## Ecraid

European Clinical Research Alliance on Infectious Diseases

Evelina Tacconelli CSO Ecraid





# Building on **COMBACTE** and PREPARE

**COMBACTE** — Combatting Bacterial
Resistance in Europe — is an Innovative
Medicines Initiative funded project focusing
on improving the clinical <u>development of</u>
antibacterial treatment programmes

The result is a comprehensive <u>clinical</u> <u>research infrastructure</u> consisting of four high-quality networks:



PREPARE — Platform for European
Preparedness Against (Re-)emerging
Epidemics — is a large-scale European
network funded by the Framework
Programme 7 aimed at building
operational readiness for rapid deployment
of harmonised European clinical studies for
any infectious disease outbreak

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#### **History**

Network of experts in clinical management, epidemiology of infectious diseases and in the design of clinical studies, statistical methods and analyses





#### Achievements in Antimicrobial Resistance

Project	New antimicrobial drug	Study name	Study design	Publications	Drug's faith
COMBACTE- NET	DAV132 (Clostridium difficile)	ANTICIPATE	Observational	Nature Comm Nature Comm	
		MICROCARE	Phase 3	-	Program stopped: operational futility
	Suvratoxumab (S. aureus)	ASPIRE-ICU	Observational	JAMA Network Open	
		SAATELLITE	Phase 2	Lancet Infect Dis	
		SAATELLITE-2	Phase 3	-	Program stopped: operational futility
	E. coli vaccine	EXPECT1-2	Observational	CID	Phase 3 study ongoing (E.mbrace)
COMBACTE- MAGNET	Gremubamab (P. aeruginosa)	ASPIRE-ICU	Observational	Nature Comm	
		EVADE	Phase 2	Crit Care	Program stopped: Lack of efficacy
COMBACTE- CARE	Emblaveo (Aztreonam-Avibactam) (Multi-drug resistant Gram- negative bacteria)	EURECA	Observational	Eclinical Med	
		REJUVENATE	Phase 2	JAC	
		REVISIT	Phase 3	Submitted	Approved by EMA



# Achievements in Acute Respiratory Infections and COVID-19

Patient Domain	Study	Study design	Intervention	Publications	Conclusion
Primary Care	ALIC <sup>4</sup> E	APT	Oseltamivir	Lancet 2020	Benefit
ICU	REMAP-CAP	APT	Corticosteroids	JAMA Sep 2020	Benefit
			Lopinavir/ritonavir Hydroxychloroquine	ICM Jul 2021 Nature Comm Apr 2021	Likely harm Harm
			Tocilizumab/Sarilumab Anakinra Interferon beta-1a	NEJM Jan 2021 JAMA Mar 2022	Benefit Futile Operationally futile
			Heparin – moderate Heparin – severe	NEJM Aug 2021 NEJM Aug 2021	Benefit Futile
			Convalescent plasma	JAMA Oct 2021	Futile
			ACEi and ARB	JAMA Apr 2023	Likely harm
			continued TAC - severe	ICM May 2023	Likely harm
			Vitamin C	JAMA Oct 2023	Likely harm
			Simvastatin	NEJM Oct 2023	Benefit
Healthcare workers	BRACE	RCT	BCG vaccine	NEJM Apr 2022	Futile

#### **Coordinating Committee**



Marc Bonten Chair, COMBACTE & CLIN-Net, Ecraid CEO



Herman Goossens LAB-Net



Chris Butler POS-ARI-PC, PRUDENCE, ECRAID-Prime



Oliver Cornely VACCELERATE



Jacques Demotes-Mainard ECRIN Data Management



Lennie Derde REMAP-CAP



Carlo Giaquinto PENTA-ID VERDI



Peter Horby POS-ARI -ER MERMAIDS 2.0



Thomas
Jaenisch
RECODID
Data Sharing



Marion Koopmans Outbreak Preparedness & Response, POS-Disease-X, VEO



**Jesús Rodriguez Baño** POS-cUTI



Stephan Harbarth STAT-Net



**Bruno François** POS-VAP



Evelina Tacconelli EPI-Net, LOTTA-Net, ORCHESTRA, Ecraid CSO



Arjana Tambić Andrašević Capacity building Eastern Europe



Yazdan Yazdanpanah EU-RESPONSE, MPX-RESPONSE



Roger Brüggemann P3-Net



Oana Sandulescu Chair of Ecraid Clinical Liaison Council



Sibyl Anthierens
Public Engagement





#### Governance

#### A <u>not-for-profit foundation</u> NGO status since 2023 with 80 employees

The <u>Management Board</u> performs overall coordination and is supervised by a <u>Supervisory Board</u>

#### MANAGEMENT BOARD



Marc Bonten Chief Executive Officer



Evelina Tacconelli Chief Scientific Officer



Nils Visser Chief Operating Officer



Prof. Arno Hoes Executive Board member & Dean, UMC Utrecht



Prof. Juan E. Echevarria Laboratory Head, Instituto de Salud Carlos III



SUPERVISORY BOARD

Bernard Pécoul, PhD Former Executive Dir. Drugs for Neglected Diseases initiative



Prof. Deborah Cook Professor of Health Research Methods, Evidence and Impact, McMaster University



Annie Van Broekhoven former CEO Q-Biologicals, Antwerp

Operational service/country level management

Ecraid HQ

Ecraid Chief Offices (ECHOs)

Coordination units Local support units Ecraid Country
Offices

Ecraid Clinical Liaisons Council

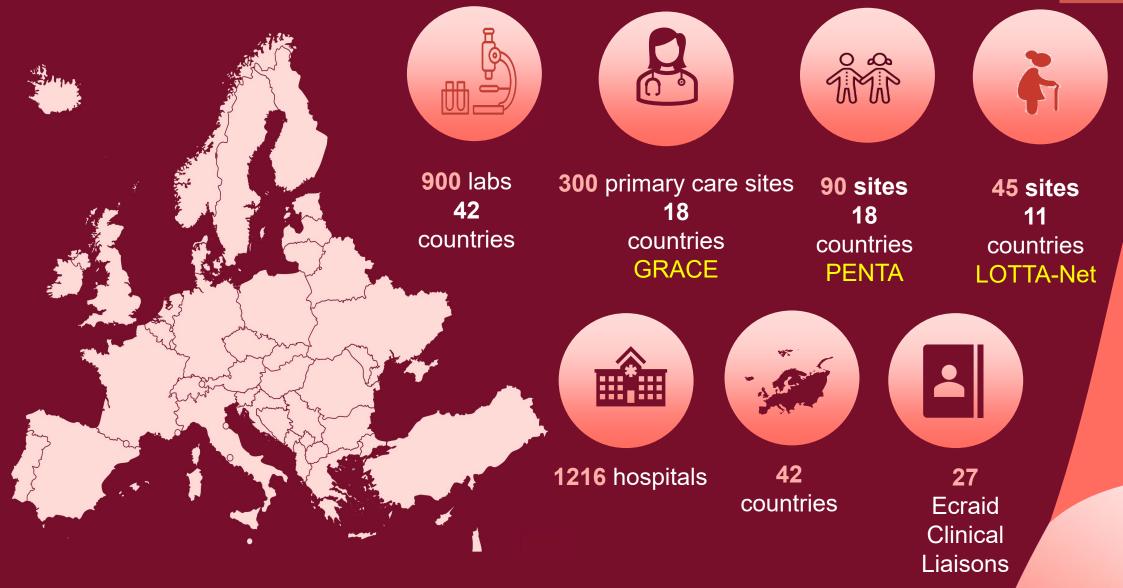
#### **Objectives**

Ecraid is a <u>warm-base academic</u> clinical research network for infectious diseases

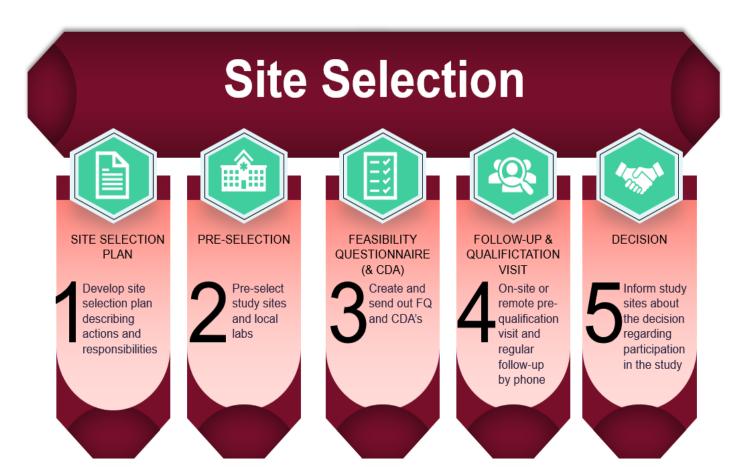
#### The network has the capacity and capabilities to:

- <u>Directly enrol patients</u> for <u>generating evidence</u> to support, through <u>RCT design</u>, testing, development and validation of new anti-infective therapies, diagnostics, and preventive strategies of infectious diseases
- Provide <u>active</u>, <u>prospective cohorts</u> continuously enrolling patients with infectious diseases
- Function as a platform for a <u>rapid research response</u> in the face of serious infectious diseases with epidemic and pandemic scenarios

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The Network: Ecraid built bridges for the future



# Clinical Liaison



Prof. Slavica Kvolik Anaesthesiology, ICM J.J. Strossmayer University



A/Prof. Zoi Dorothea Pana Paediatrics, ID European University of Cyprus



Dr Kadri Tammo Tartu University Hospital Tartu University Hospital



Attikon University Hospital



University Hospital of Limoges



Prof. Akos Csomos ICM National Institute of Hematology and Infectious



University of Cologne

Hungarian Defense Forces Medical Centre



Attikon University Hospital

St Vincent's University Rambam Health Care Campus<sup>5</sup> Hospital<sup>2</sup> Ireland



Dr Diletta Pezzani University of Verona

Dr Raquel Duro

Tâmega e Sousa Hospital

Portugal

Dr Jose Bravo-Ferrer

ID University Hospital Virgen



A/Prof. Gennaro de Pascale ICM Agostino Gemelli University Policlinic<sup>4</sup>



Dr Jose Pedro Cidade St. Francis Xavier Hospital Portugal



University Hospital Center of São João



Prof. Oana Såndule University of Medicine and Pharmacy "Carol Davila" Bucharest



Prof. Elena Copaciu Anaesthesiology, ICM National Institute of Infectious Diseases "Prof. Dr. Matei Bals"



Epidemiology Oslo University Hospital



A/Prof. Pontus Naucle



Karolinska University Hospital



Uppsala University



Hacettepe University



University of Oxford<sup>7</sup>



University of Mancheste



Prof. Philip Evans University of Exeter United Kingdom



#### **Trials and Cohorts: the Ecraid Portfolio**

REMAP-CAP	CAP/COVID-19 in ICU	SUNRISE-3	Early treatment COVID-19
PNEUMO	S pneumoniae Acute Respiratory Infections (ARI) in ER	Epoxi	MPOX
POS-VAP	VAP in ICU	RECOVERY	ARI
POS-cUTI	cUTI	POS-DisX	Undiagnosed infection in imunocompromised
POS-ARI-ER	ARI in ER	Neo-IPC	Sepsis in NICU
SAATELLITE2	Mabs S. aureus carriers in ICU	ECRAID-Prime	ARI in PC
COVACC	SARS-CoV-2 vaccination in children (5-12 yrs)	RECLAIM	Long COVID
POS-ARI-PC	ARI in PC	E.Mbrace	Vaccine to prevent UTI
SNAP	Staph aureus bacteremia		

#### **ECRAID-Base** POS studies





Albania

Italy

Belgium

Netherlands

Bulgaria

Portugal

Croatia

Romania

Cyprus

Serbia

Czech RepublicSpain

Denmark

Sweden

France

Switzerland

Germany

Turkey

Greece

United Kingdom



# Perpetual observational studies

VAP = Ventilator Associated Pneumonia

cUTI = Complicated Urinary tract Infections

ARI = Acute Respiratory Infections

#### **Perpetual Observational Studies** ICU ER ER ER PC HOS HOS **VAP** Ventilator-associated pneumonia **cUTI** Complicated urinary tract infections **ARI-ER** Acute respiratory infections Disease X Unexplained febrile illness **Audit ARI-PC** Acute respiratory infections Core **YEAST** Yeast

Acute respiratory

infections

**PNEUMO** 

## 1 protocol, 1 infection, multiple sites in multiple countries

No. of sites activated	No. of countries	Enrolled as at 1 Jan 24	Enrolled as at 2 May 24
23	9	1,882	2,828
34	14	1,480	2,230
13	5	334	700
1	1	1	10
95	18	4,324	6,752
7	1	0	48
Pending funding			
42	6	4,719	5,800
173	24	12,740	<b>18,368</b> (+5,628)

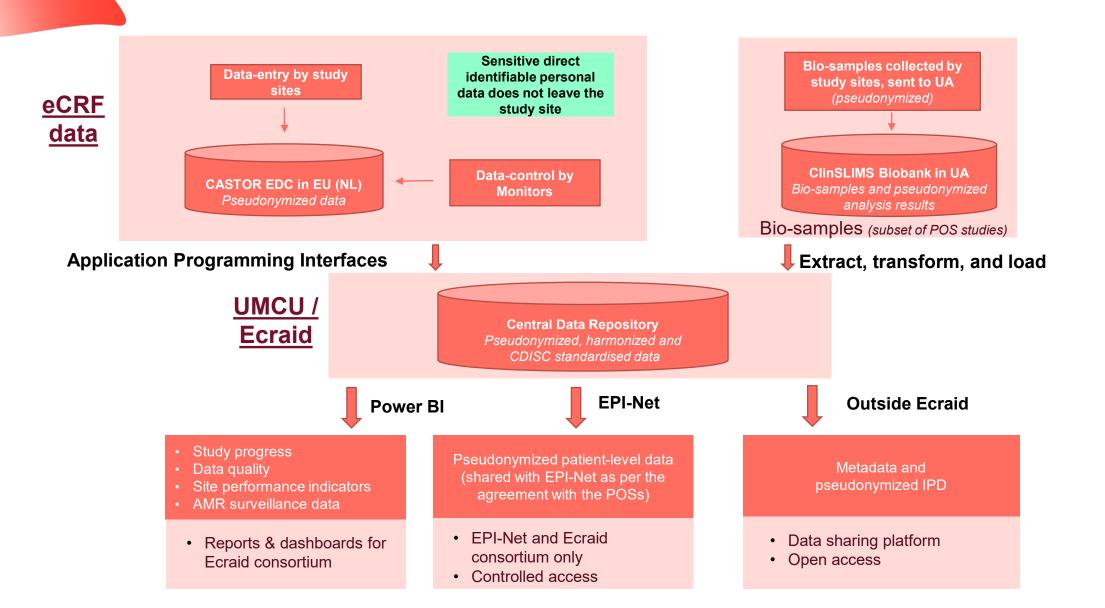
ICU = Intensive Care Unit

ER = Emergency Room

PC = Primary Care

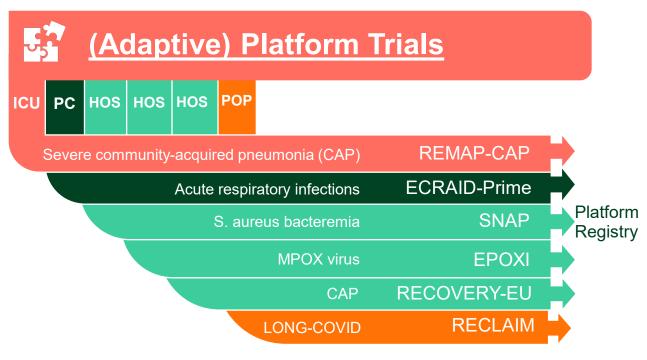
HOS = Hospital wards

#### Perpetual observational studies: data flow





#### **Platform Trials**



No. of sites activated	No. of countries	Enrolled as at 1 Jan 2024	Enrolled as at 2 May 2024			
131 (265)	12 (19)	7,606	7,902			
Pending regulatory approval						
6	1	1	28			
6	1	1	44			
Pending regulatory approval						
6	2	0	4			
Pending regulatory approval						
149	12	7,608	7,978 (+370)			

ICU = Intensive Care Unit ER = Emergency Room PC = Primary Care

HOS = Hospital wards

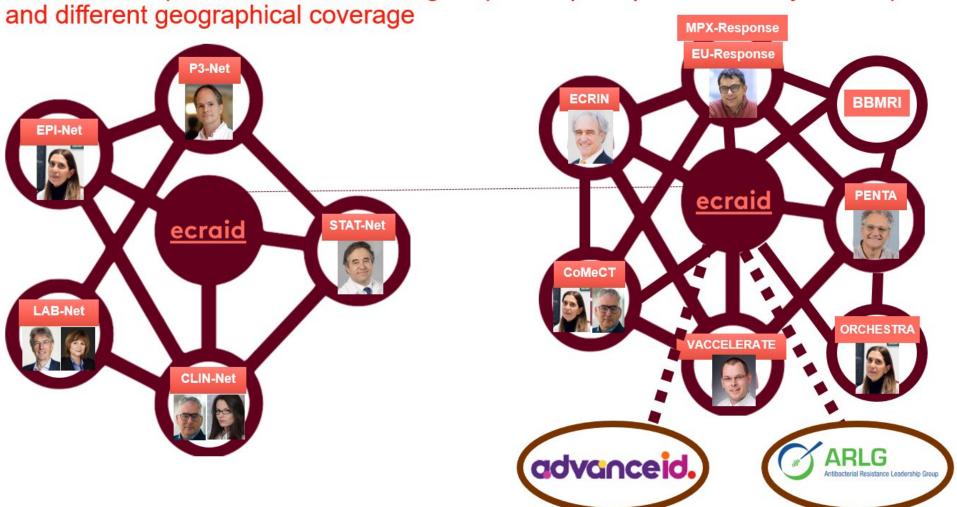
CAP = Community-Acquired Pneumonia

ARI = Acute Respiratory Infections

SAB = Staph aureus bacteremia

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and..a <u>network of networks</u> including different study designs (from Phase 2 to cohort studies), different diseases targets (from mpx to post COVID syndrome), and different deographical coverage



#### **Outbreak Preparedness & Response**

#### 'Inter-epidemic' mode

The Ecraid warm-base network is operationally prepared to rapidly initiate a clinical research response addressing key questions in the event of an infectious disease **outbreak** or changing in epidemiology due to the **climate change** 

What if a viral pandemic scenario (pneumonia as a primary infection site) would start tomorrow:

#### **REMAP-CAP**

130 active sites in 11 countries active with 8 domains operational (embedded in global network of 298 sites)

#### **RECOVERY-EU**

- 5 sites in 2 countries active with for randomisation to oseltamivir, baloxavir or standard care
- 188 study sites.
- End of 2024: 65 new sites in 8 EU countries

#### **POS-ARI-ER**

- 13 sites in 5 countries active
- End of 2024: 30 active sites in 10 countries

#### **POS-ARI-PC**

- 7 sites in 1 country active
- End of 2024: 60 active sites in 8 countries

#### **ORCHESTRA**

- 82 active cohorts (500000 enrol.)
- Children/ adult
- Underserved populations
- HCWs
- Centralised infrastructures
- Federated learning
- Acute disease
- 24-month followup

#### A patient-centred network Transferability

# IMI-supported treatment against multidrug-resistant bacteria approved by European Commission

The Commission's green light means this new treatment will soon be available for adult patients with serious infections caused by multidrug-resistant Gram-negative bacteria where treatment options are limited.

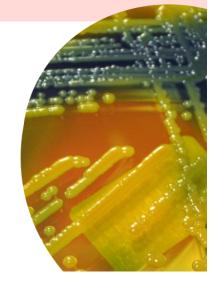
22 April 2024

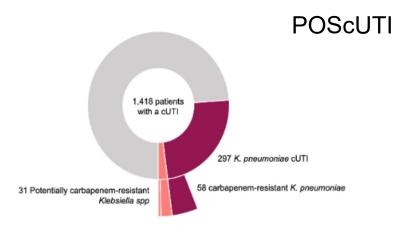
Two of the EMBLAVEO® clinical studies were conducted with the support of the Innovative Medicines Initiative project <u>COMBACTE-CARE</u> – the first was a Phase II study (<u>REJUVENATE</u>) which investigated its potential as a treatment for hospitalised patients with complicated intra-abdominal infections. The second was a Phase III study (<u>REVISIT</u>) which compared the aztreonam-avibactam treatment with meropenem and colistin – a commonly used treatment – to treat complicated intra-abdominal infections, hospital-acquired pneumonia and ventilator-associated pneumonia. The REVISIT study was also supported by the Biomedical Advanced Research and Development Authority (BARDA). Data from the studies showed that the treatment is effective and well-tolerated.

# A patient-centred network Support to public health

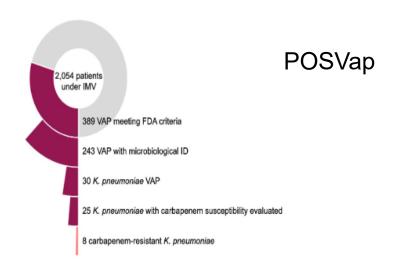
Ecraid network responds to hypervirulent Klebsiella pneumoniae warning

The ECDC cautions that hypervirulent *Klebsiella pneumoniae* may be causing untreatable infections in Europe. The teams behind Ecraid's platform studies on ventilator-associated pneumonia and complicated urinary tract infections swiftly analysed their data to quantify the prevalence of carbapenem-resistant *Klebsiella*.





**Figure 1.** Prevalence of carbapenem-resistant *Klebsiella* in patients with a cUTI



**Figure 2.** Prevalence of carbapenem-resistant *Klebsiella* in patients with microbiologically confirmed VAP

#### A patient-centred network Education

Six-part course introduces the future of clinical research: adaptive designs

Free webinar on complicated urinary tract infections

Traditional clinical research designs are not sufficiently equipped to tackle infectious disease threats. Adaptive designs, on the other hand, are. This free online training course will introduce the distinct types of adaptive designs and explain their advantages and limitations.



Experts will explore definitions, microbi challenges and nove randomised trials o two-hour webinar o Registration is now

#### Webinar good pra laborato

In an effort to help tract infection diagteam responsible f work in the ECRAI hosting a practical February 14, 2024. address the microclinical nuances of offering know-how done for the POS-a These good labors are included in a n

Conducting international clinical research is not easy, even for the most experienced trialists. How can it be made easier for young investigators? On the heels of two fully booked Young Investigator Workshops held in 2022 and 2023, the team behind this series is returning to ESCMID Global (formerly known as ECCMID) for a third, hybrid edition.

Young Investigator Workshop returns to ECCMID in 2024





### Thank you!

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