



Universities for Adaptation: nature-based solutions and skills for resilience

Italy Pavilion

November 15th 2025

Piero Di Carlo

University 'G. d'Annunzio' of Chieti-Pescara

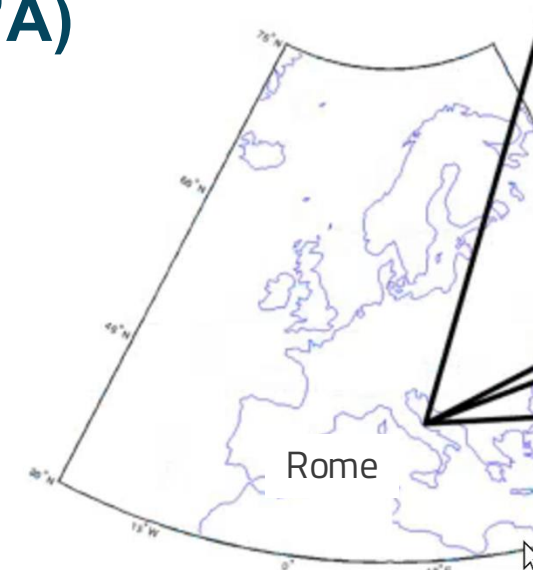
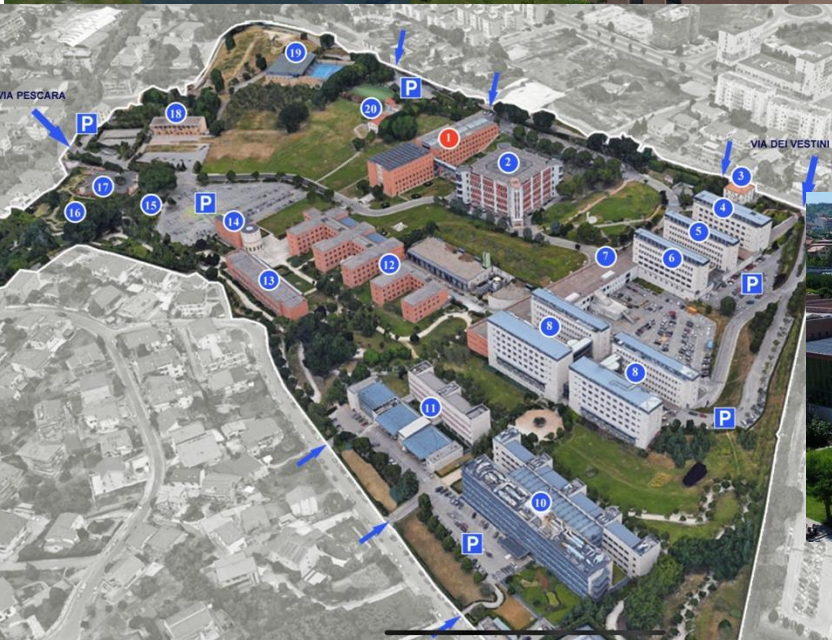
Ongoing projects (Vitality) and planned infrastructures using nature-based solution for resilience



Università degli studi
"G. d'Annunzio"



University 'G. d'Annunzio' of Chieti-Pescara (Ud'A)



Ud'A is Central Italy, on the Adriatic coast
180 km from Rome
50 km from Mountain

133,928 m2 of surface with planted vegetation
24,056 m2 of forest vegetation

Ud'A was established in 1965 and includes **16 Departments and 3 Schools.**

Ud'A has two campuses: one in **Chieti**, the other one in **Pescara**.

Prof and researchers: **760**

AREA SANITARIA
14 Corsi di Laurea
01 Corsi di Laurea Magistrale
04 Corsi di Laurea Magistrale a Ciclo Unico

AREA UMANISTICA
05 Corsi di Laurea
05 Corsi di Laurea Magistrale

AREA SCIENTIFICA
07 Corsi di Laurea
07 Corsi di Laurea Magistrale
01 Corsi di Laurea Magistrale a Ciclo Unico

AREA SOCIALE
09 Corsi di Laurea
15 Corsi di Laurea Magistrale



35

Bachelor Degree

28

Master Degree.

05

Medicine and Dentistry Degree.



19

PhD program

09

Master di I Livello

16

Master di II Livello

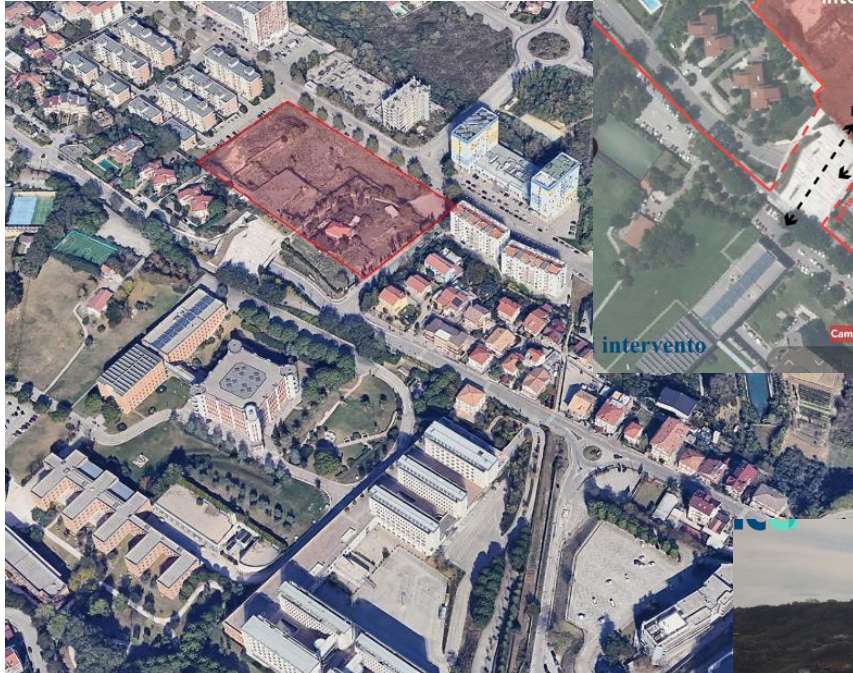
35

Scuole di Specializzazione

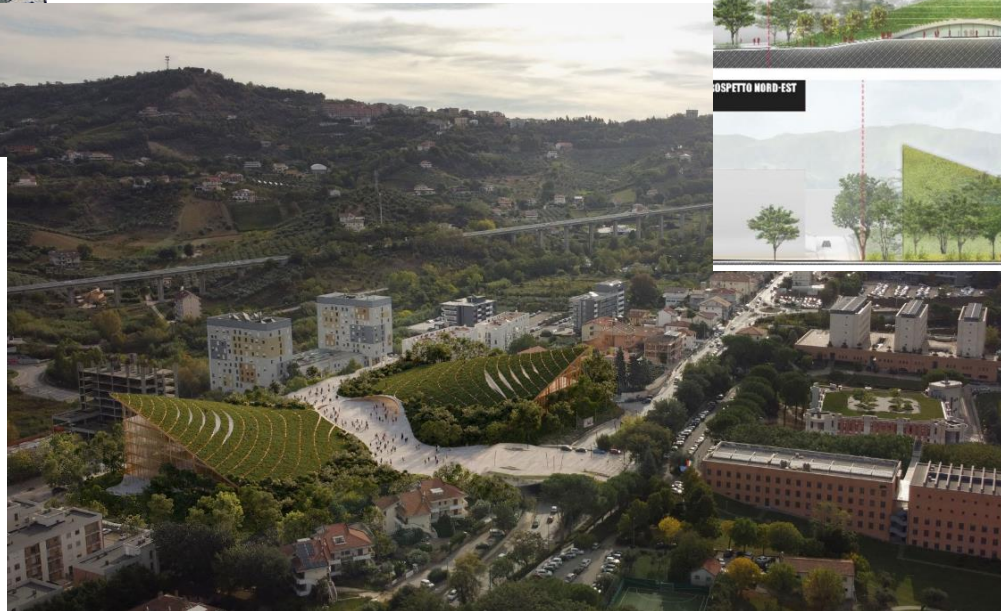
06

Corsi di Perfezionamento

Chieti Campus Regeneration (ongoing)



- Reduction of potential thermal loads through a series of passive strategies (north-facing offices and south-facing classrooms).
- Production of energy from renewable sources - photovoltaic system - both on the roof and on the south facade.
- Reduction of the urban heat island effect through the creation of the large canopy green, the presence of vegetation, permeable and reflective materials.



- Decrease in the temperature perceived by users in open spaces thanks to evapotranspiration of vegetation
- High energy efficiency through the optimization of the plant
- Effective management of water resources: collection and reuse of rainwater.

Pescara Campus Regeneration (completed)

BEFORE



AFTER



68 more trees of various species:
8 red maple
16 laurel
14 birch
14 strawberry tree
16 alder



Finanziato
dall'Unione europea
NextGenerationEU



Ministero
dell'Università
e della Ricerca



Italiadomani
PIANO NAZIONALE
DI RIPRESA E RESILIENZA



Vitality: One-Health telemedicine and environment

The project background

nature

Explore content ▾ About the journal ▾ Publish with us ▾

[nature](#) > [letters](#) > article

Letter | Published: 16 September 2015

The contribution of outdoor air pollution sources to premature mortality on a global scale

[J. Lelieveld](#) , [J. S. Evans](#), [M. Fnais](#), [D. Giannadaki](#) & [A. Pozzer](#)



THE LANCET

The 2020 report of the Lancet Countdown on health and climate change



"Unless the global COVID-19 recovery is aligned with the response to climate change, the world will fail to meet the target laid out in the Paris Agreement, damaging public health in the short term and long term."

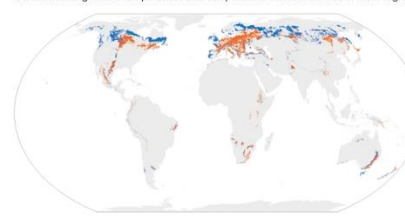


A Review by The Lancet



CLIMATE CHANGE EXACERBATES INFECTIOUS DISEASES

Global warming means the parasites that carry malaria can find a home in more regions.



Area newly suitable for transmission*
• *Plasmodium falciparum* • *P. vivax*

*During 2013-22, compared with 1951-60.
In land suitable for *Anopheles* mosquitoes.

©nature

nature

Explore content ▾ About the journal ▾ Publish with us ▾

[nature](#) > [articles](#) > article

Article | Published: 05 April 2023

Lung adenocarcinoma promotion by air pollutants

[William Hill](#), [Emilia L. Lim](#), [Clare E. Weeden](#), [Claudia Lee](#), [Marcellus Augustine](#), [Kezhong Chen](#), [Feng-Chen](#)

nature

Explore content ▾ About the journal ▾ Publish with us ▾

[nature](#) > [articles](#) > article

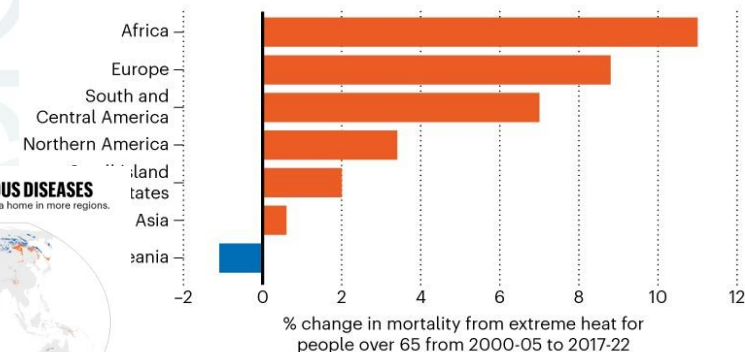
Article | Published: 12 February 2020

Premature mortality related to United States cross-state air pollution

[Irene C. Dedoussi](#), [Sebastian D. Eastham](#), [Erwan Monier](#) & [Steven R. H. Barrett](#) 

LIVES LOST FROM EXTREME HEAT

People over 65 years old are at greatest risk of mortality from extreme heat.



Università degli studi
"G. d'Annunzio"



Finanziato
dall'Unione europea
NextGenerationEU



Ministero
dell'Università
e della Ricerca

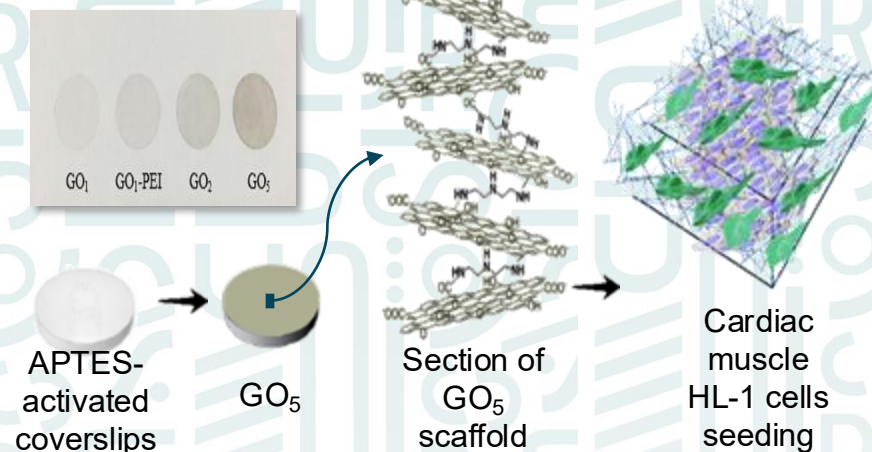
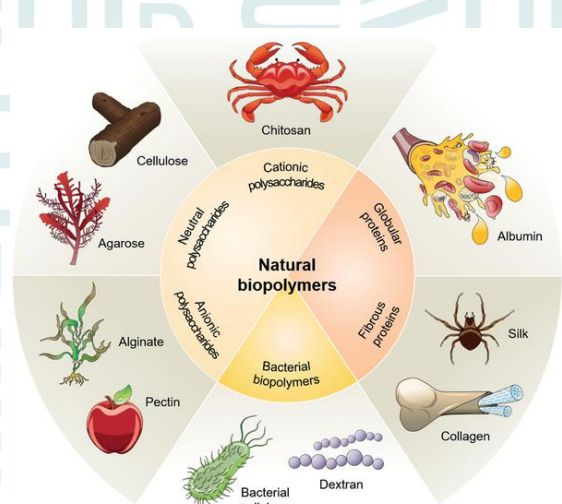


Italiadomani
PIANO NAZIONALE
DI RIPRESA E RESILIENZA

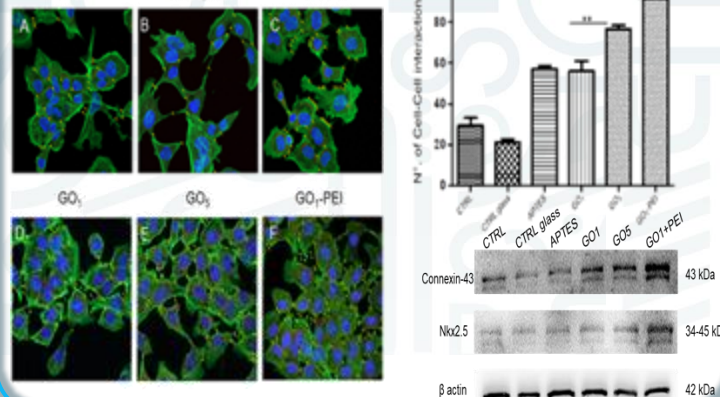


Università degli studi
"G. d'Annunzio"
Chieti - Pescara

Vitality: Natural – based biomaterials for regeneration and medicine



➤ Biological evaluation



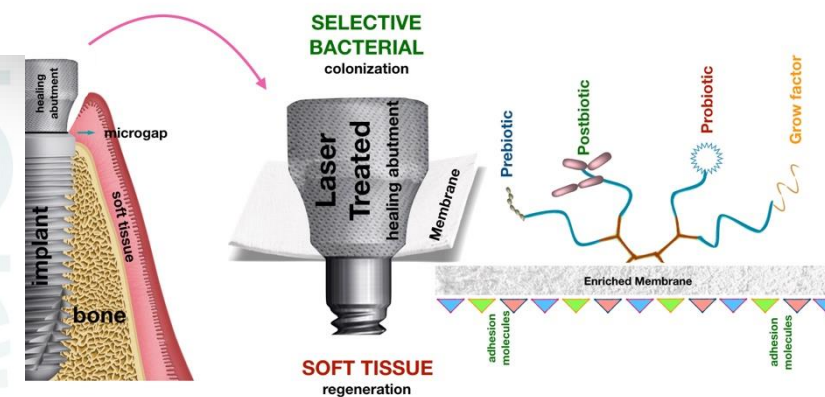
Hindawi
Mediators of Inflammation
Volume 2021, Article ID 5562340, 9 pages
<https://doi.org/10.1155/2021/5562340>



Research Article

Assessment of the Vanillin Anti-Inflammatory and Regenerative Potentials in Inflamed Primary Human Gingival Fibroblast

Erica Costantini¹, Bruna Sinjari², Katia Falasca³, Marcella Reale², Sergio Caputi¹, Srinivas Jagarlapodii¹, and Giovanna Murmura²



Bruna SINJARI: Innovative, Natural-based, Antioxidant, Spring water Composite membrane for Oral health

Barone A,....., Celia C,... Drug Deliv Transl Res. 2023;13(12):3154-3168. doi: 10.1007/s13346-023-01378-9.

Pilato S, Moffa S, et al, ACS Applied Materials & Interfaces. 2023;15:14077-14088. doi: 10.1021/acsami.3c00216.