

## WHAT IS COMBACTE-NET AND LAB-Net?

**Project start: January 2013 / Project end: February 2021**

LAB-Net is the laboratory network within COMBACTE-NET (Combating Bacterial resistance in Europe). Its overarching objective is to establish, train, and maintain a high-quality geographically representative European laboratory network to support antibacterial drug development via various clinical trials. LAB-Net consists of routine diagnostic laboratories, specialized research microbiology laboratories, and a central coordinating laboratory based at the University of Antwerp, Belgium (Fig. 1). This network is fully complementary to COMBACTE-NET CLIN-Net, the clinical investigator network and closely linked with the clinical studies.

## LAB-Net SINCE 2013

- ✓ Since its start in January 2013, LAB-Net has grown from 200 to 663 laboratories in 41 European countries participating in seventeen clinical studies (as of July 2018). LAB-Net has currently 973 laboratory contacts (Fig. 2).
- ✓ 627 routine microbiology labs were approached for feasibility in one or more studies.
- ✓ 2,812 laboratory questionnaires (incl. 428 baseline Q) were sent and over 40% were completed (1259 new study specific laboratory questionnaires and 59 baseline questionnaires were sent only in 2017).
- ✓ 976 investigators in 403 sites have participated in site initiation visits and investigators' meetings and were trained by LAB-Net on sample collection, handling, storage and shipment.
- ✓ Development and launch of a LAB-Net Quality Assurance Program including External quality assessment (EQA) panel development & GCP training for laboratories:
  - ✓ 61 laboratory investigators trained at 6 GCP trainings
  - ✓ EQA panel for one observational and one interventional study to assess the capacity of laboratories to detect carbapenem-resistant Gram-negative bacteria
- ✓ A repository was established that currently houses more than 35000 specimens and 5000 strains of five clinical studies that can be linked to anonymized clinical information. It will serve as a repository for future COMBACTE studies and a core facility to study microbial and human biomarkers. The repository will support the development of new antimicrobial agents and novel rapid diagnostic tests.
- ✓ 31 laboratories in 10 countries (Bulgaria, Italy, Portugal, Hungary, Romania, Croatia, Serbia, Czech Republic, Slovakia and Albania) were visited since September 2016 within the country visits initiative together with CLIN-Net.

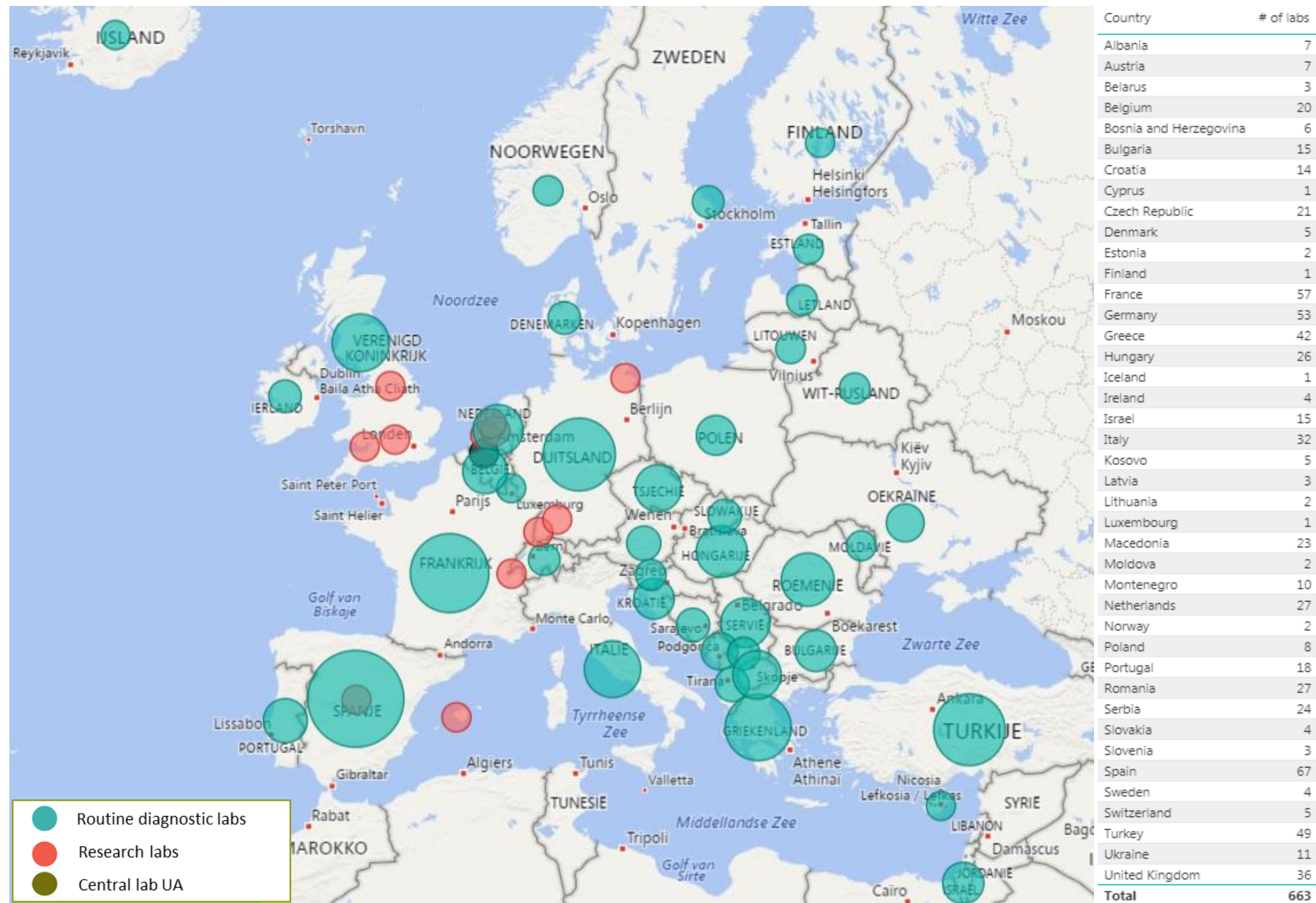
## LAB-Net: 5 years in and beyond

The COMBACTE-NET network is able to contribute to all aspects of clinical study development and execution. LAB-Net, specifically, brings in all aspects of microbiological expertise to the clinical studies it is involved in ranging from contributing scientific expertise to clinical protocol development to site selection, lab training and biobanking (Fig. 3). This internationally recognized expertise has led non-COMBACTE organizations to seek global partnerships with LAB-Net. The final objective by the end of COMBACTE-NET is to establish a sustainable infrastructure beyond the COMBACTE-NET funding.

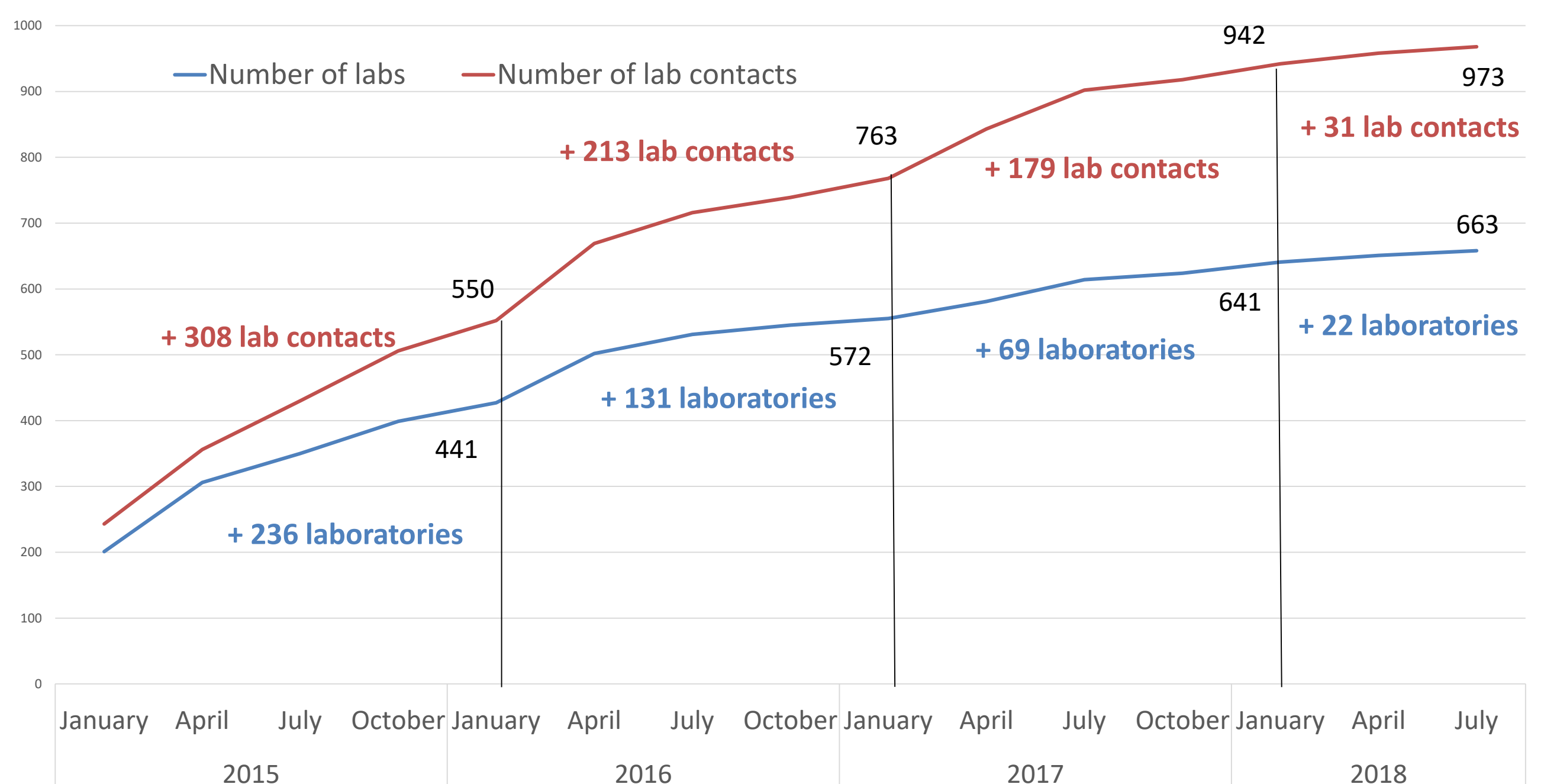
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**Fig. 1.** Distribution of the LAB-Net routine diagnostic laboratories, research laboratories and central laboratory in Europe.



**Fig. 2.** Growth of the number of laboratories and laboratory contacts in LAB-Net since January 2015.

Study	Task	Task											
		Clinical Protocol	CRD selection	Dx test selection	Questionnaire	Site selection	Local lab Manual	Sample Kits	Local lab training	EQA panel	Biobanking	Central lab	Research lab
COMBACTE-NET	ASPIRE-ICU		NA										
	ASPIRE-SSI		NA										
	SAATELLITE												
	ANTICIPATE		NA										
COMBACTE-MAGNET	ASPIRE-ICU		NA										
	EVADE												
COMBACTE-CARE	EURECA		NA				NA						
	REJUVENATE		NA	NA		NA	NA	NA	NA	NA	NA	NA	NA
	REVISIT			FU									
NON-COMBACTE STUDIES	CREDIBLE-CR												NA
	NeoOBS		NA	NA			NA						FU
	OVERCOME			NA			NA	NA	NA	NA	NA	NA	NA
	RESTORE-IMI-2		NA	NA			NA		NA	NA	NA	NA	NA
	ARBO-MERMAIDS		NA	NA					NA	NA			
	ARI-MERMAIDS		NA	NA					NA	NA			
	PED-MERMAIDS		NA	NA					NA	NA			
ALICÉ		NA	NA					NA	NA				

  LAB-Net involved in task  
  LAB-Net involved in task in 2017-2018  
  LAB-Net not involved in task  
  NA Task not applicable for the study  
  FU Future study, tasks not defined yet

**Fig. 3.** LAB-Net involvement in various tasks in 2017 and 2018 (dark green cells) and in general since the start of the COMBACTE-NET project (light green cells).