**Supplementary Table 1.** List of kinase inhibitors used in this study

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|  | **DRUGS** | **TARGETS** | **Highest Clinical Trial Phase** |
| 1 | Nilotinib | Bcr-Abl | FDA-approved |
| 2 | Regorafenib | c-Kit | B-Raf | VEGFR | FDA-approved |
| 3 | Imatinib Mesylate | c-Kit | PDGFR | FDA-approved |
| 4 | PF-2341066(Crizotinib) | c-Met | ALK | FDA-approved |
| 5 | Erlotinib Hydrochloride | EGFR | FDA-approved |
| 6 | Gefitinib(Iressa) | EGFR | FDA-approved |
| 7 | Lapatinib Ditosylate | EGFR | HER2 | FDA-approved |
| 8 | Neratinib | EGFR | HER2 | FDA-approved |
| 9 | Sunitinib Malate | FLT3 | PDGFR | VEGFR | Kit | FDA-approved |
| 10 | Tofacitinib | JAK | FDA-approved |
| 11 | Trametinib | MEK | FDA-approved |
| 12 | Everolimus | mTOR | FDA-approved |
| 13 | Rapamycin | mTOR | FDA-approved |
| 14 | Temsirolimus | mTOR | FDA-approved |
| 15 | Bosutinib | SRC | Abl | FDA-approved |
| 16 | Dasatinib | SRC | Abl | FDA-approved |
| 17 | PCI-32765(Ibrutinib) | BTK | FDA-approved |
| 18 | Fostamatinib | Syk | FDA-approved |
| 19 | Axitinib | VEGFR | FDA-approved |
| 20 | Pazopanib Hydrochloride | VEGFR | FDA-approved |
| 21 | XL184(Cabozantinib) | VEGFR | c-Met | Flt | Tie-2 | c-Kit | FDA-approved |
| 22 | Vandetanib | VEGFR | EGFR | FDA-approved |
| 23 | BIBF1120(Nintedanib) | VEGFR | PDGFR | FGFR | FDA-approved |
| 24 | Sorafenib Tosylate | VEGFR | PDGFR | RAF | FDA-approved |
| 25 | Phenformin hydrochloride | AMPK | Phase 1 |
| 26 | Mubritinib | HER2 | Phase 1 |
| 27 | XL765(Voxtalisib) | PI3K | mTOR | Phase 1 |
| 28 | SGI-1776 | Pim | Phase 1 |
| 29 | CX-4945(Silmitasertib) | PKC / CK2 | Phase 1 |
| 30 | MK-2206 2HCl | Akt | Phase 2 |
| 31 | Roscovitine | CDK | Phase 2 |
| 32 | MP-470(Amuvatinib) | c-Met | c-Kit | PDGFR | Flt3 | Src | Phase 2 |
| 33 | Pelitinib | EGFR | Phase 2 |
| 34 | LY2784544(Gandotinib) | JAK | Phase 2 |
| 35 | AS703026(Pimasertib) | MEK | Phase 2 |
| 36 | LY2228820(Ralimetinib) | p38 MAPK | Phase 2 |
| 37 | GDC-0941(Pictilisib) | PI3K | Phase 2 |
| 38 | XL147(Pilaralisib) | PI3K | Phase 2 |
| 39 | Saracatinib | SRC | Abl | Phase 2 |
| 40 | Masitinib | c-Kit | PDGFR | FGFR | VEGFR | Phase 3 |
| 41 | Selumetinib | MEK | Phase 3 |
| 42 | Crenolanib | PDGFR | Phase 3 |
| 43 | CAL-101(Idelalisib) | PI3K | Phase 3 |
| 44 | Enzastaurin | PKC | Phase 3 |
| 45 | ON-01910(Rigosertib) | PLK | Phase 3 |
| 46 | Volasertib | PLK | Phase 3 |
| 47 | Fasudil HCl | ROCK | Phase 3 |
| 48 | Vatalanib | VEGFR | c-Kit | Flk | Flt | FGFR | Phase 3 |
| 49 | Tivozanib | VEGFR | c-Kit | PDGFR | Phase 3 |
| 50 | Cediranib | VEGFR | FGFR | Phase 3 |
| 51 | TSU-68(Orantinib) | VEGFR | PDGFR | FGFR | Phase 3 |
| 52 | PD0332991(Palbociclib) | CDK | Phase 4 |
| 53 | Apatinib | VEGFR | Phase 4 |
| 54 | NU7441 | DNA-PK/PI3K | Pre-clinical |
| 55 | PP-121 | DNA-PK /mTOR / PDGFR | Pre-clinical |
| 56 | NVP-TAE684 | ALK | Pre-clinical |
| 57 | KU-60019 | ATM | Pre-clinical |
| 58 | CP-466722 | ATM | Pre-clinical |
| 59 | GDC-0879 | B-Raf | Pre-clinical |
| 60 | ZM336372 | c-Raf | Pre-clinical |