

Freeze-dried leaves of *C. quinoa* infected with VLBR and VLG isolate were used as positive controls.

All plants of *C. quinoa* inoculated with VLBR and VLG isolates were positive in ELISA yielding A_{405} values over 1.8 and showing symptoms of mottling and leaf deformation. The virus was not detected in control plants of *C. quinoa*. Germination of the seed infected with VLBR and VLG isolates was 76% and 75 %, respectively, whereas germination of the healthy control seed was 91%. Some seedlings revealed faint symptoms of leaf mosaic, which were more pronounced with ageing of the plants. Results on the virus transmission by seed are summarised in the table.

| RBDV isolate | VLBR | VLG |
|--|---------------|---------------|
| No. of seedlings tested | 76 | 75 |
| No. (%) of seedlings infected | 28 (37%) | 51 (68%) |
| A_{405} , healthy control ^a | 0.048 ± 0.010 | 0.048 ± 0.010 |
| A_{405} , RBDV-positive control ^a | 0.572 ± 0.081 | 0.273 ± 0.070 |
| A_{405} , infected seedlings ^a | 0.183 ± 0.100 | 0.196 ± 0.102 |

^aThe data represent mean ± 3SD.

Transmission of RBDV in plants of the family *Rosaceae* by seed was discovered by Cadman (7) who found that 30 – 40% of the seedlings from RBDV-infected Lloyd George raspberry were infected. Barnett and Murant (8) confirmed that RBDV was transmitted by seed and identified the virus serologically in 26% of progeny seedlings from raspberry infected with D200 isolate belonging to the common strain of RBDV. Jones *et al.* (9) demonstrated 14% RBDV transmission by seed of *R. idaeus*, *R. sachalinensis* and *R. vulgatus buschii*. Seed transmission of RB isolate of RBDV by seed was demonstrated by Barbara *et al.* (10) with seed of cv. Carnival imported from USSR. In contrast to the results with raspberry, infected *Fragaria vesca* plants yielded only 2 infected seedlings out of 64 tested (11).

Barnett and Murant (8) transmitted RBDV by inoculation of sap to 55 species of 12 families of flowering plants and infected most of them symptomlessly. RBDV caused

systemic symptoms in some species of *Amaranthaceae*, *Chenopodiaceae* and *Cucurbitaceae*, but seed transmission of the virus was not tested, although some of those species are currently used as assay hosts for viruses infecting small fruits and fruit trees.

According to our best knowledge, the only experiment with RBDV transmission by seed of *C. quinoa*, a non-rosaceous host, was conducted by Murant *et al.* (11). They found no infection in 100 seedlings from seed set by RBDV-infected plants. The high percentage transmission of two isolates of RBDV in our experiments supported by ELISA data clearly demonstrated a possibility of RBDV transmission by seed of *C. quinoa*, a non-rosaceous host.

Acknowledgements. This research was supported by the grant OC 823.10 of the Ministry of Education of the Czech Republic.

References

1. Jones AT, *Crop Res.* **26**, 127–171, 1986.
2. Bulger MA, Stace-Smith R, Martin RR, *Plant Dis* **74**, 514–517, 1990.
3. Špak J, Kubelková D, Janečková M, *4th International Symposium on Diagnosis and Identification of Plant Pathogens*, Bonn, September 9–12, 1996.
4. Špak J, Kubelková D, Janečková M, *Proceedings of the 17th International Symposium on Virus and Virus-like Diseases of Temperate Fruit Crops*, Bethesda, 1997, p. 60.
5. Clark MF, Adams AN, *J. Gen. Virol.* **34**, 475–483, 1977.
6. Sutula CL, Gillet JM, Morrissey SM, Ramsdell DC, *Plant Dis.* **70**, 722–726, 1986.
7. Cadman CH, *Plant Dis. Rep.* **49**, 230–238, 1965.
8. Barnett OW, Murant AF, *Ann. Appl. Biol.* **65**, 435–449, 1970.
9. Jones AT, Murant AF, Jennings DL, Wood GA, *Ann. Appl. Biol.* **100**, 135–147, 1982.
10. Barbara DJ, Jones AT, Henderson SJ, Wilson SC, Knight VH, *Ann. Appl. Biol.* **105**, 49–54, 1984.
11. Murant AF, Chambers J, Jones AT, *Ann. Appl. Biol.* **77**, 271–281, 1974.

ERRATUM

The title of the article by M. Chen, M.Y. Fan, D.Z. Bi, J.Z. Zhang and X.R. Chen that appeared in *Acta virologica* **42** (No. 2), 91–93 (1998) should read „**SEQUENCE ANALYSIS OF A FRAGMENT OF *rOmpA* GENE OF SEVERAL ISOLATES OF SPOTTED FEVER GROUP RICKETTSIAE FROM CHINA**“.