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## Proteome chips

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Jonathan B Weitzman

Email: jonathanweitzman@hotmail.com

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In the July 26 *ScienceXpress*, Heng Zhu and colleagues from *Yale University* describe the construction of a *proteome microarray* containing approximately 80% of all yeast proteins (*ScienceXpress* 2001, 10.1126/science.1062191). They built a high-quality collection of 5800 yeast open reading frames (ORFs), representing 93.5% of all yeast genes. Each ORF was fused to a glutathione-S-transferase (GST)-HisX6 tag and expressed in yeast under the inducible *GALI* promoter. Proteins were spotted at high spatial density onto nickel-coated slides (which binds to the HisX6 tag). The yeast proteome chip was then screened with biotinylated calmodulin, and protein-protein interactions were detected using Cy3-labelled streptavidin. Zhu *et al.* identified known partners and 33 new potential calmodulin-binding proteins, allowing them to define a common binding motif. They also screened the proteome for proteins that bind phosphatidylinositide (PI). PI liposomes containing phosphatidylcholine and biotinylated phospholipids identified 150 different protein targets, many of which are uncharacterized proteins. These *results* emphasize the power of proteome chip approaches for high-throughput screening of protein interactions.

## References

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2. Yale University , [<http://www.yale.edu>]
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