

# Sixth Wave Expands Virus Detection Patent Applications

Vancouver, British Columbia--(Newsfile Corp. - April 17, 2020) - **Sixth Wave Innovations Inc. (CSE: SIXW) (OTC Pink:ATURF) (FSE: AHUH) ("SIXW" or the "Company")** is pleased to announce that it has now filed a second patent application with the United States Patent and Trademark Organization: ***The Use of Molecularly Imprinted Polymers for the Rapid Detection of Emerging Viral Outbreaks Patent; Application Number: 63/010,244*** (the "Device Patent" or "Patent").

The Patent addresses a broad spectrum of devices, delivery systems and appliances for the rapid detection of viruses such as the virus associated with COVID-19, using the Company's Molecularly Imprinted Polymers ("MIPs") technology, and the proposed Accelerated Detection MIPs ("AMIPs") platform. Notably, the Patent proposes a wide range of practical devices to collect samples from multiple sources including individual patients, air and water supplies, and common everyday contact surfaces where the virus can survive and threaten human exposure between hosts. The goal of the envisioned products will be to deliver a warning indicator (including a visual colorimetric indicator or audible alarm), within minutes of the sampling process.

The Company has not yet developed functional prototypes of the devices described in the subject Patent for virus detection but has developed similar successful products in the past for other target molecules. Development of these AMIPs delivery devices will be dependent upon final testing of the underlying AMIPs technology which is currently under development. FDA, Health Canada, and other country government agency approvals will be applied for upon completion of the development.

## AMIPs Technology

The AMIPs technology itself is the subject of a previously filed patent application (the "**AMIPs Patent**") and will be designed to identify the virus directly, using physical characteristics such as molecular size, shape and surface structures. This feature stands in contrast to many conventional Rapid Diagnostic Tests ("**RDT**"), which look for bi-products of the virus (antibodies) that can take several days to weeks to appear in the host, or DNA/RNA tests which require specific equipment to process samples and complicated electronics to detect the virus. The detection of antibodies which develop days or weeks after an individual is infectious can result in a potentially dangerous time period, during which the virus can unknowingly spread to others and lost opportunity for early intervention. The AMIPs Patent has been filed with the US Patent and Trademark Office.

The AMIPs Device Patent targets the detection of specific viruses such as COVID-19 in human environments. AMIPs-infused collection media can potentially be applied to devices for wiping and disinfecting public surfaces, filtration and purification of public air and water supplies, as well as utensils used in the preparation and processing of beverages and foods. The appropriation and extraction capabilities of MIPs in other applications are already well documented, with the capacity to seek out, selectively bind to, and remove target molecules down to the parts per billion level ("**PPB**"). The Company seeks to apply this proven MIP technology to the AMIPs application.

## About the Device Patent

The Device Patent addresses a broad spectrum of potential devices and delivery systems for Sixth Wave's AMIPs virus detection and removal technology, currently in development. The Patent proposes a variety of alternative methods and apparatus for the collection and analysis of samples for the presence of a one or more target viruses, and the communication of results.

The device options set out in the Patent include, but are not limited to, the following:

1. Medical diagnostic systems which may be as simple as microwell plates for use with collection swabs;
2. Continued monitoring devices suitable for tracking the course of an infection;
3. Disinfecting wipes with integrated virus detection;
4. Face masks;
5. Breathalysers capable of responding to virus content exhaled from a person's breath; and
6. Monitoring systems for the presence of airborne viruses, and others.

The Company is also actively engaged with multiple strategic partners to assist in product development and has submitted for Government grants in both the United States and Canada to accelerate development and certification of AMIPs products.

## About AMIPs & Conventional Technologies

The goal of the AMIPs technology is to identify a virus utilizing the unique physical characteristics of the virus itself, comprised of molecular size, shape and surface characteristics. Based on SIXW's previous experience it believes that the AMIPs technology could offer a distinct time advantage and flexibility to address the variety of devices contained in the patent over conventional RDT platforms using PCR and immunoassay-based techniques. These conventional methods seek to detect antibodies which develop only *after* an individual has been infected, a metabolic process which can take days to weeks to manifest. This is a potentially dangerous time period, during which the virus can unknowingly spread to others and the opportunity for early intervention is effectively lost.

Antibody response is a late-stage event of the disease incubation process. Hence, the detection of such a lagging indicator -- regardless of the speed or efficiency of the RDT methodology -- is of substantially less use than a technology which looks for the virus directly, potentially weeks in advance. PCR techniques are also traditionally time intensive, taking hours to days to run the analysis, and require highly skilled technicians and specialized lab equipment to analyze. PCR amplifies and detects the genetic

material, usually DNA, of the virus. This requires "breaking open" the virus to get at the DNA inside. These processes have a range of effectiveness depending on the composition of the exterior coat of the virus.

Traditional RDT methodologies are also limited to the sampling of bodily fluids from an individual, often by way of a throat swab or blood sample. AMIPs has the potential to similarly be deployed via throat swab, albeit much earlier in the incubation process. Additionally, the AMIPs technology proposes a number of convenient and less invasive means of gathering patient samples (post infection). More importantly, AMIPs goes beyond the individual, looking for the virus where it lives between hosts, in high risk environments.

## About Sixth Wave

Sixth Wave is a development stage nanotechnology company with patented technologies that focus on extraction and detection of target substances at the molecular level using highly specialized molecularly imprinted polymers (MIPs). The Company is in the process of commercializing its Affinity™ cannabinoid purification system, as well as, IXOS®, a line of extraction polymers for the gold mining industry. SIXW has developed and fielded past products using MIPs for the detection of explosives and explosive compounds and has completed chemistry for the visual detection and biogenic amines associated with harmful bacteria.

Sixth Wave can design, develop and commercialize MIP solutions across a broad spectrum of industries. The company is focused on nanotechnology architectures that are highly relevant for detection and separation of viruses, biogenic amines and other pathogens, for which the Company has products at various stages of development.

For more information about Sixth Wave, please visit our web site at: [www.sixthwave.com](http://www.sixthwave.com)

## ON BEHALF OF THE BOARD OF DIRECTORS

"Jon Gluckman"

Jonathan Gluckman, Ph.D., President & CEO

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## Cautionary Notes

*This press release includes certain statements that may be deemed "forward-looking statements" including statements regarding the planned features, capacity and performance of the AMIPs technology. All statements in this release, other than statements of historical facts, that address future events or developments that the Company expects, are forward-looking statements. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance, and actual events or developments may differ materially from those in forward-looking statements. Such forward-looking statements necessarily involve known and unknown risks and uncertainties, which may cause the Company's actual performance and financial results in future periods to differ materially from any projections of future performance or results expressed or implied by such forward-looking statements. In particular, successful development and commercialization of the AMIPs technology are subject the risk that the AMIPs technology may not prove to be successful in detecting virus targets effectively or at all, uncertainty of medical product development, uncertainty of timing or availability of required regulatory approvals, lack of track record of developing products for medical applications and the need for additional capital to carry out product development activities. The ability for molecularly imprinted polymers to detect viruses as successfully as it has been implemented to detect other elements has yet to be proven. The value of any products ultimately developed could be negatively impacted if the patent is not granted. The Company has not yet completed development of a prototype for the product that is subject of its patent application and has not yet applied for regulatory approval for the use of this product from any regulatory agency. A number of other Companies are researching the development of rapid virus detection tests. The ultimate value of the AMIPs technology could be impacted by the success of any of these potentially competitive technologies.*



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