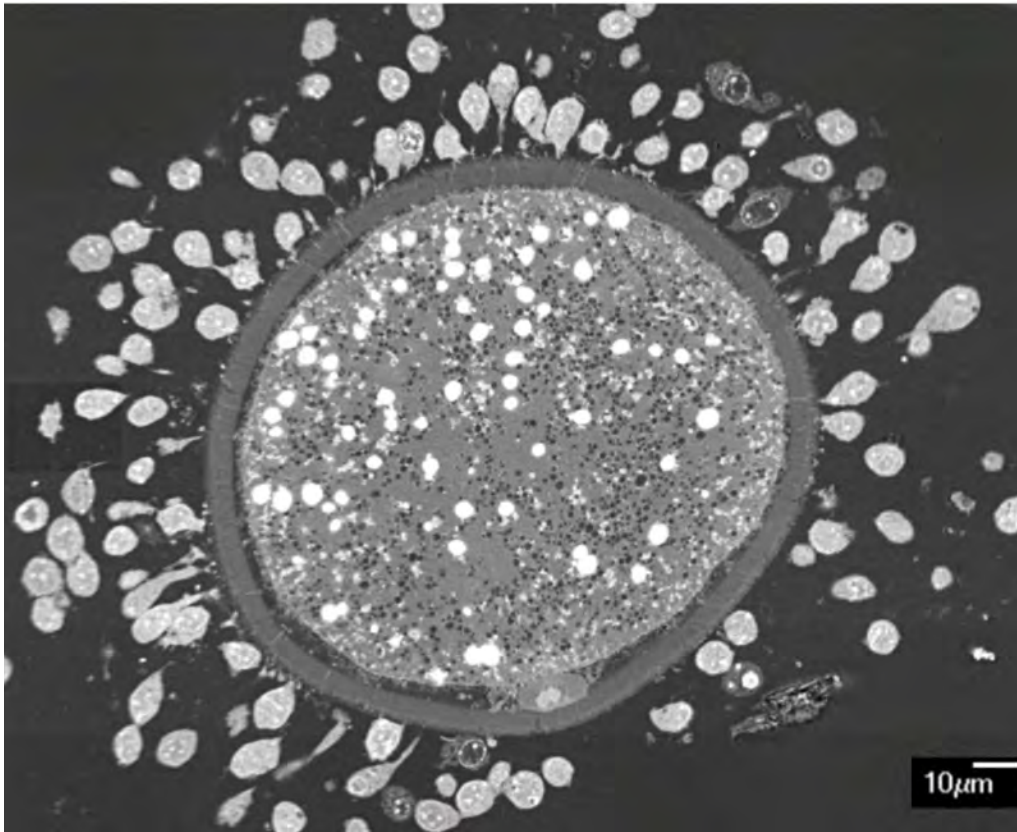
Cryo-TEM image of multiple  $\phi$ Psa17 particles attached to a membrane vesicle. This phage infects a broad range of *P. syringae* pv. *actinidiae* strains and may be suitable for formulation as a biocontrol agent. **Brian Tong.**

For details see *Viruses*, 24:3361-79 (2015).

# June

# 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	2	3	4	5
6  Queen's Birthday	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22  Semester One Ends	23	24	25	26
27	28	29	30			



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Image of a section through a mature sheep oocyte (egg) (SEM/BSE). **Karen Reader.**

For details see *Theriogenology* 83(9):1484-92 (2015).

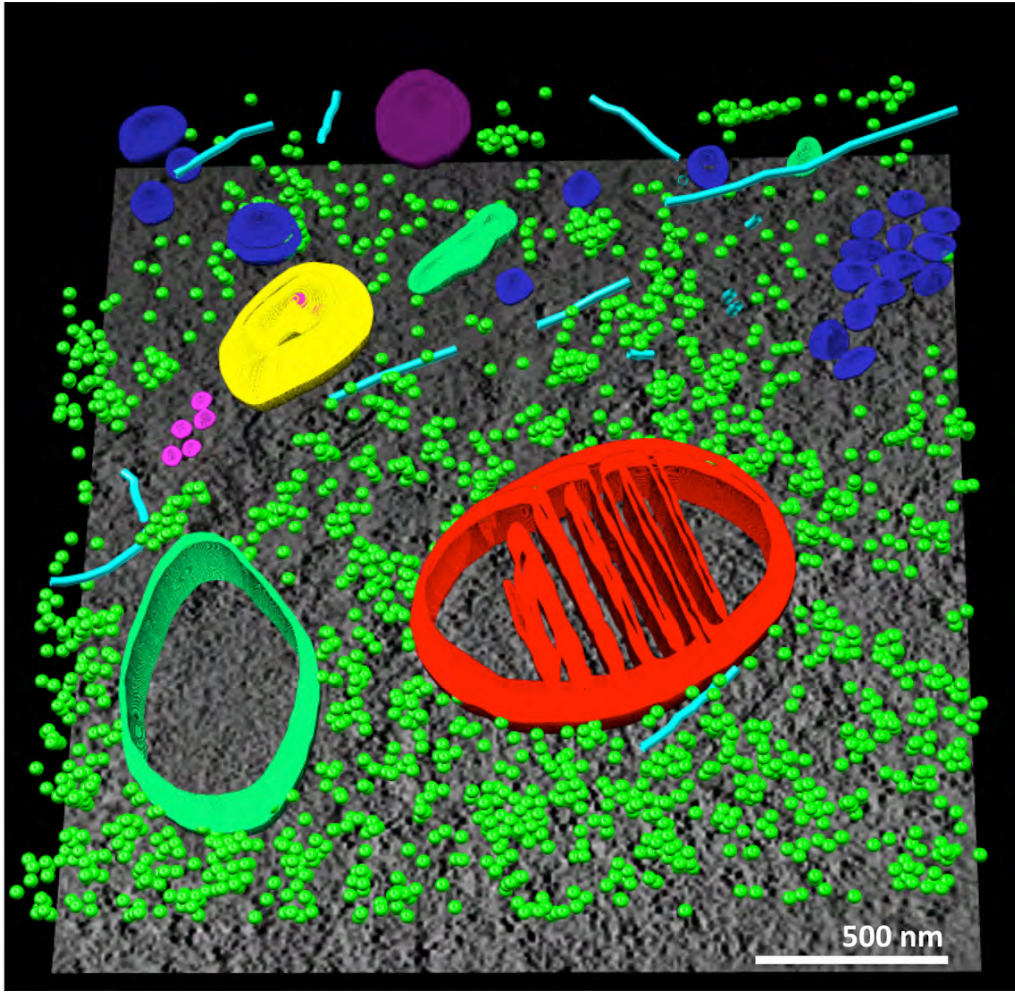
# July

# 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

*Semester Two  
Begins*





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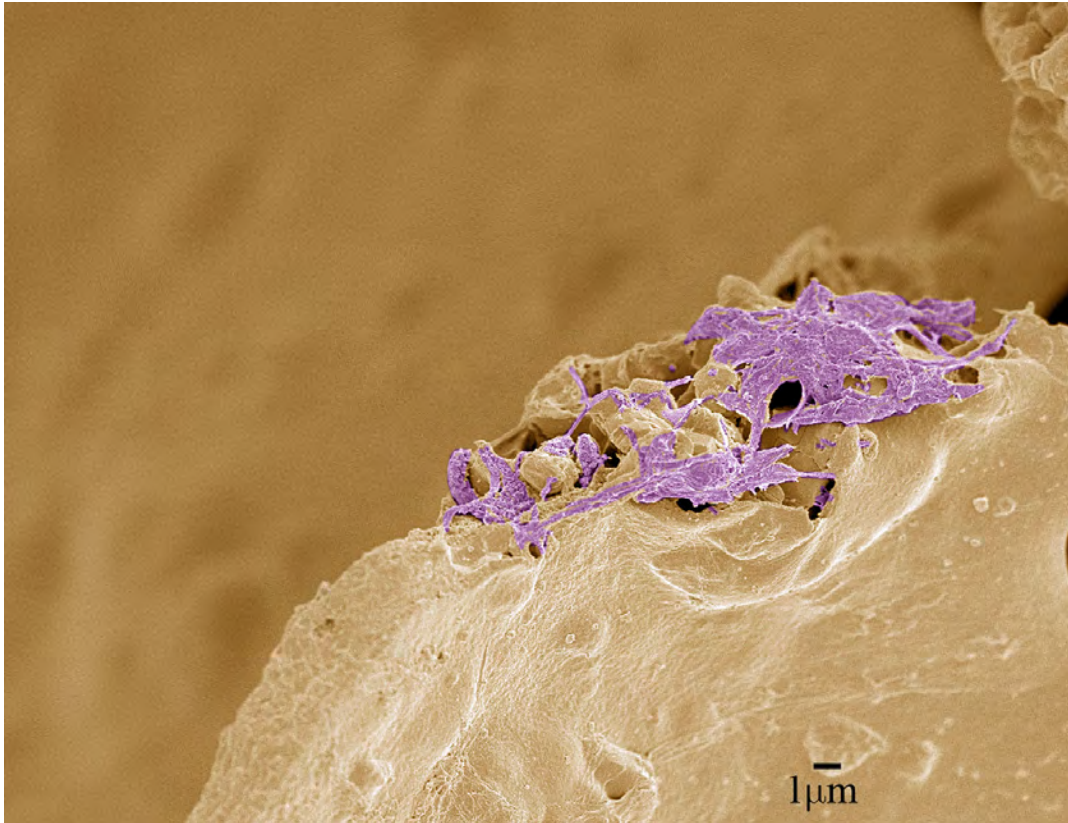
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Electron tomography of cancer cells infected with Seneca Valley Virus. A slice through the tomographic volume is shown together with segmented cellular components: ribosomes (green), microtubules (cyan), mitochondria (red), convoluted vesicles (blue). **Ryan Murphy-Dawes.**

# August

# 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				



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Osteoblastic cell attachment on a composite biomaterial surface shown by scanning electron microscopy. **Amin Shavandi.**

For details see *International Journal of Biological Macromolecules* 80:445-54 (2015).

# September

# 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			EM Student Award Application Closing Date 1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		



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An ultrathin section of the ventral posterior region of mice thalamus, processed for routine electron microscopy and viewed under a transmission electron microscope. At the centre are two excitatory synapses that appear asymmetric due to thickening of the postsynaptic density. [Steve Seo.](#)

For details see *Neuroscience*, 306:28-38 (2015),

# October

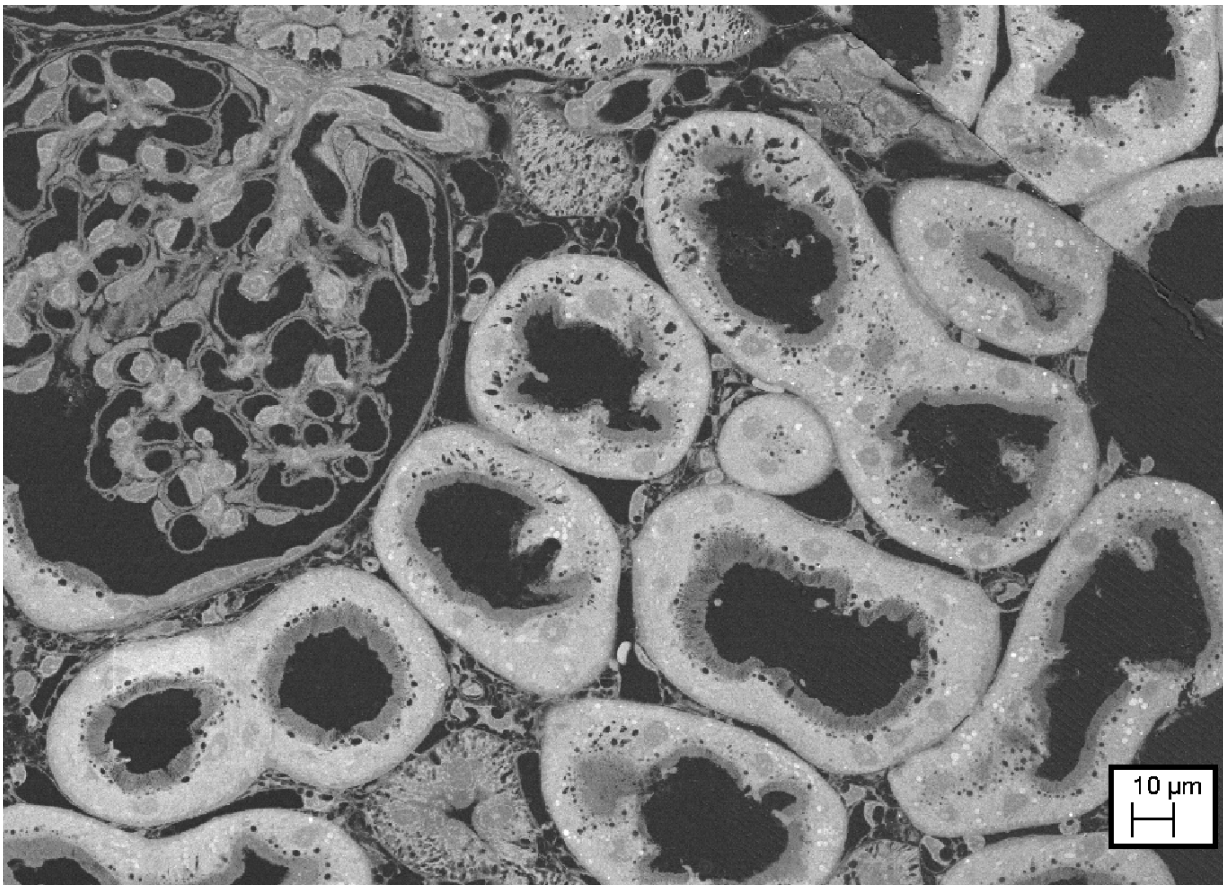
# 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
Labour Day						
31						



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Backscatter image taken from 1µm rat kidney resin section mounted on a glass slide and imaged using the Zeiss Sigma FEG-SEM. [Sharon Lequeux](#).

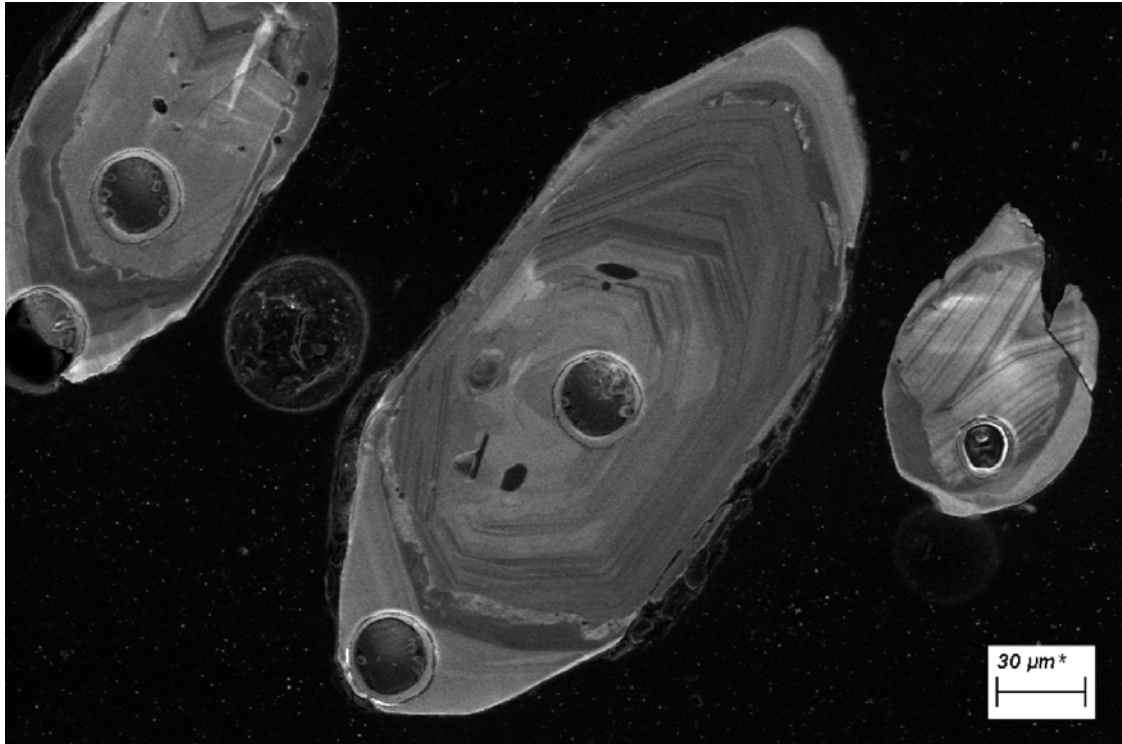
## November

## 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

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Cathodoluminescence image of zircon crystals from Paringa River, Westland. This imaging technique allows the identification of older cores and metamorphic overgrowths, which in this sample have been dated at ~70 Ma by laser ablation ICP-MS (which has left holes in the crystals) at the Centre for Trace Element Analysis, Otago. [Kat Lily and Alan Cooper](#).

## December

## 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
						Christmas Day
26	27	28	29	30	31	
Boxing Day						



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## 2017

January						
M	Tu	W	Th	F	Sa	Su
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

February						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

March						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

April						
M	Tu	W	Th	F	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

May						
M	Tu	W	Th	F	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

June						
M	Tu	W	Th	F	Sa	Su
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

July						
M	Tu	W	Th	F	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

August						
M	Tu	W	Th	F	Sa	Su
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

September						
M	Tu	W	Th	F	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

October						
M	Tu	W	Th	F	Sa	Su
						1
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

November						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

December						
M	Tu	W	Th	F	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
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The New Zealand Conference on Microscopy, Auckland 31<sup>st</sup> January – 3<sup>rd</sup> February 2017.