## Ficha LA - versão 2.1

	L	
		1. Nome/Designação do LA
		2. Acrónimo do LA
	LA	3. Referência FCT
		4. Coordenador do LA
		5. Data da atribuição do estatuto de LA
		6. Webpage
		7. Classificação FCT
		8. Financiamento Complementar FCT Total
		1. Nome/Designação da Unidade de I&D
		2. Acrónimo
		3. Personalidade jurídica
		4. Coordenador
	Unidade de I&D Principal	5. Contactos gerais
		6. Webpage
		7. Classificação FCT
A Caracterização do		8. Financiamento Base FCT Total
A - Caracterização do LA		9. Financiamento Programático FCT Total
LA		1. Nome/Designação da Unidade de I&D
		2. Acrónimo
	Outras Unidades de I&D	3. Personalidade jurídica
		4. Coordenador da Unidade
		5. Contactos gerais da Unidade
		6. Webpage
		7. Classificação FCT
		8. Financiamento Base FCT Total
		9. Financiamento Programático FCT Total
	Unidade de Gestão Principal	1. Nome/Designação
		2. Personalidade jurídica
	Unidades de Gestão Participantes	1. Nome/Designação
		2. Personalidade jurídica

B - Constituição da equipa de investigação do LA	N.º de investigadores integrados com PhD	150
	N.º de ETIs integrados	130.2
	N.º de técnicos	20
	N.º de doutorandos	180
	N.º de outros colaboradores com PhD	
	N.º de outros colaboradores sem PhD	
C - Missão do LA	1. Mission Statement/Objetivos principais	LABBELS is an Associate Laboratory based at the Univer (CEB) - Industrial Biotechnology, Environmental Biotech computational modelling, micro/nano fabrication, sma both step and leap changes in Biotechnology and Bioer solutions and devices, oriented for accelerated market challenges of securing a Sustainable Bioeconomy.
	1. Área Científica 1	Industrial Biotechnology
	2. Área Científica 2	Environmental Biotechnology

D - Áreas Científicas	3. Área Científica 3	Medical Biotechnology
	4. Área Científica 4	Agricultural Biotechnology
	5. Área científica 5	Electrical Engineering, Electronic Engineering, Informa
	1. Palavra-chave 1	Industrial Biotechnology
	2. Palavra-chave 2	Environmental Biotechnology
E - Palavras-chave	3. Palavra-chave 3	Health Biotechnology
	4. Palavra-chave 4	Food Biotechnology
	5. Palavra-chave 5	Microelectromechanical systems
		1. Designação da LT
		2. Coordenador da LT
		3. Contactos do Coordenador
	1. Linha Temática 1	4. Descrição da LT
		1. Designação da LT
	2. Linha Temática 2	2. Coordenador da LT
		3. Contactos do Coordenador
		4. Descrição da LT
		1. Designação da LT
		2. Coordenador da LT
E Linhos Tomáticas		3. Contactos do Coordenador
F - Linhas Temáticas	2 Linha Tamática 2	

3. Linha Temática 3

4. Descrição da LT

1. Designação da LT	
2. Coordenador da LT	
3. Contactos do Coordenador	

4. Linha Temática 4

4. Descrição da LT

1. Designação da LT
2. Coordenador da LT
3. Contactos do Coordenador

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5. Linha Temática 5

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4. Descrição da LT

Associate Laboratory on Biotechnology, Bioengineering and Microelectromechanical Systems
LABBELS
LA/P/0029/2020
Nome; contactos (e-mail, telefone)
1/1/2021
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Fundação
n/a
(e.g: Pública, Privada, Associativa, Cooperativa, Fundação, Outra

estimativa

rsity of Minho linking the 4 well established thematic lines at the Centre of Biological Engineering nology, Health Biotechnology and Bioengineering, and Food Biotechnology, with the clear-cut expertise in rt devices integration and testing, of the Microelectromechanical Systems Research Unit (CMEMS). LABBELS will enable ngineering, by delivering an outstanding scientific groundwork underpinning the development of innovative biotech implementation. Linking life and technology, we will shape the future by contributing significantly to the global

#### Industrial Biotechnology

José António Teixeira

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TL1 established ambitious goals for the next 5-10 years that contribute to accelerating the decarbonisation of the economy, to the circ

### Environmental Biotechnology

Eugénio Campos Ferreira

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TL2 established ambitious goals for the next 5-10 years, including: 1.

to turn the North of Portugal a Water Smart Territory; 2

# Health Biotechnology

Joana Azeredo

#### jazeredo@deb.uminho.pt

TL3 and TL5 (Microelectromechanical systems) have established complementary goals for the next 5-10 years

- to address two major health related strategic challenges, as detailed bellow:
- 1. Aging and quality of life. Development of electronic devices coupled to biologic sensors for fast, early and accurate identific
- 2. Digital society. To promote the deployment of internet of things everywhere, from logistics to healthcare sector.
- 3. Development of health related principles for application of hair and skin cosmetics.

#### Food Biotechnology

António Vicente

### Avicente@deb.uminho.pt

TL4 established ambitious goals for the next 5-10 years, including:

- 1. Widen and diversifying the business opportunities associated with the efficient and, whenever possible, regenerative use of lo
- 2. Implementing programmes oriented to support the creation of pilot-scale, prototypes or scale-up solutions targeting the object
- 3. <u>Supporting research and innovation linked to biodiversity projects in this area (e.g. the RCI Project Algavalor, or the Mobilizi</u>
- 4. Supporting research and innovation linked to food quality control and safety

## Microelectromechanical Systems

## José Higino Correia

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TL5 established ambitious goals for the next 5-10 years, including:

- 1. Digital transition in health.
- 2. Optimizing the Ocean Government.
- 3. Ensuring the sustainability of marine resources.
- 4. Improving communication skills and sensing smart territories and creating a network of smart cities
- 5. Implementing a transversal platform of Internet of Things sensors in the ports, roads and railways for the hinterland, and auto

cular economy and to the promotion of biorefineries: 1.

to develop a process (TRL 2-3) using microalgae/cyanobacteria, to directly m

2. to promote and support the implementation of Sustainable Biogas Plants linked to nitrogen/phosphorous biorefineries in order to re

ation of diseases, such as cancer, infectious diseases and neurological disorders.

cal resources (particularly those related with e.g. forest biomass and by-products of food processing) tive of achieving a circular bioeconomy ng Project ValorMar) is a clear demonstration of its capabilities in this domain that will be reinforced in the subsequent years (TRL 4-6);

nomous operating equipment, automatically interconnected with the Single Logistics Window and all systems of the actors involved in the lo

litigate methane emission while producing value added compounds potentially used in

scover energy (biomethane injected in the NG grid) and manage nutrients from agricult

gistics networks, managed by advanced cognitive systems, with capacity for decision r