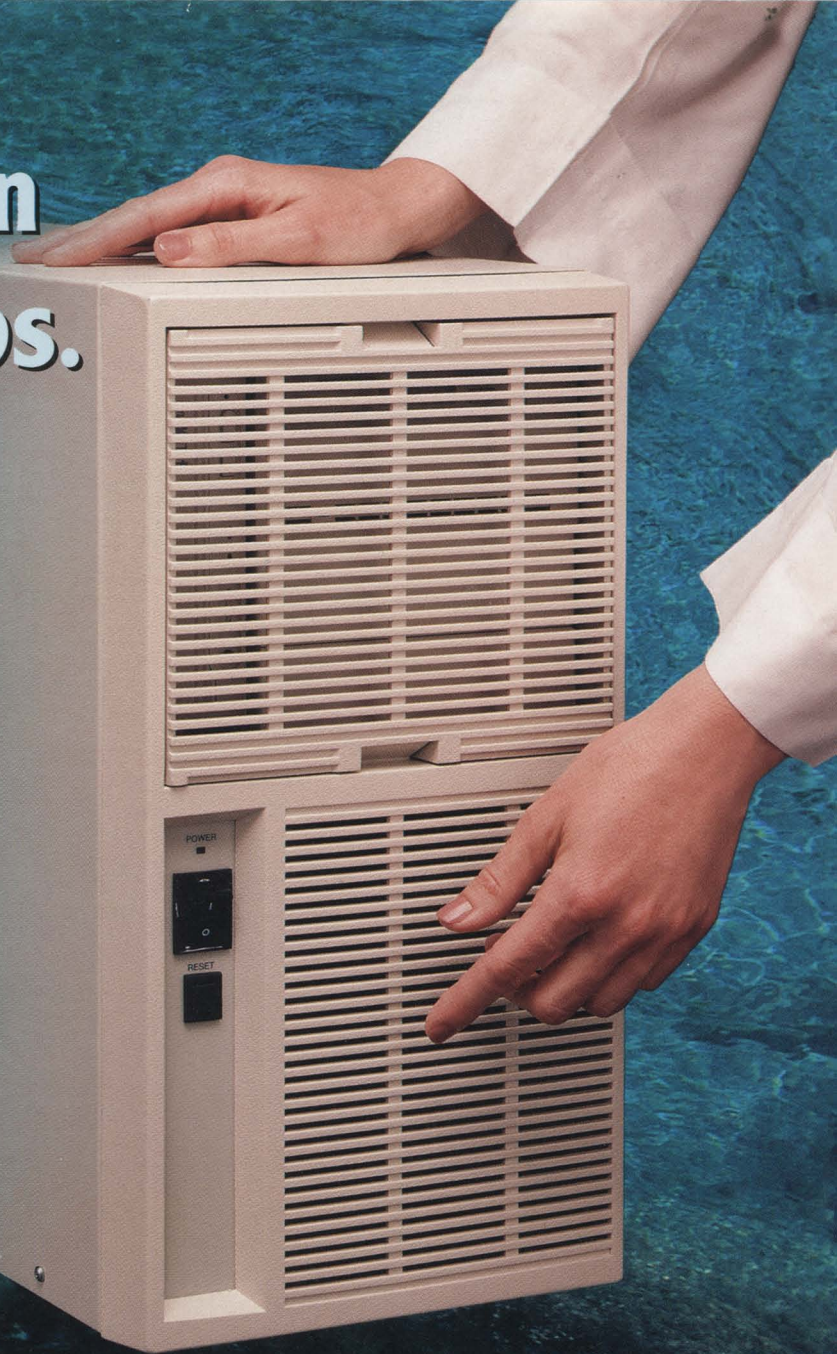


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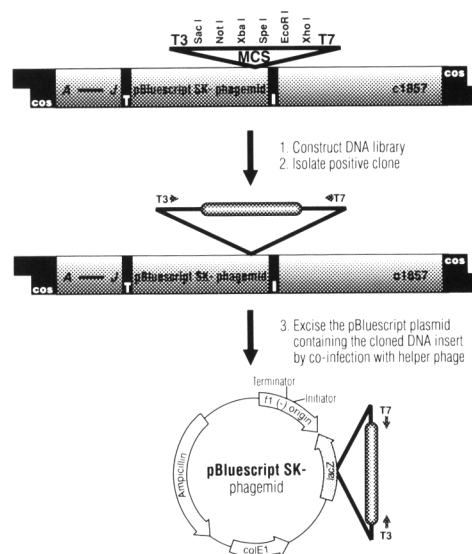
## Lambda ZAP® Vectors for Easy Library Screening and Amplification

Stratagene's Lambda ZAP® vectors® combine the high efficiency of lambda cloning—for easier library screening and amplification—with the convenience of a plasmid system.<sup>1,2</sup> In addition, the insert size bias inherent in plasmid libraries is not found with libraries constructed in lambda phage. Stratagene offers several derivatives of the Lambda ZAP vector, each tailored to meet your specific cloning needs. The Lambda ZAP II vector has six unique cloning sites that accommodate inserts from 0-10 kb in length, and recombinants can be screened with either DNA or antibody probes. *In vivo* excision of the pBluescript® plasmid allows for rapid characterization of inserts in a plasmid system without time-consuming phage preparations or sub-cloning steps. In addition, entire libraries can be excised for screening and analysis.

The Uni-ZAP XR® vector, Lambda ZAP II vector digested for unidirectional cloning, ensures that all clones are in the proper orientation for protein expression. The ZAP Express™ vector allows unidirectional cloning, both eukaryotic and prokaryotic expression, and increased cloning capacity up to 12 kb. For studying signal transduction, cell growth and differentiation, gene expression, secretion and metabolism, Stratagene provides a complete line of HybriZAP® two-hybrid system products for generating cDNA or genomic libraries.

### REFERENCES

- Short, J.M., Fernandez, J.M., Sorge, J.A., and Huse, W.D. (1988) *Nucl. Acids Res.* 16: 7583-7600.



### Lambda ZAP® II Vector Excision

Individual lambda plaques or an entire lambda library is allowed to infect cells that are co-infected with filamentous helper phage. Inside the cell, trans-acting proteins from the helper phage recognize two separate domains (initiator and terminator) positioned within the Lambda ZAP vector arms. Both of these signals are recognized by the helper phage gene III protein and a new DNA strand is synthesized, displacing the existing strand. The displaced strand is packaged as a filamentous phage by the helper phage proteins, and secreted from the cell. pBluescript plasmids are recovered by infecting an F' strain and growing in the presence of ampicillin.

## Construct Directional cDNA Libraries with Stratagene's cDNA Synthesis Kits\*\*

Stratagene's cDNA Synthesis Kit is the only cDNA synthesis kit quality controlled to produce a library with  $2 \times 10^6$  primary clones. The method of choice for construction of directional cDNA libraries is the cDNA Synthesis Kit from Stratagene. This kit is designed to make directional cDNA libraries in your choice of innovative Lambda ZAP® cloning vectors. The kit uses 5-methyl-dCTP during first-strand synthesis, eliminating the need for site-specific methylases. All of Stratagene's cDNA synthesis kits are provided with *Pfu* DNA polymerase, instead of Klenow polymerase, to create blunt-ended cDNA before adaptor ligation. Studies show that using *Pfu* DNA polymerase to end polish cDNA creates more efficient adaptor ligation, resulting in more primary clones. Fragments that have been cloned into any Lambda ZAP vector can be quickly excised to generate subclones or entire libraries in versatile phagemid vectors. This means no more time-consuming subcloning experiments.

For construction of high-quality directional cDNA libraries, Stratagene provides complete kits that include your choice of powerful Lambda ZAP vector, the cDNA Synthesis Kit and Gigapack® III Gold packaging extract. All components are also available separately.

\*U.S. Patent Nos. 5,128,256 and 5,286,636, and European Patent No. 286200B1  
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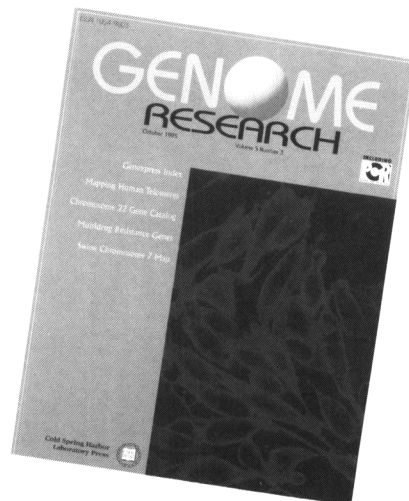
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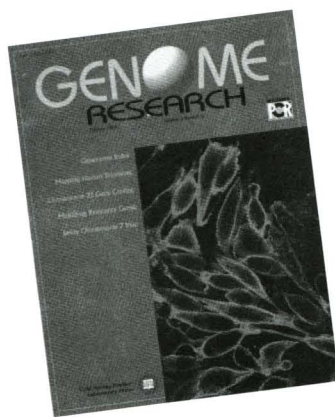
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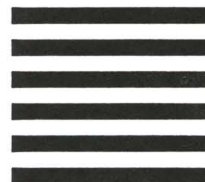
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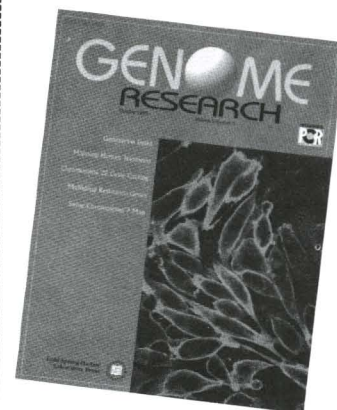


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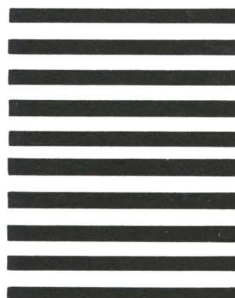
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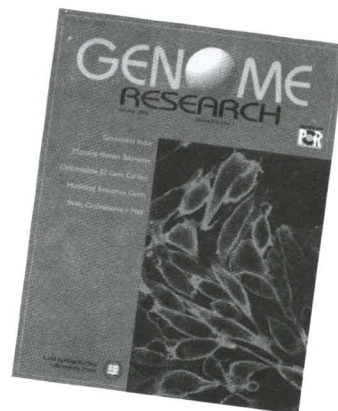
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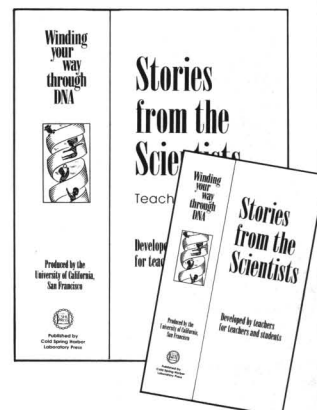
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The creators of *Winding Your Way Through DNA* return with a documentary that tells the story of two of the most famous partnerships in biology. Francis Crick and James Watson describe the events that led to the discovery of the structure of DNA, and Herbert Boyer and Stanley Cohen recall their development of methods for combining DNA molecules and cloning genes. The narrative weaves together interviews, animation, re-enactment, and historical footage to illustrate the participants' scientific achievements, their personalities, and their individual approaches to the challenge of discovery.

This 30-minute videotape, created with active assistance from professional educators, is intended for college and high school biology classes and public education programs. It is accompanied by a 32-page, illustrated Teacher's Guide that expands on the contents of the tape and provides activities, handouts, and other resources that can be used in the classroom.

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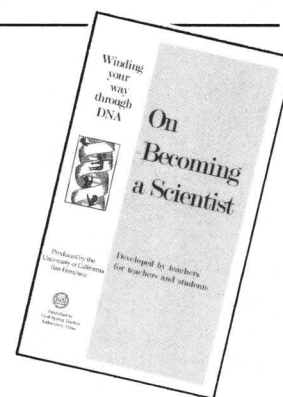


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*On Becoming a Scientist* is a fast-paced "MTV-style" video showing a "day in the life" of three graduate students and a laboratory manager. These young scientists are followed as they work in their laboratories, take part in UCSF programs for public school children and the homeless, and socialize. Through interviews with scientists and students, viewers learn what attracts scientists to science, what it takes to become a scientist and what impact their work has on our world. The goal is to dispel stereotypes — to show scientists as people who lead interesting lives and are approachable and accessible, and to provide role models for women and minorities notably underrepresented in science. This video can be used in biology classes, in school career centers, or to prepare for visiting a local laboratory. Scientists also can use it when meeting with students and members of the public.

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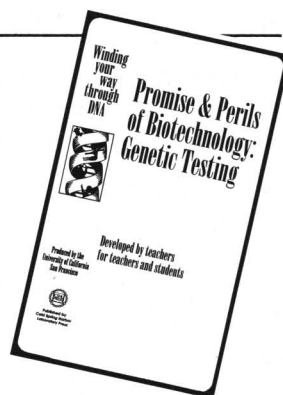
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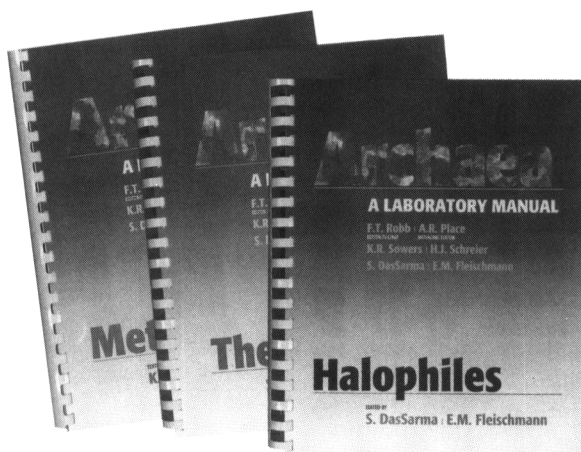
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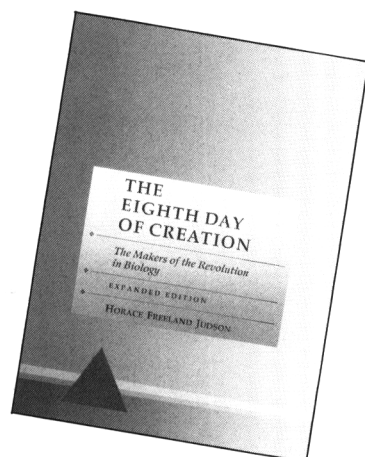
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