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Molecular biology methods in pathology

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Molecular biology is more used method in clinical laboratory diagnostic. It is also used method in pathology. There are still people using principal methods in histology, but molecular biology methods have rapidly developing field within pathology. The molecular method is focused in diagnostic but also therapeutic response of human disease, the interest in oncology field. In the past year's pathologist have been interested in morphology, but now they are interested to make decisions on treatment rapidly and monitoring of response to treatment is coming a major role. Molecular pathology methods like FISH (Fluorescent *in situ* Hybridization), CISH (Chromogenic *in situ* Hybridization), NGS (Next Generation Sequencing), RT-PCR are using clinical pathology. RNA based methods are also used in pathology. The use indication for the fusion gene is most commonly the lung adenocarcinoma, driver mutations. For example, ALK-1 and ROS-1 translocation carcinoma are found to be highly potent drugs. The importance of guiding the study is high in those few patients who have a genetic change sensitive to drug treatment. In Helsinki University hospital they currently conduct these fusion panel studies on a weekly basis. Molecular pathology and predictive medicine are two rapidly developing field within pathology and they probably will change the classic role of pathologists and laboratory scientists.

Biography

Marko Björn has completed his Master of Nursing Science from University of Eastern Finland and he is currently pursuing his PhD studies in University of Eastern Finland. He is a Lecturer in Turku University of Applied Sciences, Biomedical Laboratory Sciences.

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