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In the Early Edition of the *Proceedings of the National Academy of Sciences* Salomon *et al.* describe a sensitive method, exploiting multidimensional liquid chromatography/mass spectrometry, for measuring dynamic phosphotyrosine modifications (*Proc Natl Acad Sci USA* 2002, 10.1073 pnas.2436191100). The approach has several advantages over conventional two-dimensional gel electrophoresis. Whole cell extracts are first enriched for phosphotyrosine-containing polypeptides by immunoprecipitation using a specific anti-phosphotyrosine antibody. After tryptic digestion samples, are further enriched by methyl esterification and immobilized metal affinity chromatography. Reversed phase HPLC and tandem mass spectrometry allowed Salomon *et al.*unambiguously to assign many sites of tyrosine phosphorylation. They tested the technique by looking at tyrosine phosphorylation events following T-cell-receptor ligation in Jurkat cells and following BCR-Abl signaling in leukemia cells. A large number of the phosphotyrosine sites that they identified have previously been found using more traditional methods.

References

1. *Proceedings of the National Academy of Science*s , [http://www.pnas.org]

2. Phosphoamino acid analysis.