

Do-it-yourself biology on rise

New breed of scientists using technology to experiment outside usual lab settings

By **Julian Guthrie**

CHRONICLE STAFF WRITER

In a kitchen in Saratoga, an electrical engineer is working with pure strains of *E. coli* purchased over the Internet in hopes of creating a handheld diagnostic tool to detect dangerous bacteria.

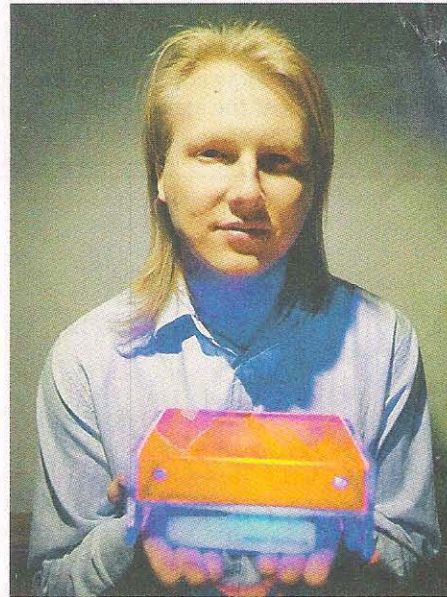
Out of a garage in Sacramento, a bioengineer is designing low-cost equipment to allow people to see and construct DNA.

From a studio in San Francisco, an artist is building houses from a medicinal fungus.

Across the Bay Area, and in other high-tech hotbeds, a revolution is under way. Citizen scientists — or biohackers, as they're being called — are taking biology out of academia and closed-door laboratories and bringing it into garages and kitchens, studios and warehouses.

The dream is to make breakthroughs that will ultimately benefit humanity, in fields as diverse as biofuel and cancer

Biology continues on A18



Adam Lau / The Chronicle

Tito Jankowski, who works on DNA research tools in his garage, started the San Francisco chapter of DIYbio.

FROM THE COVER



Lea Suzuki / The Chronicle

Phil Ross, an artist and USF professor, returned last week from Dusseldorf, Germany, where an art show featured his latest work — a house made from fungus.

