

Figure S1 Bibliometric analysis of Web of Science core collection output in terms of Carbapenem-resistant Enterobacteriaceae (CRE) research. A: Top ten productive funding agencies; B: Top ten active research area; C: Top ten journals with highest number of publications; D: Top ten fruitful authors; E: Top ten institutional contributors.

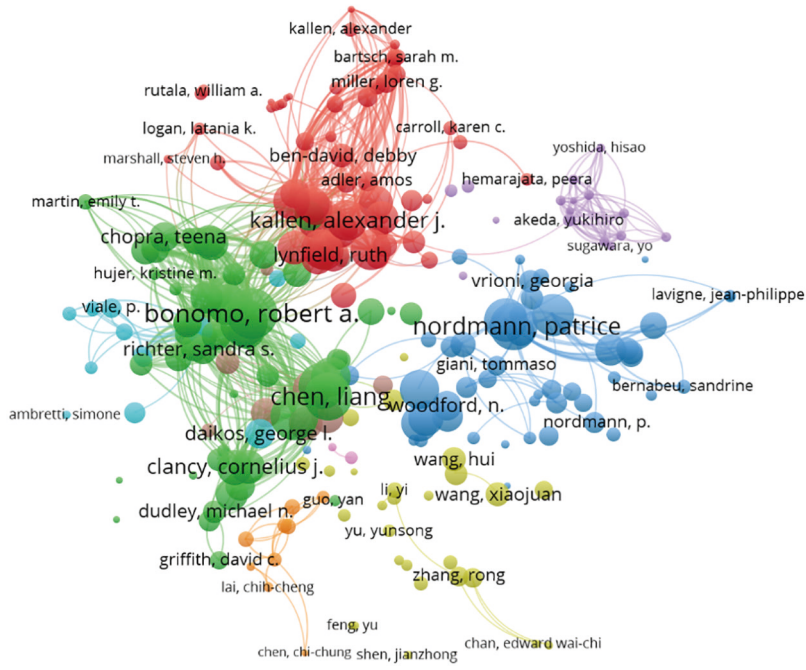
Table S1 Top ten co-authorship link strength countries, organizations and authors.

Country	Documents	Citations	Total link strength
USA	533	13071	224
France	122	2960	165
Italy	133	2561	150
England	88	2548	140
Spain	61	1531	124
Germany	53	1115	116
Greece	57	1901	116
Switzerland	47	1262	105
Israel	72	3048	102
Netherlands	43	1152	101
Organization	Documents	Citations	Total link strength
Case Western Reserve Univ	45	1140	180
Univ Pittsburgh	44	1636	146
Univ N Carolina	24	640	127
Duke Univ	16	555	118
Cleveland Clin	17	592	114
Metrohlth Med Ctr	13	458	108
Wayne State Univ	29	886	104
Univ Michigan	19	348	84
Louis Stokes Cleveland Dept Vet Affairs Med Ctr	12	528	80
Univ Florence	25	521	80
Author	Documents	Citations	Total link strength
Bonomo, Robert A.	43	1186	276
Kaye, Keith S.	33	1041	239
Perez, Federico	21	791	184
van Duin, David	21	639	169
Richter, Sandra S.	13	395	130
Cober, Eric	11	362	127
Hujer, Andrea M.	13	344	126
Kalayjian, Robert C.	11	371	125
Salata, Robert A.	11	371	125
Evans, Scott	10	359	118

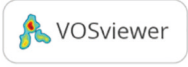
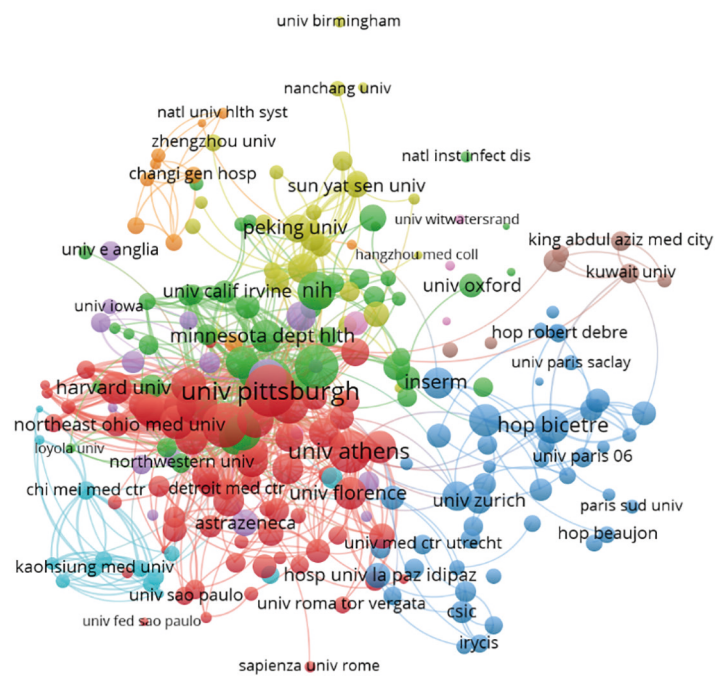
Table S2 The top 100 most cited articles in the field of CRE.

Rank	Title	Journal	Publication year	Citations
1	Tracking a Hospital Outbreak of Carbapenem-Resistant <i>Klebsiella pneumoniae</i> with Whole-Genome Sequencing	Sci. Transl. Med.	2012	503
2	Rapid Detection of Carbapenemase-producing Enterobacteriaceae	Emerg. Infect. Dis.	2012	410
3	Treatment Outcome of Bacteremia Due to KPC-Producing <i>Klebsiella pneumoniae</i> : Superiority of Combination Antimicrobial Regimens	Antimicrob. Agents Chemother.	2012	351
4	Vital Signs: Carbapenem-Resistant Enterobacteriaceae	MMWR-Morb. Mortal. Wkly. Rep.	2013	309
5	Carbapenemase-Producing <i>Klebsiella pneumoniae</i> Bloodstream Infections: Lowering Mortality by Antibiotic Combination Schemes and the Role of Carbapenems	Antimicrob. Agents Chemother.	2014	306
6	Containment of a Country-wide Outbreak of Carbapenem-Resistant <i>Klebsiella pneumoniae</i> in Israeli Hospitals via a Nationally Implemented Intervention	Clin. Infect. Dis.	2011	266
7	Sequence-specific antimicrobials using efficiently delivered RNA-guided nucleases	Nat. Biotechnol.	2014	241
8	What remains against carbapenem-resistant Enterobacteriaceae? Evaluation of chloramphenicol, ciprofloxacin, colistin, fosfomycin, minocycline, nitrofurantoin, temocillin and tigecycline	Int. J. Antimicrob. Agents	2011	223
9	Early Dissemination of NDM-1- and OXA-181-Producing Enterobacteriaceae in Indian Hospitals: Report from the SENTRY Antimicrobial Surveillance Program, 2006-2007	Antimicrob. Agents Chemother.	2011	220
10	New Delhi Metallo-beta-Lactamase-Producing Carbapenem-Resistant <i>Escherichia coli</i> Associated With Exposure to Duodenoscopes	JAMA-J. Am. Med. Assoc.	2014	203
11	Occurrence of carbapenemase-producing <i>Klebsiella pneumoniae</i> and <i>Escherichia coli</i> in the European survey of carbapenemase-producing Enterobacteriaceae (EuSCAPE): a prospective, multinational study	Lancet Infect. Dis.	2017	193
12	Activities of NXL104 Combinations with Ceftazidime and Aztreonam against Carbapenemase-Producing Enterobacteriaceae	Antimicrob. Agents Chemother.	2011	188
13	Carbapenemase-producing Enterobacteriaceae in Europe: assessment by national experts from 38 countries, May 2015	Eurosurveillance	2015	179
14	Activity of aminoglycosides, including ACHN-490, against carbapenem-resistant Enterobacteriaceae isolates	J. Antimicrob. Chemother.	2011	177
15	Clinical Outcomes, Drug Toxicity, and Emergence of Ceftazidime-Avibactam Resistance Among Patients Treated for Carbapenem-Resistant Enterobacteriaceae Infections	Clin. Infect. Dis.	2016	171
16	Single-molecule sequencing to track plasmid diversity of hospital-associated carbapenemase-producing Enterobacteriaceae	Sci. Transl. Med.	2014	168
17	High rate of colistin resistance among patients with carbapenem-resistant <i>Klebsiella pneumoniae</i> infection accounts for an excess of mortality	Clin. Microbiol. Infect.	2013	163
18	Outcome of carbapenem resistant <i>Klebsiella pneumoniae</i> bloodstream infections	Clin. Microbiol. Infect.	2012	163
19	Emergence and Rapid Regional Spread of <i>Klebsiella pneumoniae</i> Carbapenemase-Producing Enterobacteriaceae	Clin. Infect. Dis.	2011	154
20	Effect of appropriate combination therapy on mortality of patients with bloodstream infections due to carbapenemase-producing Enterobacteriaceae (INCREMENT): a retrospective cohort study	Lancet Infect. Dis.	2017	146
21	Characteristics of Extended-Spectrum beta-Lactamase- and Carbapenemase-Producing Enterobacteriaceae Isolates from Rivers and Lakes in Switzerland	Appl. Environ. Microbiol.	2013	145
22	Colistin Versus Ceftazidime-Avibactam in the Treatment of Infections Due to Carbapenem-Resistant Enterobacteriaceae	Clin. Infect. Dis.	2018	140
23	A sensitive and specific phenotypic assay for detection of metallo-beta-lactamases and KPC in <i>Klebsiella pneumoniae</i> with the use of meropenem disks supplemented with aminophenylboronic acid, dipicolinic acid and cloxacillin	Clin. Microbiol. Infect.	2011	140
24	Outbreak of Colistin-Resistant, Carbapenem-Resistant <i>Klebsiella pneumoniae</i> in Metropolitan Detroit, Michigan	Antimicrob. Agents Chemother.	2011	138
25	Efficacy and Safety of Ceftazidime-Avibactam Plus Metronidazole Versus Meropenem in the Treatment of Complicated Intra-abdominal Infection: Results From a Randomized, Controlled, Double-Blind, Phase 3 Program	Clin. Infect. Dis.	2016	137
26	Epidemiology of Carbapenem-Resistant Enterobacteriaceae in 7 US Communities, 2012-2013	JAMA-J. Am. Med. Assoc.	2015	137
27	Outbreak of OXA-48-Positive Carbapenem-Resistant <i>Klebsiella pneumoniae</i> Isolates in France	Antimicrob. Agents Chemother.	2011	132
28	An Ongoing National Intervention to Contain the Spread of Carbapenem-Resistant Enterobacteriaceae	Clin. Infect. Dis.	2014	126
29	Double-Carbapenem Therapy for Carbapenemase-Producing <i>Klebsiella pneumoniae</i>	Antimicrob. Agents Chemother.	2011	125
30	Antibacterial Activity of Eravacycline (TP-434), a Novel Fluorocycline, against Hospital and Community Pathogens	Antimicrob. Agents Chemother.	2013	124
31	Ceftazidime-avibactam Versus Doripenem for the Treatment of Complicated Urinary Tract Infections, Including Acute Pyelonephritis: RECAPTURE, a Phase 3 Randomized Trial Program	Clin. Infect. Dis.	2016	121
32	The Importance of Long-term Acute Care Hospitals in the Regional Epidemiology of <i>Klebsiella pneumoniae</i> Carbapenemase-Producing Enterobacteriaceae	Clin. Infect. Dis.	2013	121
33	Intravenous fosfomycin for the treatment of nosocomial infections caused by carbapenem-resistant <i>Klebsiella pneumoniae</i> in critically ill patients: a prospective evaluation	Clin. Microbiol. Infect.	2010	121
34	Potential Role of Active Surveillance in the Control of a Hospital-Wide Outbreak of Carbapenem-Resistant <i>Klebsiella pneumoniae</i> Infection	Infect. Control Hosp. Epidemiol.	2010	119
35	A Randomized, Double-Blind, Placebo-Controlled Trial of Selective Digestive Decontamination Using Oral Gentamicin and Oral Polymyxin E for Eradication of Carbapenem-Resistant <i>Klebsiella pneumoniae</i> Carriage	Infect. Control Hosp. Epidemiol.	2012	116
36	Molecular Dissection of an Outbreak of Carbapenem-Resistant Enterobacteriaceae Reveals Intergenous KPC Carbapenemase Transmission through a Promiscuous Plasmid	mBio	2011	111
37	Epidemic <i>Klebsiella pneumoniae</i> ST258 Is a Hybrid Strain	mBio	2014	108
38	Risk factors for developing clinical infection with carbapenem-resistant <i>Klebsiella pneumoniae</i> in hospital patients initially only colonized with carbapenem-resistant <i>K pneumoniae</i>	Am. J. Infect. Control	2012	107
39	Nationwide Surveillance of Clinical Carbapenem-resistant Enterobacteriaceae (CRE) Strains in China	EBioMedicine	2017	104
40	Infections caused by carbapenem-resistant <i>Klebsiella pneumoniae</i> among patients in intensive care units in Greece: a multi-centre study on clinical outcome and therapeutic options	Clin. Microbiol. Infect.	2014	102
41	Treatment and outcomes in carbapenem-resistant <i>Klebsiella pneumoniae</i> bloodstream infections	Diagn. Microbiol. Infect. Dis.	2011	100
42	Comparing the Outcomes of Patients With Carbapenemase-Producing and Non-Carbapenemase-Producing Carbapenem-Resistant Enterobacteriaceae Bacteremia	Clin. Infect. Dis.	2017	99
43	Endoscopic Retrograde Cholangiopancreatography-Associated AmpC <i>Escherichia coli</i> Outbreak	Infect. Control Hosp. Epidemiol.	2015	99
44	Prevalence and Risk Factors for Acquisition of Carbapenem-Resistant Enterobacteriaceae in the Setting of Endemicity	Infect. Control Hosp. Epidemiol.	2013	98
45	The global distribution and spread of the mobilized colistin resistance gene <i>mcr-1</i>	Nat. Commun.	2018	95
46	Vaborbactam: Spectrum of Beta-Lactamase Inhibition and Impact of Resistance Mechanisms on Activity in Enterobacteriaceae	Antimicrob. Agents Chemother.	2017	94
47	Prevention of Colonization and Infection by <i>Klebsiella pneumoniae</i> Carbapenemase-Producing Enterobacteriaceae in Long-term Acute-Care Hospitals	Clin. Infect. Dis.	2015	91
48	Colonization with extended-spectrum beta-lactamase-producing and carbapenemase-producing Enterobacteriaceae in international travelers returning to Germany	Int. J. Med. Microbiol.	2015	90
49	Colistin resistance superimposed to endemic carbapenem-resistant <i>Klebsiella pneumoniae</i> : a rapidly evolving problem in Italy, November 2013 to April 2014	Eurosurveillance	2014	89
50	Rapid emergence and spread of OXA-48-producing carbapenem-resistant Enterobacteriaceae isolates in Belgian hospitals	Int. J. Antimicrob. Agents	2012	89
51	Duration of carriage of carbapenem-resistant Enterobacteriaceae following hospital discharge	Am. J. Infect. Control	2013	86
52	Ceftazidime-Avibactam Is Superior to Other Treatment Regimens against Carbapenem-Resistant <i>Klebsiella pneumoniae</i> Bacteremia	Antimicrob. Agents Chemother.	2017	85
53	Carriage rate of carbapenem-resistant <i>Klebsiella pneumoniae</i> in hospitalised patients during a national outbreak	J. Hosp. Infect.	2010	83
54	Complete Sequences of <i>mcr-1</i> -Harboring Plasmids from Extended-Spectrum-beta-Lactamase- and Carbapenemase-Producing Enterobacteriaceae	Antimicrob. Agents Chemother.	2016	82
55	Activity of Meropenem Combined with RPX7009, a Novel beta-Lactamase Inhibitor, against Gram-Negative Clinical Isolates in New York City	Antimicrob. Agents Chemother.	2015	82
56	A quarantine process for the resolution of duodenoscopy-associated transmission of multidrug-resistant <i>Escherichia coli</i>	Gastrointest. Endosc.	2015	80
57	Vital Signs: Estimated Effects of a Coordinated Approach for Action to Reduce Antibiotic-Resistant Infections in Health Care Facilities - United States	MMWR-Morb. Mortal. Wkly. Rep.	2015	80
58	Surveillance of Carbapenem-Resistant <i>Klebsiella pneumoniae</i> : Tracking Molecular Epidemiology and Outcomes through a Regional Network	Antimicrob. Agents Chemother.	2014	80
59	Mortality associated with carbapenem-resistant <i>Klebsiella pneumoniae</i> infections in liver transplant recipients	Liver Transplant.	2012	80
60	Modified Carbapenem Inactivation Method for Phenotypic Detection of Carbapenemase Production among Enterobacteriaceae	J. Clin. Microbiol.	2017	79
61	Molecular Characterization of Carbapenemase-Producing <i>Escherichia coli</i> and <i>Klebsiella pneumoniae</i> in the Countries of the Gulf Cooperation Council: Dominance of OXA-48 and NDM Producers	Antimicrob. Agents Chemother.	2014	79
62	Laboratory and Clinical Evaluation of Screening Agar Plates for Detection of Carbapenem-Resistant Enterobacteriaceae from Surveillance Rectal Swabs	J. Clin. Microbiol.	2011	79
63	In Vitro Evaluation of Antibiotic Synergy for Polymyxin B-Resistant Carbapenemase-Producing <i>Klebsiella pneumoniae</i>	J. Clin. Microbiol.	2010	79
64	Effect and Safety of Meropenem-Vaborbactam versus Best-Available Therapy in Patients with Carbapenem-Resistant Enterobacteriaceae Infections: The TANGO II Randomized Clinical Trial	Infect. Dis. Ther.	2018	77
65	Risk factors for carbapenem-resistant <i>Klebsiella pneumoniae</i> bloodstream infection among rectal carriers: a prospective observational multicentre study	Clin. Microbiol. Infect.	2014	77
66	Asymptomatic rectal carriage of blaKPC producing carbapenem-resistant Enterobacteriaceae: who is prone to become clinically infected?	Clin. Microbiol. Infect.	2013	76
67	Carbapenemase-producing Enterobacteriaceae in Finland: the first years (2008-11)	J. Antimicrob. Chemother.	2012	76
68	Prospective Multicenter Study of Carbapenemase-Producing Enterobacteriaceae from 83 Hospitals in Spain Reveals High In Vitro Susceptibility to Colistin and Meropenem	Antimicrob. Agents Chemother.	2015	75
69	Carbapenemase-Producing Enterobacteriaceae in Spain in 2012	Antimicrob. Agents Chemother.	2013	75
70	Assessing the Efficacy and Safety of Eravacycline vs Ertapenem in Complicated Intra-abdominal Infections in the Investigating Gram-Negative Infections Treated With Eravacycline (IGNITE 1) Trial A Randomized Clinical Trial	JAMA Surg.	2017	74
71	Carbapenem-resistant <i>Klebsiella pneumoniae</i> bacteremia: factors correlated with clinical and microbiologic outcomes	Diagn. Microbiol. Infect. Dis.	2010	74
72	Outbreak of Carbapenem-Resistant <i>Klebsiella pneumoniae</i> in Puerto Rico Associated with a Novel Carbapenemase Variant	Infect. Control Hosp. Epidemiol.	2010	73
73	Ceftazidime-Avibactam as Salvage Therapy for Infections Caused by Carbapenem-Resistant Organisms	Antimicrob. Agents Chemother.	2017	72
74	Evaluation of the RAPIDEC (R) CARBA NP, the Rapid CARB Screen (R) and the Carba NP test for biochemical detection of carbapenemase-producing Enterobacteriaceae	J. Antimicrob. Chemother.	2015	72
75	Large Nosocomial Outbreak of Colistin-Resistant, Carbapenemase-Producing <i>Klebsiella pneumoniae</i> Traced to Clonal Expansion of an mgrB Deletion Mutant	J. Clin. Microbiol.	2015	72
76	Secular Trends in Gram-Negative Resistance among Urinary Tract Infection Hospitalizations in the United States, 2000-2009	Infect. Control Hosp. Epidemiol.	2013	71
77	Recent Exposure to Antimicrobials and Carbapenem-Resistant Enterobacteriaceae: The Role of Antimicrobial Stewardship	Infect. Control Hosp. Epidemiol.	2012	71
78	Comparison of methods to detect the <i>in vitro</i> activity of silver nanoparticles (AgNP) against multidrug resistant bacteria	J. Nanobiotechnol.	2015	69
79	Infections by carbapenem-resistant <i>Klebsiella pneumoniae</i> in SCT recipients: a nationwide retrospective survey from Italy	Bone Marrow Transplant.	2015	69
80	High colonization rates of extended-spectrum beta-lactamase (ESBL)-producing <i>Escherichia coli</i> in Swiss Travellers to South Asia- a prospective observational multicentre cohort study looking at epidemiology, microbiology and risk factors	BMC Infect. Dis.	2014	69
81	Phase 2, Randomized, Double-Blind Study of the Efficacy and Safety of Two Dose Regimens of Eravacycline versus Ertapenem for Adult Community-Acquired Complicated Intra-Abdominal Infections	Antimicrob. Agents Chemother.	2014	69
82	A hospital-based matched case-control study to identify clinical outcome and risk factors associated with carbapenem-resistant <i>Klebsiella pneumoniae</i> infection	BMC Infect. Dis.	2013	69
83	NDM-1, OXA-48 and OXA-181 carbapenemase-producing Enterobacteriaceae in Sultanate of Oman	Clin. Microbiol. Infect.	2012	69
84	Comparative Effectiveness of Aminoglycosides, Polymyxin B, and Tigecycline for Clearance of Carbapenem-Resistant <i>Klebsiella pneumoniae</i> from Urine	Antimicrob. Agents Chemother.	2011	69
85	Emergence of a hypervirulent carbapenem-resistant <i>Klebsiella pneumoniae</i> isolate from a clinical intervention in China	J. Infect.	2015	68
86	Down the drain: carbapenem-resistant bacteria in intensive care unit patients and handwashing sinks	Med. J. Aust.	2013	68
87	Bacteraemia due to OXA-48-carbapenemase-producing Enterobacteriaceae: a major clinical challenge	Clin. Microbiol. Infect.	2013	68
88	Carbapenem-Resistant <i>Klebsiella pneumoniae</i> in Post-Acute-Care Facilities in Israel	Infect. Control Hosp. Epidemiol.	2011	68
89	Multicenter Clinical and Molecular Epidemiological Analysis of Bacteremia Due to Carbapenem-Resistant Enterobacteriaceae (CRE) in the CRE Epicenter of the United States	Antimicrob. Agents Chemother.	2017	67
90	Impact of carbapenem resistance on the outcome of patients' hospital-acquired bacteraemia caused by <i>Klebsiella pneumoniae</i>	J. Hosp. Infect.	2013	67
91	Comparison of BD Phoenix, Vitek 2, and MicroScan Automated Systems for Detection and Inference of Mechanisms Responsible for Carbapenem Resistance in Enterobacteriaceae	J. Clin. Microbiol.	2010	67
92	Emergence of carbapenem-resistant Enterobacteriaceae as causes of bloodstream infections in patients with hematologic malignancies	Leuk. Lymphoma	2013	66
93	Effect of the beta-Lactamase Inhibitor Vaborbactam Combined with Meropenem against Serine Carbapenemase-Producing Enterobacteriaceae	Antimicrob. Agents Chemother.	2016	65
94	Carbapenem-Resistant <i>Klebsiella pneumoniae</i> Strains Exhibit Diversity in Aminoglycoside-Modifying Enzymes, Which Exert Differing Effects on Plazomicin and Other Agents	Antimicrob. Agents Chemother.	2014	65
95	Outbreak of OXA-48 carbapenemase-producing <i>Klebsiella pneumoniae</i> in Greece involving an ST11 clone	J. Antimicrob. Chemother.	2013	65
96	Phenotypic Screening of Carbapenemases and Associated beta-Lactamases in Carbapenem-Resistant Enterobacteriaceae	J. Clin. Microbiol.	2012	65
97	Colistin Resistance in Carbapenem-Resistant <i>Klebsiella pneumoniae</i> : Laboratory Detection and Impact on Mortality	Clin. Infect. Dis.	2017	64
98	Rising Rates of Carbapenem-Resistant Enterobacteriaceae in Community Hospitals: A Mixed-Methods Review of Epidemiology and Microbiology Practices in a Network of Community Hospitals in the Southeastern United States	Infect. Control Hosp. Epidemiol.	2014	64
99	Carbapenem-Resistant <i>Klebsiella pneumoniae</i> Exhibit Variability in Capsular Polysaccharide and Capsule Associated Virulence Traits	J. Infect. Dis.	2014	63
100	Activity of biapenem (RPX2003) combined with the boronate -lactamase inhibitor RPX7009 against carbapenem-resistant Enterobacteriaceae	J. Antimicrob. Chemother.	2013	63

A



B



C

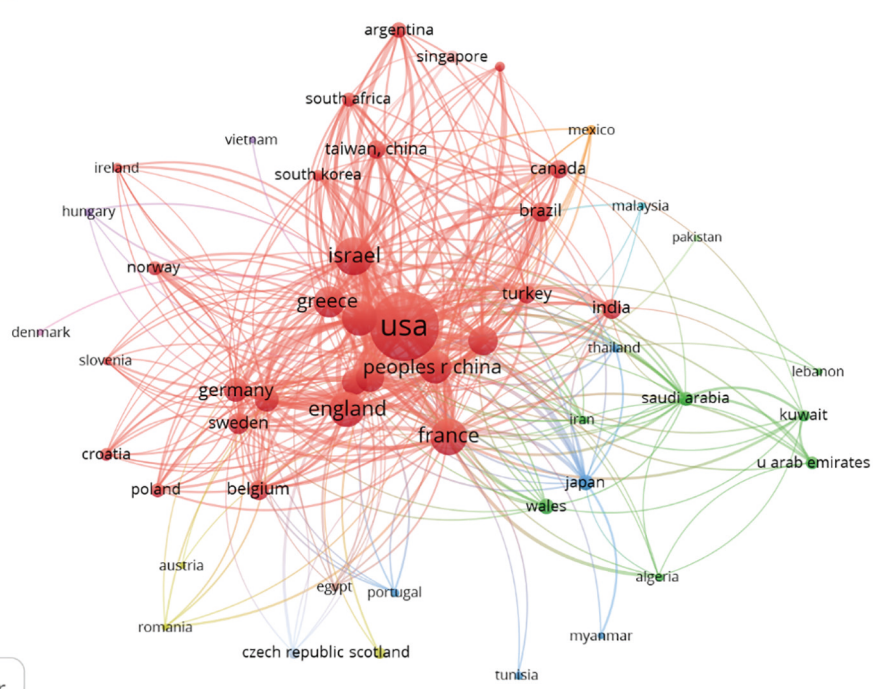
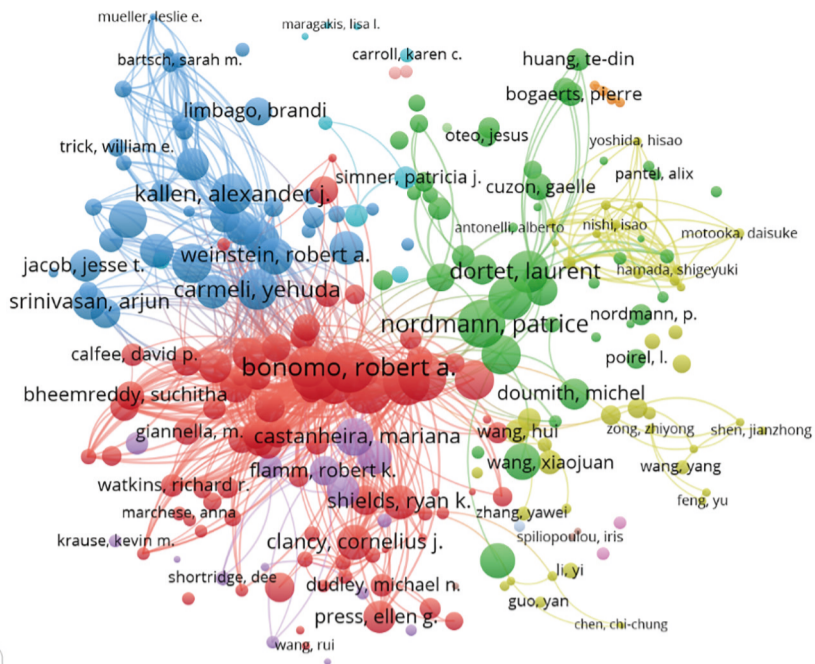
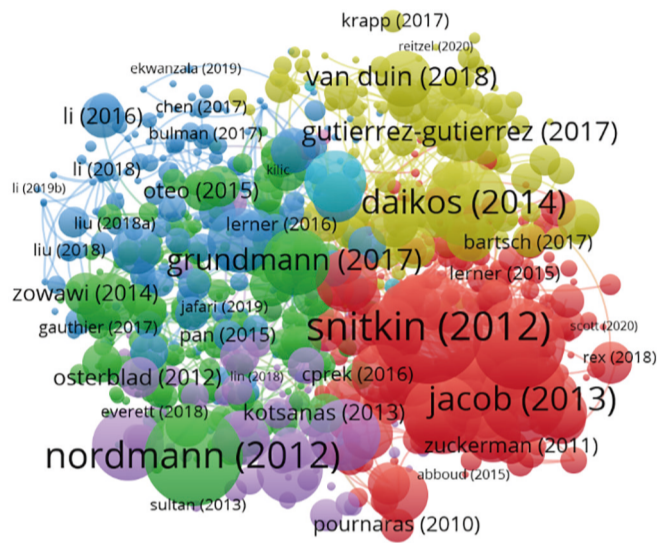


Figure S3 Bibliometric analysis of the citation. The citation of authors (A), institutions (B), and countries (C) in field of CRE research. The color indicated clusters, circle size indicated citations, the thickness of lines indicated strength of linkage.

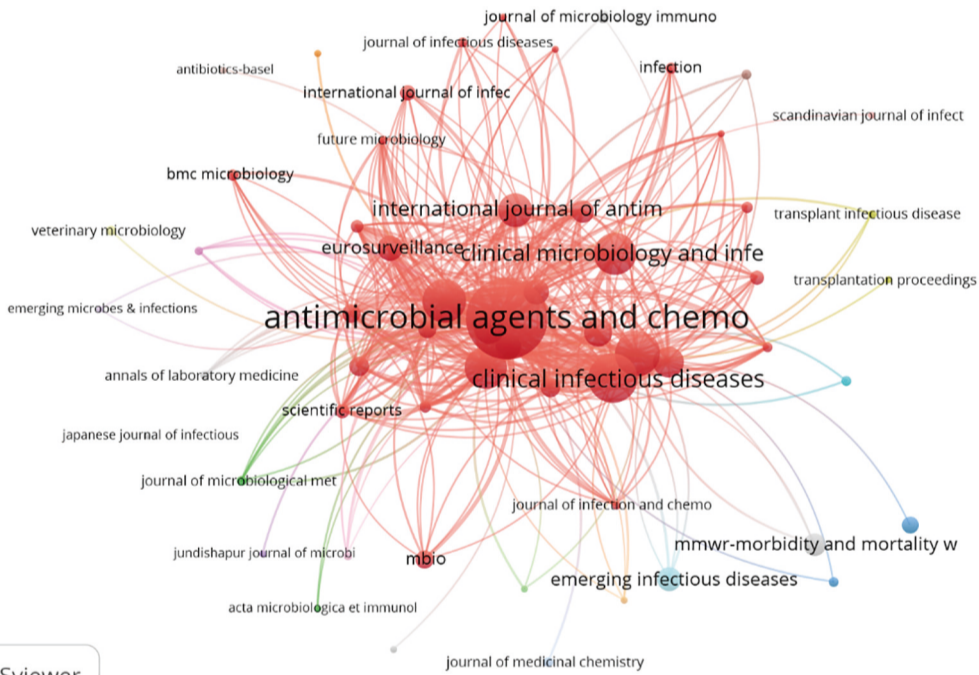
A



B



C



D

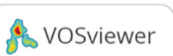
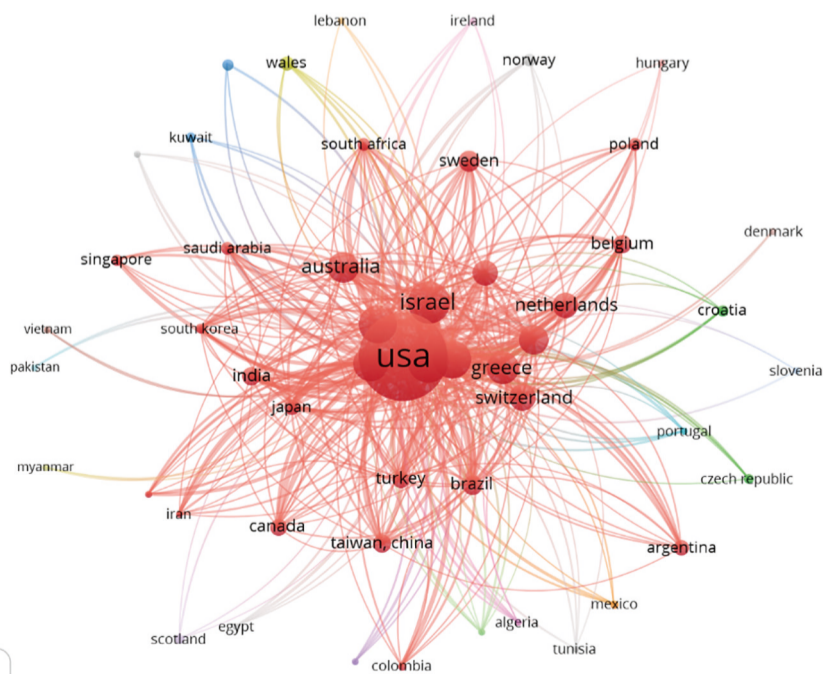
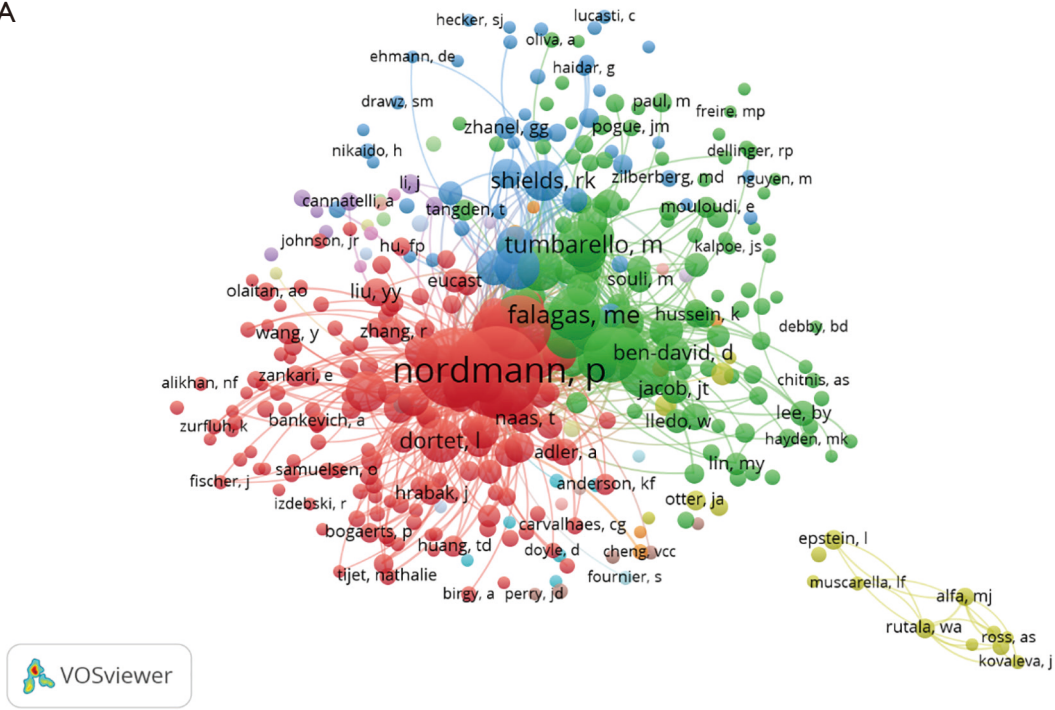
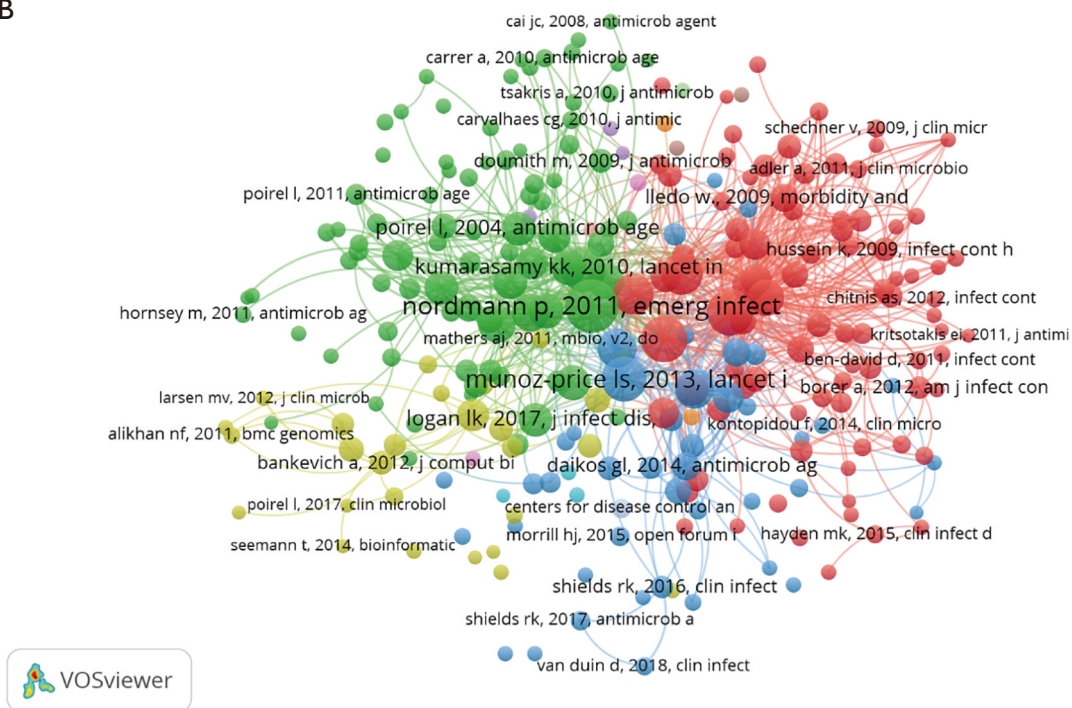


Figure S4 Bibliographic coupling analysis. The bibliographic coupling networks of authors (A), documents (B), journals (C) and countries (D) were shown. The color indicated clusters, circle size indicated number of citations, the thickness of lines indicated strength of linkage.

A



B



C

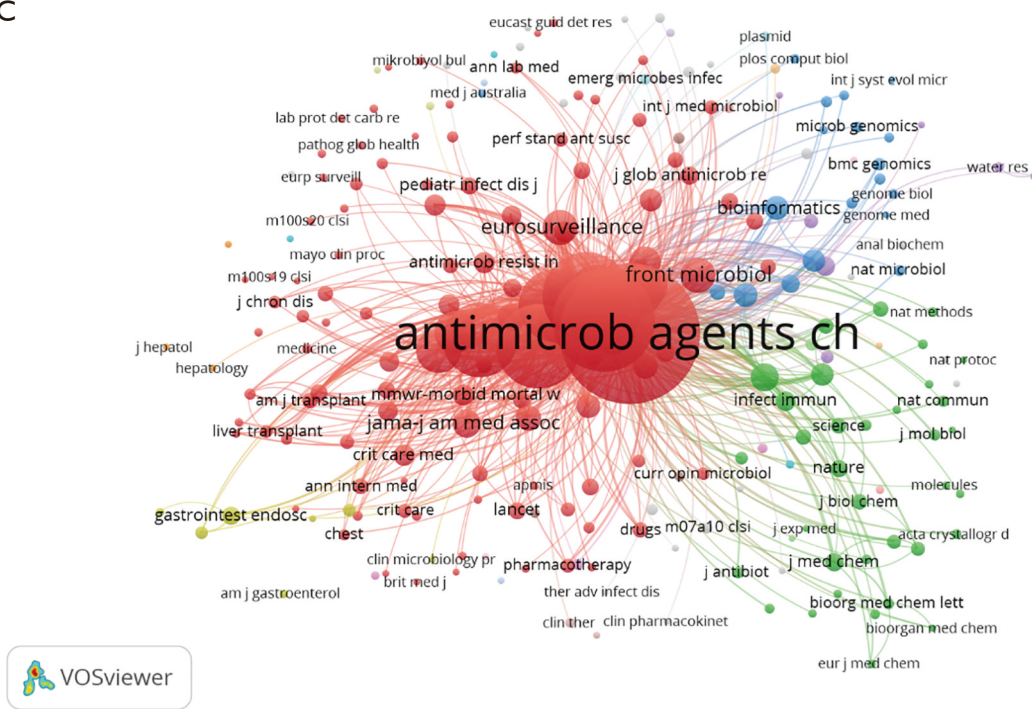


Figure S5 Co-citation analysis evaluate the link between two documents that are both cited by the same literature. The co-citation network of authors (A), references (B) and journals (C) were shown. The color indicated clusters, circle size indicated number of citations, the thickness of lines indicated strength of linkage.

Table S3 Highly frequent major keywords from the included publications on CRE (n = 5,782).

Rank	Keywords	Occurrence	Percentage of occurrence (%)	Cumulative percentage (%)
1	carbapenem-resistant Enterobacteriaceae	284	4.9118	4.9118
2	Enterobacteriaceae	234	4.047	8.9588
3	carbapenemase	223	3.8568	12.8156
4	Klebsiella pneumoniae	218	3.7703	16.586
5	KPC	122	2.11	18.696
6	carbapenem resistance	111	1.9198	20.6157
7	carbapenem	88	1.522	22.1377
8	carbapenemase-producing Enterobacteriaceae	64	1.1069	23.2446
9	antimicrobial resistance	62	1.0723	24.3168
10	OXA-48	60	1.0377	25.3545
11	colistin	59	1.0204	26.375
12	carbapenem-resistant	57	0.9858	27.3608
13	antibiotic resistance	56	0.9685	28.3293
14	carbapenem-resistant Klebsiella pneumoniae	55	0.9512	29.2805
15	ESBL	54	0.9339	30.2145
16	multidrug resistance	54	0.9339	31.1484
17	risk factors	53	0.9166	32.065
18	NDM	51	0.882	32.9471
19	NDM-1	47	0.8129	33.7599
20	ceftazidime-avibactam	47	0.8129	34.5728
21	Escherichia coli	45	0.7783	35.3511
22	mortality	39	0.6745	36.0256
23	carbapenemase-producing	37	0.6399	36.6655
24	infection control	36	0.6226	37.2881
25	resistance	35	0.6053	37.8935
26	epidemiology	33	0.5707	38.4642
27	bloodstream infection	32	0.5534	39.0176
28	MBL	30	0.5189	39.5365
29	intensive care unit	29	0.5016	40.038
30	surveillance	29	0.5016	40.5396
31	meropenem	27	0.467	41.0066
32	outbreak	26	0.4497	41.4562
33	colonization	26	0.4497	41.9059
34	colistin resistance	25	0.4324	42.3383
35	whole-genome sequencing	25	0.4324	42.7707
36	plasmid	24	0.4151	43.1857
37	drug resistance	21	0.3632	43.5489
38	multidrug-resistant	20	0.3459	43.8948

Table S4 High-frequency keyword/source article matrix.

No	Keywords	Sequence of publications				
		1	2	3	...	1671
1	carbapenem-resistant Enterobacteriaceae	0	0	0	...	0
2	Enterobacteriaceae	0	1	1	...	0
3	carbapenemase	0	0	0	...	0
4	Klebsiella pneumoniae	0	0	0	...	1
...
38	multidrug-resistant	0	0	0	...	0

Table S5 Co-word matrix of high frequent keyword.

No	Keywords	carbapenem-resistant Enterobacteriaceae	Enterobacteriaceae	carbapenemase	...	multidrug-resistant
1	carbapenem-resistant Enterobacteriaceae	284	15	22	...	9
2	Enterobacteriaceae	15	234	79	...	6
3	carbapenemase	22	79	223	...	3
...
38	multidrug-resistant	9	6	3	...	20