



Industria della salute e Silver Economy

SPOKE 5

R&I Roadmaps

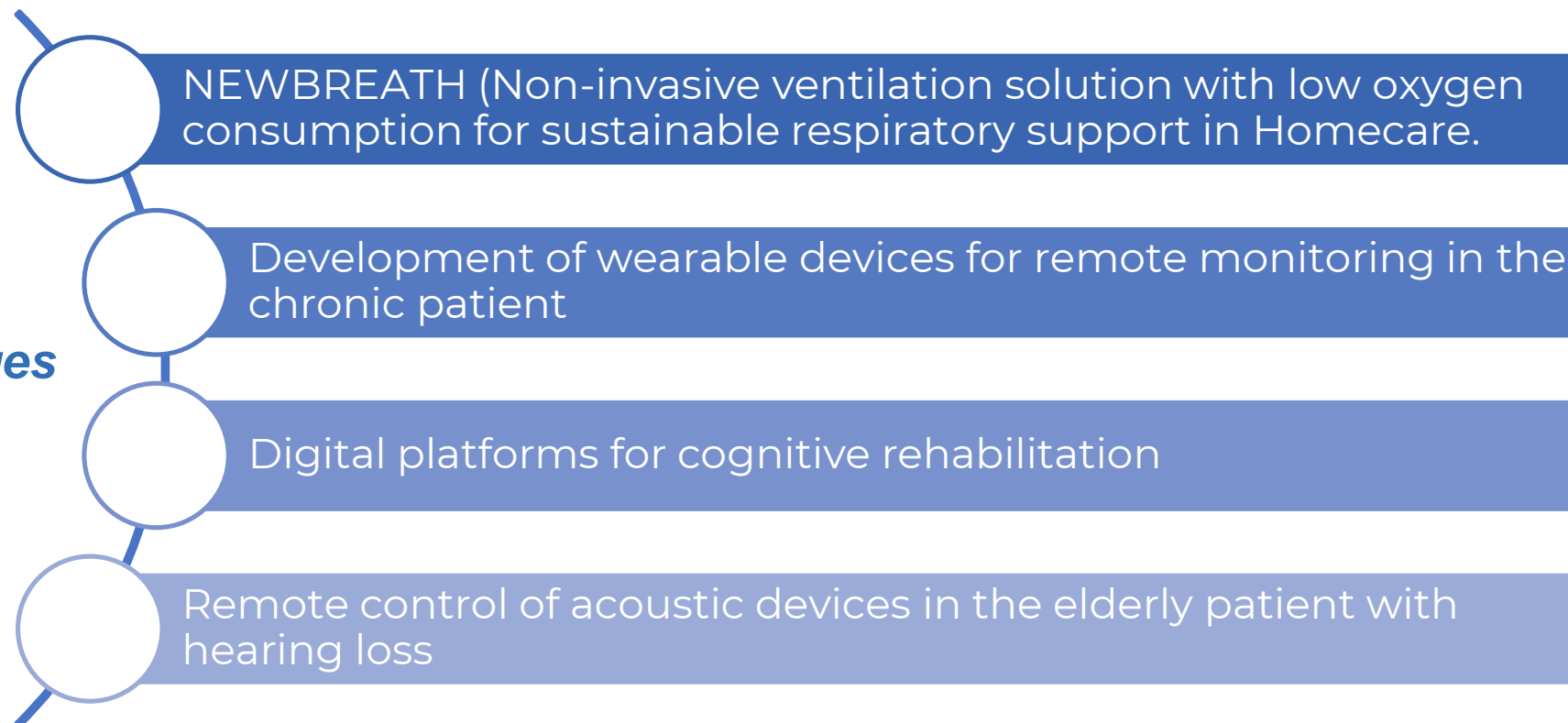
ACHIEVEMENTS

- **R&I RoadMap** first draft definition and revision for the definition and implementation of the **Research Topics** of the cascading calls;
- **Road Map** shared with **Stakeholder Committee**;
- Collection of feedback on topics of interest and investments in the next 2 years in R&D&I from local companies
Launch and first results evaluation of **Strumento di Scoperta Imprenditoriale: more than 65 industries** showed interest in NODES call

Technology Integration in healthCARE

“TINCARE”

Objectives and Challenges





TINCARE

Progress of Research Activities

1. Definition of the research protocol of a study to reduce re-hospitalisations among high-risk patients;
2. Project engineering to validate a smart biotech fabric engineered with nanoceramics, able to record vital signals;
3. Investigation of a wearable multi sensor device able to monitor gait during subjects' daily life;
4. Analysis of the non-invasive ventilation systems from a scientific, industrial, and regulatory framework and preliminary data collection;
5. Design of a pilot study to set up the digital platform;
6. Definition of the study protocol to test a remote monitoring system for patients with cochlear implant;
7. Analysis of the existing virtual reality devices.

TINCARE

Publications

Communication

Effects of Usnic Acid to Prevent Infections by Creating a Protective Barrier in an In Vitro Study

Rebecca Galla ^{1,2,†}, Sara Ferrari ^{1,†}, Sara Ruga ¹, Beatrice Mantuano ¹, Giorgia Rosso ¹, Stelvio Tonello ³, Luigi Rosa ⁴, Piera Valenti ⁴ and Francesca Uberti ^{1,2,*}

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Via Solaroli 17. 28100 Novara. Italy

Article

Base of Support, Step Length and Stride Width Estimation during Walking Using an Inertial and Infrared Wearable System

Rachele Rossanigo ^{1,*}, Marco Caruso ^{2,3}, Stefano Bertuletti ¹, Franca Deriu ^{1,4}, Marco Knafitz ^{2,3}, Ugo Della Croce ¹ and Andrea Cereatti ^{3,*}

Article

Novel Approach to the Treatment of Neuropathic Pain Using a Combination with Palmitoylethanolamide and *Equisetum arvense* L. in an In Vitro Study

Sara Ruga ¹, Rebecca Galla ^{1,2}, Sara Ferrari ¹, Marco Invernizzi ^{3,4} and Francesca Uberti ^{1,*}

INNovative Diagnostics and therApeutics for regNerAtive medicine

“INNDIANA”

Objectives and Challenges

Innovative products for tissue engineering and regenerative medicine

Advanced therapeutic approaches in the application of Organ-on-Chip (OoC)

Bioactive compounds and Drug Delivery

INNDIANA

Progress of Research Activities

Master thesis:

"Physicochemical characterization and biological performances of an ECM-derived hydrogel: role in articular cartilage regeneration."

"Biomaterial mediated regulation of focal mesenchymal stem cells during muscle tissue differentiation: applications in regenerative medicine."

"Cardiomyogenic Differentiation of H9C2 Cardiomyoblasts on Hydrogel Derived From Decellularized Bovine Pericardium."

Publications:

 International Journal of
Molecular Sciences



Article

Polylevolysine and Fibronectin-Loaded Nano-Hydroxyapatite/PGLA/Dextran-Based Scaffolds for Improving Bone Regeneration: A Histomorphometric in Animal Study

Elena Canciani ^{1,†}, Paola Straticò ^{2,†}, Vincenzo Varasano ², Claudia Dellavia ³, Chiara Sciarrini ², Lucio Petrizzi ², Lia Rimondini ^{1,*,†} and Elena M. Varoni ^{3,†}

 **frontiers** | Frontiers in Immunology

TYPE Review
PUBLISHED 25 May 2023
DOI 10.3389/fimmu.2023.1176016

Feeding the gut microbiome: impact on multiple sclerosis

Matteo Bronzini^{1†}, Alessandro Maglione^{1†}, Rachele Rosso^{1†}, Manuela Matta², Federica Masuzzo², Simona Rolla^{1,†*} and Marinella Clerico^{1,2†}

¹Department of Clinical and Biological Sciences, University of Turin, Orbassano, Italy. ²San Luigi Gonzaga University Hospital, Orbassano, Italy

EDUCATION ACTIVITIES

Education activities have been designed to improve and develop high quality and educational paths with appropriate knowledge, skill and values needed **to foster and boost competences in digital and sustainable technologies** for the management of frail subjects (Spoke 5 topics), with the aim **to train** and have high level of **students, professional and entrepreneur**

- **LLI: 3 CUAP/ECM courses will start in the AA 2023/24:**
 - Nutrition for health and aging (organized by UniTO and UPO)
 - The use of digital tools in medical practice: from diagnosis to surgical planning (organized by UniTO)
 - Tutoring and Coaching in Health Care Simulation and Education (organized by UniTO)
- **Industrial PhD: 4 out of 6 Industrial PhD co-financed by companies have received “Expression of interest” :**
 - Food, health and Longevity; Medical Sciences and Biotechnology; Chemistry and Biology; Drug Innovation at UPO (1 position)
 - Bioengineering and Medical- Surgical Sciences at PoliTO (2 positions)
 - Medicine and experimental therapy at UniTO (1 position)
- **Entrepreneurship Training:**
 - **Challenges:** 4 challenges will be scheduled from 2023 to 2025
 - “Silver Economy - new business opportunities” - organized from POLITO and started in March 2023

BANDI A CASCATA

PoC Accademici:

- **Number of n.21 Proof of Concept proposals presented at first cut-off (16/06/2023);**
- **Total amount Established budget of Grants: 657.459 €;**
- **Total amount request: 1.862.000 €;**
- **Processo di valutazione *in progress* con la Commissione di Valutazione;**

BANDI A CASCATA

Bandi Linea A e Linea B

- Sono pervenute domande per un ammontare di circa cinque volte la dotazione dello Spoke 5 per la Linea A;
- Processo di valutazione *in progress* con nomina della Commissione di Valutazione e Comitato tecnico individuati tra Esperti Nazionali nelle tematiche dello Spoke 5 (salute pubblica, medicina, riabilitazione, telemedicina, ...)
- Chiusura valutazione e assegnazione del contributo per fine settembre 2023.

Acceleration Booster WP6

GOALS & ACHIEVEMENTS

□ Activities to foster start-up development:

- **Presentation of Nodes opportunities** within the **local and Italian Health innovation ecosystem** (startups, SMEs, National clusters such as ALISEI and investors);
- **>44 Target b2b meeting** with **startups** and **SMEs**;
- **>80 B2B** matchmakings with technological and business partners, including investors

□ Market development:

- Definition, management, Launch and Promotion of Acceleration vouchers – Linea B
- 15 Acceleration services listed in Linea B
- Promotion during dedicated events (WP2) and through dedicated 1to1 meetings

Engagement of actors WP6

ACHIEVEMENTS

- **2 relevant investor groups** are part of the **Stakeholder Committee** □ **Claris Ventures & Club degli Investitori**
- **2 relevant actor in public Grants** are part of the **Stakeholder Committee** □ **Invitalia** and **EIT Health**
- **3 Investors days** organized: **6 investor groups** involved and more than **12 target b2b** meeting between **investors and selected startups**.
- **>80 B2B matchmakings** with **technological and business partners**, including **investors**
- **4 strategic partnerships** with **new innovation actors**

Internationalization WP6

ACHIEVEMENTS

- **NODES** introduction to **ALISEI** (Italian Life Sciences Innovation Cluster) to disseminate the NODES initiative for the South regions;
- Participation to **3 International Events** to **promote** and **connect** territory and industry at **International** level: **ARAB Health, Smart Health Pilot Event – Vanguard initiative, CEBR Annual Meeting**;
- Shared with **CHEDIH** project partners to implement collaborative actions.

COMUNICAZIONE E DISSEMINAZIONE

- **14 news** on research activities carried out by the researchers of spoke 5 based on the two flagship projects.
- **10 events** for the diffusion of NODES - Spoke 5:
 - **3** organized by UPO for the presentation of the cascade calls and the activities of the Spoke 5 → **225 participants**;
 - **2** organized by Cluster BioPmed;
 - **5** organized by Confindustria, Sistema Poli, AOU-Novara and Cluster Alisei.
- **LinkedIn** and **Twitter** pages constantly updated with Spoke news;
- **6** UPO News - visible to the following [Link](#).

