

Substandard and falsified antibiotics: neglected drivers of antimicrobial resistance?

Supplementary file 1. Search terms.

PUBMED

(substandard OR falsified OR counterfeit OR fake OR spurious OR degraded OR “falsely labelled” OR “drug* qualit*” OR “medicine* qualit*” OR “pharmaceutical* qualit*” OR “poor qualit*”) AND (antibacterial* OR antibiotic* OR antimicrobial* OR anti-infective* OR demeclocycline OR doxycycline OR chlortetracycline OR lymecycline OR metacycline OR oxytetracycline OR tetracycline* OR minocycline OR rolitetraacycline OR penimepencycline OR clomocycline OR omadacycline OR tigecycline OR eravacycline OR sarecycline OR chloramphenicol OR thiamphenicol OR ampicillin OR pivampicillin OR carbenicillin OR amoxicillin OR carindacillin OR bacampicillin OR epicillin OR pivmecillinam OR azlocillin OR mezlocillin OR mecillinam OR piperacillin OR ticarcillin OR metampicillin OR talampicillin OR sulbenicillin OR temocillin OR hetacillin OR aspoxicillin OR benzylpenicillin OR phenoxyethylpenicillin OR propicillin OR azidocillin OR pheneticillin OR penamecillin OR clometocillin OR “benzathine benzylpenicillin” OR “procain* benzylpenicillin” OR “benzathine phenoxyethylpenicillin” OR dicloxacillin OR cloxacillin OR methicillin OR oxacillin OR flucloxacillin OR nafcillin OR sulfactam OR tazobactam OR avibactam OR sultamicillin OR cefalexin OR cefaloridine OR cefalotin OR cefazolin OR cefadroxil OR cefazidone OR cefatrizine OR cefapirin OR cefradine OR cefacetile OR cefroxadine OR ceftezole OR cefoxitin OR cefuroxime OR cefamandole OR cefaclor OR cefotetan OR cefonicid OR cefotiam OR loracarbef OR cefmetazole OR cefprozil OR ceforanide OR cefminox OR cefbuperazone OR flomoxef OR cefotaxime OR ceftazidime OR cefsulodin OR ceftriaxone OR cefmenoxime OR latamoxef OR ceftizoxime OR cefixime OR cefodizime OR cefetamet OR cefpiramide OR cefoperazone OR cefpodoxime OR ceftibuten OR cefdinir OR cefditoren OR cefcapene OR cefteram OR cefepime OR cefpirome OR cefozopran OR ceftolozane OR aztreonam OR carumonam OR meropenem OR ertapenem OR doripenem OR biapenem OR tebipenem OR imipenem OR panipenem OR “ceftobiprole medocaril” OR “ceftaroline fosamil” OR “faropenem” OR trimethoprim OR brodimoprim OR iclaprim OR sulfaisodimidine OR sulfamethizole OR sulfadimidine OR sulfapyridine OR sulfafurazole OR sulfanilamide OR sulfathiazole OR sulfathiourea OR sulfamethoxazole OR sulfamoxole OR sulfadiazine OR sulfadimethoxine OR sulfalene OR sulfametomidine OR sulfametoxydiazine OR sulfamethoxypyridazine OR sulfaperin OR sulfamerazine OR sulfaphenazole OR

sulfamazone OR erythromycin OR spiramycin OR midecamycin OR oleandomycin OR roxithromycin
OR josamycin OR troleandomycin OR clarithromycin OR azithromycin OR miocamycin OR rokitamycin
OR dirithromycin OR flurithromycin OR telithromycin OR solithromycin OR clindamycin OR
lincomycin OR pristinamycin OR quinupristin OR dalfopristin OR streptomycin OR streptoduocin OR
tobramycin OR gentamicin OR kanamycin OR neomycin OR amikacin OR netilmicin OR sisomicin OR
dibekacin OR ribostamycin OR isepamicin OR arbekacin OR bekanamycin OR plazomicin OR ofloxacin
OR ciprofloxacin OR pefloxacin OR enoxacin OR temafloxacin OR norfloxacin OR lomefloxacin OR
fleroxacin OR sparfloxacin OR rufloxacin OR grepafloxacin OR levofloxacin OR trovafloxacin OR
moxifloxacin OR gemifloxacin OR gatifloxacin OR prulifloxacin OR pazufloxacin OR garenoxacin OR
sitaflloxacin OR tosusflloxacin OR delafloxacin OR rosloxacin OR nalidixic acid OR piromidic acid OR
pipemidic acid OR oxolinic acid OR cinoxacin OR flumequine OR nemonoxacin OR vancomycin OR
teicoplanin OR telavancin OR dalbavancin OR oritavancin OR colistin OR “polymyxin B” OR “fusidic
acid” OR metronidazole OR tinidazole OR ornidazole OR azanidazole OR propenidazole OR nimorazole
OR secnidazole OR nitrofurantoin OR nifurtoinol OR furazidin OR fosfomycin OR xibornol OR
clofotol OR spectinomycin OR methenamine OR “mandelic acid” OR nitroxoline OR linezolid OR
daptomycin OR bacitracin OR tedizolid OR lefamulin OR macrolide* OR tetracycline* OR Beta-
Lactam* OR Sulfonamide* OR lincosamide* OR aminoglycoside* OR *quinolone* OR glucopeptide*
OR lipopeptide OR cephalosporin* OR “penicillin V” OR penicillin OR “penicillin G” OR co-amoxiclav
OR Co-fluampicil OR Co-trimoxazole OR cephalexin OR cephaloridine OR cephalothin OR cephazolin
OR cephapirin OR cephadrine OR cephacetrile)

EMBASE

(substandard OR falsified OR counterfeit OR fake OR spurious OR degraded OR “falsely labelled” OR
“drug quality” OR “medicine quality” OR “pharmaceutical quality” OR “poor quality”) AND
(antibacterial OR antibiotic OR antimicrobial OR anti-infective OR demeclocycline OR doxycycline OR
chlortetracycline OR lymecycline OR metacycline OR oxytetracycline OR tetracycline OR minocycline
OR rolitetracycline OR penimepicycline OR clomocycline OR omadacycline OR tigecycline OR
eravacycline OR sarecycline OR chloramphenicol OR thiامphenicol OR ampicillin OR pivampicillin OR
carbenicillin OR amoxicillin OR carindacillin OR bacampicillin OR epicillin OR pivmeccillinam OR
azlocillin OR mezlocillin OR mecillinam OR piperacillin OR ticarcillin OR metampicillin OR
talampicillin OR sulbenicillin OR temocillin OR hetacillin OR aspoxicillin OR benzylpenicillin OR
phenoxytmethylpenicillin OR propicillin OR azidocillin OR pheneticillin OR penamecillin OR

clometocillin OR “benzathine benzylpenicillin” OR “procain benzylpenicillin” OR benzathine phenoxyxymethylpenicillin OR dicloxacillin OR cloxacillin OR methicillin OR oxacillin OR flucloxacillin OR nafcillin OR sulbactam OR tazobactam OR avibactam OR sultamicillin OR cefalexin OR cefaloridine OR cefalotin OR cefazolin OR cefadroxil OR cefazidone OR cefatrizine OR cefapirin OR cefradine OR cefacetile OR cefroxadine OR ceftezole OR cefoxitin OR cefuroxime OR cefamandole OR cefaclor OR cefotetan OR cefonicid OR cefotiam OR loracarbef OR cefmetazole OR cefprozil OR ceforanide OR cefminox OR cefbuperazone OR flomoxef OR cefotaxime OR ceftazidime OR cefsulodin OR ceftriaxone OR cefmenoxime OR latamoxef OR ceftizoxime OR cefixime OR cefodizime OR cefetamet OR cefpiramide OR cefoperazone OR cefpodoxime OR cefributen OR cefdinir OR cefditoren OR cefcapene OR ceferam OR cefepime OR cefpirome OR cefozopran OR ceftolozane OR aztreonam OR carumonam OR meropenem OR ertapenem OR doripenem OR biapenem OR tebipenem OR imipenem OR panipenem OR “ceftobiprole medocaril” OR “ceftaroline fosamil” OR faropenem OR trimethoprim OR brodimoprim OR iclaprim OR sulfaisodimidine OR sulfamethizole OR sulfadimidine OR sulfapyridine OR sulfafurazole OR sulfanilamide OR sulfathiazole OR sulfathiourea OR sulfamethoxazole OR sulfamoxole OR sulfadiazine OR sulfametrole OR sulfadimethoxine OR sulfalene OR sulfametomidine OR sulfametoxydiazine OR sulfamethoxypyridazine OR sulfaperin OR sulfamerazine OR sulfaphenazole OR sulfamazone OR erythromycin OR spiramycin OR midecamycin OR oleandomycin OR roxithromycin OR josamycin OR troleandomycin OR clarithromycin OR azithromycin OR miocamycin OR rokitamycin OR dirithromycin OR flurithromycin OR telithromycin OR solithromycin OR clindamycin OR lincomycin OR pristinamycin OR quinupristin OR dalfopristin OR streptomyces OR streptoduocin OR tobramycin OR gentamicin OR kanamycin OR neomycin OR amikacin OR netilmicin OR sisomicin OR dibekacin OR ribostamycin OR isepamicin OR arbekacin OR bekanamycin OR plazomicin OR ofloxacin OR ciprofloxacin OR pefloxacin OR enoxacin OR temafloxacin OR norfloxacin OR lomefloxacin OR fleroxacin OR sparfloxacin OR rufloxacin OR grepafloxacin OR levofloxacin OR trovafloxacin OR moxifloxacin OR gemifloxacin OR gatifloxacin OR prulifloxacin OR pazufloxacin OR garenoxacin OR sitafloxacin OR tosusloxacin OR delafloxacin OR rosloxacin OR nalidixic acid OR piromidic acid OR pipemidic acid OR oxolinic acid OR cinoxacin OR flumequine OR nemonoxacin OR vancomycin OR teicoplanin OR telavancin OR dalbavancin OR oritavancin OR colistin OR polymyxin B OR fusidic acid OR metronidazole OR tinidazole OR ornidazole OR azanidazole OR propenidazole OR nimorazole OR secnidazole OR nitrofurantoin OR nifurtinol OR furazidin OR fosfomycin OR xibornol OR clofoctol OR spectinomycin OR methenamine OR “mandelic acid” OR nitroxoline OR linezolid OR daptomycin OR bacitracin OR tedizolid OR lefamulin OR macrolide OR tetracycline OR Beta-Lactam OR Sulfonamide OR lincosamide OR aminoglycoside OR fluorquinolone OR quinolone OR glucopeptide OR lipopeptide OR cephalosporin OR penicillin V OR penicillin OR

penicillin G OR co-amoxiclav OR Co-fluampicil OR Co-trimoxazole OR cephalexin OR cephaloridine
OR cephalothin OR cephazolin OR cephapirin OR cephadrine OR cephacetrile)

Google and Google Scholar (sorted by relevance, selected first 200 for each search)

English language searches

1. (substandard OR falsified OR counterfeit OR fake OR spurious OR "drug quality" OR "medicine quality" OR "pharmaceutical quality") AND (antibacterial OR antibiotic OR antimicrobial OR aminoglycoside OR Quinolone OR macrolide OR Beta-Lactam)
2. (substandard OR falsified OR counterfeit OR fake OR spurious OR "drug quality" OR "medicine quality" OR "pharmaceutical quality") AND (Tetracyclines OR penicillin OR Cephalosporin)

French language searches

3. (sous-standard OR falsifié OR contrefaçon OR faux OR "médicament fallacieux" OR "qualité des médicaments" OR "qualité pharmaceutique") AND (antibactérien OR antibiotique OR antimicrobien OR aminoside OR quinolone OR macrolide OR béta-lactamine)
4. (sous-standard OR falsifié OR contrefaçon OR faux OR "médicament fallacieux" OR "qualité des médicaments" OR "qualité pharmaceutique") AND (tétracycline OR pénicilline OR céphalosporine)