



## Research laboratory "Bionanocomposite"



h20

### Research adviser

Sukhodub Leonid, member of the NASU, Ph.D., professor

Staff



h11

Lyudmila Sukhodub, Ph.D., Senior Researcher



h5

Kumeda Maria, graduate student



h1

Belai Volodymyr, graduate student



Derevyanko Vita, graduate student

### The main direction of activity

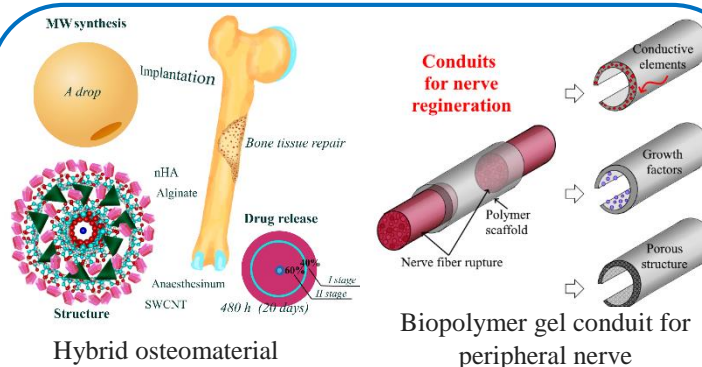
(under martial law and post-war reconstruction)

Fundamental studies of physical and chemical processes of biomineralization of solid tissues; engineering structures based on natural biopolymers and nanometric calcium phosphates for biomedicine (conduits, drains, etc.)

### Equipment

The material base of the laboratory is presented:

- X-ray fluorescence analyzer ElvaX Light SDD;
- High performance liquid chromatograph Agilent Technologies 1200;
- Freeze-dryer Alpha 1-2 LDplus
- Shaker KS 4000 I control
- Bactericidal cell ShBM-8



### Main achievements

Many types of materials and coatings have been created, namely: membranes, gels, granules modified with inorganic particles, drains, conduits, and multifunctional coatings for medical applications.

### Publications: articles, manuals, patents

Sukhodub L.B., et al. *Materials Today Communications*, 2022, 31, 103696 (Scopus, Q2, SNIP 0.859)  
 Sukhodub, L.B., et al. *Carbohydrate Polymers*. 2021. vol.266, 118137 (Scopus, Q1, SNIP 1.947)  
 Sukhodub L.F., et al. *J. Korean Ceram. Soc.* -2020. Volume 57 .P. 557–569. (Scopus, Q2, SNIP 0.750)  
 Suhodub L.F. *Biomaterials and coatings [Electronic source]* / Sumy: Sumy State University. — 300 s, 2020.  
 UTILITY MODEL PATENT UA150097 12/29/2021, Bull. No. 52

### Cooperation with students

Actively submitting and winning prizes at the All-Ukrainian competition of student scientific papers in specialty 163 "Biomedical engineering": Kumeda M. - 2nd place in (2019), Denysenko A. - 3rd place (2020), Ostolskyi V. 3rd place (2021).

A course of lectures for masters in specialty 163 "Biomedical Engineering" has been developed.

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