components (*e.g.*, cameras, imaging capturing devices, etc.), and breakage of microscopes slides. By way of example, conventional robotic apparatuses often grip a label end of a microscope slide. There may be exposed residual glue at the label. If a gripper contacts the edges of the slide adjacent to the label or the edges of the label, the exposed residual glue may stick or adhere to the gripper. This may result in mishandling of the slide.

BRIEF SUMMARY

In some embodiments, a microscope slide holding cassette includes a main body, a plurality of shelves, and a plurality of support members. The main body is configured to surround and protect microscope slides and includes a first sidewall and a second sidewall. The shelves are capable of supporting microscope slides and are positioned between the first and second sidewalls. The shelves can be vertically spaced apart from one another when the microscope slide holding cassette is in the upright orientation. The support members extend away from respective shelves and include an elongate body and a catch. The catch protrudes upwardly from the elongate body and is capable of limiting movement of the microscope slide positioned along an elongate body. The microscope slide holding cassette further includes a first sloped shelf sidewall and a second sloped shelf sidewall, wherein one of the shelves extends between a base of the first sloped shelf sidewall and a base of the second sloped shelf sidewall.

In some other embodiments, a method of transporting a microscope slide includes picking up the microscope slide using a pickup device without contacting an edge of a label on the microscope slide and without contacting an edge of the microscope slide adjacent to the label. The microscope slide is carried using the pickup device to a desired location. In some embodiments, the microscope slide is carried between at least two processing stations (*e.g.*, a stainer unit, a coverslipper, an imaging system, an optical scanner, an optical imaging system) without contacting the edge of the label and without contacting the slide edge.

In some embodiments, a microscope slide pickup device comprises an end effector including an elongate planar platform having an upper surface and a lower surface. A fluid line is positioned on an upper side of the platform. The head element includes a connector and a suction head. The connector is positioned