



## Hyperstable Collagen Mimics

[View U.S. Patent No. 7,122,521 in PDF format.](#)

WARF: P03226US

Inventors: Ronald Raines, Jonathan Hodges

**The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a novel, hyperstable collagen mimic.**

### Overview

Collagen, the most abundant protein in vertebrates, serves as the fundamental structural protein for vertebrate tissues. Collagen is a fibrous protein consisting of three polypeptide chains that fold into a triple helix. Many diseases including arthritis, atherosclerosis, rheumatism, osteoporosis and osteogenesis imperfecta are linked to collagen abnormalities.

### The Invention

UW-Madison researchers have developed a novel, hyperstable collagen mimic. This new collagen mimic consists of a tripeptide unit with the formula  $(\text{flpYaaGly})_n$ , where flp is 4(S)-fluoroproline, Yaa is any natural or modified amino acid residue, and  $n$  is a positive integer, preferably at least 7. The novel compound forms triple helices that are more stable than native collagen.

### Applications

- Treating diseases associated with abnormal collagen, including arthritis, osteoporosis and osteogenesis imperfecta
- Developing new methods of wound healing
- May be useful as a component in artificial skin, a solder in tissue welding or a substitute for collagen in other applications requiring high strength

### Key Benefits

- Forms a stronger and more stable triple helix than native collagen
- Provides a desirable alternative to collagen from cows, which might be contaminated by BSE (bovine spongiform encephalitis)
- Likely has a greater half-life *in vivo* than native collagen

### Additional Information

#### Related Technologies

- [See WARF reference number P97135US for information on earlier collagen mimics created by the inventor.](#)

#### Publications

- [Click here for a news release describing this technology.](#)

We use cookies on this site to enhance your experience and improve our marketing efforts. By continuing to browse without changing your browser settings to block or delete cookies, you agree to the storing of cookies and related technologies on your device. [See our privacy policy.](#)

OK



For current licensing status, please contact Rafael Diaz at [rdiaz@warf.org](mailto:rdiaz@warf.org) or 608-960-9847

We use cookies on this site to enhance your experience and improve our marketing efforts. By continuing to browse without changing your browser settings to block or delete cookies, you agree to the storing of cookies and related technologies on your device. [See our privacy policy.](#)

OK



**WARF**  
Wisconsin Alumni Research Foundation

| [info@warf.org](mailto:info@warf.org) | 608.960.9850