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Resistance of barley landraces collected in Pakistan to isolates of *Blumeria graminis* f. sp. *hordei*

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Landraces of barley are important in many mountain regions because they are often the only crop possible to be cultivated on slopes at high elevations (e.g. Pakistan). Powdery mildew (*Blumeria graminis* f. sp. *hordei*) is one of the most destructive foliar diseases of barley. In countries where mildew is a problem, yield losses in experimental tests often exceed 25%, although average losses in barley production are smaller and about 10%. Barley landraces constitutes a rich genetic resource, and many examples of their successful use have been reported. However only for less than 2 percent of barley landraces the attempts were made to identify powdery mildew resistance genes using differential lines and isolates. Seed samples of 215 barley landraces from Pakistan were used in resistance tests with 21 differential isolates of powdery mildew. This investigation identified new sources of resistance to barley powdery mildew in lines selected from barley landraces collected in Pakistan. These new sources confer resistance to a large number of powdery mildew virulence genes prevalent in Europe and may contribute to the diversity of the powdery mildew resistance gene pool available for barley breeders.