
How Can Nanotechnology and Blockchain Help in Monitoring Individuals' Health Data?

2020-05-05

U.S.-based quantum dot producer Quantum Materials Corp combined nanotechnology and blockchain for COVID-19 immunity passports.

U.S.-based quantum dot producer Quantum Materials Corp ([QMC](#)) announced its blockchain-based QDX HealthID for transparency in disease testing and immunization for infectious diseases. The goal is to ensure the authenticity of health data and support individuals to re-join the workforce quickly.

[Quantum dots](#) are nanoparticles made up of semiconductor materials that emit different colors when illuminated by light. This color depends on their size and the way they were manufactured. QMC has developed a track and trace solution using quantum dots and blockchain to verify the origin of products and counterfeiting.

The authentication solution is combined with QDX HealthID for monitoring and tracking the outbreaks of diseases, such as the COVID-19. The solution authenticates individuals being tested, the persons administering the test, and the test kits.

[Nanotechnology in Battle Against Coronavirus ...](#)

In simpler terms, QDX HealthID ensures that testing data is secure and not tampered with. Currently, health reports and medical certificates are being issued on paper, which makes them easy to forge.

“Not only does this service facilitate improved health outcomes for patients, but it also underpins back-to-work certifications, sometimes referred to as immunization passports,”

said Stephen B. Squires, President & CEO of QMC.

With the health data backed by blockchain, governments and health agencies can formulate new plans and safety measures to contain the spread of COVID-19 and other diseases. Additionally, individual users can assess their immunization passport using a mobile application. The app features color-coded indicators — green, yellow, and red. If the app shows the green indicator, the individual has clearance to interact in social and work environments. This indicator can be shared and authenticated by others using a QR code.

“The world must have a system that eliminates the fears and anxiety of not knowing who is able to return to work,” said Les Paull, CEO of QMVT, the unit responsible for sales and marketing of QMC’s innovations.

The solution is hosted on the Microsoft Azure cloud and can integrate with existing EMR systems. It is based on the Hyperledger Sawtooth enterprise blockchain and for smart contracts, it’s using the Digital Asset Modeling Language (DAML).

Ledger Insights reported on the COVID Credentials initiative (CCI), which uses digital identity to develop “immunity passports”. Members of the initiative include Evernym, ID2020, uPort, Dutch research organization TNO, Microsoft, ConsenSys Health and consultants Luxoft and many others.

Read the [original article](#) on Ledger Insights.