Born to help researchers from academia and industry to continue to innovate and maintain their competitive advantage, the Swiss Integrative Center for Human Health SA (SICHH) is focused on an unique approach. With the motto «Innovation by Integration», the center tackles R&D challenges holistically with interdisciplinary services.

Innovation by Integration
The Swiss Integrative Center for Human Health SA is dedicated to supporting fundamental and applied research related to human health. In other terms, SICHH tackles the creation of an innovative and interdisciplinary environment, which catalyzes innovation in R&D for public-private ideas and projects.

Established in the blueFACTORY, Fribourg Innovation quarter, SICHH's scientists operate in five high-tech facilities and labs hosted under the same roof:

- Health Facility: genome sequencing and proteomics
- Ergonomics Facility: human-machine interaction and effective visualization of complex results
- Materials Facility: microscopy and materials characterization
- Mathematics Facility: analysis and interpretation of results; modeling and simulation data
- Tech Facility: laboratory support and cell culture services.

Medtech meets Bio
The Medtech sector is entering a new era of developments using new technologies and integrating new components such as biomolecules, drugs, sensors and IT. While Switzerland had the chance to build up on the existing and experienced watchmaking and jewelry industry, medical technology is developing beyond dentistry and orthopedic areas.

Telemedicine makes use of telecommunication and information technologies in order to provide monitoring and clinical health care at a distance. Implantology and personalized-medicine make use of new imaging techniques, characterization and functionalization of surfaces as well as 3D prototyping and printing techniques. In parallel, some combinations products feature medical devices with new bio-components such as DNA, proteins, cells, antibodies or drugs.

The multidisciplinary team of highly skilled specialists provides microscopical services such as materials and surface characterization, modification but is also able to integrate technologies such as Next Generation sequencing (NGS), genomic profiling, chemical synthesis, particle analysis or biological and microbiological analysis.

Focus on Materials Facility: latest generation microscopes
At the crossroads of biology, physics, chemistry and bioinformatics, the Materials Facility provides solutions responding to those emerging needs. Imagery taken from latest generation microscopes can provide medtech customers with information such as hydrophility, hydrophobicity, roughness, texture, functionality or reactivity of materials.

The facility is equipped with high-tech microscopes including:
- Zeiss Smartscope 5 Widefield Confocal Microscope
- Atomic Force Microscope – Nanosurf Flex Ana
- Confocal Microscope – Zeiss LSM 800 On Axio Observer Z1
- Morphologically-Directed Raman Spectroscopy – Malvern Morphologi 3G ID
- SEM with EDX system – Zeiss Gemini.

Academic and industrial partnerships for innovative collaborations
Company shares are held by academic partners across Switzerland. As a result, SICHH creates a network of academic competences, facilitating access to professors and researchers for industry customers. Academic partners also participate in projects involving multiple partners, such as H2020 for example.

SICHH also established partnerships with world-renowned industrial suppliers for equipping its facilities. The center's partners benefit from the latest generation technologies from its partners. In addition, machine suppliers bring their know-how and expertise to R&D projects development.

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