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Jonathan B Weitzman

Email: jonathanweitzman@hotmail.com

Protein phosphorylation on serine, threonine or tyrosine residues, can regulate [protein-protein interactions](#) via specific binding to the phospho-residues. In the February 21 [Science](#) Elia *et al.* describe a proteomic screen designed to isolate novel phospho-binding proteins (*Science* 2003, **299**:1228-1231). The technique involves the creation of a library of biased partially degenerate phosphopeptides that are immobilized and used as a 'bait' in a screen for binding proteins. Elia *et al.* tested the technique with peptides resembling substrates of cyclin-dependent kinase and isolated the mitotic kinase Plk1 (polo-like kinase 1). The phospho-binding domain of Plk1 is important for localisation to the centrosome during mitosis. Elia *et al.* identified the phosphopeptide-binding domain and tested binding specificities, providing important proof-of-principle for their approach.

References

1. Protein-protein interactions define specificity in signal transduction.
2. *Science*, [<http://www.sciencemag.org>]