

IL-22 gene delivers the goods and decreases intestinal inflammation

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There are two major types of inflammatory bowel disease (IBD), Crohn disease (CD) and ulcerative colitis (UC). Conflicting reports have indicated that the soluble factor IL-22 can have both IBD promoting and IBD controlling effects. But now, Atsushi Mizoguchi and colleagues at Massachusetts General Hospital, Boston, have established that IL-22 ameliorates disease in a mouse model of UC.

Expression of IL-22 is much higher in the intestines of individuals with CD than UC. To investigate the role of IL-22 in IBD, the authors used a new microinjection-based strategy to deliver the gene that makes IL-22 to the walls of the intestine of mice who suffer from an intestinal disease that models UC. Delivery of the IL-22 gene ameliorated local intestinal inflammation through enhanced mucus production. Consistent with this, when the same strategy was used to deliver a gene that makes a protein that neutralizes IL-22, IL-22-binding protein, to the walls of the intestines of normal mice it enhanced chemical-induced intestinal inflammation. The authors therefore suggest that individuals with UC might benefit from local delivery of the IL-22 gene to their intestines.

Source: Journal of Clinical Investigation

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