

Seattle health startup speeds up lab tests to improve use of antibiotics

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Patients who are in pain from infections often can't wait two days until lab-test results come in, so doctors prescribe antibiotics right away. But without test results, they might not suggest the most effective medicine.

Seattle, Wash., startup ID Genomics has developed [technology](#) to identify [bacteria](#) in 30 minutes, giving doctors all the information they need to prescribe the best treatment.

The goal is to identify the bacteria's exact "fingerprint" while the patient is still in the clinic, so doctors can choose a narrowly targeted antibiotic. Broad [antibiotics](#), which are often used when the exact [infection](#) is not known, could become problematic as bugs become resistant to them.

The company's technology focuses on urinary-tract infections for now, said founder Evgeni Sokurenko, but will eventually expand to other infections.

For several years, Sokurenko and the 10-person ID Genomics team has been creating a database of different [strains](#) of E. coli bacteria, which causes the majority of urinary-tract infections. Each strain has distinct characteristics.

"It's sort of like a bar code," said Sokurenko, a professor of microbiology at the University of Washington.

ID Genomics' technology consists of a kit that quickly matches the patient's urine sample with the database, zeroing in on the exact bacteria. It then searches the database to find how that bacteria strain responds to different antibiotics.

The startup conducted a clinical study during 2014 and 2015 at Group Health (now Kaiser Permanente) where it ran its technology in parallel with common prescribing practices.

The study found that ID Genomics' technology

would have reduced the number of times a less effective antibiotic was prescribed by threefold and in some cases fivefold.

ID Genomics, which received a \$3 million grant last year from the National Institutes of Health, is planning to apply for Food and Drug Administration approval of its technology in the beginning of 2019.

In the meantime, it has formed a consortium of health centers to share data on bacterial strains in one place, so more doctors can access the information.

Multiple hospitals are already participating, including Harborview and Kaiser Permanente Washington.

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