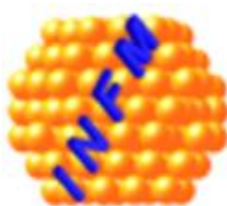


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <b>PROGRAMUL DE FINANTARE:</b> PNIII- Program 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                             |
| <b>SUBPROGRAM:</b> 2.1-Transfer project to the economic operator (PTE-2019)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                             |
| <b>TITLUL PROIECTULUI/ACRONIM:</b> Algoritm de valorificare a reziduurilor entomologice si de pielarie in sisteme multivalente pentru regenerare de tesut cutanat/BIOTEHKER                                                                                                                                                                                                                                                                                                                                                                                                 |                                             |
| <b>CONTRACT NR.:</b> 5PTE_2020-2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                             |
| <b>BUGET TOTAL PROIECT:</b> 1890000 lei/ 378000 euro                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>BUGET INCOTP:</b> 155000 lei/120000 euro |
| <b>DATA DE ÎNCEPERE:</b> 01/06/2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>DATA DE FINALIZARE:</b> 01/06/2022       |
| <b>PAGINA WEB:</b> <a href="https://256poc.biotehnos.ro/">https://256poc.biotehnos.ro/</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                             |
| <b>PARTENERI:</b><br><div> <div> SC      Biotehnos<br/> coordonator </div> <div> SA-      INCOTP-Sucursala ICPI<br/> Partener 1 </div> <div> INCOTFM<br/> Partener 2 </div> <div> UPB<br/> Partener 3 </div> </div> <div>     </div> |                                             |
| <b>OBIECTIVE GENERALE:</b><br>Implementarea biotehnologiilor optimizate de obtinere a unor compusi structurali cu efect cicatrizant (chitina si cheratina) din reziduuri entomologice si de pielarie si asocieri multicomponent inovative (extracte vegetale si materiale intermetalice bio-eficace), in vederea realizarii, inclusiv prin tehnologie 3D-printing, a unor sisteme integrate de livrare a principiilor active.                                                                                                                                               |                                             |
| <b>OBIECTIVE SPECIFICE:</b> <ul style="list-style-type: none"> <li>Dezvoltarea capacitatii de inovare de produse si tehnologii, prin atingerea unei noi etape tehnologice pentru o serie de produse intermediare si prototipuri aflate in portofoliu si completarea acestuia cu produse noi, complementare ca actiune cutanata;</li> <li>Stimularea cercetarii in sectorul privat prin colaborare cu institute de cercetare si universitati publice;</li> <li>Stimularea transferului de cunostinte in domeniul privat si valorificarea rezultatelor cercetarii.</li> </ul> |                                             |
| <b>ELEMENTE DE NOUȚATE/CONCEPTUL ȘTIINȚIFIC:</b><br>Valorificarea biotehnologica a deseurilor entomologice si de pielarie; combinatia compusi structurali / extracte vegetale / structuri intermetalice antimicrobiene; formulari topice de ultima generatie - 3D-printing pentru regenerare cutanata, cu proiectie in medicina personalizata din Romania.                                                                                                                                                                                                                  |                                             |
| <b>REZULTATE EXPLOATABILE PRECONIZATE PENTRU ATINGEREA OBIECTIVULUI:</b> <ul style="list-style-type: none"> <li>aditivi pe baza de cheratina pentru vindecarea ranilor cronice;</li> <li>tehnologii de extractie si rafinare a cheratinei pentru uz farmaceutic.</li> </ul>                                                                                                                                                                                                                                                                                                 |                                             |
| <b>REZULTATE OBTINUTE:</b> <ul style="list-style-type: none"> <li>Formule noi de biomateriale pentru vindecarea ranilor cronice;</li> <li>Cheratina de uz farmaceutic pentru formularea de creme, geluri sau pudre.</li> </ul>                                                                                                                                                                                                                                                                                                                                              |                                             |



**Loturi de cheratina obtinute din lana ovina, pentru uz farmaceutic, structura poroasa**

#### **DISEMINARE, CERERI DE BREVETE, PREMII OBTINUTE:**

- **Lucrari publicate WoS: 1**

Olariu, L.; Dumitriu, B.G.; Gaidau, C.; Stanca, M.; Tanase, L.M.; Ene, M.D.; Stanculescu, I.-R.; Tablet, C. Bioactive Low Molecular Weight Keratin Hydrolysates for Improving Skin Wound Healing. *Polymers* **2022**, *14*, 1125. <https://doi.org/10.3390/polym14061125>, IF=4, 329 (Q1), AIS=2,037.

- **Lucrari publicate BDI: 3**

► Gaidau Carmen, Rapa Maria, Olariu Laura, Dumitriu Brindusa Georgiana, Mosutiu Anamaria, Stanca Maria, Berechet Daniela, **Leather and Wool Byproducts for Bioactive Additives**, Conferinta Internationala "Innovative solutions for sustainable development of textiles and leather industry", 26-27 mai 2022, Oradea, Romania, *prezentare orală*, publicatii; Book of abstract, **P-ISSN: 1843 – 813X, CD-ISSN-2068 – 1070, E-ISSN- ISSN 2457-488, BDI** si Annals of the University of Oradea, Fascicle of Textiles, Leatherwork, vol 23, nr.1, Editura Universitatii din Oradea, **ISSN 1843 – 813X, pg.73-76.**

► Demetra Simion, Carmen Gaidau, Jianzhong Ma, Zhang Wembo, New nanostructured composite obtained by innovative technologies, *prezentare orală* la 8th International Conference on Advanced Materials and Systems, ICAMS 2020, 1-3 octombrie 2020, Bucuresti, [www.icams2020.ro](http://www.icams2020.ro), DOI: [10.24264/icams-2020.II.22](https://doi.org/10.24264/icams-2020.II.22)

► Mariana Daniela Berechet, Demetra Simion, Maria Stanca, Ciprian Chelaru, Cosmin-Andrei Alexe, Maria Rapa, The influence of alkaline extraction on some keratin hydrolysates properties, care se va publica in volumul 8<sup>th</sup> International Conference on Advanced Materials and Systems, ICAMS 2020, 1-3 octombrie 2020, Bucuresti, Editura Certex, DOI: [10.24264/icams-2020.II.3](https://doi.org/10.24264/icams-2020.II.3)

- **Comunicari: 5**

► Carmen Gaidau, Maria Stanca, Cosmin-Andrei Alexe, Daniela Berechet, Laura Olariu, Brandusa Dumitru, Veronica Drumea, The influence of enzymatic hydrolysis on keratin properties, Biocatalysis Open Days, 26

noiembrie 2020, poster prezentare virtuala, <http://www.efbiotechnology.org>

► Cosmin-Andrei Alexe, Carmen Gaidau, Maria Stanca, Daniela Berechet<sup>1</sup>, Laura Olariu, Brandusa Dumitru, Veronica Drumea, Keratin hydrolysates used as biostimulators, EFB 2021, European Federation of Biotechnology, Virtual Conference, 10-14 May 2021, comunicare poster

► Demetra Simion, Roxana Constantinescu, Carmen Gaidau, Maria Stanca, Cosmin Alexe, Laura Olariu, Brandusa Dumitru, Study of the influence of UVC radiation on microbial load and structural modification of keratin hydrolysate powders, VI. International Leather Engineering Congress, Innovative Aspects for Leather Industry, November 25-26, 2021 Izmir/Turkey, lucrare extenso, prezentare virtuala poster si lucrare in extenso

► Maria Stanca, Carmen Gaidau, Roxana Constantinescu, Roxana Trusca, Ioana Stanculescu, Daniela Berechet, Cosmin Alexe, Cristina Enascuta, Laura Olariu, Brandusa Dumitru, Preparation and characterisation of bioactive micro and nanokertin particles VI. International Leather Engineering Congress, Innovative Aspects for Leather Industry, November 25-26, 2021 Izmir/Turkey, lucrare extenso, prezentare virtuala poster si lucrare in extenso [http://www.iafli.ege.edu.tr/wp-content/uploads/2021/11/IAFLI\\_2021\\_Congress\\_Programme.pdf](http://www.iafli.ege.edu.tr/wp-content/uploads/2021/11/IAFLI_2021_Congress_Programme.pdf)

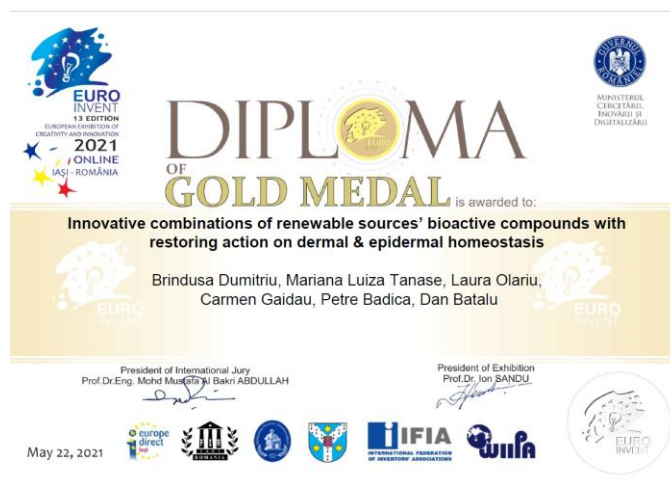
► C. Gaidau, M. Stanca, D. Berechet, M. Rapă, A. Mosutiu, L. Olariu, B.G. Dumitriu, **Processing** of protein byproducts for new biomaterials design, 12th International Conference on Materials Science & Engineering, Bramat 2022, Brasov, 9-11 martie 2022, **II.PO.1.**, pp.54, prezentare Poster.

- **Cereri de brevete:**

OSIM, A/00295/31.05.2022, Procedeu de obținere și asocieri inovative de compuși bioactivi în terapia rănilor cu vindecare dificilă, Laura OLARIU, Brândușa Georgiana DUMITRIU, Carmen-Cornelia GAIDĂU, Petre BĂDICĂ, Nicolae-Dan BATALU.

- **Premii:**

Gold medal EuroInvent, 28 mai 2022, Iasi, 14<sup>th</sup> Edition of European Exhibition of Creativity and Innovation, Porous orthotic structures functionalized with antimicrobial powders, polypeptide fragments and plant extracts used in orthopedics and traumatology, D.N Batalu, N.Dobre, I.O..Trancau, B.G.Dumitriu, L.Olariu, M.A,Grigoroscutu, M.Burdusel, G.V.Aldica, P.Badica, C.Gaidau



**PERSOANA DE CONTACT:**

Dr. ing. Carmen Gaidău,

CS I, [carmen.gaidau@incdtp.ro](mailto:carmen.gaidau@incdtp.ro)

Departament Cercetare Pielărie