

biomar

MICROBIAL TECHNOLOGIES

Specialists in Marine Biotechnology

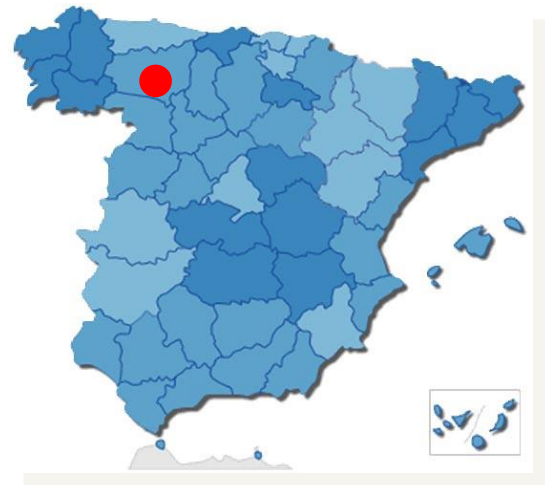
Biomar Microbial Technologies

Biomar is a Spanish biotechnological company

specialized in contract R&D and API discovery and production

Biomar has 29 employees in León (Spain)

75% in R&D



Milestones

1996: Spin off PharmaMar, Spanish Zeltia Group

1997: Beginning marine bio-prospecting and AQUA collection

1998-1999: Human Health target (Oncology)

2000: New target: Agriculture (Bio pesticides)

2001: Building production pilot plant

2002: Appointment of the new CEO: Dr. Antonio Fernández

2003. Neuro-protection and anti-angiogenesis targets

2004: First industrial collection of microalgae in Spain

2005-2006: Isolation of non-cultivable microorganisms. Expansion capital

2007: New target: Biodiesel

2008: New target: Food (preservatives)

2009: New facilities in Parque Tecnológico de León (Spain)

2010: Increasing the production capacity

2012: Approval by EPA herbicide: Thaxtomin A



Our Products

AQUA library

Production Plant

AQUA library

Three AQUA libraries

AQUA is the Library of Biomar

aqua  Strain Collection

aqua  Extract Collection

aqua  Compound Collection

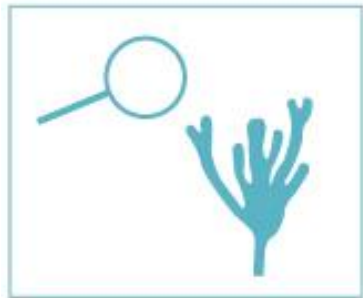
AQUA Biodiversity

+120 Bioprospections looking for chemical diversity



AQUA

How we create it



Bioprospecting



Isolation of
strains



Strain collection
AQUAs



Fermentation



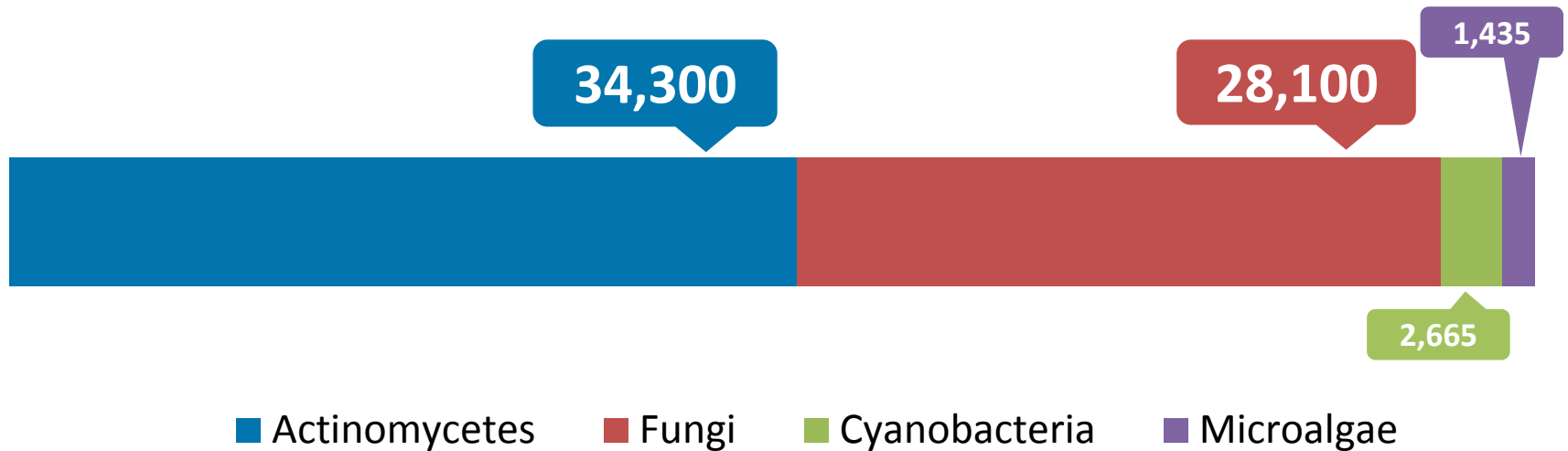
Extract collection
AQUAe



Fractionation

COMPOUND
COLLECTION
AQUAc

AQUAS Strain Library

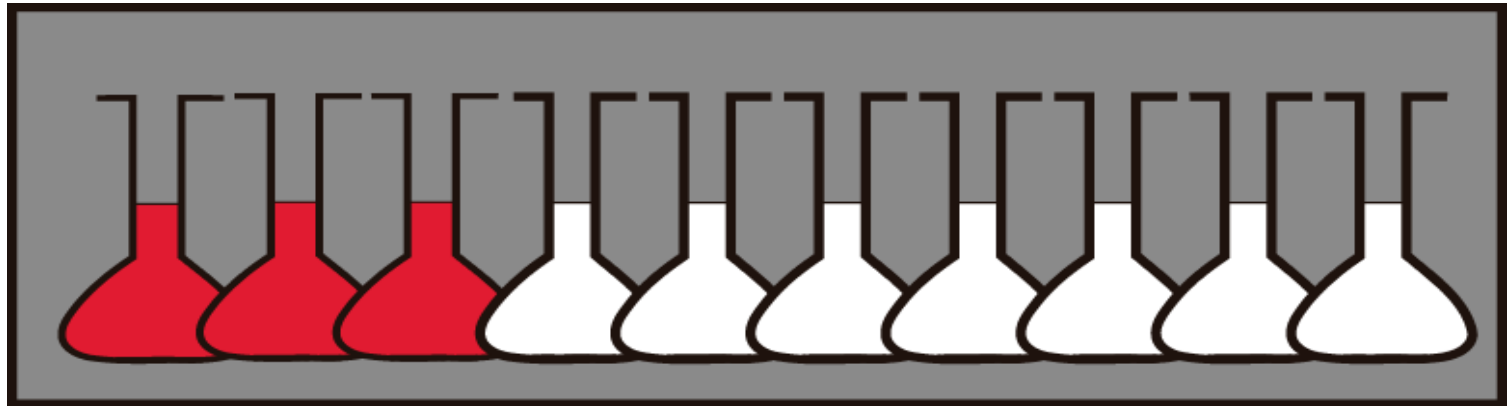


More than **66,000** different microorganisms

AQUAS Strain Library

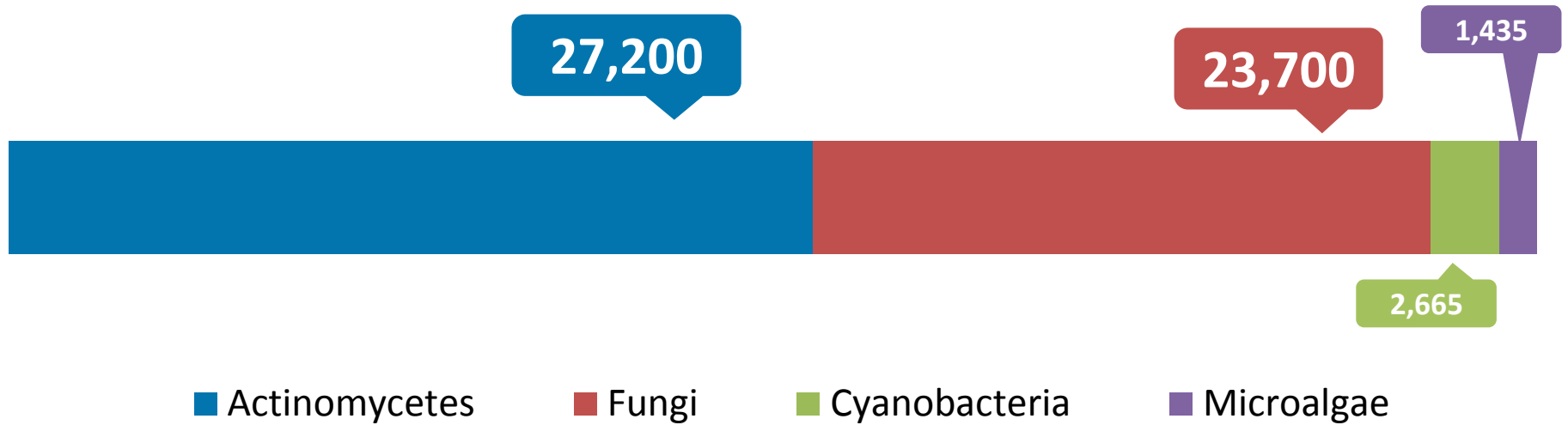
30%

OF STRAINS ISOLATED
IN BIOPROSPECTION ARE
SELECTED TO AQUAS



Taxonomic criteria **to avoid redundancy** in the library AQUAs

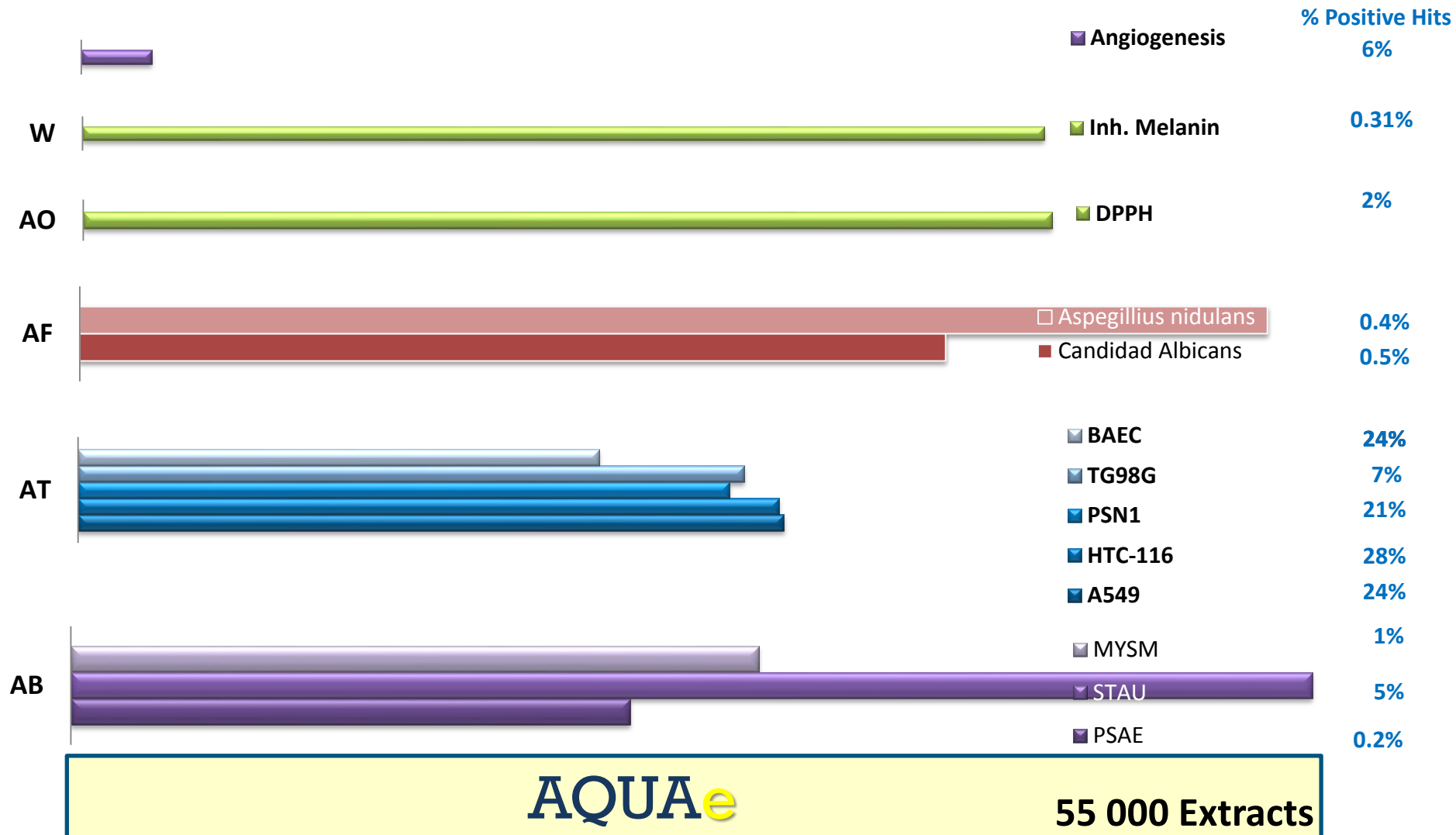
AQUA^e Extracts Library



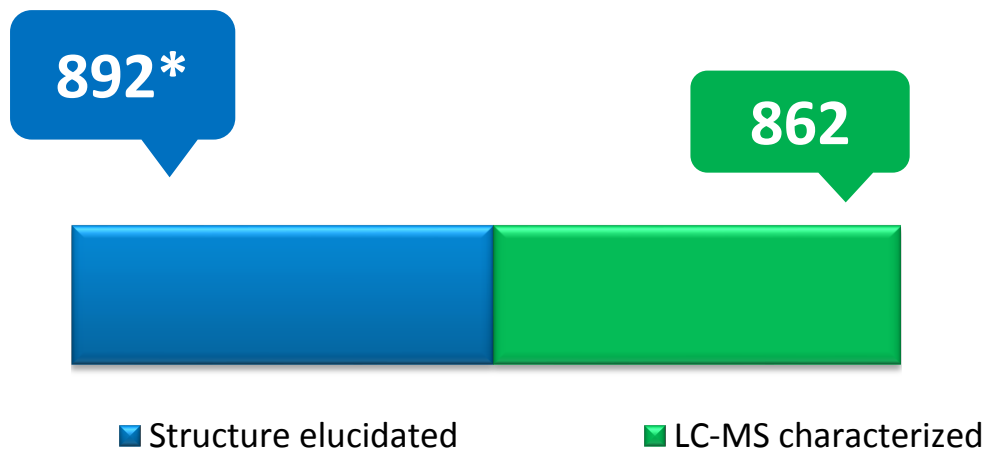
AQUA^e: 55,000 different extracts

83% MARINE ORIGIN

AQUA^e Activities assayed in HEALTH CARE



AQUA^c Pure Compounds Library

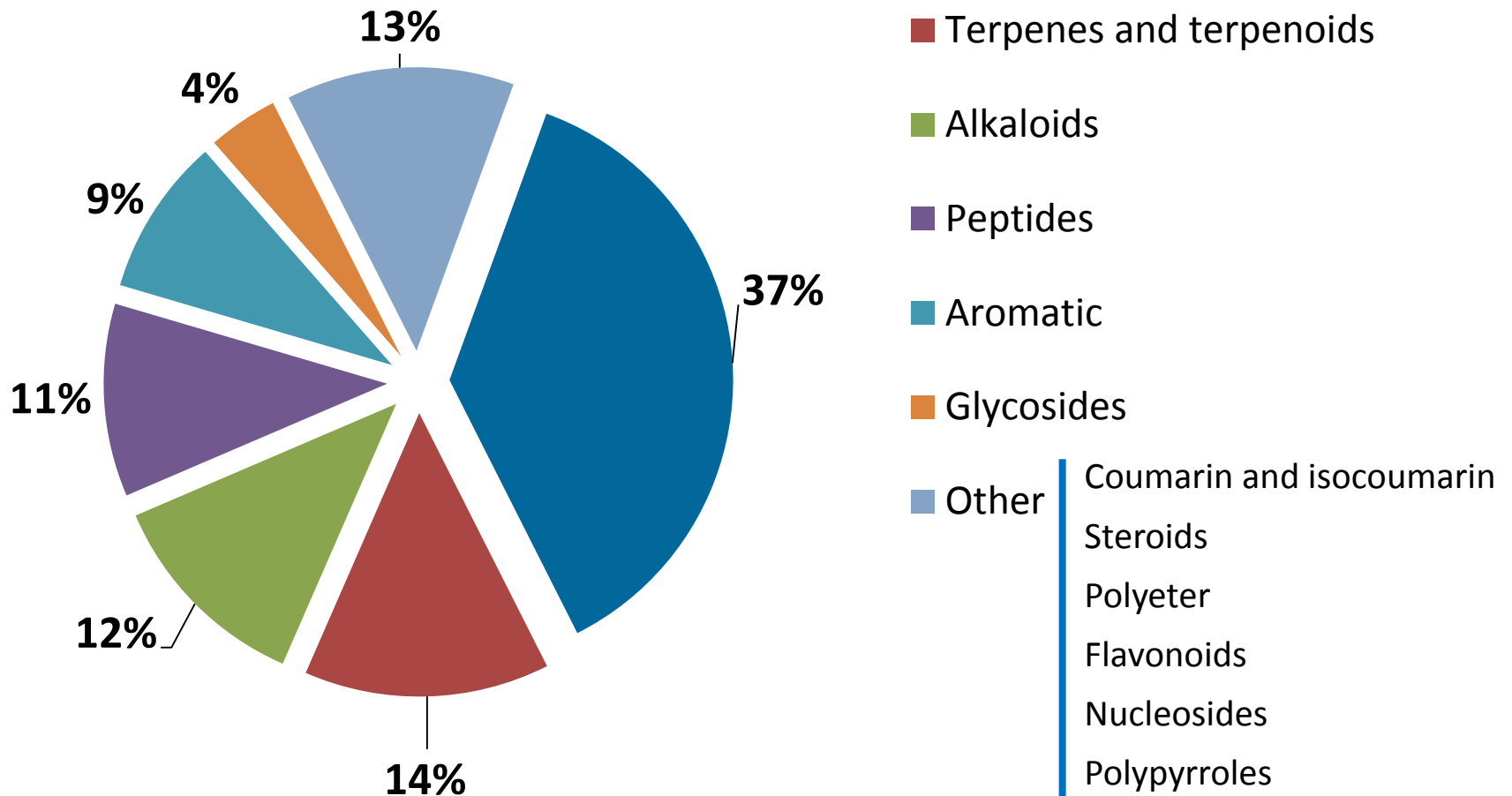


NOVEL STRUCTURE 27%

74% MARINE ORIGIN

AQUA^c Chemical Diversity

CHEMICAL NATURE OF AQUA^c:



AQUA Library



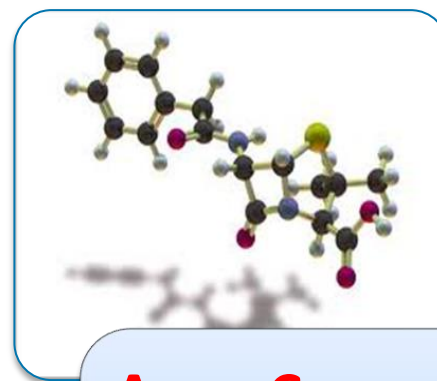
Aqua S

- 66,000 strains
- 52% Actinomycetes
- 42% Fungi
- 4% Cyanobacteria
- 2% Microalgae



Aqua E

- 55,000 extracts
- 83% Marine origin
- Bioactivity data available

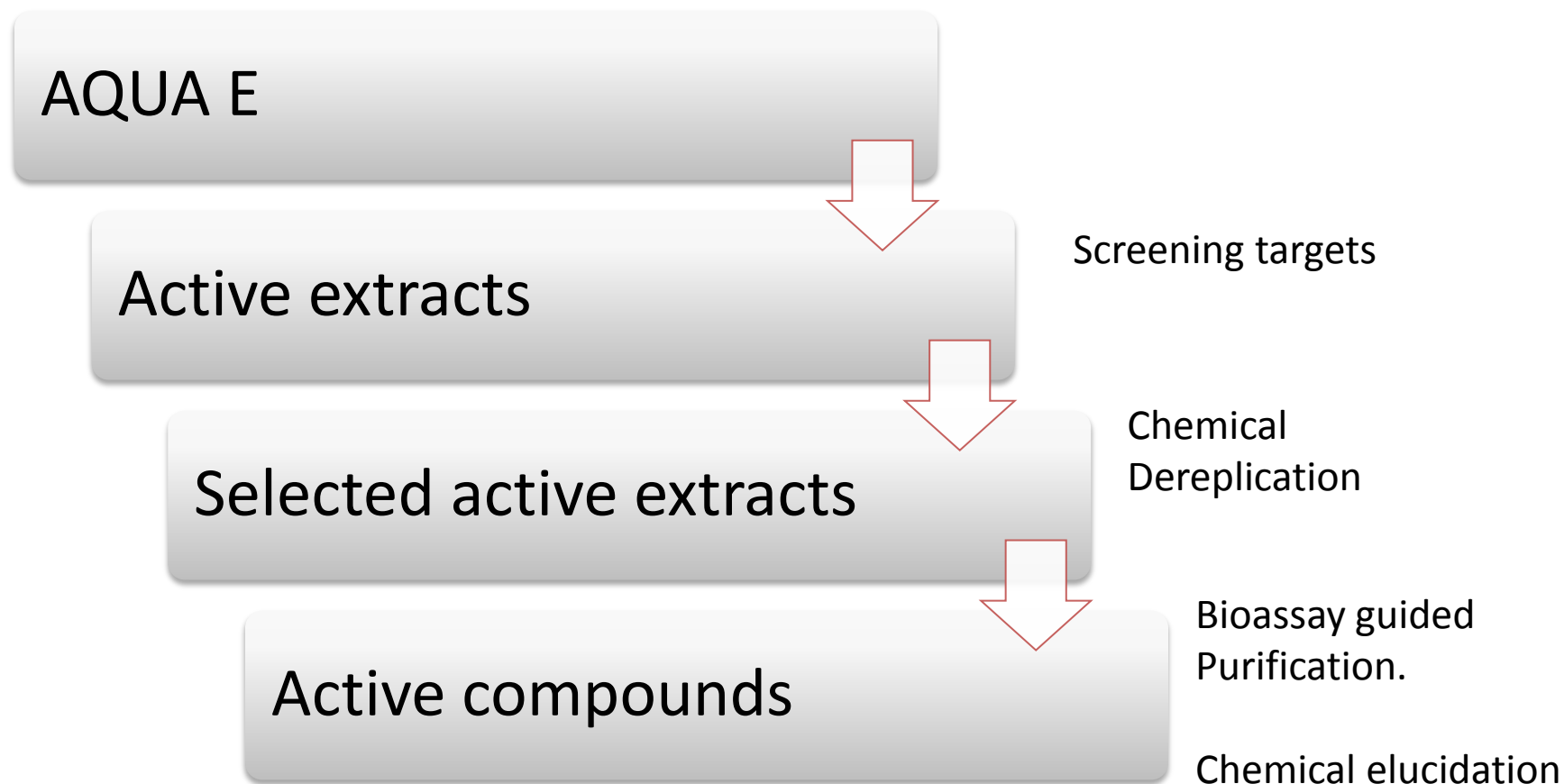


Aqua C

- 1754 compounds
- 892 elucidated
- 862 LCMS characterized
- 27% Novel structures

EXPERIENCE & AQUA

SCREENING APPROACH

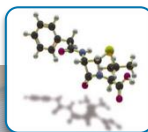
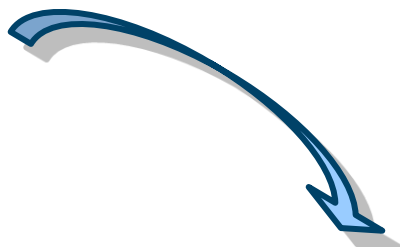


Pharmaceutical Sector

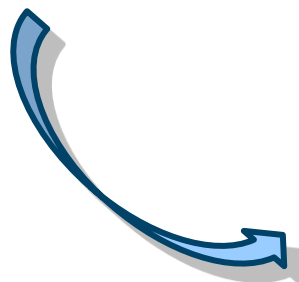
aqua 



ACTIVITY ASSAYS



**STRUCTURE
IDENTIFICATION**



**STUDIES CANDIDATES
ANIMAL MODELS**

BIOMAR Pipeline

OUR PIPELINE:

EARLY STAGE

Compound	Therapeutic Area	Stage
IB08C175	Multiple Sclerosis	Preclinical
IB07A037	Topic Antibiotic	Preclinical
IB10A111	Cancer (Glioblastoma)	Preclinical
IB12A157	Angiogenesis (Retinopathy)	Development

Effectiveness of Screening-Agriculture



Screening for natural herbicides, insecticides, antifungals.

Our **experience** is our **success**

Fungicides = **674** /22,228

Herbicides = **204** /22,228

Insecticides = **407** /22,228

Herbicide approved by EPA (USA)

Food Industry

Screening for discovery
and development of
new natural preservatives



Our experience is our success

Antibacterial = 1 /200

Novel coloring agent = 8 /21,376

Cosmetic sector

New active ingredients for Cosmetics

Our experience is our success

Skin Whitening = 5 /45,016

Antioxidant = 10/45,100

Anti-dandruff= 1 /300

Anti-acne= 1 /190



New Anti-acne agent
IN-COSMETICS 2012

MORE in Biomar

PRODUCTION PLANT

Custom manufacturing
Compounds in stock
Compounds *on demand*



5L

2 X 30L

100L

300L

2.700 L

3.500 L

Thank you

www.biomar.co

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