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Production of the refolded oligopeptide-binding protein (OppA) encoded by the citrus pathogen *Xanthomonas axonopodis* pv. *citri*

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ABSTRACT. The oligopeptide-binding protein, OppA, binds and ushers oligopeptide substrates to the membrane-associated oligopeptide permease (Opp), a multi-component ABC-type transporter involved in the uptake of oligopeptides expressed by several bacterial species. In the present study, we report the cloning, purification, refolding and conformational analysis of a recombinant OppA protein derived from *Xanthomonas axonopodis* pv. *citri* (*X. citri*), the etiological agent of citrus canker. The *oppA* gene was expressed in *Escherichia coli* BL21 (DE3) strain under optimized inducing conditions and the recombinant protein remained largely insoluble. Solubilization was achieved following refolding of the denatured protein. Circular dichroism analysis indicated that the recombinant OppA protein preserved conformational features of orthologs expressed by other bacterial species. The refolded recombinant OppA represents a useful tool for structural and functional analyses of the *X. citri* protein.

Key words: OppA; *Xanthomonas citri*; Refolding

