Practice of Constructing a Traditional Chinese Medicine Traceability System Based on a Trusted Block-chain Technology

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Abstract

The platform utilizes trusted blockchain technology to aggregate data from all parties involved in the circulation of traditional Chinese medicinal materials, achieving authentic and reliable digital chain integration, and providing traceability management and service applications for patients and medical institutions. The construction of a traceability platform for traditional Chinese medicinal materials based on a consortium using trusted blockchain technology ensures the immutability and authenticity of data, providing technical support for quality supervision throughout the entire process of traditional Chinese medicinal materials. This paper addresses the issue of traceability in Chinese medicinal materials by proposing the utilization of modern technology to establish an integrated Traditional Chinese Medicine (TCM) service system, along with quality traceability system and operational management system.. This system covers the entire spectrum of processes, including herb cultivation, processing, maintenance, prescription review, dispensing, decoction, and distribution. Focusing on the overall technical direction of "one map for traceability management, one network for interconnection, one lake for data convergence, and one platform for system development", it leverages trusted block-chain technology to build a traceability platform for Chinese medicinal materials. This platform offers functionalities such as data-chain integration, data aggregation, and application services, accompanied by specifications for third-party interfaces. By consolidating data from all participants in the circulation of Chinese medicinal materials using trusted block-chain, a genuinely trustworthy data-chain consolidation is achieved, thereby furnishing traceability management and service applications to both patients and medical institutions. The employment of trusted block-chain technology in constructing a TCM herb traceability platform based on a consortium model ensures the immutability and authenticity of data, thereby providing a sturdy technical infrastructure for the full-process quality supervision of Chinese medicinal materials.

Keywords

Block-chain, Traditional Chinese Medicine, Traceability, System