# RESEARCH THEME

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| **Title of the doctoral research** | New technologies and functional Design for 4.0 Revolution in Healthcare: a new vision for the future of drugs in terms of design, development, administration and distribution. |
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| **Abstract** | Development and human-centric application of new technologies such as VR (virtual reality), AR (augmented reality), Big Data, IoT (Internet of Things), Blockchain and 3D printing techniques are rapidly changing our society. Healthcare is one of the main application field of these new approaches. Three-dimensional printing has become a feasible manufacturing technique for pharmaceutical products providing cheap and accurate freeform systems with a great potential for personalized-dose drugs.<br>This method and technique can lead to a revolution for subject-specific personalized therapy. The doctoral research should investigate design methods and solutions in terms of forms, materials, administration, and production technologies for the approach to new visions for the future of drugs in healthcare and a whole new kind of possibilities in the design, development, packaging and distribution of custom-made drugs for quantitative and morphological design.<br>The research aims also at investigating the possibilities given by new technologies in terms of production, dosage and administration and develop a new system to secure the best intake and therapeutic adherence. The expected application could be for both adults, elderly, children and all those subjects with disabilities or function limitation (e.g. dysphagia).<br>Future perspectives in new systems, services and business have to be analyzed and designed at the end of the research. |
| **Keywords** | 3D drugs printing, Functional design, Personalized therapy |