

Researchers: Molecule kills leukemia cells

SAN DIEGO

UC San Diego researchers say they've found an immune system molecule that directly kills chronic lymphocytic leukemia cells without harming healthy ones.

The molecule, called a monoclonal antibody, is being readied for human clinical trials "in the not-too-distant future," said lead researcher Thomas J. Kipps, with the UCSD Moores Cancer Center.

The study was published Monday in the Proceedings of the National Academy of Sciences.

Named RG7356, the "humanized" monoclonal antibody targets a receptor or surface molecule, called CD44, found on the chronic lymphocytic leukemia cells. The antibody is toxic to the cells, according to laboratory studies. The RG7356 antibody is being clinically tested for solid tumors; this study indicates effectiveness may extend to nonsolid malignancies.

Monoclonal antibodies provide one of the most powerful weapons against cancers, because they are designed to home in on specific molecules. Some of them kill when linked to a toxic molecule, others kill directly.

The first monoclonal antibody approved against cancer was Rituxan, discovered by San Diego-based Idec Pharmaceuticals. Idec is now part of Biogen Idec, based in Cambridge, Mass. The FDA approved Rituxan for use against B-cell non-Hodgkin's lymphoma in 1997. Since then, Rituxan has been approved for use against chronic lymphocytic leukemia and for treating certain autoimmune diseases.