GLOSSAR

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#### Computed tomography (CT):

A computer-aided process in which an object is irradiated with strong X-rays in order to obtain a three-dimensional image. Time-resolved CT or 4D CT is when the same object is imaged at multiple points in time. A <u>uCT</u> or micro-CT provides particularly high resolutions with details accurate down to the micrometer range.

## Translational medicine:

The transfer of research findings into practical applications for healthcare.

## In vitro:

Organic processes that take place outside a living organism, for example in a test tube or on an organ-on-a-chip. In contrast, in vivo processes take place in a living organism, for example in a laboratory animal.

## Laser-textured surfaces:

Treatment of the implant surface with ultra-short pulse laser beams



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#### Microfluidic chip:

A system in which chemical, biochemical and biological processes can be performed and investigated in a very small space. Liquids and gases are transported along microscopic channels with the aid of capillary forces. Also known as lab-on-a-chip when the chip fulfills the functions of a laboratory, such as for pointof-care diagnostics, and organ-on-a-chip when cell cultures are used to replicate an organ or, as in our case, a bone.

# Synchrotron:

A particle accelerator in which charged elementary particles (ions) can be made to travel at high speeds and used for high-resolution X-ray processes.