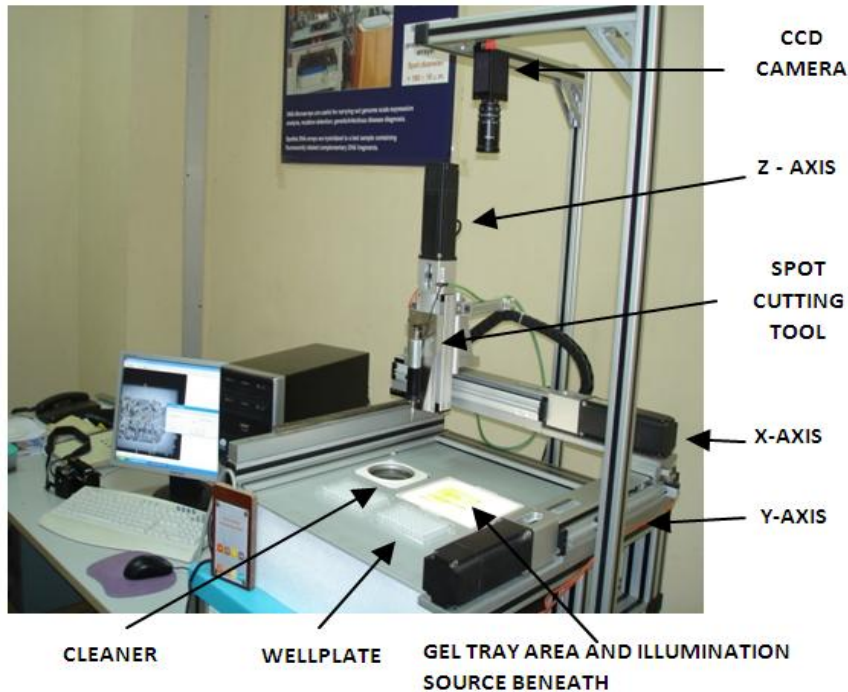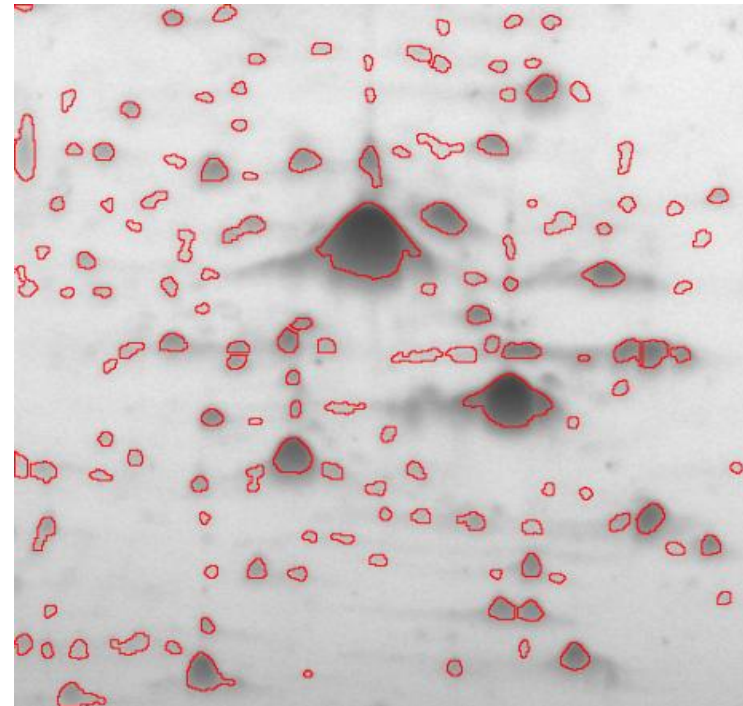# Spot Picker Robot for Proteomics applications

Precise robotic system with novel image processing algorithms for screening large number of proteins for development of new biomarkers and new drug targets in many diseases.
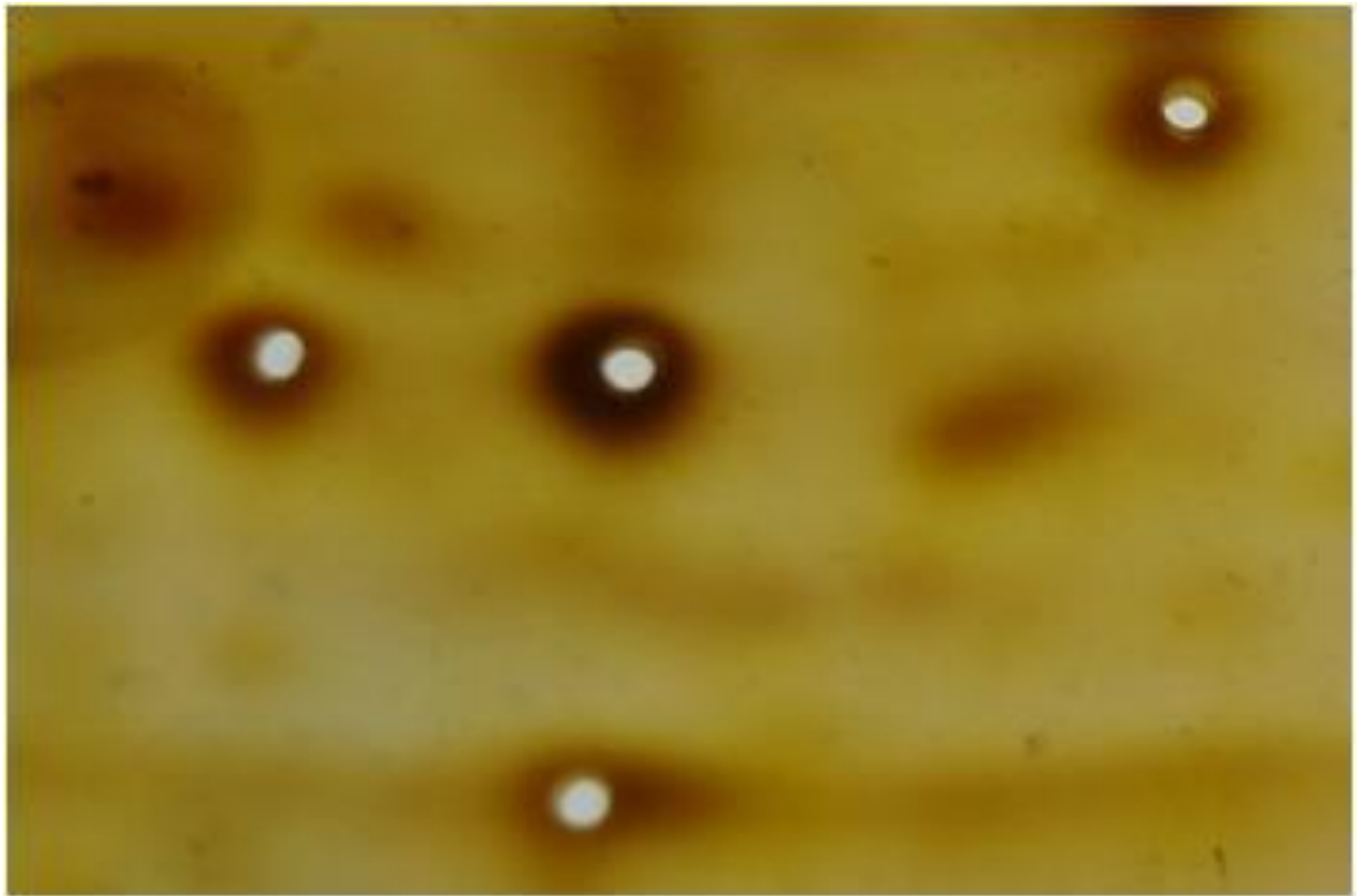

CCD CAMERA

Z - AXIS

SPOT CUTTING TOOL

X-AXIS

Y-AXIS

CLEANER   WELLPLATE   GEL TRAY AREA AND ILLUMINATION SOURCE BENEATH

Spot Picker Robot

2D Electrophoresis Gel Image Analysis

Challenges:

1. Identification of the various protein spots in very noisy and inhomogeneous background (faint and overlapped spots)
2. Precise robotic motion and spot excision

Protein spot excision tool & precise excision of protein spots

Features:

- Automation of 2D electrophoresis gel analysis for precise and true protein identification
- Characterization of protein spots in non separable wavelet domain
- Novel techniques and algorithms are better than commercially available methods.
- Precise control of robotic system and spot excision