

# Sixth Wave Innovation moves its IXOS gold extraction technology forward with USD\$50M+ multi-stage contract

written by Tracy Hughes | October 13, 2022

Until recently Sixth Wave has been a company with very promising technology but has been looking to turn that into dollars (revenue). That has now changed and could lead to a boost in the company's fortunes.

[Sixth Wave Innovations Inc.](#) (CSE: SIXW | OTCQB: SIXWF) ("Sixth Wave") is a nanotechnology company. The company's technology focuses on 'detecting, capturing, and releasing' of target substances at the molecular level using specialized 'molecularly imprinted polymers' ("MIPs"). Six Wave is in the process of commercializing its Affinity™ cannabinoid purification system, AMIPS™ virus/bacteria detection, as well as their IXOS® extraction polymers for the gold mining industry. All of these are based on Sixth Wave's MIPs technology which can detect, capture and release almost any target molecule.



Source: [Sixth Wave Innovation website](#)

On September 12, 2022, Sixth Wave [announced](#) that it and Magnus Mineral Resources (PVT) Ltd had signed a USD\$50M+ contract for the implementation of its IXOS Mining Technology at the Penhalonga Gold Mine and beyond. The announcement [stated](#) that Sixth Wave has signed "a three phase test and implementation contract... that will field SIXW's patented IXOS® molecular

imprinted polymer for extraction and purification of gold and silver... at the Penhalonga Gold Mine, Zimbabwe. Additionally, Magnus Resources plans to build and deploy three smaller processing plants to assist regional artisanal mining groups in Zimbabwe." The company goes on to say that one of the benefits of using its extractive technology is to change "artisanal mining operations from dangerous and environmentally destructive practices involving mercury amalgamation."

The first phase of the agreement involves laboratory extraction and recovery testing. The second involves pilot-plant process design, engineering, implementation for gold recovery from oxides; as well as delivery/commissioning of three portable VAT leach adsorption/desorption/recovery plants that are capable of processing 100tpd of ore. The third phase will involve the testing and optimization of extraction for the transitional and refractory ore present at the mine.

While it is still early days and a lot needs to be achieved, Sixth Wave now has a pathway towards achieving significant revenue and a project to demonstrate that their technology is effective at scale in real world conditions. Plenty of risks still exist in terms of fulfilling the contract as well as Zimbabwe's country risk.

The key advantages of Sixth Wave's IXOS technology is that it has a high gold recovery ([average 95%](#)), it recovers gold with 90% less cyanide usage than conventional cyanidation, and has reduced energy requirements which lower processing costs.

It is often the case when new technology comes along there will be some resistance to change. However once it has been demonstrated to be effective at scale then the disruption begins, meaning others begin to seriously consider and adopt the technology. We have seen this with electric vehicles and we may

be about to see this with gold mining via Sixth Wave and Magnus Resources' plan to deploy the IXOS MIPs technology in Zimbabwe.

If the project succeeds this should open the door to numerous other opportunities for Sixth Wave Innovations. Investors can be excited given this opportunity in the mining sector, not to mention all the [other areas of opportunity](#) across multiple sectors where Sixth Wave's multi-purpose MIPs can be effective.

Sixth Wave Innovations trades on a market cap of just [C\\$5.4M](#). Will this be the turning point for the company? Time will tell and some patience is required. But it certainly looks very promising.

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## Sixth Wave hits the market with MIP coatings and sensors

# for the biodetection of viruses and bacteria

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[Sixth Wave Innovations Inc.](#) (CSE: SIXW | OTCQB: SIXWF) (“Sixth Wave”) is a nanotechnology company focused on the ‘detection and extraction’ of target substances at the molecular level using specialized molecularly imprinted polymers (MIPs).

**Sixth Wave’s nanotechnology uses MIPs to detect and extract almost any target molecule**



Source: [Sixth Wave Innovation website – About MIPs](#)

There is a huge list of potential industries that can benefit from Sixth Wave’s MIP technology; however key areas of interest for now for Sixth Wave are health (rapid COVID-19 detection), cannabis production (cannabinoid purification), security, gold and lithium extraction.

## **AMIP COVID-19 test with improved sensitivity**

[Announced](#) on August 19, 2021, Sixth Wave has improved the sensitivity and capability of its leading-edge nanotechnology AMIP to detect the presence of the COVID-19 virus at levels below 1,000,000 virus particles/mL. Dr. Garrett Kraft, Vice President of Innovation at Sixth Wave, [stated](#): “Hitting this level of detection is a huge achievement for us. With this technical milestone, we are fulfilling the sensitivity requirements for many of our intended end-use applications for high throughput screening.”

Note: Accelerated Molecular Imprinted Polymers (AMIPs) are rapid

acting MIPs.

The clinical significance of a more sensitive test is the potential to detect COVID-19 earlier and in patients that are asymptomatic, when lower levels of the virus may be present. According to Grandview Research, the global COVID-19 diagnostics market size was estimated at [USD 84.4 billion](#).

Sixth Wave is quickly moving through a program of development and scale-up milestones toward a wide range of AMIPs virus rapid detection devices.

### **MIP coatings and sensors for biodetection of viruses and bacteria**

Sixth Wave recently [announced](#) that they have filed for a patent for their MIP coatings and sensors for biodetection. The patent focuses on the synthesis and processing of MIPs containing detection elements for viruses and bacteria. Sixth Wave [state](#): “The patent will be solely in the name of Sixth Wave, who will have exclusive ownership of the IP, subject to a reasonably agreed-upon license fee. The work with York University is an expansion of Sixth Wave’s efforts with the AMIP product line and focuses on detecting both viral and bacterial-based pathogens in fluid samples.”

This could potentially be a huge business one day for Sixth Wave given the global need for rapid detection of viruses and bacteria.

### **More about Sixth Wave**

Sixth Wave has collaborated for research and testing with some of the largest entities in the chemical, resources, education, security, defense and medical sectors. Sixth Wave’s systems are all patented or patent pending in 40+ countries worldwide.

Sixth Wave's key product names are IXOS® (a line of extraction polymers for the gold mining industry), Affinity™ (for the cannabis industry), and AMIPs (for sensitive and rapid COVID-19 testing). Sixth Wave recently [announced](#) an Affinity system has been shipped from the contract manufacturer and is on the way to Sixth Wave and then onto the first customer, Green Envy Extracts.

Other prospective products in development include a wide range of AMIPs Virus/Bacteria rapid detection devices, Personal Protective Equipment applications such as SIXW's Smart Mask™ (see news dated [May 15, 2020](#)), and smart clothing, airborne sensors, breathalyzers, ELISA-based technologies, cartridge/lateral flow designs, and others.

### **Closing remarks**

Sixth Wave is at an exciting stage as the Company rolls out the commercialization of its Affinity™ cannabinoid purification system, IXOS® gold mining extraction technology, and soon plans the rollout of their AMIPs virus rapid detection devices and other products.

The idea of one day being able to potentially use a Sixth Wave MIP sensor to rapidly detect viruses and bacteria pathogens is quite amazing, and if it happens, would be a significant advancement for medical diagnosis.

Trading on a market cap of just C\$30 million, stay tuned for more developments from this fast-moving company.

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# Sixth Wave's Dr. Jon Gluckman talks about the election and the 2nd wave of cannabis investment

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In a recent InvestorIntel interview, Tracy Weslosky speaks with Dr. Jon Gluckman, President, CEO and Founder of [Sixth Wave Innovations Inc.](#) (CSE: SIXW | OTCQB: ATURF) about what a Biden presidential win means for an energized and revitalized cannabis sector.

"We're pretty excited," said Dr. Gluckman, "that in addition to the Biden win it was pretty clear that the referendums on the state ballots in the U.S. were extremely positive and forward-looking for the future of cannabis and the significant expansion in the United States which is obviously a huge market."

Asked about what it means, Dr. Gluckman said that Sixth Wave sees it "as a tremendous opportunity for licensed producers to expand their footprints into different spaces and certainly for new equipment requirements which will include Affinity, so we're stoked." Affinity™ is Sixth Wave's cannabinoid purification system.

Discussing the Affinity cannabinoid purification system revenue model, Dr. Gluckman explains that it work on a "total system performance license" basis, where Sixth Wave provides the technology to licensed cannabis producers on a "small profit margin basis", but then partners to provide upgrades and maintenance in exchange for a portion of the producer's revenue stream. As Sixth Wave's Affinity optimization can save a

projected 50% of a producer's production costs, this mutually beneficial arrangement can create a substantial revenue stream for both the producer and Sixth Wave.

Dr. Gluckman explains to Tracy how the application of Sixth Wave's patented Molecular Imprint Polymers ([#MIPs](#)) technology creates "consistent and high purity" cannabinoid from a producer's raw material that is essential to creating a commercial product.

Regarding revenue expectations, Dr. Gluckman said that they expect to see revenue through a deal with Green Envy as early as December, and ramping up in the first quarter of 2021. Answering Tracy's question about investors who missed the "first wave" of cannabis investment, he said that "the very interesting thing now is that what we have seen is that the growers are all growing," and that "as new states come on board they are all going to need new licensed producers." And since there are federal restrictions on interstate movement of cannabis, production will have to be local to each state, requiring multiple production facilities

"We're really looking forward to it and scaling up significantly next year," Dr. Gluckman said.

To watch the full interview on YouTube, [click here](#).

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# Sixth Wave Innovations leads virus detection through breath testing

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## Using nanotechnology to quickly identify pathogens

Imagine if taking a coronavirus test was as simple as an alcohol breathalyzer, or a pregnancy test, and the results just as fast. One company has developed a test that uses **molecular imprinted polymers** with the possibility of detecting almost any pathogen, and is now using their technology to develop a way to detect for COVID-19 as easily as using a saliva test or a swab test.

[Sixth Wave Innovations](#) (CSE: SIXW | OTCQB: ATURF | FSE: AHUH) is a development stage nanotechnology company with patented technologies that focus on the extraction and detection of target substances at the molecular level using highly specialized 'molecular imprinted polymers' (MIPs). The target substances can be anything, such as pathogens (viruses & bacteria), gold, or anything made of molecules (that's every substance).

Sixth Wave has technology to make a 'polymer imprint' for molecules including viruses. Sixth Wave is working to develop a molecular imprint for the coronavirus so they can capture the virus in their polymer and then apply various techniques to detect the virus such as colormetrics or electronics.

The company is working toward incorporating the technology into a mask **so you could wear a mask that both protects and detects**

**for COVID-19.** Another concept is to have the MIP inside a coated barcode strip which you would then scan with your smartphone to see if you have been infected or not. (See: [Sixth Wave working on a virus breath test.](#))

President, CEO and Founder Dr. Jonathan Gluckman [explained that](#) a “virus has a size and shape and we create an imprint in our polymer for that exact virus. Then we will detect that directly based on our chemistry.” He continued that Sixth Wave is “working to integrate this into masks and breathalyzers and then we can just utilize the breath, as we all know that’s the main transmission method. If you think about putting a mask on, not only will that mask provide protection, it can also, right there, be the test for COVID-19.”

Highlighting the advantages of Sixth Wave’s COVID-19 test over other tests, Dr. Gluckman also said that **the test will be cheaper, faster, less invasive, and easy to use.**

Dr. Gluckman [says](#) that Sixth Wave’s COVID-19 detection technology is currently under development, but the Company has successfully launched and commercialized other products with similar properties. The coronavirus tests are planned to be ready for an [early 2021](#) rollout. The company has received a grant from the Canadian government to work with York University and the CTRI to use its virus detection technology to detect COVID-19 virus in wastewater supplies and in air handling systems.

**Sixth Wave Innovations can detect and extract anything at the molecular level – Target markets include COVID-19 testing, gold extraction, and cannabis purification**



[Source](#)

## **Sixth Wave Innovations technology can be used for other applications**

### **Gold extraction**

IXOS® is a line of extraction polymers for the gold mining industry 100% developed and owned by Sixth Wave and patented/patent pending in 40+ countries worldwide. CEO Gluckman says the technology can save gold mining companies about US\$100/oz on their processing costs based on pilot scale test results for multiple mines.

**Sixth Wave Innovations IXOS® can save gold miners up to US\$100/oz in gold processing costs**



Source: [Corporate presentation](#)

### **Cannabis Purification**

Sixth Wave is in the process of commercializing its Affinity™ cannabinoid purification system. The Affinity™ Technology for the medical and recreational cannabis industry is 100% developed and owned by Sixth Wave with a patent pending. Affinity™ products [are now rolling out](#) and starting to generate revenue for Sixth Wave, including an initial 300 Affinity units.

### **Other applications**

Sixth Wave's Molecular Imprinted Polymers (MIPs) have also been applied in industries including security (SAFE-T explosives detective wipes), mining (gold & silver extraction, also removal of mercury), and other pathogen detection. The potential list of applications is enormous.

## Sixth Wave Innovations planned revenue streams



Source: [Corporate presentation](#)

### Closing remarks

History has repeatedly shown how mankind makes incredible innovative technology during incredible times. Here we are facing one of this century's greatest pandemics and scientists globally are racing to develop better diagnostic tests, treatments and vaccines.

In the case of Sixth Wave Innovations it is fast-tracking the development of an innovative technology to detect and extract polymer molecules. They are now focused on adapting their technology to make a polymer imprint of the coronavirus that can, if successful, make COVID-19 detection as simple and fast as a breath test, whether on a test strip or even on a dual-purpose face mask. Imagine wearing a face mask that can also detect COVID-19. Sixth Wave's COVID-19 detection technology targeted for early 2021, and if successful it will be a massive win-win for the public and also for Sixth Wave Innovations.

Meanwhile, Sixth Wave will be advancing their near term revenues from Affinity™, and later hopefully from IXOS®. The current market cap of Sixth Wave Innovations is only C\$21m thereby presenting a tremendous early stage speculative opportunity for investors.