

عنوان مقاله:

A Review on the Future of Protein Analysis in Pathology

محل انتشار:

بیست و یکمین همایش سالانه و چهارمین همایش بین المللی آسیب شناسی و طب آزمایشگاه و هشتمین همایش بین المللی شاخه ایرانی آکادمی بین المللی پاتولوژی (سال: 1398)

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خلاصه مقاله:

the use of microscopy images for clinical diagnosis rests at the core of the pathologist s profession. In the last few years, protein analysis methods such as laser-based biological Mass Spectrometry (MS) and immunohistochemistry (IHC) has made substantial advances in countless and very diverse directions. Many techniques have been developed for molecular protein analysis. Especially, matrix-assisted laser desorption/ionization imaging mass spectrometry (MALDI IMS). This research aims to focus on the workflow, advantages, and disadvantages of both MALDI IMS and IHC. Method: This research has been done with keywords mass spectrometry , MALDI IMS and immunohistochemistry during the January 2015 to July 2019 by analyzing articles from dependable scientific databases including Google Scholar, Science Direct, PubMed, MEDLINE, and Scopus. Result: MALDI MS analysis is applied to intact proteins after separation by isoelectric focusing and alternatively combined with the results of a bottom-up analysis of gel-separated protein digests by MALDI MS. new efforts in improving the sample targets in laser-based desorption/ionization for MS analysis, and a new low-cost disposable metal-coated polymeric sample target plate and a highly porous silver foil as sample substrate for the efficient analysis of lipids. In the field of IF and IHC, exploiting physical characteristics have led to the advent of a series of techniques that have improved spatial resolution by limiting diffraction, such as confocal scanning laser microscopy or super-resolution microscopy techniques. In the very nearby future, variability in human understanding might benefit from digital image quantification performed on scanned slides. Conclusion: There is a great need for multiplex systems that can measure several proteins at once. Oncology might benefit from techniques where predictive biomarkers are quickly analyzed in parallel. DNA markers have made their way into laboratories by PCR and Sanger sequencing. It is time for the .proteins to track the course

کلمات کلیدی:

MALDI IMS , immunohistochemistry , mass spectrometry

لینک ثابت مقاله در پایگاه سیویلیکا:

