METHODOLOGY

Table of Contents 1.1 Approved product definition2 1.2 Inclusion/exclusion criteria for approved products......2 Methodology and data sources for identification2 1.3 1.3.1 1.3.2 1.4 1.5 1.6 2 Pipeline4 2.1 2.2 Inclusion/exclusion criteria for ND and EID R&D pipeline candidates......4 2.3 Methodology and data sources for identification5 2.4 Data validation6 2.5 3.1 R&D priority definition7 3.2 3.3 Methodology and data sources for identification7 3.4 Mapping candidates to R&D priorities8 4 Annex 1: Resources used......9 5 6

1 Approved products

1.1 Approved product definition

We have defined an approved product as:

a finished pharmaceutical product (FPP), drug, vaccine, biologic, vector control product or diagnostic that has been granted a marketing authorisation (product licence or registration certificate) by a designated medicines regulatory authority, defined as Stringent Regulatory Authorities (SRAs), National Regulatory Authorities (NRAs) of vaccine producing countries of maturity level 3 or above (as define by WHO Listed Authorities framework), or WHO prequalification. The marketing authorisation could be full market authorisation or conditional, such as an emergency use authorisation or approval under the European Medicines Agency's EUM4AII procedure (previously Article 58).

1.2 Inclusion/exclusion criteria for approved products

All approved products included in the database:

- met the approved product definition, with first approval on or after 1 January 1999;
 and
- have been approved for a disease or indication in the <u>G-FINDER scope</u> for neglected or emerging infectious diseases, as defined in the Infectious Disease Tracker Scope document.

Product inclusion is based on the molecular entity, using the international non-proprietary name (INN). Except in the case of distinct formulations or routes of administration, we included only one unique INN per indication.

Off-label use of marketed products for in-scope indication were not included.

1.3 Methodology and data sources for identification

Data was gathered using a two-step process: normative literature review, and review of publicly available regulatory databases. Context determined the sequence of these two steps. For example, the WHO typhoid vaccine-position-paper was reviewed before the SRA-approved vaccine database, as no SRAs have approved the only typhoid conjugate vaccine recommended/supported by WHO and Gavi. In other instances, such as hepatitis C direct-acting antivirals which are SRA approved, the review order was reversed.

1.3.1 Normative literature review

In conjunction with the <u>G-FINDER scope</u>, a preliminary list of approved products was compiled by reviewing the disease or pathogen-specific treatment guidelines, WHO <u>vaccine position papers</u>, and <u>essential medicines</u> and <u>diagnostic list</u> databases. For most areas, WHO treatment guidelines, including regional offices (such as Pan American Health Organization's <u>Chagas' disease diagnosis and treatment guidelines</u>), were used as the gold standard. Other guidelines, such as the <u>American Association for the Study of Liver Diseases' hepatitis C guidance</u>, were consulted if additional products were identified through regulatory review. A list of all literature used is listed <u>here</u>.

1.3.2 Regulatory review

The preliminary list of approved products compiled through the method outlined above was further cross-referenced against decisions provided by national or multilateral regulatory bodies. This step of the review process served three purposes:

- confirmation of the regulatory status, including the indication,
- identification of additional products not identified in the normative literature review,
- collation of product-specific technical information from documents published by regulatory agencies, such as the package insert.

The regulatory review was carried out by searching publicly available databases of both:

- SRAs (such as FDA's <u>Vaccines Licensed for Use in the United States</u>); and
- vaccine-producing NRAs operating at maturity level 3 and 4 (<u>Egyptian EDA</u>, <u>Indian CDSCO</u>, <u>Indonesian Badan POM</u>, <u>Serbian ALIMS</u>, <u>Thai FDA</u>, <u>Vietnamese DAV</u> and <u>Chinese NMPA</u>)

When products had been identified, databases maintained by multilateral organisations were further consulted to fill information gaps in their profile. These included:

- WHO prequalification and emergency use databases
- Gavi detailed product profiles
- Medicines Patent Pool
- UNICEF pricing data
- STOP TB Partnership's Global Drug Facility
- Global Fund PQR database (password required for access)

1.4 Data validation

Approved products were validated by cross-referencing against WHO's therapeutic guidelines and <u>essential medicines list</u>, followed by WHO <u>prequalified lists</u>. Product details including registration dates and indication were also cross-referenced against materials published by SRAs.

1.5 Classification and characterisation of approved products

The final, verified list of approved products was further reviewed to curate product-specific information such as:

- use-case: indication, product type, healthcare facility level
- technical characteristics: target, technology type, route of administration, mechanism of action, and for diagnostics, biomarkers, specimen type, technology principle and test format
- development lifecycle: developer and funder information, and pre-clinical/clinical results
- registration details: approval status and dates for NRAs, SRA and WHO prequalification, and FDA pregnancy labelling/pregnancy risk summary

Product-specific information was sourced from academic publications, grey literature, and paid and free pharmaceutical products databases, including:

- peer-reviewed journal articles;
- WHO <u>Product Development for Vaccines Advisory Committee</u> (PDVAC) and <u>Vector Control Advisory Group</u> (VCAG) meeting reports, <u>Unitaid</u> technology landscape reports;
- DrugBank and NIH's NCAT Inxight Drugs; and
- AdisInsight

A list of all resources used can be found here.

1.6 Data limitations

The data represents a snapshot of approved products. Products approved prior to 1999 and since August 2023 are not captured. Where the registration data wasn't precisely available, we used the first of the month or January of the year. Due to the lack of access to identifiable details for diagnostics, we relied on developer publication of CE IVD marking dates as the registration date.

Every effort was made to review all NRAs of maturity level 3 and above but not all NRA-registered products are included due to the lack of publicly available and searchable databases for some NRAs (Egyptian EDA, Indian CDSCO, Indonesian Badan POM, Serbian ALIMS, Thai FDA, Vietnamese DAV and Chinese NMPA). We have not reviewed each endemic country's therapeutic guidelines to identify which products are registered in each country.

2 Pipeline

2.1 Candidate definition

We have defined a pipeline candidate as:

a potential drug (including both repurposed and new molecules), biologic, vaccine, vector control product, diagnostic, or platform technology, currently under investigation for an in-scope disease, that is yet to be approved by a designated medicines regulatory authority (see Section 1.1 above).

2.2 Inclusion/exclusion criteria for ND and EID R&D pipeline candidates

For a pipeline candidate to be included, it must:

- be currently under investigation for a disease or indication in the G-FINDER scope for neglected or emerging infectious diseases, as defined in the Infectious Disease Tracker Scope document;
- have a development status that can be independently verified; and
- be unique (one count per indication) or innovative (new chemical class, new target, new mode of action). Repurposed drugs are included only if research involves a new indication.

The pipeline includes candidates at all stages of development, from discovery through to registration.

- For drugs and vaccines, development stage is broken down into discovery; pre-clinical studies, including investigational new drug application (IND)/clinical trial authorisation (CTA) enabling studies; clinical trials (further divided into Phase I, Phase II and Phase III trials); and submitted for regulatory review.
- Diagnostics and vector control products have different regulatory pathways, and the development stages for these products are broken down into concept and research; feasibility and planning; design and development; and clinical validation and launch readiness.
- Drug candidates are included from lead optimisation onwards. Drug screening-related activity, including lead identification, and identification and optimisation of druggable targets, is excluded.

- Candidates are no longer considered to be part of the R&D pipeline and therefore excluded from this analysis – once granted regulatory approval by a designated medicines regulatory authority. These are instead captured as approved products (defined in section 1). Treatment optimisation trials involving already marketed products are therefore excluded.
- Candidates are excluded if their development has been actively terminated, or if their development had been placed on hold indefinitely.

Other inclusion/exclusion decisions are not binary, with decisions based on multiple data points. Relevant decision points include:

- Clinical trial sponsor profile and source of funding: an investigational candidate
 undergoing development by industry, a product development partnership, or
 public/philanthropic funding with a clear objective of ultimately delivering a marketed
 product makes a strong case for including the pipeline candidate in the database.
- Product development plan: an investigational candidate with a clear product development plan, in the form of Securities and Exchange Commission (SEC) filing, annual or shareholder report, or compliance with Current Good Manufacturing Practice (CGMP) regulations, which provides enough evidence for further development and eventual commercialisation of the product, is included in the database.
- <u>Clinical trial registration status</u>: a clinical investigational candidate whose clinical trial(s) is not registered in a clinical trial registry will be excluded, unless other evidence strongly supports inclusion.
- Type of IND application: an investigational candidate with a non-commercial (research) IND application is not included in the database unless other forms of evidence indicates that the ultimate goal of the research is to develop and market the investigational candidate.
- <u>Clinical trial study protocols</u>: clinical trials are only considered relevant to support candidate inclusion if the study protocols are in line with the <u>G-FINDER scope</u>; for example, in the case of pneumococcal vaccines, the trial must include infants less than two years of age.
- Clinical trial registry updates and publication status of completed studies: pipeline candidates with unverified clinical trials where none of the clinical trial data elements (including but not limited to the recruitment status, last update posted, and results posted) have been updated for over three years are considered inactive unless there is strong evidence otherwise. Similarly, a clinical candidate whose trial status is listed as completed but where linked results have not been published for over three years is considered inactive unless there is evidence to the contrary, such as sharing interim results through a press release or in a conference proceeding.

2.3 Methodology and data sources for identification

Data on the candidates in the global R&D pipeline for neglected diseases and emerging infectious diseases was collected and cross-referenced by Policy Cures Research, building on our previous pipeline analyses including:

- two comprehensive pipeline reviews conducted by Policy Cures Research in 2017 and 2019, which were commissioned and funded by WHO-TDR and Duke University.
- a 2015 neglected diseases product pipeline review,
- and pipeline data collected for the 2012 Policy Cures/Global Health Technologies
 (GHTC) report 'Saving lives and creating impact: Why investing in global health R&D

works', which in turn was based on BIO Ventures for Global Health (BVGH) Global Health Primer, with additional research and analysis by Policy Cures Research.

Historical data and analysis are publicly available on Policy Cures Research's R&D pipeline tracker website: https://www.pipeline.policycuresresearch.org/

To bring the R&D pipeline candidate data up to date as of August 2023, and to expand on the scope of previous efforts, Policy Cures Research reviewed and cross-referenced all major sources of available data including:

- academic literature (both original research and review articles);
- Unitaid landscape and technical reports;
- conference abstracts and presentation (e.g. The <u>Vaccines Against Shigella and ETEC (VASE) Conference</u>, <u>International Conference on Typhoid & Other Invasive Salmonellosis</u>);
- WHO advisory committee (e.g. <u>PDVAC</u>, <u>VCAG</u>, <u>Strategic Advisory Group of Experts on Immunization</u>) reports;
- background documents prepared for the WHO <u>Product Development for Vaccines</u> Advisory Committee
- Treatment Action Group pipeline reports
- relevant publicly available product databases (e.g. <u>NCATS Inxight: Drugs</u>, AVAC HIV Prevention Research & Development Database, WHO products in preclinical and clinical development for priority pathogens, WHO rainbow table, Working Group on New TB Drugs pipeline);
- information from international clinical trials registries, including <u>ClinicalTrials.gov</u> and the WHO International Clinical Trials Registry Platform;
- websites of PDPs (e.g. DNDi, MMV, TB Alliance, FIND, PATH, IAVI, EVI) and developers
- patent databases (e.g. Google Patents and World Intellectual Property Organization)
- G-FINDER R&D funding database;
- disease-specific pipeline updates prepared by <u>BIO Ventures for Global Health</u> and the <u>Treatment Action Group</u>;
- publicly available company and product development partnership R&D portfolios;
- Paid subscription service AdisInsight
- university, government, and non-profit organization websites.

2.4 Data validation

Clinical trial registries (ClinicalTrials.gov and ICTRP) were used to verify active clinical candidates. Those with ongoing trials, or trials completed within the last five years at the time of review were considered active. Candidates with trials completed in the preceding 3-5 years were also reviewed using information from the clinical trial sponsor and developers, cross-referencing their websites, pipelines, and grey literature to determine future plans for the candidate.

Grey literature, namely WHO working groups (including <u>PDVAC</u> and <u>VCAG</u>) and their associated documents and published pathogen-specific pipelines (like that for <u>Rheumatic fever</u>), websites of PDPs and AdisInsight were used to cross-reference clinical candidates from clinical trial registries and confirm candidate characteristics.

Validation of preclinical candidates heavily relied on conference abstracts and presentations (such as <u>Vaccines Against Shigella and ETEC (VASE) Conference</u>, <u>International Conference</u> <u>on Typhoid & Other Invasive Salmonellosis</u>). A list of all resources used can be found <u>here</u>.

2.5 Data limitations

The data represents a snapshot of the R&D pipeline at a point in time. Since the pipeline is constantly changing with candidates entering, leaving and progressing through the pipeline, any changes that became publicly known after we conducted our review (in 2022), and validation (in 2023) may not be captured. A targeted refresh of the pipeline was conducted in August 2023 to capture key changes.

Our research was limited to publicly available sources and relied on confirmation from the authoritative sources outlined in the methodology and validation procedures. Where the status of a candidate could not be confirmed, it was excluded from the active candidate list.

The lack of publicly available information on some products under development means that the count and development phase of active candidates may not be fully accurate. There is little information available on discovery and pre-clinical candidates due to the lack of dedicated public registries mirroring those available for clinical trial candidates, limited sharing of proprietary data by companies, and the potential for termination of discovery efforts prior to publication. Therefore, the list of these early-stage candidates may not be exhaustive.

3 R&D priorities and mapping candidates to R&D priorities

3.1 R&D priority definition

We have defined an R&D priority as:

A widely accepted set of specified characteristics (including the intended use, target populations, desired safety and efficacy profiles, access considerations) designed to guide product development for a specific disease or indication.

3.2 Inclusion/exclusion criteria for R&D priorities

To qualify as 'widely accepted', an R&D priority needed to undergo extensive public consultation with diverse relevant stakeholders before publication. Our aim was to include those R&D priorities which had global consensus. R&D priorities that were undergoing public consultation or archived at the time of the review were not included. To this end most R&D priorities included were from WHO with the exception of those for malaria drugs which were produced by Medicines for Malaria Venture (MMV). Regional R&D priorities and those that have not been through a consensus consultative process were excluded.

3.3 Methodology and data sources for identification

R&D priorities were identified from WHO's database of <u>target product profiles (TPPs)</u> and <u>product profile characteristics (PPCs)</u> and from <u>Medicines for Malaria Venture's pipeline</u>.

WHO's target product profiles (TPPs) aim to inform product developers, regulatory agencies, procurement agencies and funders on R&D and public health priorities. They describe the preferred and the minimally acceptable profiles for vaccines, therapeutics, diagnostics or medical devices. They also provide information for funders and developers on the performance and operational characteristics expected of products if they are to meet WHO's needs. These TPPs also recognise that access, equity and affordability are integral parts of

the innovation process and need to be considered at all stages, not just after a product is developed. Where WHO has identified a priority need for a product class, but the stage of development is early, preferred product characteristics (PPCs) might be provided. While generally specifying WHO's preferences, these do not specify minimally acceptable criteria.

MMV's target candidate profiles (TCPs) and target product profiles (TPPs) are widely accepted in the malaria R&D community. They are the result of extensive consultation through their External Scientific Advisory Committee (with the <u>latest review in 2017</u>) – considering the <u>research agenda</u> presented by the malERA Consultative Group on Drugs – to reflect the continual maturation of understanding of key challenges in producing the next generation of medicines to control, eliminate and eradicate malaria.

The methodology and sources for the R&D priorities was supported by our consultative process with external experts, see Section 4 for details.

3.4 Mapping candidates to R&D priorities

Active pipeline candidates in clinical development for every disease and product area that had defined R&D priorities were evaluated on whether they met the defined indication. Those that met the defined indication were reviewed for their potential to meet the other characteristics such as intended use, efficacy, safety, and target population.

Only clinical stage candidates were evaluated because early-stage candidates (from discovery through to completed IND enabling studies) do not have well-defined characteristics for intended use, target population, safety and/or efficacy. Clinical stage pipeline candidate characteristics were cross-referenced from sources used in identification of pipeline candidates (see Section 2.3).

As multiple R&D priorities exist for specific disease and product areas, a candidate may be mapped to more than one R&D priority.

4 External consultation

We conducted an external consultation to assess the methodology and key elements being used for the review of approved products and the pipeline of R&D candidates.

This consultative process brought together specialists across geographies, with a range of expertise on product development, product approval, biomedical R&D, and innovation.

In advance of the online consultation, a survey was circulated to all experts to collect their feedback on the proposed approach for these reviews. We received feedback from 11 experts prior to the online consultation and these contributed to shaping the agenda and the discussions during the online consultation. The methodology presented in this document was developed after this survey and consultation incorporating feedback received from this expert group.

A list of the consulted experts can be found here.

5 Annex 1: Resources used

Disease	Product	Resource name	Year	Resource type	Review focus
Buruli ulcer	Diagnostics	WHO Target product profile for a rapid test for diagnosis of Buruli ulcer at the primary health-care level	2022	Normative literature	Normative literature review
Buruli ulcer	Diagnostics	Laboratory diagnosis of Buruli Ulcer: Challenges and future perspectives	2019	Journal article	Candidate characteristics
Buruli ulcer	Drugs	Pharmacologic management of Mycobacterium ulcerans infection	2020	Journal article	Candidate characteristics
Buruli ulcer	Drugs	The compound TB47 is highly bactericidal against Mycobacterium ulcerans in a Buruli ulcer mouse model	2019	Journal article	Candidate characteristics
Buruli ulcer	Vaccine	Systematic review of M. Bovis BCG and other candidate vaccines for Buruli ulcer prophylaxis	2021	Journal article	Candidate characteristics
Buruli ulcer	Vaccine	The search for a Buruli Ulcer vaccine and the effectiveness of the Bacillus Calmette–Guérin vaccine	2022	Journal article	Candidate characteristics
Chagas' disease	Diagnostics	Parasitological, serological and molecular diagnosis of acute and chronic Chagas disease: from field to laboratory	2022	Journal article	Candidate characteristics
Chagas' disease	Diagnostics	Rapid immunochromatographic tests for the diagnosis of chronic Chagas disease in at-risk populations: A systematic review and meta-analysis	2019	Journal article	Candidate characteristics
Chagas' disease	Diagnostics	Strategies to enhance access to diagnosis and treatment for Chagas disease patients in Latin America	2019	Journal article	Candidate characteristics
Chagas' disease	Diagnostics	Application of WHO International Biological Reference Standards to evaluate commercial serological tests for chronic Chagas disease	2020	Normative literature	Candidate characteristics
Chagas' disease	Drugs	WHO Guidelines for the diagnosis and treatment of Chagas disease	2018	Normative literature	Normative literature review
Chagas' disease	Drugs	Challenges in Chagas disease drug development	2020	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Chagas' disease	Multiple products	Unitaid Screening and treatment for Chagas' disease technology and market landscape	2020	Pipeline report	Candidate characteristics
Chagas' disease	Vaccine	Chagas disease vaccine design: the search for an efficient Trypanosoma cruzi immune-mediated control	2020	Journal article	Candidate characteristics
Chagas' disease	Vaccine	The case for the development of a Chagas disease vaccine: Why? How? When?	2021	Journal article	Candidate characteristics
Chagas' disease	Vaccine	Vaccine design against Chagas disease focused on the use of nucleic acids	2022	Journal article	Candidate characteristics
Chikungunya	Diagnostics	Beyond fever and pain: Diagnostic methods for Chikungunya virus	2019	Journal article	Candidate characteristics
Chikungunya	Diagnostics	GloPID-R report on Chikungunya, O'nyong-nyong and Mayaro virus, part I: Biological diagnostics	2019	Journal article	Candidate characteristics
Chikungunya	Diagnostics	Mapping the global landscape of chikungunya rapid diagnostic tests: A scoping review	2022	Journal article	Candidate characteristics
Chikungunya	Diagnostics	Understanding the biology and immune pathogenesis of Chikungunya virus infection for diagnostic and vaccine development	2022	Journal article	Candidate characteristics
Chikungunya	Drugs	Anti-Chikungunya virus monoclonal antibody that inhibits viral fusion and release	2020	Journal article	Candidate characteristics
Chikungunya	Drugs	Antivirals against the Chikungunya virus	2021	Journal article	Candidate characteristics
Chikungunya	Drugs	Current and promising antivirals against Chikungunya virus	2020	Journal article	Candidate characteristics
Chikungunya	Drugs	Small-molecule inhibitors of Chikungunya virus: Mechanisms of action and antiviral drug resistance	2020	Journal article	Candidate characteristics
Chikungunya	Vaccine	Chikungunya vaccine candidates: Current landscape and future prospects	2022	Journal article	Candidate characteristics
Chikungunya	Vaccine	Chikungunya virus vaccines: Platforms, progress, and challenges	2022	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Chikungunya	Vaccine	Report of the meeting with National Regulatory Authorities of Regional Reference: Regulatory preparation for vaccines of Chikungunya in the Americas	2023	Meeting report	Regulatory
Chikungunya	Vaccine	WHO Chikungunya vaccine pipeline	2023	Pipeline database	Candidate characteristics
Cholera	Diagnostics	Accuracy of cholera rapid diagnostic tests: A systematic review and meta-analysis	2022	Journal article	Candidate characteristics
Cholera	Diagnostics	Cholera rapid diagnostic tests for the detection of Vibrio cholerae O1: An updated meta-analysis	2021	Journal article	Candidate characteristics
Cholera	Diagnostics	Diagnostic techniques for rapid detection of Vibrio cholerae O1/O139	2020	Journal article	Candidate characteristics
Cholera	Diagnostics	Gold standard cholera diagnostics are tarnished by lytic bacteriophage and antibiotics	2020	Journal article	Candidate characteristics
Cholera	Diagnostics	Laboratory evaluation of the rapid diagnostic tests for the detection of Vibrio cholerae O1 using diarrheal samples	2021	Journal article	Candidate characteristics
Cholera	Vaccine	An update on cholera immunity and current and future cholera vaccines	2021	Journal article	Candidate characteristics
Cholera	Vaccine	Cholera control in three continents: Vaccines, antibiotics and WASH	2020	Journal article	Candidate characteristics
Cholera	Vaccine	Current and future cholera vaccines	2020	Journal article	Candidate characteristics
Cholera	Vaccine	Emerging concepts in cholera vaccine design	2022	Journal article	Candidate characteristics
Cholera	Vaccine	Global Task Force on Cholera Control vaccine research database	2023	Pipeline database	Candidate characteristics
COVID-19	Drugs	A living WHO guideline on drugs for COVID-19	2023	Normative literature	Normative literature review
COVID-19	Drugs	US FDA Approved and EUA authorized products	2023	Regulatory body	Regulatory
COVID-19	Drugs	COVID-NMA	2023	Clinical trial database	Candidate characteristics
COVID-19	Vaccine	LSHTM COVID-19 vaccine tracker	2022	Pipeline database	Candidate characteristics
COVID-19	Vaccines	WHO COVID-19 vaccine tracker	2023	Pipeline database	Characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
COVID-19	Vaccines	Milken COVID-19 vaccine tracker	2022	Product database	Product characteristics
COVID-19	Vaccines	UNICEF data dashboard	2023	Product database	Product characteristics
COVID-19	Vaccines	US FDA COVID-19 vaccines approved or authorized for Emergency Use	2023	Regulatory body	Regulatory
Crimean-Congo haemorrhagic fever	Diagnostics	Degenerate sequence-based CRISPR diagnostic for Crimean–Congo hemorrhagic fever virus	2022	Journal article	Candidate characteristics
Crimean-Congo haemorrhagic fever	Diagnostics	Development and evaluation of indirect antibody ELISA assay for early diagnosis and surveillance of Crimean-Congo hemorrhagic fever infection in humans	2022	Journal article	Candidate characteristics
Crimean-Congo haemorrhagic fever	Diagnostics	Development of a novel recombinant ELISA for the detection of Crimean-Congo hemorrhagic fever virus IgG antibodies	2021	Journal article	Candidate characteristics
Crimean-Congo haemorrhagic fever	Diagnostics	Development of a reverse transcription loop- mediated isothermal amplification (RT-LAMP)	2020	Journal article	Candidate characteristics
Crimean-Congo haemorrhagic fever	Diagnostics	Diagnostic tests for Crimean-Congo haemorrhagic fever: A widespread tickborne disease	2019	Journal article	Candidate characteristics
Crimean-Congo haemorrhagic fever	Diagnostics	WHO meeting presentation - Overview of diagnostic tools	2019	Meeting report	Candidate characteristics
Crimean-Congo haemorrhagic fever	Drugs	Crimean-Congo hemorrhagic fever virus: Current advances and future prospects of antiviral strategies	2021	Journal article	Candidate characteristics
Crimean-Congo haemorrhagic fever	Drugs	WHO meeting presentation - Draft TPP and overview of CCHF candidate therapeutics	2019	Meeting report	Candidate characteristics
Crimean-Congo haemorrhagic fever	Multiple products	WHO consultation on Crimean Congo haemorrhagic fever therapeutics and vaccine evaluation	2019	Meeting report	Candidate characteristics
Crimean-Congo haemorrhagic fever	Vaccine	Crimean–Congo hemorrhagic fever virus: Advances in vaccine development	2020	Journal article	Candidate characteristics
Crimean-Congo haemorrhagic fever	Vaccine	WHO meeting presentation - Overview of CCHF vaccine candidates	2019	Meeting report	Candidate characteristics
Cryptococcal meningitis	Drugs	Advances in antifungal development: Discovery of new drugs and drug repurposing	2022	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Cryptococcal meningitis	Drugs	Avenues for antifungal drug discovery and development: where to now?	2022	Journal article	Candidate characteristics
Cryptococcal meningitis	Drugs	Drug development for cryptococcosis treatment: what can patents tell us?	2019	Journal article	Candidate characteristics
Cryptococcal meningitis	Drugs	Screening of the pandemic response box reveals an association between antifungal effects of MMV1593537 and the cell wall of Cryptococcus neoformans, Cryptococcus deutero gattii, and Candida auris	2022	Journal article	Candidate characteristics
Cryptococcal meningitis	Drugs	Treatment strategies for cryptococcal infection: challenges, advances and future outlook	2021	Journal article	Candidate characteristics
Cryptosporidiosis	Drugs	US CDC treatment guidelines	2022	Grey literature	Normative literature review
Cryptosporidiosis	Diagnostics	Cryptosporidium spp. diagnosis and research in the 21st century	2021	Journal article	Candidate characteristics
Cryptosporidiosis	Diagnostics	Performance and operational feasibility of two diagnostic tests for cryptosporidiosis in children (CRYPTO-POC): a clinical, prospective, diagnostic accuracy study	2021	Journal article	Candidate characteristics
Cryptosporidiosis	Diagnostics	Performance of a rapid diagnostic test for the detection of Cryptosporidium spp. in African children admitted to hospital with diarrhea	2020	Journal article	Candidate characteristics
Cryptosporidiosis	Diagnostics	Performance of three rapid diagnostic tests for the detection of Cryptosporidium spp. and Giardia duodenalis in children with severe acute malnutrition and diarrhoea	2019	Journal article	Candidate characteristics
Cryptosporidiosis	Drugs	An update on Cryptosporidium biology and therapeutic avenues	2022	Journal article	Candidate characteristics
Cryptosporidiosis	Drugs	Opportunities and challenges in developing a Cryptosporidium controlled human infection model for testing antiparasitic agents	2021	Journal article	Candidate characteristics
Cryptosporidiosis	Drugs	Emerging treatment options for cryptosporidiosis	2021	Journal article	Candidate characteristics
Dengue	Diagnostics	Dengue detection: Advances in diagnostic tools from conventional technology to point of care	2021	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Dengue	Diagnostics	Rapid diagnostic tests for determining dengue serostatus: a systematic review and key informant interviews	2019	Journal article	Candidate characteristics
Dengue	Drugs	Current trends and limitations in Dengue antiviral research	2021	Journal article	Candidate characteristics
Dengue	Drugs	Finding a chink in the armor: Update, limitations, and challenges toward successful antivirals against flaviviruses	2022	Journal article	Candidate characteristics
Dengue	Drugs	Recent advances in antiviral drug development towards dengue virus	2020	Journal article	Candidate characteristics
Dengue	Drugs	Recent update on anti-dengue drug discovery	2019	Journal article	Candidate characteristics
Dengue	Drugs	Updates on dengue vaccine and antiviral: Where are we heading?	2021	Journal article	Candidate characteristics
Ebola	Drugs	Sudan Ebolavirus – Experts deliberations candidate treatments prioritization and trial design discussions	2022	Meeting report	Candidate characteristics
Ebola	Multiple products	US FDA Preparedness and response	2023	Regulatory body	Regulatory
Ebola	Vaccine	WHO Working Group on vaccine prioritization - review of Sudan ebolavirus vaccine candidates	2022	Meeting report	Candidate characteristics
Ebola	Vaccine	Sudan Ebolavirus Vaccine Tracker - List of vaccine candidates in research & development	2022	Pipeline database	Candidate characteristics
Hepatitis B	Drugs	WHO Guidelines for the prevention, care and treatment of persons with chronic hepatitis B infection	2015	Normative literature	Normative literature review
Hepatitis B	Drugs	WHO Prevention of mother-to-child transmission of hepatitis B virus: guidelines on antiviral prophylaxis in pregnancy	2020	Normative literature	Normative literature review
Hepatitis C	Drugs	WHO Guidelines for the care and treatment of persons diagnosed with chronic hepatitis C virus infection	2018	Normative literature	Normative literature review
Hepatitis C	Drugs	WHO Updated recommendations on treatment of adolescents and children with chronic HCV infection	2022	Normative literature	Normative literature review
Hepatitis C	Drugs	Treatment Action Group Long-Acting Technologies Trials Tracker for Hepatitis C	2022	Pipeline report	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Hepatitis C and B	Diagnostics	WHO Guidelines on hepatitis B and C testing	2017	Normative literature	Normative literature review
Hepatitis C and B	Diagnostics	Unitaid HCV diagnostics technology landscape	2019	Pipeline report	Candidate characteristics
Hepatitis C and B	Drugs	MedsPal	2022	Product database	Product characteristics
HIV/AIDS	Diagnostics	WHO Consolidated guidelines on HIV testing services	2019	Normative literature	Product characteristics
HIV/AIDS	Diagnostics	WHO Point-of-care CD4 tests to support the identification of individuals with advanced HIV disease TPP	2020	Normative literature	Normative literature review
HIV/AIDS	Diagnostics	WHO Point-of-care tests for diagnosing HIV infection among children younger than 18 months TPP	2020	Normative literature	Normative literature review
HIV/AIDS	Diagnostics	Unitaid Market and Technology Landscape HIV rapid diagnostic tests for self-testing	2018	Meeting presentation	Candidate characteristics
HIV/AIDS	Drugs	HIV Prevention Trials Network Studies	2022	Clinical trial database	Candidate characteristics
HIV/AIDS	Drugs	PrEP Watch	2022	Pipeline database	Candidate characteristics
HIV/AIDS	Drugs	i-base HIV pipeline report	2021	Pipeline report	Candidate characteristics
HIV/AIDS	Drugs	Unitaid Multipurpose prevention technologies landscape report	2021	Pipeline report	Candidate characteristics
HIV/AIDS	Microbicides	EMA opinion document - Vaginal ring to reduce the risk of HIV infection for women in non-EU countries with high disease burden	2020	Regulatory body	Regulatory
HIV/AIDS	Multiple products	HIV Prevention Clinical Trials Database	2022	Clinical trial database	Candidate characteristics
HIV/AIDS	Vaccine	HIV Vaccine Trials Network	2022	Clinical trial database	Candidate characteristics
HIV/AIDS	Vaccine	Treatment Action Group HIV vaccines and passive immunisation pipeline report	2022	Pipeline report	Candidate characteristics
Kinetoplastid diseases	Drugs	DNDi pipeline portfolio	2022	Grey literature	Product characteristics
Lassa Fever	Diagnostics	FIND Lassa fever diagnostics landscape	2022	Meeting presentation	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Lassa Fever	Vaccine	Prospects of Lassa fever candidate vaccines	2022	Journal article	Candidate characteristics
Leishmaniasis	Diagnostics	WHO Target product profile for a point-of-care diagnostic test for dermal leishmaniases	2022	Normative literature	Normative literature review
Leptospirosis	Diagnostics	Role of diagnostics in epidemiology, management, surveillance, and control of Leptospirosis	2022	Journal article	Candidate characteristics
Lymphatic filariasis	Diagnostics	WHO Diagnostic test for lymphatic filariasis to support decisions for stopping triple-therapy mass drug administration: target product profile	2021	Normative literature	Normative literature review
Lymphatic filariasis	Diagnostics	WHO Diagnostic test for surveillance of lymphatic filariasis: target product profile	2021	Normative literature	Normative literature review
Malaria	Diagnostics	Unitaid Malaria diagnostics market and technology landscape	2022	Pipeline report	Candidate characteristics
Malaria	Drugs	Scoping review of antimalarial drug candidates in Phase I and II drug development	2022	Journal article	Candidate characteristics
Malaria	Drugs	MMV's pipeline of antimalarial drugs	2022	Pipeline database	Candidate characteristics
Malaria	Multiple products	WHO Guidelines for malaria (MAGICapp)	2022	Normative literature	Normative literature review
Malaria	Vaccine	MIMVaC Africa portfolio	2022	Pipeline database	Candidate characteristics
Malaria	Vaccine	PATH Malaria Vaccine Initiative portfolio	2022	Pipeline database	Candidate characteristics
Malaria	Vaccine	The Jenner Institute Malaria Vaccine Programme	2022	Pipeline database	Candidate characteristics
Marburg	Multiple products	WHO Urgent Marburg meeting presentations	2023	Meeting report	Candidate characteristics
Marburg	Vaccine	An introduction to the Marburg virus vaccine consortium, MARVAC	2022	Journal article	Candidate characteristics
Marburg	Vaccine	Vaccine development needs for Marburg virus and Sudan ebolavirus: Leveraging lessons learned from the Zaire ebolavirus	2022	Journal article	Candidate characteristics
Multiple diarrhoeal diseases	Vaccine	Vaccine Against Shigella and ETEC Conference proceedings 2021/2022	2022	Conference proceedings	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Multiple diseases	Diagnostics	The Global Fund list of diagnostics	2023	Grey literature	Normative literature review
Multiple diseases	Diagnostics	Unitaid landscape reports	2023	Grey literature	Product characteristics
Multiple diseases	Diagnostics	WHO electronic Essential in vitro Diagnostics List (eEDL)	2023	Product database	Normative literature review
Multiple diseases	Diagnostics	FDA Nucleic acid based tests database	2023	Regulatory body	Regulatory
Multiple diseases	Diagnostics	Diagnosing point-of-care diagnostics for neglected tropical diseases	2021	Journal article	Candidate characteristics
Multiple diseases	Diagnostics	Diagnostics and the neglected tropical diseases roadmap: setting the agenda for 2030	2020	Journal article	Candidate characteristics
Multiple diseases	Diagnostics	Landscape analysis of NTD diagnostics and considerations on the development of a strategy for regulatory pathways	2022	Journal article	Candidate characteristics
Multiple diseases	Diagnostics	WHO prequalification database - in vitro diagnostics under assessment	2023	Pipeline database	Candidate characteristics
Multiple diseases	Diagnostics	Treatment Action Group diagnostic pipeline reports	2023	Pipeline report	Candidate characteristics
Multiple diseases	Diagnostics	Unitaid Multi-disease diagnostic landscape for integrated management of HIV, HCV, TB and other coinfections	2018	Pipeline report	Candidate characteristics
Multiple diseases	Drugs	DrugBank	2023	Product database	Product characteristics
Multiple diseases	Drugs	WHO electronic Essential Medicines List (eEML)	2023	Product database	Normative literature review
Multiple diseases	Drugs	Drugs@FDA	2022	Regulatory body	Regulatory
Multiple diseases	Drugs	US FDA Orangebook	2023	Regulatory body	Regulatory
Multiple diseases	Drugs	US FDA summary	2023	Regulatory body	Regulatory
Multiple diseases	Drugs	How can monoclonal antibodies be harnessed against neglected tropical diseases and other infectious diseases?	2019	Journal article	Candidate characteristics
Multiple diseases	Drugs	Landscape of monoclonal antibodies targeting Zika and Dengue: Therapeutic solutions and critical insights for vaccine development	2021	Journal article	Candidate characteristics
Multiple diseases	Drugs	Reassessing therapeutic antibodies for neglected and tropical diseases	2020	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Multiple diseases	Drugs	Medicines Development for Global Health pipeline	2022	Pipeline database	Candidate characteristics
Multiple diseases	Multiple products	AdisInsight	2023	Candidate database	Candidate characteristics
Multiple diseases	Multiple products	ClinicalTrials.gov	2023	Clinical trial database	Candidate characteristics
Multiple diseases	Multiple products	Developer websites	2023	Grey literature	Product characteristics
Multiple diseases	Multiple products	Iris.ai	2023	Journal articles	Candidate characteristics
Multiple diseases	Multiple products	Semantic Scholar	2023	Journal articles	Candidate characteristics
Multiple diseases	Multiple products	Global Health Innovative Technology Fund portfolio	2023	Pipeline database	Candidate characteristics
Multiple diseases	Multiple products	Treatment Action Group prevention/treatment pipeline reports	2023	Pipeline report	Candidate characteristics
Multiple diseases	Multiple products	KEGG DRUG Database	2023	Product database	Regulatory
Multiple diseases	Multiple products	WHO Emergency Use Assessment and Listing (EUAL)	2023	Product database	Regulatory
Multiple diseases	Multiple products	WHO Prequalification database	2023	Product database	Regulatory
Multiple diseases	Multiple products	Brazilian Health Regulatory Agency (Anvisa)	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Chinese National Medical Products Administration (NMPA)	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Cuban Center for State Control of Medicines and Medical Devices(CECMED)	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Drug Administration Department of Vietnam	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Egyptian Drug Authority	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	EMA European public assessment reports (EPARs)	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	EMA medicines for use outside EU	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Indian Central Drugs Standard Control Organisation	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Indonesian Badan Pengawas Obat dan Makanan	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Iran Food and Drug Administration	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Japanese Ministry of Health Labour and Welfare website	2023	Regulatory body	Regulatory

Disease	Product	Resource name	Year	Resource type	Review focus
Multiple diseases	Multiple products	Korean Ministry of Food and Drug Safety (MFDS)	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Medicines and Medical Devices Agency of Serbia (ALIMS)	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Mexican Federal Committee for Protection from Sanitary Risks (COFEPRIS)	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Russian Federation Ministry of Health (Minzdrav)	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	South African Health Products Regulatory Authority (SAHPRA)	2023	Regulatory body	Regulatory
Multiple diseases	Multiple products	Thai Food and Drugs Administration	2023	Regulatory body	Regulatory
Multiple diseases	Vaccine	The Global Vaccine and Immunization Research Forum (GVIRF)	2023	Conference proceedings	Candidate characteristics
Multiple diseases	Vaccine	Product Development for Vaccines Advisory Committee (PDVAC) meeting reports	2023	Meeting report	Candidate characteristics
Multiple diseases	Vaccine	European Vaccine Initiative portfolio	2023	Pipeline database	Candidate characteristics
Multiple diseases	Vaccine	WHO Immunisation, Vaccines and Biologicals pipeline	2023	Pipeline database	Candidate characteristics
Multiple diseases	Vaccines	WHO IVB website	2023	Normative literature	Normative literature review
Multiple diseases	Vaccines	WHO Market Information for Access to Vaccines (MI4A)	2023	Normative literature	Normative literature review
Multiple diseases	Vaccines	WHO Vaccine position papers	2023	Normative literature	Normative literature review
Multiple diseases	Vaccines	US FDA Vaccines licensed for use in the United States	2023	Regulatory body	Regulatory
Multiple diseases	Vector control products	CropLife Australia	2022	Product database	Product characteristics
Multiple diseases	Diagnostics	Diagnostic preparedness for WHO Blueprint pathogens	2023	Normative literature	Candidate characteristics
Multiple diseases	Diagnostics	FIND DxConnect Directory	2023	Pipeline database	Candidate characteristics
Multiple diseases	Drugs	Helminth Elimination Platform (HELP)	2023	Consortium publication	Candidate characteristics
Multiple diseases	Drugs	DNDi portfolio	2023	PDP portfolio	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Multiple diseases	Drugs	WHO Analysis of the antibacterial pipeline	2022	Pipeline database	Candidate characteristics
Multiple diseases	Drugs	WHO 2021 antibacterial agents in clinical and preclinical development: an overview and analysis	2022	Pipeline report	Candidate characteristics
Multiple diseases	Multiple products	Unitaid Landscape of innovative tools and delivery strategies for eliminating vertical transmission of HIV, syphilis, hepatitis B, and Chagas in endemic areas	2022	Pipeline report	Candidate characteristics
Multiple diseases	Vaccine	Estimating the cost of vaccine development against epidemic infectious diseases: a cost minimisation study	2018	Journal article	Candidate characteristics
Multiple diseases	Vaccine	GVIRF 2021 Conference Proceedings	2021	Conference proceedings	Candidate characteristics
Multiple diseases	Vaccine	BARDA's Expanding CBRN Medical Countermeasure Portfolio	2023	Pipeline database	Candidate characteristics
Multiple diseases	Vaccine	WHO bacterial vaccines in clinical and preclinical development	2021	Pipeline report	Candidate characteristics
Multiple diseases	Vector control products	Innovative Vector Control Consortium Annual Report 2020-21	2021	Consortium publication	Candidate characteristics
Multiple diseases	Vector control products	WHO Vector Control Advisory Group (VCAG) - meeting reports	2022	Meeting report	Candidate characteristics
Multiple diseases	Vector control products	WHO Observatory VCP pipeline	2022	Pipeline database	Candidate characteristics
Multiple diseases	Vector control products	WHO Vector Control Advisory Group (VCAG) - summary of new interventions	2022	Pipeline database	Candidate characteristics
Multiple diseases	Vector control products	WHO Vector Control Advisory Group (VCAG) - intervention classes and prototype/products	2022	Regulatory body	Candidate characteristics
Multiple diseases (NTDs only)	Diagnostics	Strategic and Technical Advisory Group for Neglected Tropical Diseases (STAG-NTD)	2022	Grey literature	Normative literature review
Multiple diseases (NTDs only)	Diagnostics	WHO diagnostic technical advisory group meeting reports	2022	Normative literature	Normative literature review
Multiple diseases (NTDs only)	Multiple products	WHO Ending the neglect to attain the Sustainable Development Goals: A road map for neglected tropical diseases 2021–2030	2021	Normative literature	Normative literature review

Disease	Product	Resource name	Year	Resource type	Review focus
Multiple kinetoplastids	Drugs	An overview on target-based drug design against kinetoplastid protozoan infections: Human African Trypanosomiasis, Chagas disease and Leishmaniasis	2021	Journal article	Candidate characteristics
Mycetoma	Diagnostics	WHO Target product profile for a rapid test for diagnosis of mycetoma at primary health-care level	2022	Normative literature	Normative literature review
Nipah	Diagnostics	Commercially available rapid diagnostic tests for the detection of high priority pathogens: status and challenges	2021	Journal article	Candidate characteristics
Nipah	Diagnostics	Detection of Nipah and Hendra viruses using recombinant human ephrin B2 capture virus in immunoassays	2022	Journal article	Candidate characteristics
Nipah	Diagnostics	Development and laboratory evaluation of a competitive ELISA for serodiagnosis of Nipah and Hendra virus infection using recombinant Nipah glycoproteins and a monoclonal antibody	2023	Journal article	Candidate characteristics
Nipah	Diagnostics	Evaluation of three rapid low-resource molecular tests for Nipah virus	2023	Journal article	Candidate characteristics
Nipah	Multiple products	Medical countermeasures against henipaviruses: a review and public health perspective	2022	Journal article	Candidate characteristics
Nipah	Multiple products	Nipah@20: Lessons learned from another virus with pandemic potential	2020	Journal article	Candidate characteristics
Onchocerciasis	Diagnostics	WHO Onchocerciasis: diagnostic target product profile to support preventive chemotherapy	2021	Normative literature	Normative literature review
Onchocerciasis	Diagnostics	Developing strategies for onchocerciasis elimination mapping and surveillance through the diagnostic network optimization approach	2021	Journal article	Candidate characteristics
Onchocerciasis	Diagnostics	Evaluating the diagnostic test accuracy of molecular xenomonitoring methods for characterising the community burden of onchocerciasis	2021	Journal article	Candidate characteristics
Onchocerciasis	Vaccine	Advancing a human onchocerciasis vaccine from antigen discovery to efficacy studies against natural infection of cattle with Onchocerca ochengi	2022	Journal article	Candidate characteristics
Onchocerciasis	Vaccine	Development of a recombinant vaccine against human onchocerciasis	2021	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Rheumatic fever	Vaccine	Pathogenesis, epidemiology and control of Group A Streptococcus infection	2023	Journal article	Candidate characteristics
Rheumatic fever	Vaccine	Update on Group A Streptococcal Vaccine Development	2020	Journal article	Candidate characteristics
Rheumatic fever	Vaccine	The Streptococcus pyogenes vaccine landscape	2023	Journal article	Candidate characteristics
Rheumatic fever	Vaccine	WHO expert review of Group A Streptococcus vaccines	2022	Meeting presentation	Candidate characteristics
Rheumatic fever	Vaccine	Strep A Vaccine Global Consortium (SAVAC) presentations and stakeholder meeting reports	2023	Meeting presentation	Candidate characteristics
Rift Valley Fever	Diagnostics	Development of a versatile half-strip lateral flow assay toward the detection of Rift Valley Fever virus antibodies	2022	Journal article	Candidate characteristics
Rift Valley Fever	Diagnostics	Development of a visible reverse transcription-loop- mediated isothermal amplification assay for the detection of Rift Valley Fever virus	2020	Journal article	Candidate characteristics
Rift Valley Fever	Drugs	Discovery of Rift Valley fever virus natural pan- inhibitors by targeting its multiple key proteins through computational approaches	2022	Journal article	Candidate characteristics
Rift Valley Fever	Multiple products	Rift Valley Fever: Diagnostic challenges and investment needs for vaccine development	2020	Journal article	Candidate characteristics
Rift Valley Fever	Multiple products	WHO Consultation on Rift Valley Fever therapeutics and vaccine evaluation	2019	Meeting report	Candidate characteristics
Rift Valley Fever	Vaccine	An overview of Rift Valley Fever vaccine development strategies	2022	Journal article	Candidate characteristics
Rift Valley Fever	Vaccine	Candidate vaccines for human Rift Valley fever	2019	Journal article	Candidate characteristics
Rift Valley Fever	Vaccine	Determining the acceptability of a novel One Health vaccine for Rift Valley Fever prior to phase II/III clinical trials in Uganda	2022	Journal article	Candidate characteristics
Rift Valley Fever	Vaccine	Immune correlates of protection following Rift Valley fever virus vaccination	2022	Journal article	Candidate characteristics
Rotavirus	Vaccine	Current and new rotavirus vaccines	2019	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Rotavirus	Vaccine	Does anybody want an injectable rotavirus vaccine, and why? Understanding the public health value proposition of next-generation rotavirus vaccines	2022	Journal article	Candidate characteristics
Rotavirus	Vaccine	The rotavirus vaccine development pipeline	2019	Journal article	Candidate characteristics
Rotavirus	Vaccine	The rotavirus vaccine landscape, an update	2021	Journal article	Candidate characteristics
Rotavirus	Vaccine	Next-generation rotavirus vaccine developers meeting: Summary of a meeting sponsored by PATH and the bill & melinda gates foundation (19–20 June 2019, Geneva)	2020	Meeting report	Candidate characteristics
Rotavirus	Vaccine	The challenges and opportunities of next-generation rotavirus vaccines: Summary of an expert meeting with vaccine developers	2022	Meeting report	Candidate characteristics
S. pneumoniae	Diagnostics	Comparative evaluation of the novel IMMUNOCATCHTM Streptococcus pneumoniae (EIKEN CHEMICAL CO., LTD) test with the Uni-GoldTM Streptococcus pneumoniae assay and the BinaxNOW® Streptococcus pneumoniae antigen card for the detection of pneumococcal capsular antigen in urine samples	2020	Journal article	Candidate characteristics
S. pneumoniae	Diagnostics	Comparison of four Streptococcus pneumoniae urinary antigen tests using automated readers	2021	Journal article	Candidate characteristics
S. pneumoniae	Diagnostics	Rapid, simple, and highly specific detection of Streptococcus pneumoniae with visualized recombinase polymerase amplification	2022	Journal article	Candidate characteristics
S. pneumoniae	Diagnostics	The BinaxNOW pneumococcal antigen test: An adjunct for diagnosis of pneumococcal bacteraemia	2021	Journal article	Candidate characteristics
S. pneumoniae	Diagnostics	Urinary antigen testing for respiratory infections: Current perspectives on utility and limitations	2022	Journal article	Candidate characteristics
S. pneumoniae	Vaccine	Pneumococcal vaccines: Past findings, present work, and future strategies	2021	Journal article	Candidate characteristics
S. pneumoniae	Vaccine	Development of next generation Streptococcus pneumoniae vaccines conferring broad protection	2020	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
S. pneumoniae	Vaccine	If not now, when? Nonserotype pneumococcal protein vaccines	2021	Journal article	Candidate characteristics
S. pneumoniae	Vaccine	Multi-valent protein hybrid pneumococcal vaccines: A strategy for the next generation of vaccines	2021	Journal article	Candidate characteristics
S. pneumoniae	Vaccine	Novel protein-based pneumococcal vaccines: Assessing the use of distinct protein fragments instead of full-length proteins as vaccine antigens	2019	Journal article	Candidate characteristics
S. pneumoniae	Vaccine	Status of research and development of pediatric vaccines for Streptococcus pneumoniae	2016	Journal article	Candidate characteristics
Salmonella infections	Diagnostics	Enteric fever diagnosis: Current challenges and future directions	2021	Journal article	Candidate characteristics
Salmonella infections	Diagnostics	Performance of immunodiagnostic tests for typhoid fever: A systematic review and meta-analysis	2021	Journal article	Candidate characteristics
Salmonella infections	Diagnostics	The current status of enteric fever diagnostics and implications for disease control	2020	Journal article	Candidate characteristics
Salmonella infections	Drugs	Identification of a novel therapeutic target against XDR Salmonella Typhi H58 using genomics driven approach followed up by natural products virtual screening	2021	Journal article	Candidate characteristics
Salmonella infections	Multiple products	International Conference on Typhoid and Other Invasive Salmonelloses	2022	Conference proceedings	Candidate characteristics
Scabies	Diagnostics	WHO Target Product Profiles for the development of new diagnostic tools to start and stop mass drug administration for scabies	2022	Normative literature	Normative literature review
Scabies	Diagnostics	Development of a rapid scabies immunodiagnostic assay based on transcriptomic analysis of Sarcoptes scabiei var. nyctereutis	2021	Journal article	Candidate characteristics
Scabies	Diagnostics	Diagnostics to support the control of scabies— Development of two target product profiles	2022	Journal article	Candidate characteristics
Scabies	Diagnostics	Laboratory-based diagnosis of scabies: a review of the current status	2022	Journal article	Candidate characteristics
Scabies	Diagnostics	Recent advances in understanding and treating scabies	2021	Journal article	Candidate characteristics
Scabies	Drugs	The management of scabies in the 21st century: Past, advances and potentials	2020	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Scabies	Drugs	International Alliance for the Control of Scabies publications	2022	Journal articles	Candidate characteristics
Schistosomiasis	Diagnostics	WHO Diagnostic target product profiles for monitoring, evaluation and surveillance of schistosomiasis control programmes	2021	Normative literature	Normative literature review
Schistosomiasis	Diagnostis	Sensitive diagnostic tools and targeted drug administration strategies are needed to eliminate schistosomiasis	2020	Journal article	Candidate characteristics
Schistosomiasis	Diagnostis	The road to elimination: Current state of schistosomiasis research and progress towards the end game	2022	Journal article	Candidate characteristics
Schistosomiasis	Drugs	Pediatric Praziquantel Consortium	2022	Consortium publication	Candidate characteristics
Schistosomiasis	Drugs	Chemotherapy for human schistosomiasis: how far have we come? What's new? Where do we go from here?	2020	Journal article	Candidate characteristics
Schistosomiasis	Drugs	Identification of Inhibitors of the Schistosoma mansoni VKR2 Kinase Domain	2022	Journal article	Candidate characteristics
Schistosomiasis	Vaccine	Current status and future prospects of protein vaccine candidates against Schistosoma mansoni infection	2020	Journal article	Candidate characteristics
Schistosomiasis	Vaccine	Promising technologies in the field of helminth vaccines	2021	Journal article	Candidate characteristics
Schistosomiasis	Vaccine	Schistosomiasis vaccine development: update on human clinical trials	2020	Journal article	Candidate characteristics
Schistosomiasis	Vaccine	Vaccines for human schistosomiasis: Recent progress, new developments and future prospects	2022	Journal article	Candidate characteristics
Shigella	Vaccine	Frontiers in Shigella vaccine development - special issue	2022	Journal article	Candidate characteristics
Shigella	Vaccine	World Health Organization Expert Working Group: Recommendations for assessing morbidity associated with enteric pathogens	2021	Journal article	Candidate characteristics
Sleeping sickness	Diagnostics	WHO Target product profile for a gambiense human African trypanosomiasis test to identify individuals to receive widened treatment	2022	Normative literature	Normative literature review

Disease	Product	Resource name	Year	Resource type	Review focus
Sleeping sickness	Diagnostics	WHO Target product profile for a test for rhodesiense human African trypanosomiasis diagnosis usable in peripheral health facilities	2021	Normative literature	Normative literature review
Sleeping Sickness	Diagnostics	Development and implementation of a strategy for intensified screening for gambiense human African trypanosomiasis in Kongo Central province, DRC	2020	Journal article	Candidate characteristics
Sleeping Sickness	Diagnostics	Trypanosoma brucei gambiense-iELISA: A promising new test for the post-elimination monitoring of Human African Trypanosomiasis	2020	Journal article	Candidate characteristics
Sleeping Sickness	Diagnostics	Two-year follow-up of Trypanosoma brucei gambiense serology after successful treatment of Human African Trypanosomiasis: Results of four different sero-diagnostic tests	2022	Journal article	Candidate characteristics
Soil-transmitted helminths	Diagnostics	WHO Diagnostic target product profile for monitoring and evaluation of soil-transmitted helminth control programmes	2021	Normative literature	Normative literature review
Strongyloidiasis	Diagnostics	Comparison of loop-mediated isothermal amplification and real-time PCR assays for detection of Strongyloides larvae in different specimen matrices	2019	Journal article	Candidate characteristics
Strongyloidiasis	Diagnostics	Development of immunochromatographic device as a point-of-care tool for serodiagnosis of human strongyloidiasis cases	2020	Journal article	Candidate characteristics
Strongyloidiasis	Diagnostics	Effectiveness of Strongyloides recombinant IgG immunoreactive antigen in detecting IgG and IgG4 subclass antibodies for diagnosis of human strongyloidiasis using rapid immunochromatographic tests	2020	Journal article	Candidate characteristics
Tapeworm	Diagnostics	Evaluation of an antibody detecting point of care test for diagnosis of Taenia solium cysticercosis in a Zambian rural community: A prospective diagnostic accuracy study	2021	Journal article	Candidate characteristics
Tapeworm	Diagnostics	Neurocysticercosis: Current perspectives on diagnosis and management	2021	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Tapeworm	Diagnostics	Performance of Ag-ELISA in the diagnosis of Taenia solium cysticercosis in naturally infected pigs in Tanzania	2020	Journal article	Candidate characteristics
Tapeworm	Diagnostics	Progress on the development of rapid diagnostic tests for foodborne neglected zoonotic helminthiases: A systematic review	2019	Journal article	Candidate characteristics
Trachoma	Vaccine	Designing multi-epitope subunit vaccine for ocular trachoma infection using Chlamydia trachomatis polymorphic membrane proteins G	2021	Journal article	Candidate characteristics
Trachoma	Vaccine	Future of human Chlamydia vaccine: potential of self-adjuvanting biodegradable nanoparticles as safe vaccine delivery vehicles	2018	Journal article	Candidate characteristics
Tuberculosis	Diagnostics	WHO High priority target product profiles for new tuberculosis diagnostics	2014	Normative literature	Normative literature review
Tuberculosis	Diagnostics	WHO Target product profile for next-generation drug- susceptibility testing at peripheral centres	2021	Normative literature	Normative literature review
Tuberculosis	Drugs	Strategic and Technical Advisory Group for Tuberculosis (STAG-TB)	2022	Grey literature	Normative literature review
Tuberculosis	Multiple products	WHO eTB guidelines	2022	Normative literature	Normative literature review
Tuberculosis	Multiple products	WHO Global Tuberculosis Report	2022	Normative literature	Normative literature review
Tuberculosis	Diagnostics	Tests for tuberculosis infection: landscape analysis	2021	Journal article	Candidate characteristics
Tuberculosis	Diagnostics	Validation and optimization of host immunological bio-signatures for a point-of-care test for TB disease	2021	Journal article	Candidate characteristics
Tuberculosis	Drugs	Union World Conference on Lung Health	2022	Conference proceedings	Candidate characteristics
Tuberculosis	Drugs	After the UNGA High-Level Meeting on Tuberculosis—what next and how?	2019	Journal article	Candidate characteristics
Tuberculosis	Drugs	Anti-tuberculosis treatment strategies and drug development: challenges and priorities	2022	Journal article	Candidate characteristics
Tuberculosis	Drugs	Working Group on New TB Drugs pipeline	2022	Pipeline database	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Tuberculosis	Multiple products	New developments and insights in the improvement of Mycobacterium tuberculosis vaccines and diagnostics within the End TB Strategy	2021	Journal article	Candidate characteristics
Tuberculosis	Multiple products	Lancet Commission on TB	2019	Journal articles	Candidate characteristics
Tuberculosis	Vaccine	Tuberculosis Vaccine Initiative pipeline of vaccines	2022	Pipeline database	Candidate characteristics
Tuberculosis	Vaccine	Working Group on New TB Vaccines Clinical Pipeline	2022	Pipeline database	Candidate characteristics
Tuberculosis	Vaccines	Global Forum on TB Vaccine	2022	Conference proceedings	Candidate characteristics
Tuberculosis	Vaccines	An overview of the development of new vaccines for tuberculosis	2020	Journal article	Candidate characteristics
Tuberculosis	Vaccines	Key recent advances in TB vaccine development and understanding of protective immune responses against Mycobacterium tuberculosis	2020	Journal article	Candidate characteristics
Tuberculosis	Vaccines	Tuberculosis vaccine development: from classic to clinical candidates	2020	Journal article	Candidate characteristics
Tuberculosis	Vaccines	Meeting report: Virtual Global Forum on Tuberculosis Vaccines, 20–22 April 2021	2021	Meeting report	Candidate characteristics
Tuberculosis	Vaccines	Report of the high-level consultation on accelerating the development of the M72/AS01E tuberculosis vaccine candidate	2019	Meeting report	Candidate characteristics
Zika	Diagnostics	WHO Target Product Profiles for better diagnostic tests for Zika virus infection	2016	Normative literature	Normative literature review
Zika	Diagnostics	US FDA Zika virus response updates from FDA	2023	Regulatory body	Regulatory
Zika	Diagnostics	Evaluation of Zika rapid tests as aids for clinical diagnosis and epidemic preparedness	2022	Journal article	Candidate characteristics
Zika	Drugs	Advancement in the development of therapeutics against Zika virus infection	2022	Journal article	Candidate characteristics
Zika	Drugs	Therapeutic candidates for the Zika virus identified by a high-throughput screen for Zika protease inhibitors	2020	Journal article	Candidate characteristics
Zika	Drugs	Zika vaccines and therapeutics: landscape analysis and challenges ahead	2018	Journal article	Candidate characteristics

Disease	Product	Resource name	Year	Resource type	Review focus
Zika	Drugs	Zika virus infection and development of drug therapeutics	2022	Journal article	Candidate characteristics
Zika	Vaccine	Current advances in Zika vaccine development	2022	Journal article	Candidate characteristics
Zika	Vaccine	Current status of Zika virus vaccines: Successes and challenges	2020	Journal article	Candidate characteristics
Zika	Vaccine	Zika vaccine pre-clinical and clinical data review with perspectives on the future development	2020	Journal article	Candidate characteristics
Zika	Vaccine	WHO vaccine pipeline tracker	2023	Pipeline database	Candidate characteristics

6 Annex 2: Experts consulted

Name	Organisation
Nicaise Ndembi	Africa CDC
Evelyn Gitau	African Population Health Research Centre
Patrick Tippoo	Biovac
Melinda Moree	Bill and Melinda Gates Foundation (now retired)
Sarah Ewart	Bill and Melinda Gates Foundation
Grace Lang	Bill and Melinda Gates Foundation, China
Javier Guzman	Centre for Global Development
Gavin Yamey	Duke University
Paulo Gadelha	Fiocruz
Elizabeth Ponder	Innovative Medicines Accelerator, Stanford
Maria Freire	The Freire Group
Robert Eiss	National Institutes of Health
Jean Lang	Sanofi
Robert Fraser Terry	World Health Organization