

Erratum to "Progressive Adaptation of a CpGV Isolate to Codling Moth Populations Resistant to CpGV-M. Viruses"

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Correction

Correction: Graillot, B.; *et al.* Progressive Adaptation of a CpGV Isolate to Codling Moth Populations Resistant to CpGV-M. *Viruses* 2014, *6*, 5135–5144

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Abstract: In our article "Progressive Adaptation of a CpGV Isolate to Codling Moth Populations Resistant to CpGV-M." (*Viruses* 2014, 6, 5135–5144; doi:10.3390/v6125135) [1] we obtained resistance values of the codling moth, *Cydia pomonella,* RGV laboratory colony [2], when challenged with Cydia pomonella Granulovirus, Mexican Isolate (CpGV-M), that were lower than those previously published [2]. Careful analysis of both the RGV colony and the CpGV-M virus stock used led to the realization that a low level contamination of this virus stock with CpGV-R5 occurred. We have made new tests with a verified stock, and the results are now in agreement with those previously published.

Keywords: *Cydia pomonella granulovirus*; codling moth; biological control; resistance development

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In our article "Progressive Adaptation of a CpGV Isolate to Codling Moth Populations Resistant to CpGV-M." (*Viruses* 2014, *6*, 5135–5144; doi:10.3390/v6125135) [1] we obtained resistance values of the RGV laboratory colony, when challenged with Cydia pomonella Granulovirus, Mexican Isolate (CpGV-M), that were lower than those previously published [2].

Careful analysis of both the RGV colony and the CpGV-M virus stock used led to the realization that a low level contamination of this virus stock with CpGV-R5 occurred.

We have made new tests with a verified stock, and the results are now in agreement with those published by Berling *et al.* [2] and in the same range as those obtained with another insect population, CpRR1 [3].

Below you will find the corrected Table 2 for our recently published article [1], in which line 7 has changed.

Table 2. Pathogenicities, measured by lethal concentration $(LC)_{50}$ and LC_{90} of four viral isolates on *Cydia pomonella* laboratory colonies susceptible and resistant to CpGV-M.

Host Colony	Virus Isolate	Total No. of Insects Tested	No. of OB/μL (95% CI)		Slope ± SE	χ^2	Resistance Factor (Fold) [a]	
			LC_{50}	LC_{90}			LC_{50}	LC_{90}
Susceptible	CpGV-M	786	13.10 (6.55–23.20)	223.10 (110.70–654.18)	1.04 ± 0.09	5.99	1.0	1.0
	NPP-R1 [b]	689	25.80 (14.48–39.93)	328.55 (196.93–702.51)	1.16 ± 0.13	1.28	2.0	1.5
	2016-r4 [b]	999	39.65 (6.40–133.91)	805.85 (260.20–1.36×10^3)	0.98 ± 0.11	13.6	3.0	3.5
	2016-r8	445	48.37 (21.18–81.44)	280.52 (158.02–857.03)	1.678 ± 0.25	4.67	3.7	1.3
	2016-r16	790	6.76 (2.6–13.37)	59.63 (27.54–278.55)	1.36 ± 0.13	11.42	0.5	0.25
Resistant	CpGV-M	1619	2.22×10^6 (1.19×10^6–5.67×10^6)	—	0.50 ± 0.07	10.6	1.7×10^5	—
	NPP-R1 [b]	578	166.31 (91.21–278.27)	1.28×10^4 (5.95×10^3–3.80×10^4)	0.70 ± 0.08	4.81	13	57
	2016-r4 [b]	1201	102.31 (63.20–146.91)	1.57×10^3 (1.01×10^3–2.97×10^3)	1.10 ± 0.10	6.21	7.8	7
	2016-r8	456	41.27 (26.97–58.96)	319.24 (207.87–582.06)	1.44 ± 0.17	1.83	3.2	1.5
	2016-r16	545	22.43 (13.73–34.36)	410.67 (240.16–846.43)	1.02 ± 0.11	3.60	1.7	1.8

[a] The pathogenicity of CpGV-M on susceptible larvae is used as a reference level; [b] Results from [2].

As a consequence, the first paragraph in the Discussion section must also be changed:

"Codling moth resistant natural populations did not respond to control by CpGV-M. The resistance levels were variable, from a hundred-fold to more than a thousand-fold resistance as a function of the relative frequency of the resistant genotypes. The RGV resistant colony, developed from a natural population, exhibits a homogeneous resistance level against CpGV-M higher than 10^5 (for LC_{50}) compared to the level for the susceptible colony."

We apologize to the readers of *Viruses* for any inconvenience this may have caused.

References

1. Graillot, B.; Berling, M.; Blachere-López, C.; Siegwart, M.; Besse, S.; López-Ferber, M. Progressive adaptation of a CpGV isolate to codling moth populations resistant to CpGV-M. *Viruses* **2014**, *6*, 5135–5144. [CrossRef] [PubMed]
2. Berling, M.; Blachere-Lopez, C.; Soubabere, O.; Lery, X.; Bonhomme, A.; Sauphanor, B.; Lopez-Ferber, M. *Cydia pomonella* granulovirus genotypes overcome virus resistance in the codling moth and improve virus efficiency by selection against resistant hosts. *Appl. Environ. Microb.* **2009**, *75*, 925–930. [CrossRef] [PubMed]
3. Asser-Kaiser, S.; Fritsch, E.; Undorf-Spahn, K.; Kienzle, J.; Eberle, K.E.; Gund, N.A.; Reineke, A.; Zebitz, C.P.W.; Heckel, D.G.; Huber, J.; *et al*. Rapid emergence of baculovirus resistance in codling moth due to dominant, sex-linked inheritance. *Science* **2007**, *317*, 1916–1918. [CrossRef] [PubMed]



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