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Finger arrays

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In the June 19 issue of [Proceedings of the National Academy of Sciences](#), Bulyk *et al.* describe the use of [double-stranded DNA microarrays](#) to study the sequence specificity of DNA-protein interactions (*Proc Natl Acad Sci USA* 2001, **98**:7158-7163). They chose to look at recognition by the [zinc-finger](#), a domain found in many human transcription factors. They examined the binding specificities of the Zif268 protein and mutants that vary in the second of three zinc fingers. Zif268 proteins bound to DNA spots were detected with by immunofluorescence. Bulyk *et al.* demonstrate that the relative fluorescence intensities correlated well with DNA-binding affinities. The microarray-based assay could distinguish proteins with very similar DNA-binding specificities and were useful in determining the sequence preferences of libraries of DNA-binding domains. The authors suggest that microarrays could be used to characterize a range of DNA-binding proteins and for genome-wide analysis of transcription factor binding sites.

References

1. *Proceedings of the National Academy of Sciences* , [<http://www.pnas.org>]
2. Quantifying DNA-protein interactions by double-stranded DNA arrays.
3. Zinc finger-DNA recognition: crystal structure of a Zif268-DNA complex at 2.1 Å.