

“Revolutionizing Health: Advanced Bio-Materials for a better future”

Casadidio C., Gabrielli S., Vitali L. A., Perinelli D. R., Bonacucina G., Cespi M., Palmieri G. F., Censi. R.

Pharmaceutical Technology unit; Microbiology unit; Polymer Technology unit

Di Giambattista G., Salathia S., Sathidevi L., Jackson S., Ma Q., Fronduti M., Jucja O., Gupta D.

School of Pharmacy, School of Science and Technology



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Characterizing studies

1. Antimicrobial molecules and coatings for infection prevention and control in hospital settings (surfaces and implants) (Fig1)
2. Formulations of nanoparticles and hydrogels as drug delivery systems for different bio-medical applications (Fig 2)
3. Purification of water from heavy metals using polysaccharides (Fig 3)

Figure 1

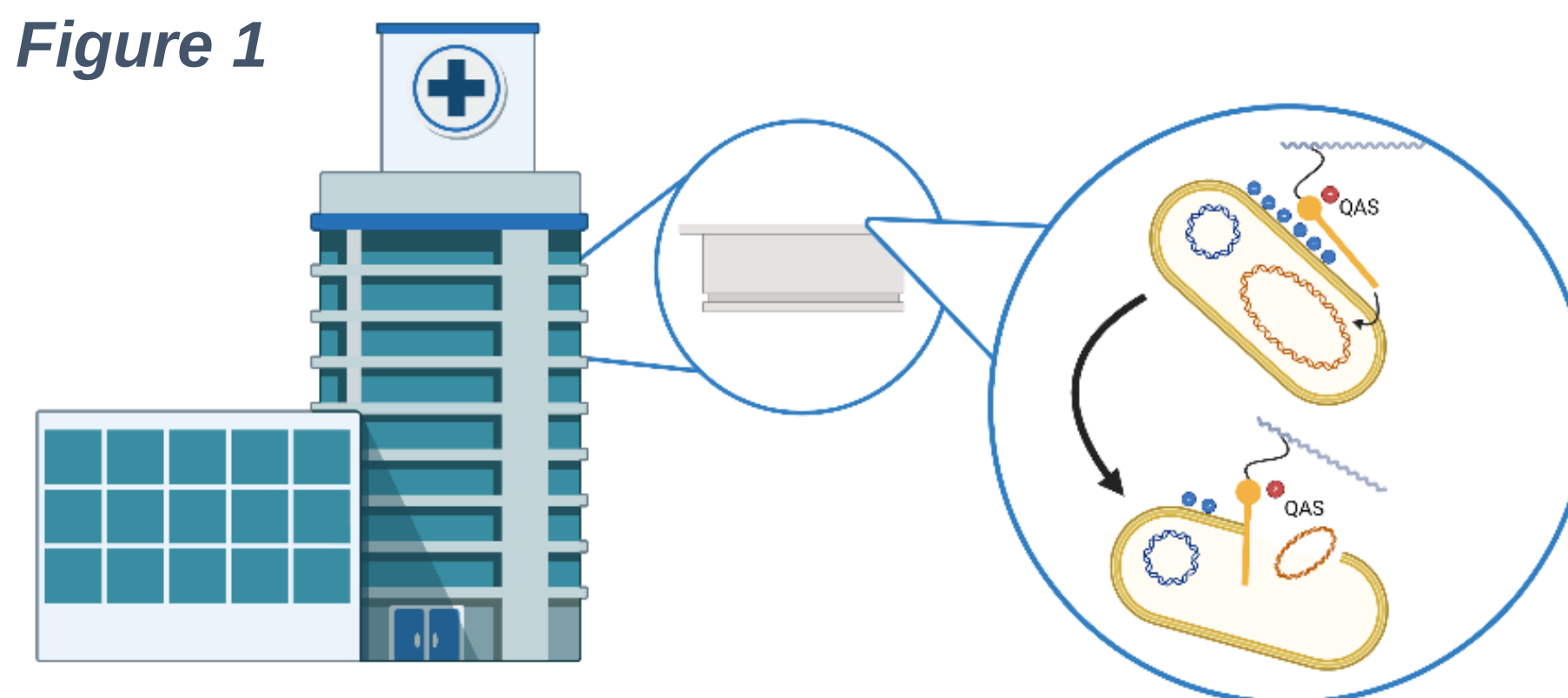


Figure 2

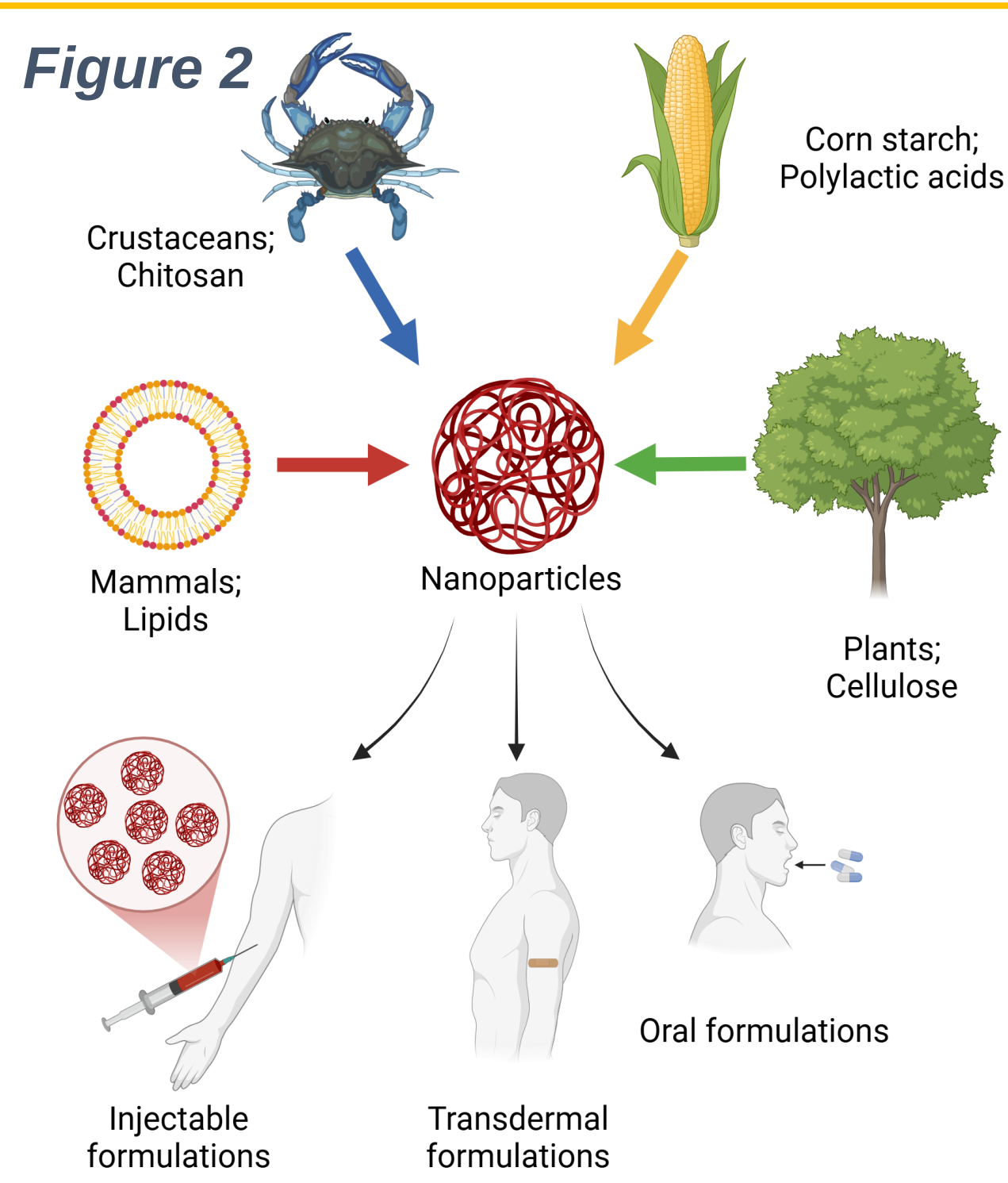
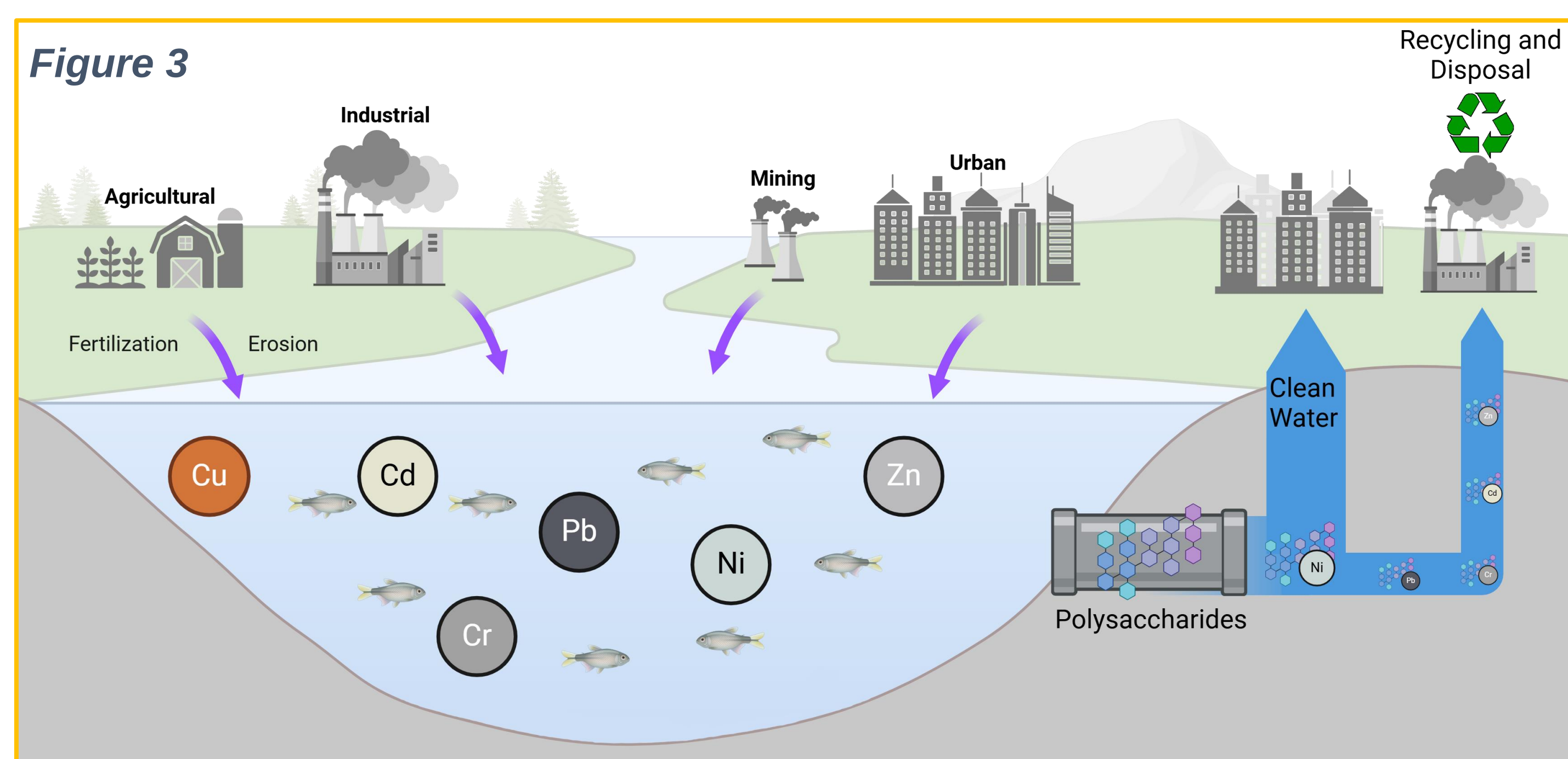


Figure 3



National and International Impact: Bio-based materials are emerging as important tools for health, safety and sustainability. The research focuses on the formulation of antimicrobial coatings for surfaces and implants, as well as the synthesis of nanoparticles used in drug delivery systems, tissues engineering, and drinking water purification.

These studies contribute to improving public health and environmental safety through regional and national collaborations. An example of the impact at a national level is the already established usage of antimicrobial coatings of hospital surfaces in many Italian infrastructures. This includes participation in hospital infection control programs, optimization of drug delivery systems, and implementation of technologies for water decontamination.

The collaboration with SMEs is driving the development of innovative and specific solutions that can be easily transferred to end users in our country, but can also be translated at the international level, both for the achievement of basic research objectives and for the derived industrial application.

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BIOCHICA S.R.L. – Startup



International collaborations:

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Roles in scientific societies/Networks/Research centers:

Roberta Censi: Directory Board Member of Italian Society of Biomaterials (SIB)
Associated Member of SITELF, CRS, FWIS, Marie Curie Alumni

Luca Vitali: Directory Board Member of the Italian Society for Pharmaceutical Microbiology (SIMiF-ETS)
Delegate of the Italian Society of Microbiology (SIM) for the Marche Region

Serena Gabrielli: Directory Board Member of the INSTM – National Institute of Material Science and Technology

