

GKNOWMIX

Global genetic testing service delivery system for seamless conversion of research and innovation into pathology supported genetic tests

BACKGROUND

Current trends in healthcare include the application of personalized genomic medicine enabling the move from reactive (treating medical conditions as they occur) to predictive/preventative (taking steps to reduce risk) healthcare practices. While genetic testing for predisposition to various diseases is available, the actual probability of a disorder occurring cannot be predicted by genetics alone. Other crucial factors including clinical, pathological and lifestyle factors play a vital role in determining the probability of occurrence of a disease and response to treatment.

TECHNOLOGY DESCRIPTION

Gknowmix (Pty) Ltd offers a unique service that integrates genetic test results with clinical, pathology and lifestyle information for clinical management of multi-factorial diseases. The risk factors are tested using a novel pathology-supported genetic testing platform. This integrated web-based, knowledge and data management system provides computer generated reports that are quality controlled and validated before release back to the pathology laboratories, doctors and patients.

VALUE PROPOSITION

Gknowmix facilitates differential disease diagnosis by combining clinical, pathological, genetic and lifestyle factors and provides an all-inclusive disease profile for targeted intervention. Gknowmix is a virtual web-based company offering pathologists and similar testing laboratories worldwide access to the company's genetic knowledge integration expertise.

CURRENT STATUS

Gknowmix offers an integrated web-based, knowledge and data management system, incorporating proprietary report-integration algorithms, providing an all-inclusive disease profile. Gknowmix offers genetic counselling support and GeneScreen™ tests for breast cancer, cardiovascular disease, demyelinating disease, iron disorders, sport injuries, and wellness assessments for eligibility assessment and interpretation of whole genome/exome sequencing.

INTELLECTUAL PROPERTY STATUS & PUBLICATIONS

Patents

- Kotze MJ. South African Medical Research Council. A method of diagnosing patients with cardiovascular disease or a genetic predisposition for cardiovascular disease. South African patent 2001/5419, 2 July 2001.

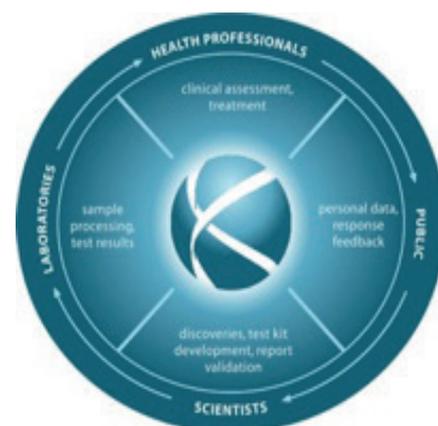
- Kotze MJ, et al. University of Stellenbosch and NHLS. In vitro method of diagnosing a demyelinating disease subtype. South African patent ZA2008/08511: 29/09/08.

Selected references

- Kotze MJ, et al. Pathology-supported genetic testing directed at shared disease pathways for optimized health in later life. *Personalized Medicine* 2013; 10: 497-507.
- Kotze MJ, et al. Genomic medicine and risk prediction across the disease spectrum. *Critical Reviews in Clinical Laboratory Sciences* 2015; 19:1-15.
- Kotze MJ. Application of advanced molecular technology in the diagnosis and application of genetic disorders in South Africa. *South African Medical Journal* 2016; 106: S114-S118.

OPPORTUNITIES

The Gknowmix integrated services are available to doctors and laboratories worldwide. The virtual business model enables geneticists at academic institutions to become part of the Gknowmix network by integrating their validated genetic findings into the web-based system and benefiting from the knowledge management process. Gknowmix welcomes in-licensing of additional genetic markers for other disease areas and invites pathology laboratories worldwide to become part of the service delivery system.



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