

Promoting educational activities at the University on Sustainable Pharmacy

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**VITORIA
GASTEIZ**

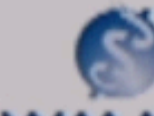


One Health

AWARENESS AND ACTION

The health of humans, domestic and wild animals, plants and the environment (including ecosystems) is closely linked and interdependent.

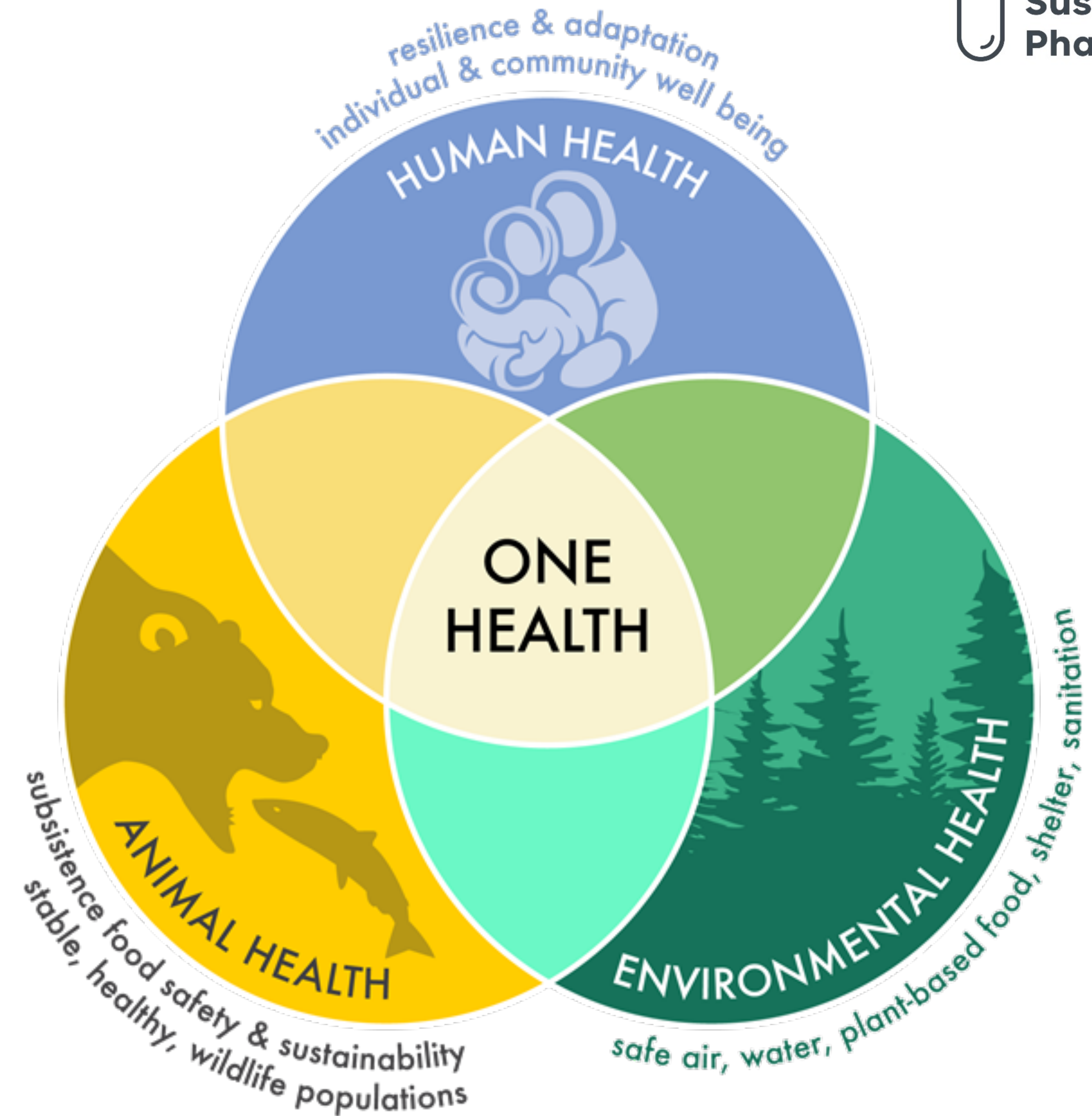
There is no ethical medicine or pharmacy if it is not sustainable

Handbook of WMA Policies  WORLD MEDICAL ASSOCIATION

**WMA DECLARATION OF DELHI
ON
HEALTH AND CLIMATE CHANGE**

Adopted by the 60th WMA General Assembly, New Delhi, India, October 2009

- 1.2. As a profession, physicians & their medical associations will encourage advocacy for environmental protection, reduction of green house gas production, sustainable development and green adaptation practices within their communities, countries/regions, especially for the right of safe water & sewage disposal for all.
- 1.3. As professionals, physicians are encouraged to act within their professional settings (clinics, hospitals, laboratories etc.) to reduce the environmental impact



Environmental Pollution

DRUG POLLUTION

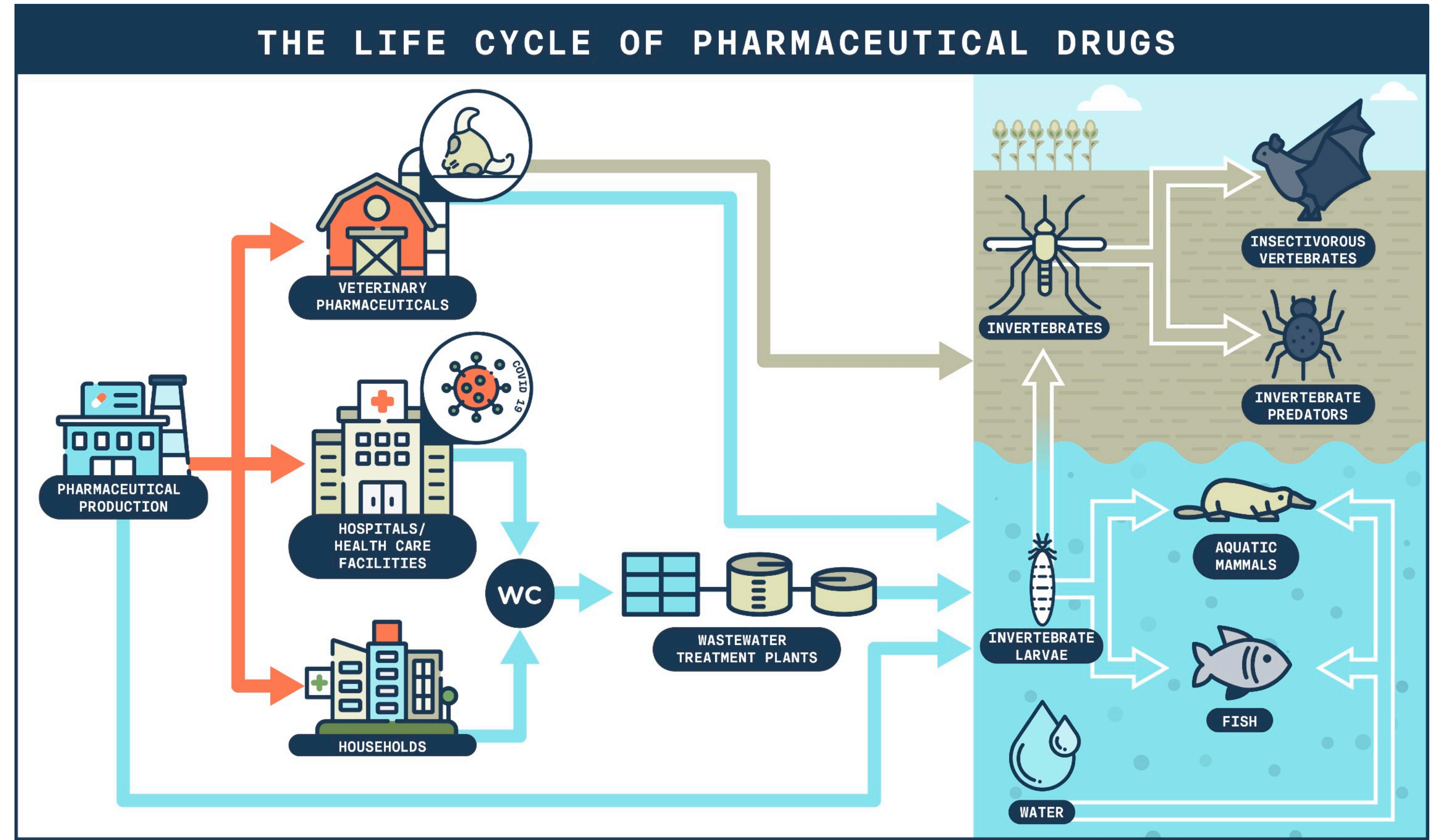
Active Pharmaceutical Contaminants



Active Pharmaceuticals

LIFE CYCLE

Any of the multiple stages involved in the drug life cycle (production, consumption and waste management) is a possible route of entry into the environment.

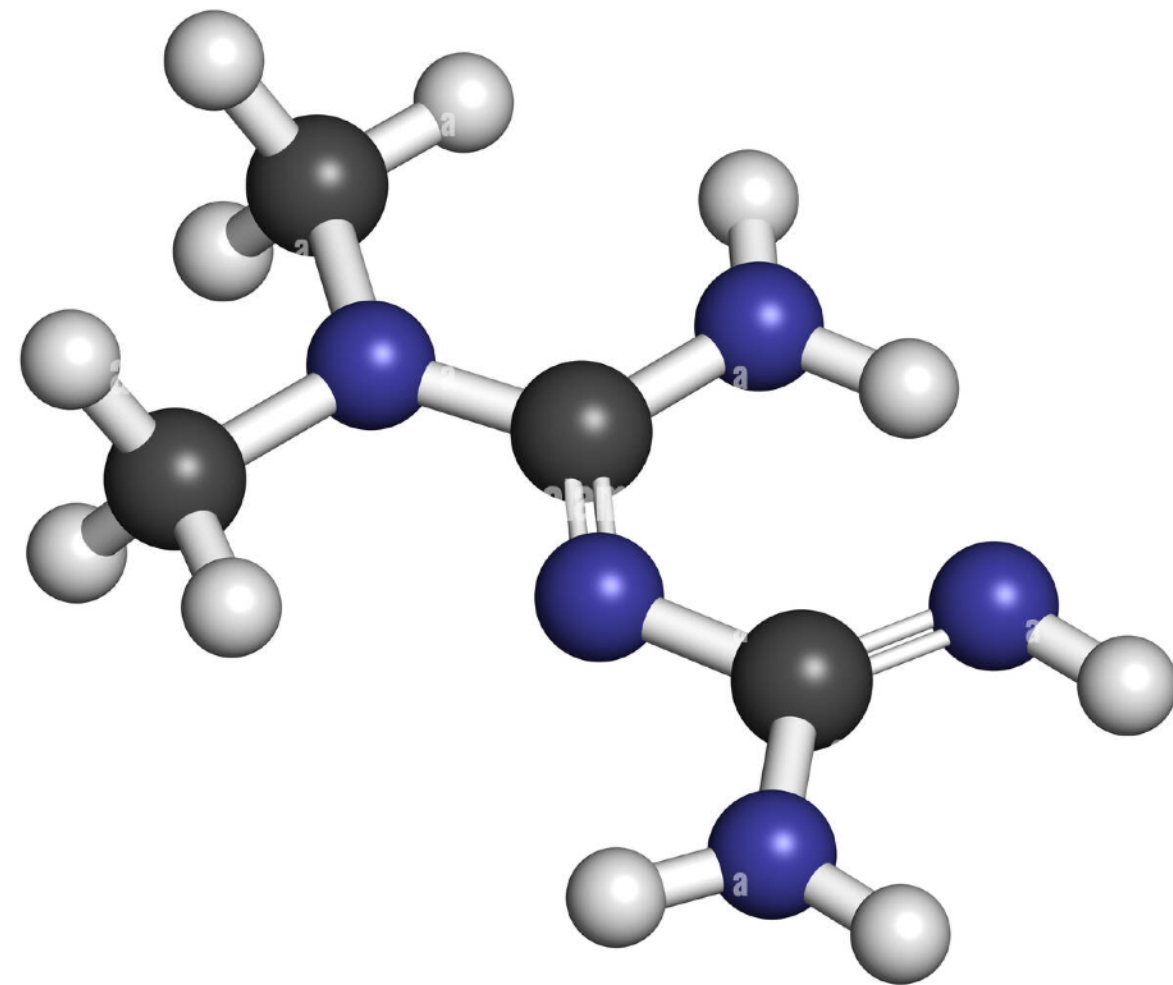


Active Pharmaceuticals

WHY ARE DRUGS POLLUTANTS?

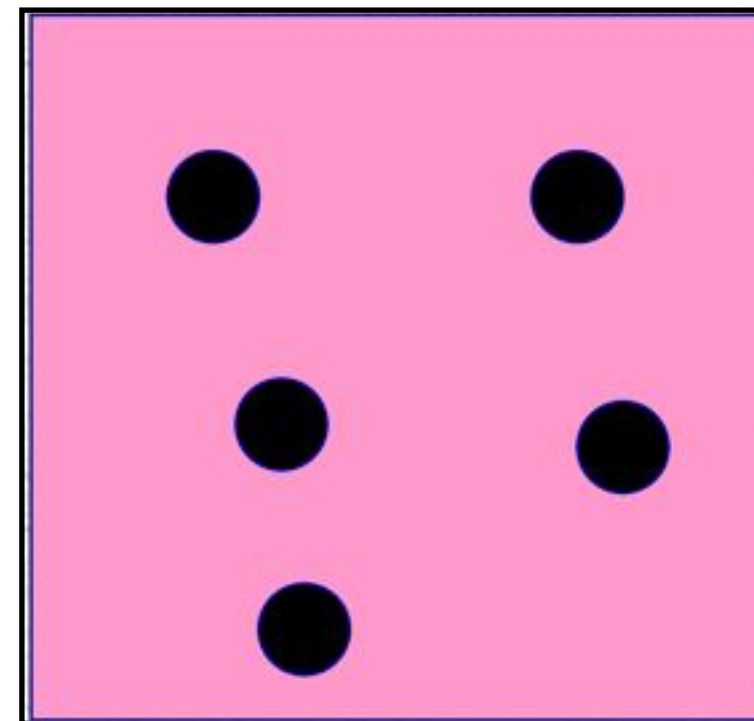
1

Designed to be
stable



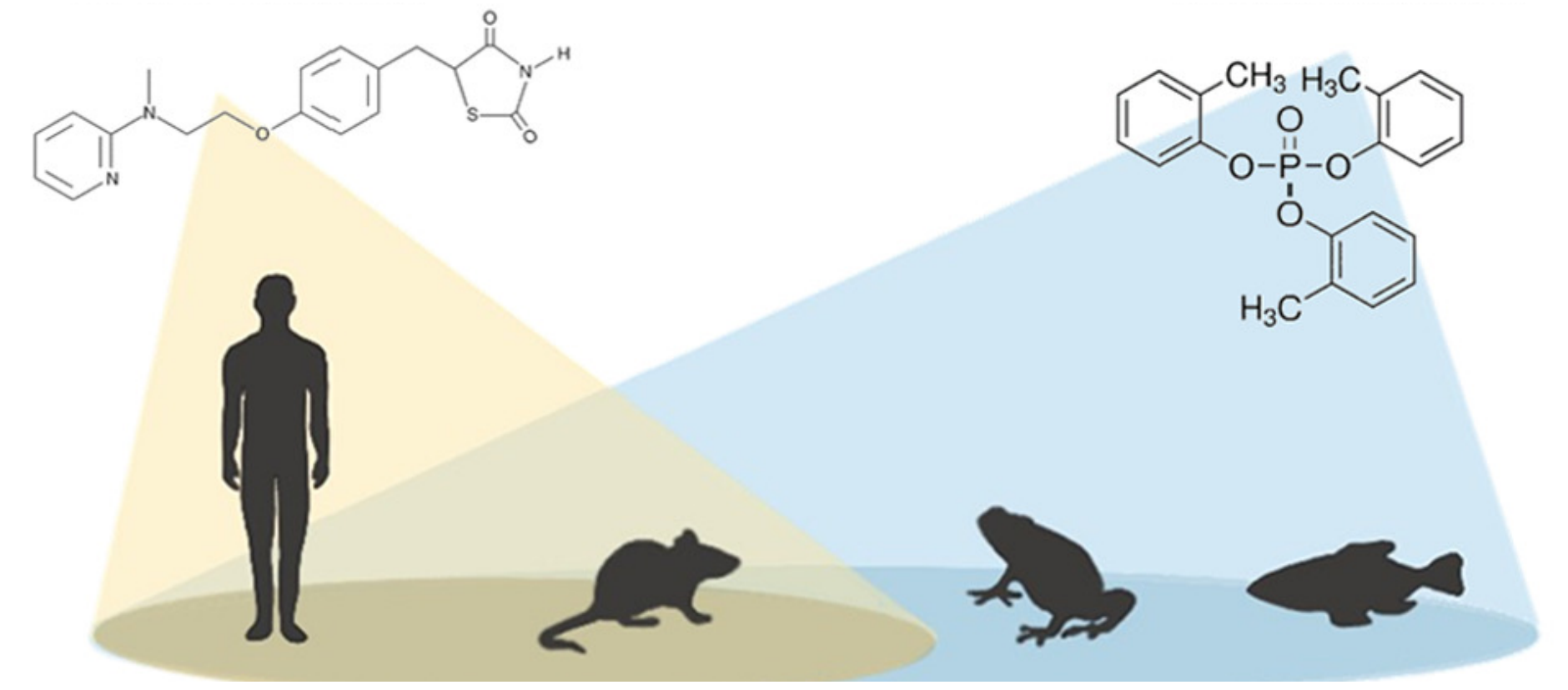
2

Effects at low
concentrations



3

Effects on non-target
target organisms

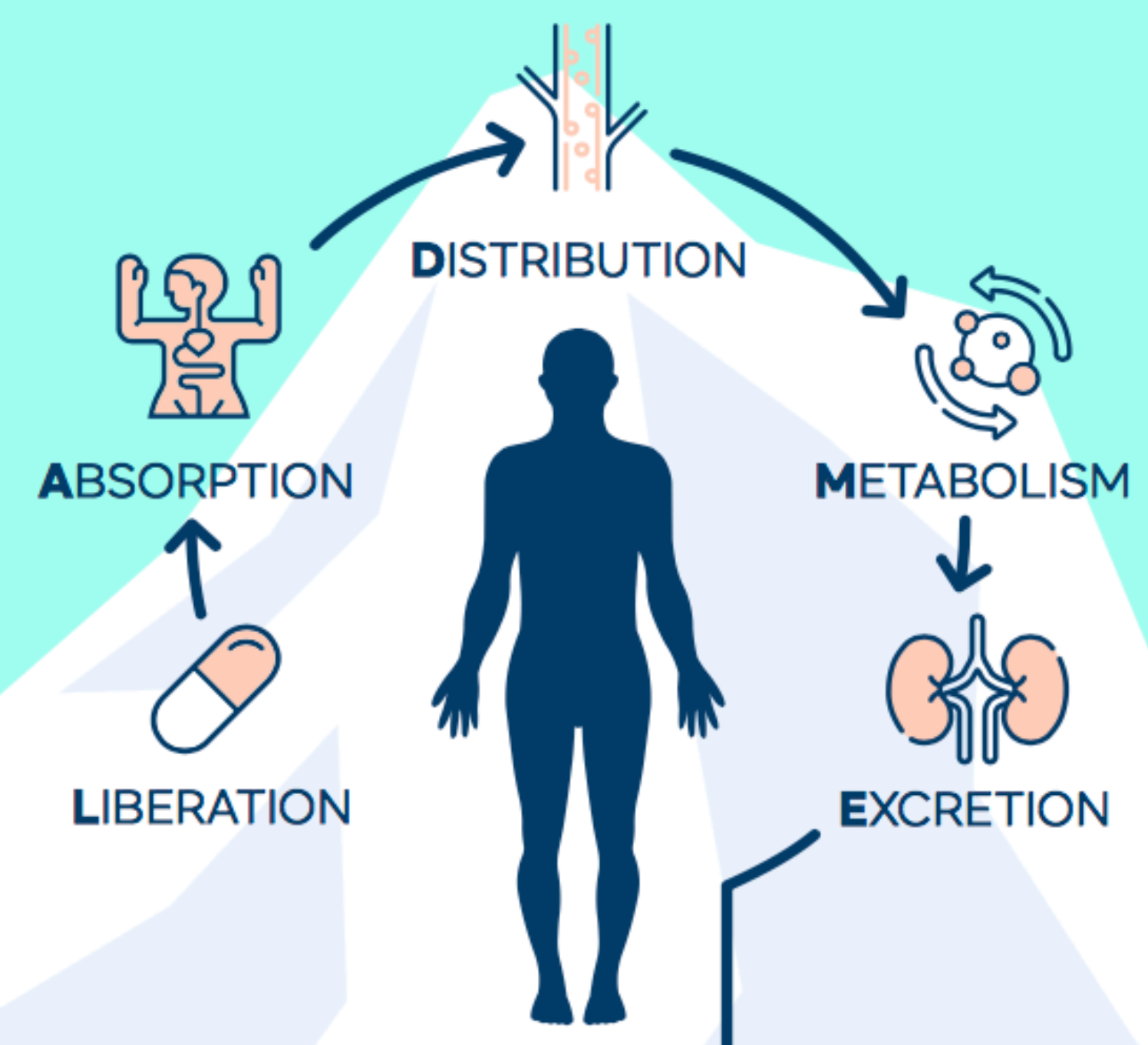


LADME

PHARMACY

Anthropocentric Perspective

LADME
is just...
**the tip of
the iceberg**

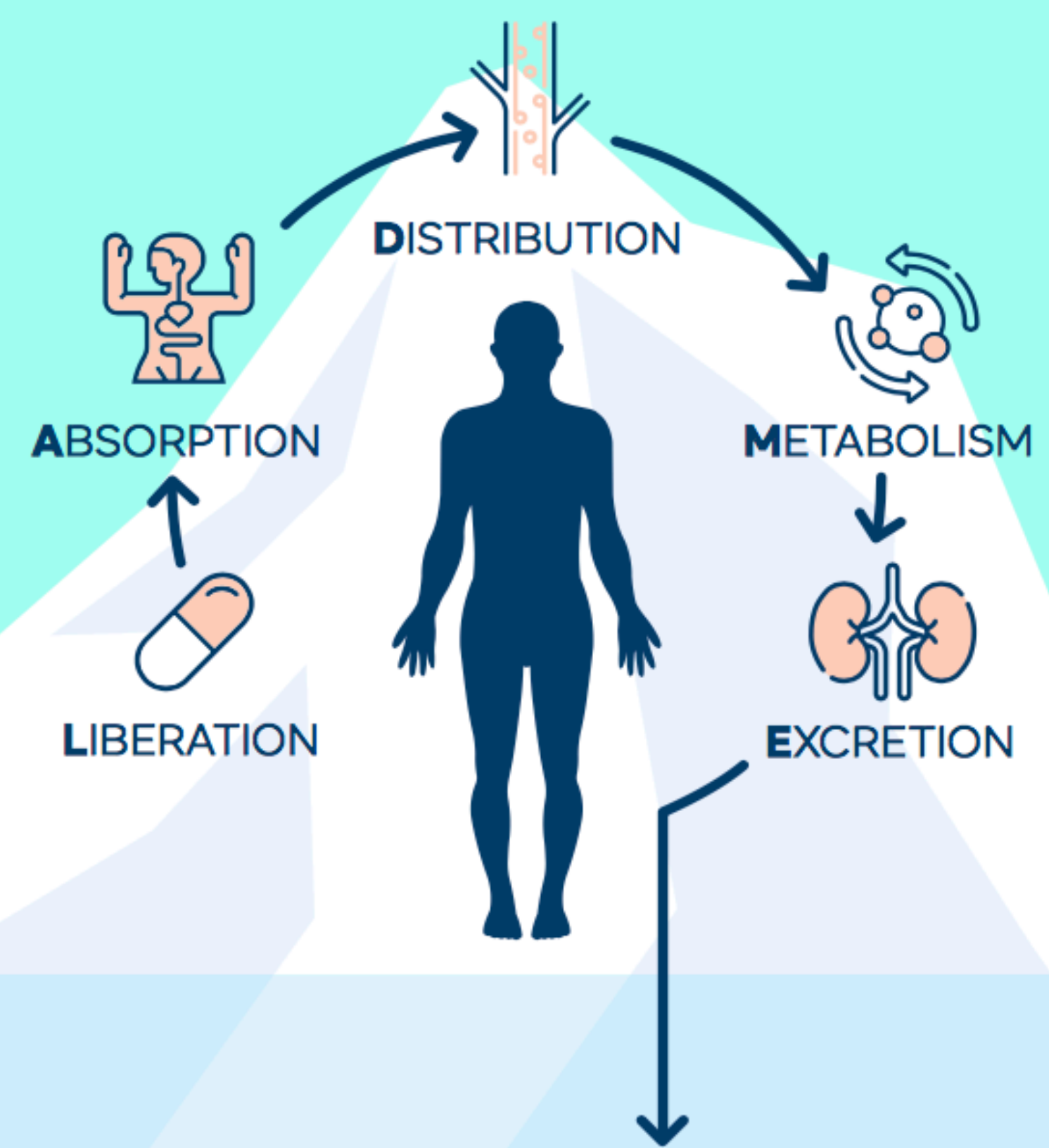


LADME

PHARMACY

Holistic Perspective

LADME is just...
the tip of the iceberg



**Pharmaceuticals
in the environment**

Education

PHARMACEUTICALS

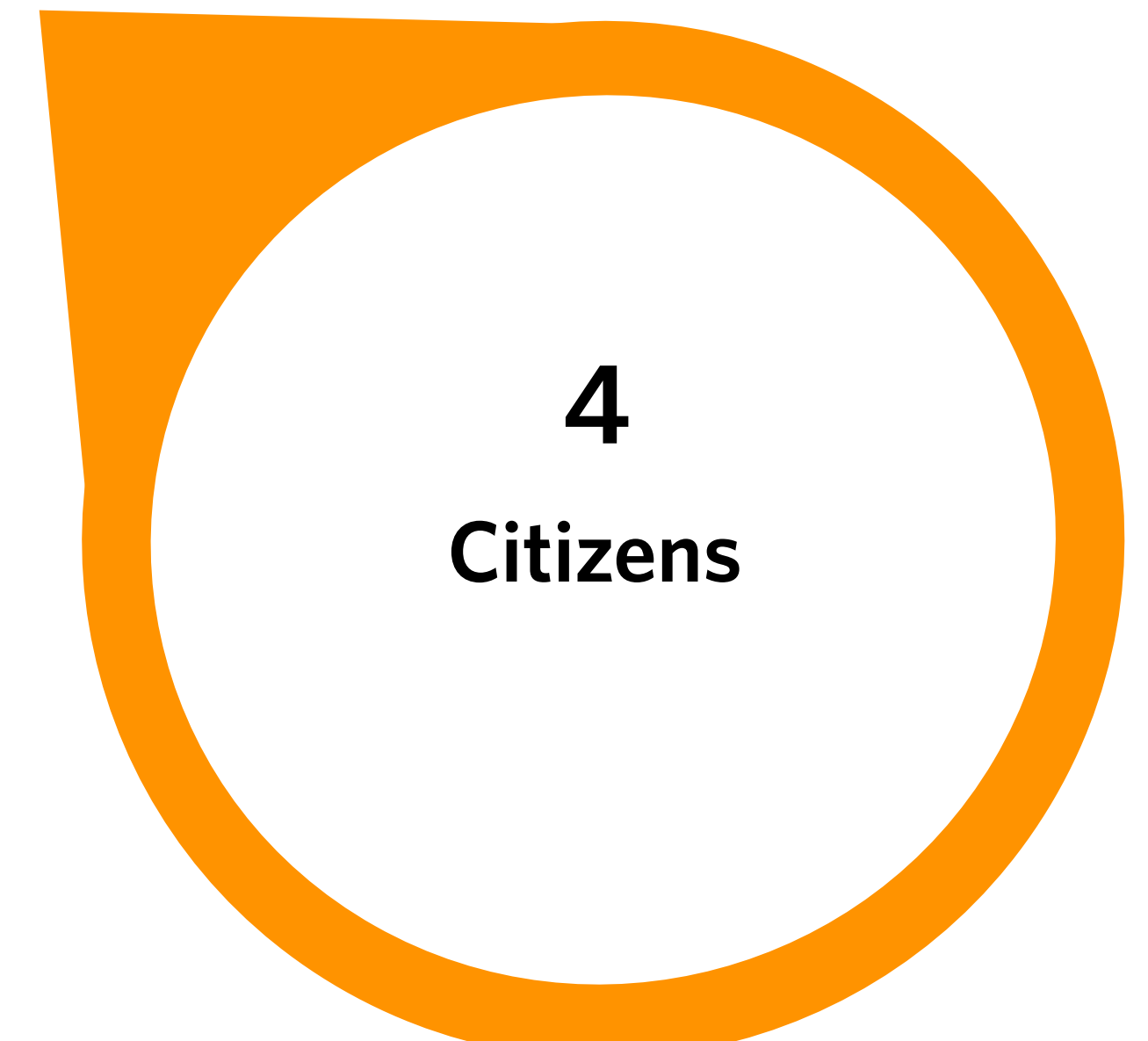
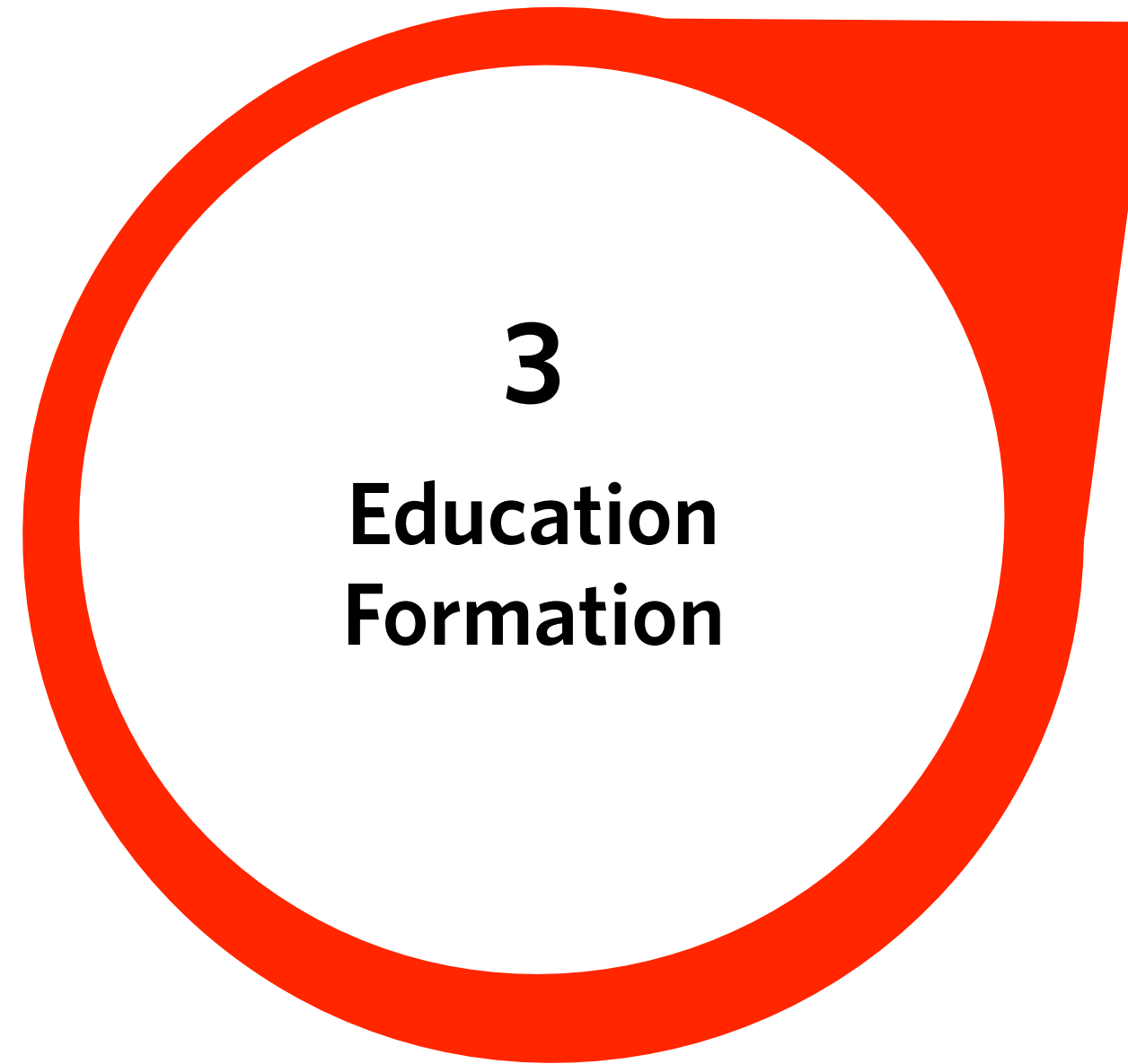


EUROPEAN UNION STRATEGIC APPROACH TO PHARMACEUTICALS IN THE ENVIRONMENT

*“Explore, in cooperation with relevant stakeholders, how **environmental aspects** could become part of **medical training** and professional development programmes”*



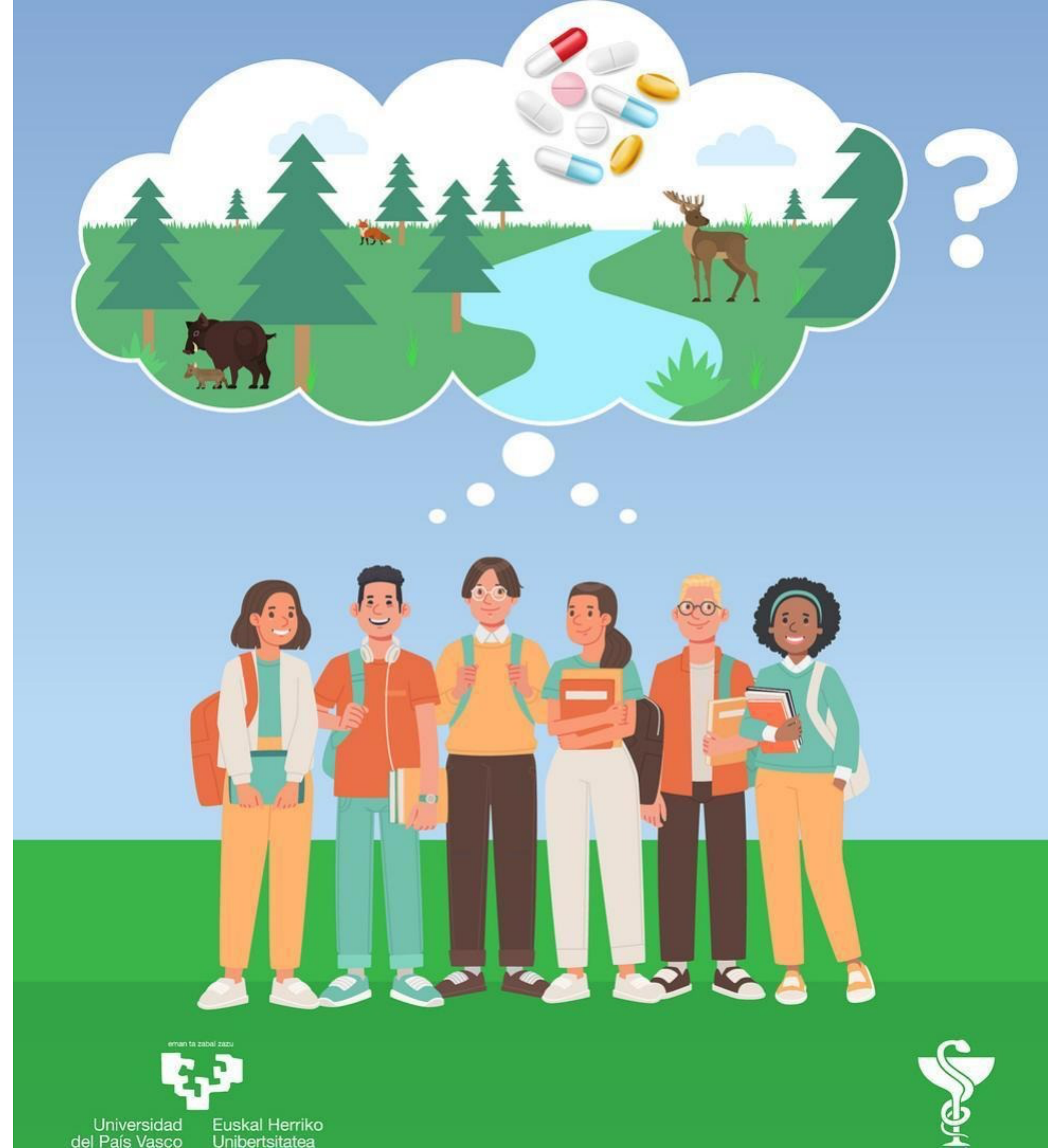
Basque
**Sustainable
Pharmacy**
RESEARCH UNIT



Basque Sustainable Pharmacy

KNOWLEDGE & ATTITUDE

Knowledge and Attitude surveys.
Faculty of Pharmacy UPV/EHU



CONOCIMIENTO Y ACTITUD

Knowledge and Attitude surveys.
Faculty of Pharmacy UPV/EHU

76%

They are unaware of the
concept of emerging
contaminants and **One Health**

88%

They do not know that
diclofenac was the cause of
death of vultures

80%

Shows a favorable attitude
in this matter and in
learning more

Expert in Sustainable Pharmacy

POSTGRADUATE COURSE



TÍTULO DE POSGRADO 2023/24

**Experto/a en
Farmacontaminación**

Presentamos el primer postgrado dedicado en exclusiva al potencial contaminante de los fármacos. Es un título organizado por profesionales del sector farmacéutico, y cuenta con un elenco multidisciplinar e internacional de profesionales, todos ellos implicados en el complejo ciclo de vida de los medicamentos, y concienciados con la sostenibilidad y el medio ambiente.

A lo largo del posgrado profundizaremos en términos como "One Health", que hace referencia a la interrelación entre la salud humana y salud medioambiental. También en la relación de los fármacos con los "Objetivos de desarrollo sostenible", y ofreceremos una visión integral de cómo afrontar el problema y las posibles soluciones, para que entre todos seamos capaces de lograr una "Green Pharmacy".

 **Posibilidad de cursar el posgrado 100% online**

 **Primer título monográfico dedicado al problema de la farmacontaminación.**

 **Docentes de reconocido prestigio nacional e internacional.**

Más información
ehu.eus/es/web/graduondokoak/experto-universidad-farmacontaminacion

Contacto
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erman ta zabal zazu

UPV EHU

Expert in Sustainable Pharmacy

POSTGRADUATE COURSE



Expert in Sustainable Pharmacy

POSTGRADUATE COURSE

100% online

15 ECTS



PROBLEM?



SOLUTION!

Top 2% Top Scientists *Stanford Ranking List*

OUR PROFESSORS

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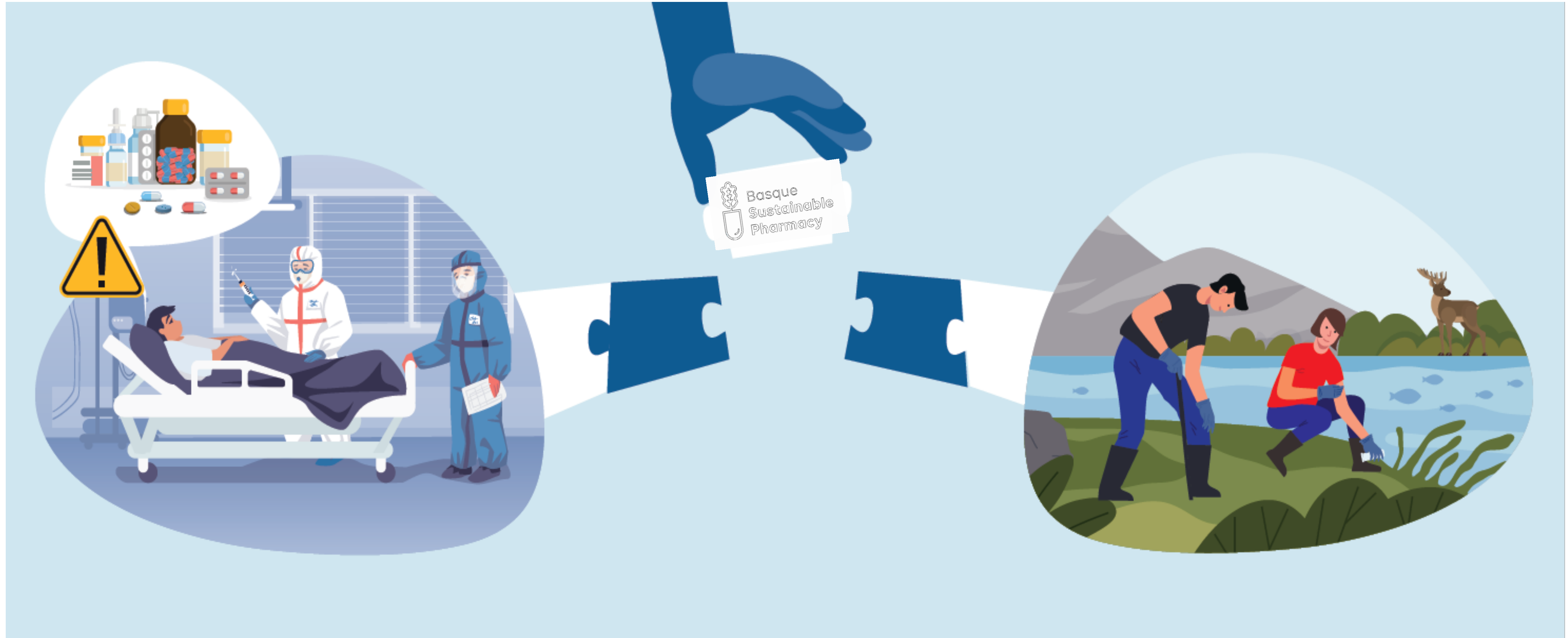


Jose B. Quintana
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Rosario Rodil
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We are part of the solution as Healthcare Professionals





Thank you so much!!

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