

NOVABAY PHARMACEUTICALS' NEW CATHETER IRRIGATION SOLUTION COULD SOLVE PATIENT URINARY CATHETER BLOCKAGE-BACTERIA PROBLEM

Helping Patients with Urinary Catheters

In the U.S. alone, approximately 74,000 people must use indwelling urinary catheters to drain their bladders, because of spinal cord injuries, multiple sclerosis, strokes, Alzheimer's disease, or other debilitating conditions. Additional patients require occasional indwelling urinary catheters for surgical procedures and shorter hospital stays.

These catheters serve a vital function and provide significant convenience for patients but they can also create serious problems. The majority of patients using catheters harbor bacteria in their bladders and catheters. The bacteria living on the catheter surface coat themselves in a protective film, which is called a biofilm. Frequently, the microbes can also cause crystals to form within the catheter lumen and in the bladder. Together the biofilm and the crystals encrust and block catheters in many patients, requiring frequent replacements. The bugs can also cause urinary tract infections. In patients with indwelling catheters, a blocked catheter often creates an emergency or a life threatening event. It may cause uncontrolled autonomic dysreflexia (AD), a serious complication with symptoms of highly elevated high blood pressure, increased pulse rate, profuse sweating and facial erythema. Complications resulting from AD include kidney infections, urinary tract infections and frequently leakage around the catheter.

There are essentially no options to help reduce the blockages and infections. Sometimes catheters may be flushed up to three times a day with saline solution, but it's not a very effective treatment since it has no effect on the blockage causing bacteria. Patients still get infections, and their catheters typically must be replaced once every week or every two weeks. Physicians say that the potentially severe consequences of catheter blockage and bladder infections are greatly unappreciated.



NovaBay Pharmaceuticals (NYSE MKT: NBY; www.NovaBay.com) is developing a formulation of auriclosene that could be pumped into catheters and be effective in killing the bacteria that cause blockage and infections. "We believe this will really make a difference in patient's lives"
- Ramin (Ron) Najafi, founder, Chairman and CEO of NovaBay Pharmaceuticals, Inc.

Now, however, an Emeryville, California, biopharmaceutical company named NovaBay Pharmaceuticals has come up with a major advance. The company's key innovation was creating a stable version of potent natural anti-microbial substances that white blood cells produce when they detect invaders. NovaBay is developing the compound, called auriclosene (NVC-422), to treat skin and eye infections. It's also made a formulation of auriclosene that can be pumped into catheters. Advanced clinical trials show that the formulation is remarkably effective at killing the bacteria that cause blockage and infections. That, in turn, can reduce both the number of times catheter must be flushed—and the number of times catheters need to be replaced. The result: a major improvement in the health and quality

of life of the tens of thousands of patients with long-term urinary catheters. The company is now planning additional clinical trials needed to get approval from the Food & Drug Administration. "We believe this will really make a difference in patients' lives," says Dr. Ron Najafi, Chairman and Chief Executive Officer of NovaBay.

Ramin ("Ron") Najafi, Ph.D., Chairman and CEO of NovaBay Pharmaceuticals Inc.

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