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- Probiotics, prebiotics, simbiotics
- Development of proteomic technologies
- Signal transduction in eukaryotes
- Synthesis, characterization and manipulation of biomaterials
- Hybrid nanosized structures and nanocomposites
- Application of nanomaterials science research in the biomedical field for the development of new therapeutic and diagnosis tools
- Drug delivery and Drugs from natural sources
- New synthetic compounds with bioactive properties
- Nanomaterials based-strategies for fighting antibiotic resistance and biofilms' development in medicine and ecology

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