

NIH innovation grant funds stem-cell startup

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A biotechnology startup founded by Tulane researcher Aline Betancourt will use a \$400,000 innovation grant from the National Institutes of Health to develop a stem-cell therapy for rheumatoid arthritis.



With a \$400,000 grant, Aline Betancourt will develop a stem-cell therapy for rheumatoid arthritis utilizing a patented technology she developed at Tulane. (Photo by Paula Burch-Celentano)

Betancourt's company, Wibi+Works, is utilizing a [patented technology](#) she developed at Tulane to design and produce uniform adult mesenchymal stem cells to treat chronic states of inflammation.

The Phase I Small Business Innovation Research Grant is proof of concept funding for preclinical trials to demonstrate how the technology can target specific tissues and turn off an overactive inflammatory response. The project will be completed in collaboration with Dr. Gary Firestein and Dr. Monica Guma at the University of CaliforniaâSan Diego.

Rheumatoid arthritis affects more than 1.5 million adults in the United States. Betancourt, a research associate professor with the Tulane [Center for Stem Cell](#)

[Research and Regenerative Medicine](#), says that current drugs for the disease are imprecise, suppressing the entire immune system to reduce inflammation in one remote problem area.

“The advantage of using stem cells is that they can actually go to the inflamed joints and modify the inflammation locally,” Betancourt says. “Targeting these inflammatory spots then allows the tissue to heal.”

Rather than being a regenerative stem-cell product that becomes part of the healed tissue, Wibi+Works' cell products are designed to be used as a short-term therapy when needed to manage misguided inflammation. This targeted therapy also means that the patient's immune system will not be compromised nor will they have to spend a lifetime on immune suppressive regimens, Betancourt says.

Wibi+Works also is testing stem-cell products in several preclinical models of disease including diabetic peripheral neuropathy, acute lung injury and multiple sclerosis. The company is one of several local biotechnology firms housed in the newly opened New Orleans BioInnovation Center at 1441 Canal St.