Claims

1. A medical device (10), preferably a micro robot for use in a body vessel, preferably for application inside a human body (2), said medical device (10) including:
a body part (11) and
a tail part (12), characterized in that a line (13) is attached to the device, preferably the tail part (12), wherein the line (13) is adapted to pull back the medical device (10) from a target location and a stiffness not sufficient to move the medical device (10) to a target location, wherein the medical device is positionable by loosening or pulling the line, further wherein the medical device (10) has a drive (15) for actively moving the device in a direction, wherein the drive is a magnetic drive for external steering.

2. The medical device (10) as claimed in claim 1, characterized in that the medical device (10) has

a control member (16) for changing the movement direction within a body by external effects.

3. The medical device (10) as claimed in one of the claims 1 or 2, characterized in that the medical device (10) has a positioning means (18) to determine the position of the medical device (10) in the body.

4. The medical device (10) as claimed in one of the claims 1 to 3, characterized in that the line (13) comprises a transmission cable (30, 31) to transmit energy and/or data, in particular light or electric signals to the medical device (10).

5. The medical device (10) as claimed in one of the claims 1 to 4, characterized in that the line (13) comprises a material of the group of materials consisting of metals, in particular copper, polymers, carbon fibres, graphene, a fabric, silk, protein fibres and carbon nanotubes.

6. The medical device (10) as claimed in one of the claims 1 to 5, characterized in that the line has a smaller cross-section than the medical device.

7. The medical device (10) as claimed in one of the claims 1 to 6, characterized in that the medical device (10) comprises a material that enables detection by at least one of a group of imaging techniques comprising: magnetic resonance imaging, computer tomography scanner, echography, X-ray, fluoroscopy.

8. The medical device (10) as claimed in one of the claims 1 or 7, characterized in that the line (13) has an outer diameter of 10 to 1000 µm , preferably 50 µm to 200 µm.

9. The medical device (10) as claimed in one of the claims 1 to 8, characterized in that the body part (11) contains a magnetic part (14).

10. The medical device (10) as claimed in one of the claims 1 to 9, characterized in that the body part (11) contains at least one functional unit (51), wherein the functional unit (51) is in particular selected from a group consisting of: clamp, scalpel, drill, hook, stent, legs, caterpillar, propeller, detonator, camera and sensor.

11. The medical device (10) as claimed in one of the claims 1 to 10, characterized in that the body part (11) comprises a compartment (41) configured to store and release a drug (62).

12. The medical device (10) as claimed in one of the claims 1 to 11, characterized in that the body part (11) contains a transmitter (17) configured to send data from the medical device to a receiver (18), in particular through the line (13).

13. The medical device (10) as claimed in one of the claims 1 to 12, characterized in that the medical device has a size of 8 – 2000 µm, preferably 50 – 1000 µm and more preferably 200 – 500 µm.

14. The medical device (10) as claimed in one of the claims 1 to 13, characterized in that the body part (11) and tail part (12) of medical device (10) comprise a material selected from the group

of: metal, plastic, glass, mineral, ceramic, carbohydrate, nitinol, carbon, biomaterial, or a biodegradable material.

15. A system for controlling a medical device (10) comprising a medical device (10) according to any one of the preceding claims, and a magnetic field generator (23) characterized in that, the medical device (10) is guidable by a magnetic field (21) generated by the magnetic field generator (23).