

MolecularMatch Clinical Trials 2018 Update

In 2008, the World Medical Association's Declaration of Helsinki stated that, "Every clinical trial must be registered in a publicly accessible database before recruitment of the first subject." This spurred many countries to start their own clinical trial registries, or to conform to the standards of other major registries like the US's ClinicalTrials.gov. Many organizations now choose to list their trials in a major registry, their home registry, or both. At MolecularMatch we bring in all trials, and merge it into a consistent format, eliminating duplicates across registries and fill in missing data. We keep this data updated so that we can be sure to contain the majority of registered trials in a format for our algorithms to process, and for our users to distribute information to medical practices around the globe.

Public Registries Incorporated into MM Database

Registry Code	Registry Name	Count
CTGOV	ClinicalTrials.gov	252,112
UMIN	University Hospital Medical Information Network (Japan)	5,179
ANZCTR	Australia/New Zealand Clinical Trials Registry	4,979
ChiCTR	Chinese Clinical Trials Registry	4,031
DRKS	German Clinical Trials Registry	3,165
IRCT	Iranian Registry of Clinical Trials	2,953
EUCTR	European Clinical Trials Registry	1,965
ISRCTN	International Standard Registry of Clinical Trials	1,855
CTRI	Indian Clinical Trials Registry	1,456
NTR	Netherlands Trial Registry	773
CRIS	Clinical Research Information Service (Korea)	476
TCTR	Thai Clinical Trials Registry	422
REBEC	Brazilian Clinical Trials Registry	374

PACTR	Pan African Clinical Trials Registry	174
JapicCTI	Japan Pharmaceutical Information Center - Clinical Trials Information	115
REPEC	Peruvian Clinical Trial Registry	70
JMACCT	Japan Medical Association - Center for Clinical Trials	49
SLCTR	Sri Lanka Clinical Trials Registry	31
RPCEC	Cuban Public Registry of Clinical Trials	8

Note that some are underutilized; as there are over 6,000 clinical trials with a site or contact in Brazil (mostly in ClinicalTrials.gov), but only 371 trials in Brazil's registry REBEC. Likewise, middle east countries may register on Iran's well supported registry IRCT.

Additional registries worth integrating are: Switzerland's **KOFAM**, the US's **NCI** registry, Spain's **REES** registry, and industry sponsored and local institutional databases.

Registry Merging

Many trials are listed on more than one registry, and we handle that by registry priority and secondary identification. For example, if a trial coming in from UMIN has a secondary identifier that is a NCT. No. from clinicaltrials.gov, this trial will not make into the final trial table. Instead, a link between the two are created and it is skipped.

Missing links are also found. If a trial comes from UMIN, but has a ANZCTR ID on it, it will get skipped in favor of the higher priority ANZCTR. But if that ANZCTR has a link to clinicaltrials.gov, both the UMIN and ANZCTR will be skipped. Missing links are recorded in a CTlinks table.

Trials added or updated in last 2 years pulled from native registries.

Registry	Native	After merge	Difference
EUCTR	8511	1871	6640
DRKS	6385	3042	3343
ANZCTR	11793	11648	145

ISRCTN	1877	1843	34
ChiCTR	3866	3863	3
UMIN	5221	5218	3
CRIS	466	464	2
PACTR	178	176	2

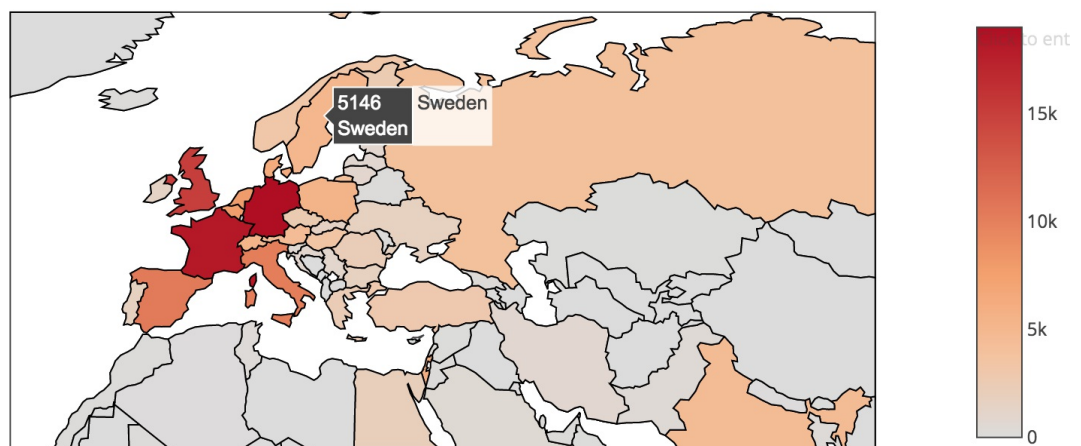
Registry priorities for merging

1) ClinicalTrials.Gov 2) DRKS 3) ANZCTR 4) EUCTR 5) All others

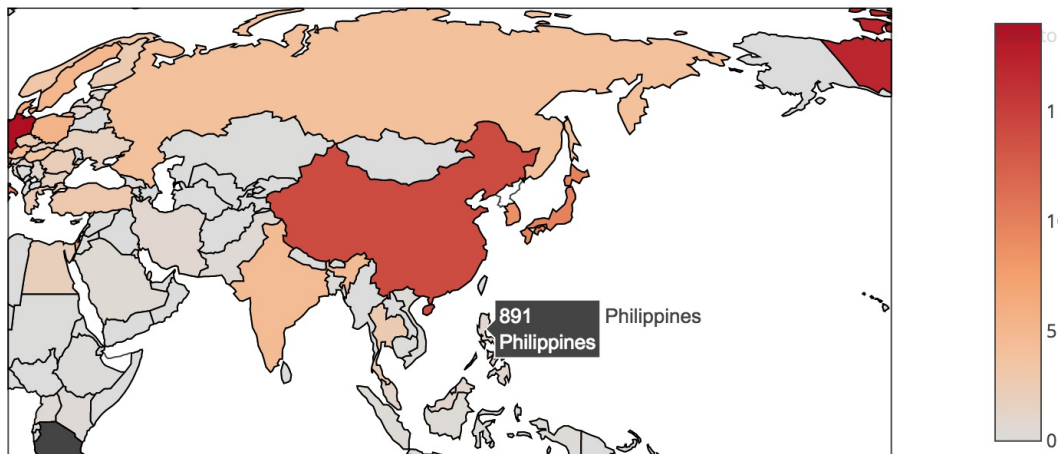
World Map of Trials

US data taken out for better viewing of non-US images.

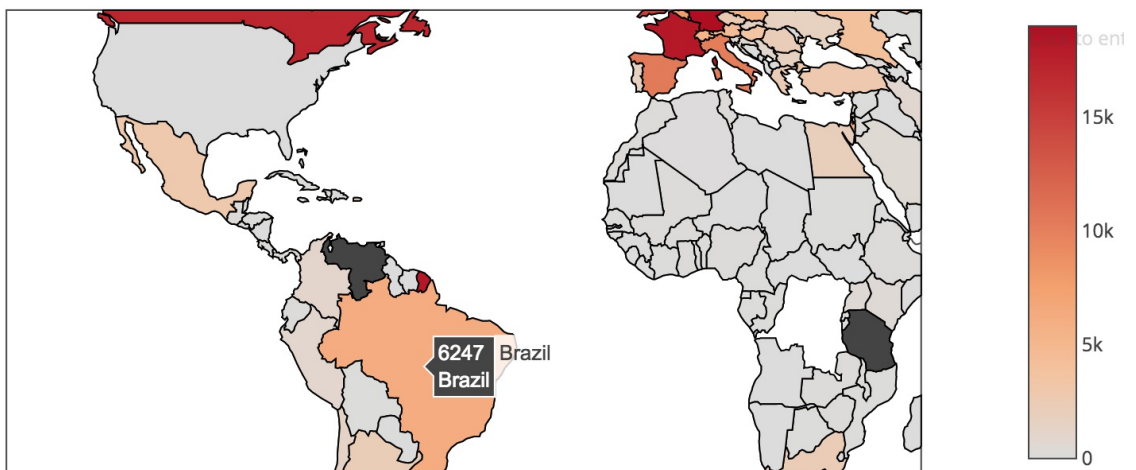
Germany, France lead Europe



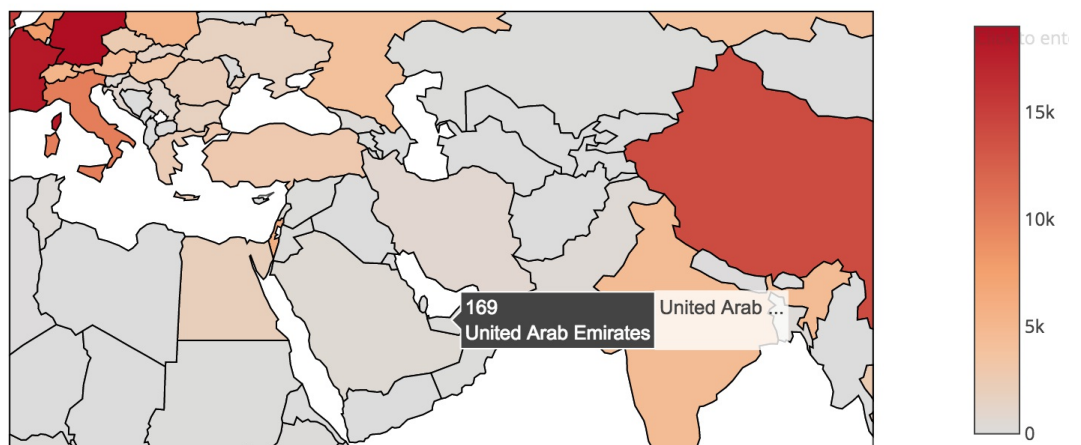
China, Japan, Korea lead Asia



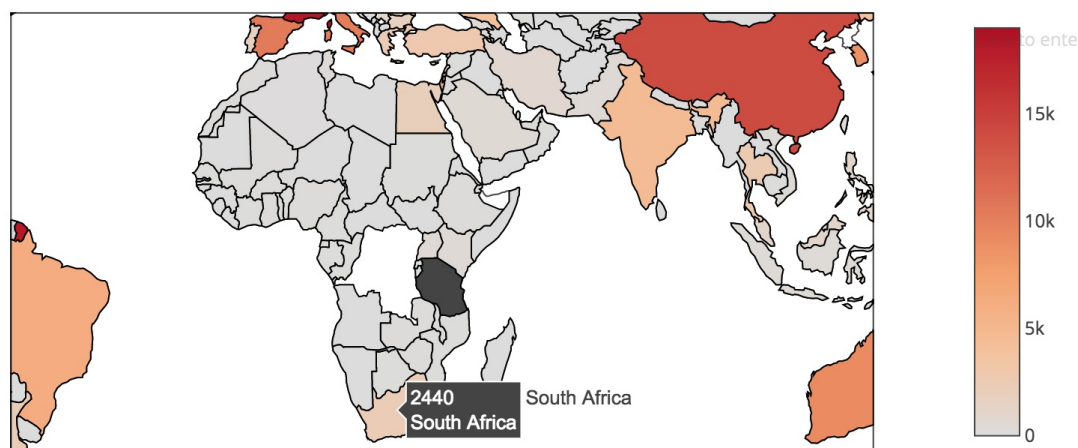
Brazil, Argentina lead South America



Turkey, Iran, Egypt lead the Middle East / North Africa region



South Africa, Uganda and Kenya lead



Total Counts - (for countries > 3 trials)

United States	100803	Thailand	2593	Pakistan	398	Zimbabwe	103	Congo	36	Madagascar	12
Germany	19008	Czech Republic	2593	Kenya	392	Morocco	98	Sudan	35	Azerbaijan	12
France	18209	South Africa	2440	Lebanon	365	Qatar	94	Benin	35	Lao People's Democratic	11
Canada	17047	Greece	2359	Indonesia	346	Nepal	87	Jamaica	35	Swaziland	11
United Kingdom	15018	Argentina	2353	Vietnam	345	Sri Lanka	84	Côte d'Ivoire	33	Libyan Arab Jamahiriya	9
China	14104	New Zealand	2290	Bangladesh	283	Algeria	84	Monaco	33	Somalia	8
Spain	10424	Romania	2239	Guatemala	280	Kuwait	80	Albania	31	Solomon Islands	8
Italy	10223	Egypt	1993	Georgia	279	Cambodia	75	Malta	30	Chad	8
Japan	9845	Singapore	1908	Tanzania	253	Kazakhstan	69	Iraq	28	Yemen	8
Australia	9220	Puerto Rico	1730	Panama	249	Syrian Arab Republic	65	Paraguay	28	Barbados	8
South Korea	8787	Bulgaria	1699	Tunisia	231	Cyprus	65	Papua New Guinea	26	Central African Republic	7
Netherlands	7879	Ukraine	1679	Belarus	209	Senegal	64	Kyrgyzstan	23	Andorra	7
Belgium	7730	Portugal	1674	Malawi	185	Rwanda	62	Niger	22	Togo	7
Denmark	6263	Hong Kong	1523	Bosnia and Herzegovina	179	Botswana	62	Myanmar	21	Angola	6
Brazil	6247	Slovakia	1506	United Arab Emirates	169	Honduras	61	Afghanistan	21	RA@union	6
Israel	5933	Ireland	1442	Zambia	163	Uruguay	60	Sierra Leone	21	Fiji	6
Poland	5482	Chile	1344	Jordan	162	Cameroon	59	Martinique	20	American Samoa	5
Switzerland	5377	Colombia	1114	Costa Rica	153	Mozambique	57	Montenegro	20	Grenada	5
Sweden	5146	Malaysia	1059	Dominican Republic	151	Gambia	57	Mongolia	19	Kosovo	5
Taiwan	4773	Serbia	970	Venezuela	151	Cuba	54	Mauritius	18	Brunei Darussalam	4
India	4579	Peru	936	Moldova	132	Haiti	47	Uzbekistan	17	Mauritania	4
Austria	4466	Croatia	894	Nigeria	131	Taiwan	45	Liberia	17	Namibia	4
Russian Federatio	3995	Philippines	891	Iceland	128	Armenia	43	Bahamas	17	Former Yugoslavia	4
Hungary	3470	Estonia	844	Ghana	118	Bolivia	41	Guinea	15	Suriname	4
Norway	3183	Lithuania	838	Macedonia	118	Guinea-Bissau	41	Belize	14	Equatorial Guinea	4
Iran	3756	Iran	798	Burkina Faso	116	Republic of the Congo	41	Lesotho	13	Bhutan	4
Mexico	2922	Latvia	781	Mali	115	El Salvador	41	Burundi	12	Guyana	3
Turkey	2824	Slovenia	564	Luxembourg	112	Bahrain	39	Trinidad and Tobago	12	Timor-Leste	3
Finland	2614	Saudi Arabia	525	Ecuador	112	Oman	39	Guadeloupe	12	Taiwan	3
		Uganda	403	Ethiopia	110	Gabon	37	Nicaragua	12	Western Sahara	3

Trial Contacts

Arguably the most important piece of a clinical trial dataset is the contact information. No online service can effectively enroll a patient into a trial because there is too much nuance in eligibility. Patients and their physicians must contact the trial to request enrollment. We're working to make sure all trials have a quality point of contact.

Email Address Domains

Its interesting to see who is registering trials. This is the number of unique emails per domain in our dataset.

gmail.com	8242	naver.com	284	uw.edu	197	lhsc.on.ca	157	med.uni-muenchen.de	133	uclouvain.be	114	chu-besancon.fr	101
163.com	2768	osumc.edu	283	chu-montpellier.fr	196	umich.edu	157	yahoo.es	133	hfh.org	114	nottingham.ac.uk	99
yahoo.com	2705	utsouthwestern.edu	277	cchmc.org	195	radboudumc.nl	156	yahoo.co.in	131	vgregion.se	113	medicine.bsd.uchicago.edu	99
hotmail.com	2539	mail.nih.gov	268	aol.com	194	rsyd.dk	156	monash.edu	129	coh.org	111	chuv.ch	99
drks.de	1526	ucsd.edu	264	chru-lille.fr	192	albertahealthservices.ca	154	me.com	129	med.usc.edu	110	uol.com.br	98
126.com	1326	uphs.upenn.edu	251	yahoo.com.cn	190	cshs.org	154	kumc.edu	128	chu-amiens.fr	110	providence.org	98
va.gov	986	hanmail.net	246	ki.se	189	mcmaster.ca	154	mountsinal.org	126	nationwidechildrens.org	110	usc.edu	98
qq.com	702	med.umich.edu	246	mdanderson.org	188	bcm.edu	153	sickkids.ca	126	chu-dijon.fr	110	maastrichtuniversity.nl	97
partners.org	616	ap-hm.fr	241	health.qld.gov.au	187	ugent.be	149	jefferson.edu	126	uams.edu	110	mcgill.ca	97
mayo.edu	585	uhn.ca	237	erasmusmc.nl	187	uab.edu	149	salud.madrid.org	126	health.wa.gov.au	109	santpau.cat	97
sina.com	547	chru-strasbourg.fr	228	med.uni-heidelberg.de	183	insel.ch	149	ualberta.ca	125	rambam.health.gov.il	109	clinic.ub.es	95
jhmi.edu	539	wustl.edu	225	chu-nantes.fr	183	wakehealth.edu	147	mail.ru	125	chu-brest.fr	109	carolinashealthcare.org	93
nhs.net	538	northwestern.edu	224	email.chop.edu	179	columbia.edu	147	chu-angers.fr	125	usoncology.com	109	wanadoo.fr	93
aphp.fr	456	cumc.columbia.edu	223	uzleuven.be	179	bidmc.harvard.edu	146	mumc.nl	124	hku.hk	106	med.lu.se	92
ucsf.edu	446	yuh.ac	222	sydney.edu.au	176	uniklinik-freiburg.de	146	yahoo.com.tw	124	health.nsw.gov.au	105	dadnet.dk	91
regionh.dk	429	nih.gov	222	mssm.edu	175	virginia.edu	144	iu.edu	123	ucalgary.ca	105	otago.ac.nz	90
stanford.edu	428	mgh.harvard.edu	221	ntu.edu.tw	175	mail.mil	144	chu-rouen.fr	123	uky.edu	105	uniklinikum-dresden.de	90
duke.edu	401	meduniwien.ac.at	221	usz.ch	174	sunnybrook.ca	143	kcl.ac.uk	122	amc.seoul.kr	105	smh.ca	90
clalit.org.il	365	med.unc.edu	220	childrens.harvard.edu	174	libero.it	143	lumc.nl	120	mh-hannover.de	105	chu-poitiers.fr	89
ucdenver.edu	356	ohsu.edu	220	uhhospitals.org	172	yahoo.fr	142	hcuge.ch	120	childrenscolorado.org	105	louisville.edu	89
emory.edu	351	chu-grenoble.fr	217	sheba.health.gov.il	169	chu-nice.fr	142	unmc.edu	119	moffitt.org	104	catholic.ac.kr	89
nyumc.org	345	ucl.ac.uk	214	umcg.nl	168	vumc.nl	139	samsung.com	118	ous-hf.no	104	uthscsa.edu	89
chu-lyon.fr	331	uth.tmc.edu	214	umcutrecht.nl	168	imperial.ac.uk	139	uke.de	118	hus.fi	104	uq.edu.au	88
ccf.org	328	musc.edu	212	urmc.rochester.edu	167	ucdavis.edu	138	rush.edu	118	usb.ch	103	sohu.com	88
vanderbilt.edu	326	med.miami.edu	211	mskcc.org	165	chu-rennes.fr	138	usp.br	117	ouhsc.edu	103	northwell.edu	88
yale.edu	324	aliyun.com	208	dfci.harvard.edu	162	snu.ac.kr	138	hadassah.org.il	117	ssss.gov.qc.ca	103	pitt.edu	88
charite.de	308	chu-toulouse.fr	208	montefiore.org	162	uabmc.edu	137	mcw.edu	116	chu-caen.fr	103	tlvmc.gov.il	88
upmc.edu	307	yahoo.com.br	203	amc.uva.nl	161	mums.ac.ir	135	ucl.edu	116	med.uni-tuebingen.de	102	uic.edu	87
mednet.ucla.edu	306	med.cornell.edu	200	uiowa.edu	160	medmail.com.cn	134	uk-koeln.de	115	sysucc.org.cn	101	terra.com.br	87
umn.edu	293	chu-bordeaux.fr	200	hsc.utah.edu	159	rm.dk	134	ufi.edu	115	iupui.edu	101	seattlechildrens.org	87

Notes

This is a global analysis of all clinical trials. Interesting results can come out of further analysis when you break down trials by disease specifics like cancer type, molecular / genomic factors, geo-location and drug treatments. MolecularMatch has the ability to do these unique analyses because of our strength biomedical NLP based trial characterization.

Registry specific trials can be viewed on our public app or API

(<http://api.molecularmatch.com>):

<http://app.molecularmatch.com/search/ANZCTR>

<http://app.molecularmatch.com/search/CTGOV>

<http://app.molecularmatch.com/search/DRKS>

<http://app.molecularmatch.com/search/EUCTR>

<http://app.molecularmatch.com/search/CTRI>

<http://app.molecularmatch.com/search/UMIN>

<http://app.molecularmatch.com/search/RPCEC>

<http://app.molecularmatch.com/search/SLCTR>

<http://app.molecularmatch.com/search/PACTR>

<http://app.molecularmatch.com/search/REPEC>

<http://app.molecularmatch.com/search/TCTR>

<http://app.molecularmatch.com/search/CRIS>

<http://app.molecularmatch.com/search/NTR>

<http://app.molecularmatch.com/search/REBEC>

<http://app.molecularmatch.com/search/ChiCTR>

<http://app.molecularmatch.com/search/IRCT>

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