












## Supplementary information to:

### Review article:

# A PARADIGM SHIFT IN THE DETECTION OF BLOODBORNE PATHOGENS: CONVENTIONAL APPROACHES TO RECENT DETECTION TECHNIQUES

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**Supplementary Table 1:** Common human bloodborne pathogens and the diseases they cause

Class	Bloodborne pathogens	Diseases caused
Viruses	<ul style="list-style-type: none"> <li>Human Cytomegalovirus- HHV5</li> <li>Human Immunodeficiency Virus</li> <li>Hepatitis B</li> <li>Hepatitis C</li> <li>Hepatitis A</li> <li>West Nile Virus</li> <li>Dengue Virus</li> <li>Epstein-Barr virus (EBV)</li> </ul>	<ul style="list-style-type: none"> <li>Infectious mononucleosis</li> <li>Acquired Immunodeficiency syndrome</li> <li>Chronic liver infection</li> <li>Chronic liver infection</li> <li>Contagious liver infection</li> <li>Encephalitis, meningitis, or meningoencephalitis</li> <li>Dengue fever</li> <li>Mononucleosis</li> </ul>
Fungus	<ul style="list-style-type: none"> <li><i>Candida albicans</i></li> <li><i>Candida parapsilosis</i></li> <li><i>Candida glabrata</i></li> <li><i>Cryptococcus</i></li> <li><i>Histoplasma</i></li> <li><i>Aspergillus species</i></li> </ul>	<ul style="list-style-type: none"> <li>Candidiasis</li> <li>Sepsis and tissue infections</li> <li>Urogenital tract infections</li> <li>Cryptococcosis</li> <li>Histoplasmosis</li> <li>Aspergillosis</li> </ul>
Bacteria	<ul style="list-style-type: none"> <li><i>Staphylococcus aureus</i> (Gram +)</li> <li><i>Staphylococcus epidermidis</i> (Gram +)</li> <li><i>Escherichia coli</i> (Gram -)</li> <li><b>Enterococcus faecalis</b></li> <li><b>Enterococcus faecium</b></li> <li><b>Streptococcus pneumoniae</b></li> <li><b>Haemophilus influenzae</b></li> <li><b>Acinetobacter baumannii</b></li> <li><b>Brucella abortus</b></li> </ul>	<ul style="list-style-type: none"> <li>Prosthetic joint infections and valve endocarditis</li> <li>Sepsis, neonatal meningitis, urinal tract infections</li> <li>Bacteremia and Endocarditis</li> <li>Intra-abdominal infection and endocarditis</li> <li>Pneumococcal disease</li> <li>Meningitis and Bacteremia</li> <li>Pneumonia and bacteremia</li> <li>Brucellosis</li> </ul>
Parasites	<ul style="list-style-type: none"> <li><i>Babesia microti</i> &amp; <i>Babesia divergens</i></li> <li><i>Trypanosoma cruzi</i></li> <li><i>Leishmania donovani</i></li> <li><i>Plasmodium berghei</i></li> <li><i>Treponema pallidum</i></li> </ul>	<ul style="list-style-type: none"> <li>Babesiosis</li> <li>Chagas disease</li> <li>Leishmaniasis</li> <li>Malaria</li> <li>Syphilis</li> </ul>

**Supplementary Table 2:** Classification of bloodborne pathogens prevalent in food animals

Food Animals	Blood parasites	Virus	Bacteria	Fungus
Goat	<i>Theileria hirci</i> <i>Theileria ovis</i> <i>Theileria separata</i> <i>Eperythrozoon ovis</i> <b>Babesia ovis</b> <b>Anaplasma ovis</b>	Rift Viral Fever	<i>Ehrlichia ruminantium</i> <b>Anaplasma marginale</b> COXIELLA BURNETII	<i>Aspergillus sp.</i> <i>Candida sp.</i>
Sheep	<i>Theileria hirci</i> <i>Theileria ovis</i> <i>Theileria separata</i> <i>Eperythrozoon ovis</i> <i>Babesia motasi</i> <i>Anaplasma ovis</i>	Rift Viral Fever	<i>Anaplasma phagocytophilum</i>	<i>Aspergillus sp.</i> <i>Candida sp.</i>
Cattle	<i>Theileria annulate</i> <i>Theileria sp</i> <i>Eperythrozoon wenyoni</i> <i>Babesia bigemina</i>	Bovine leukosis virus	<i>Haemotrophic mycoplasma</i> <i>Anaplasma marginale</i> <i>Anaplasma centrale</i>	<b>Trichophyton verrucosum</b>
Chicken	<i>Leucocytozoon caulleryi</i> <i>Leucocytozoon sabrazezi</i> , <i>Leucocytozoon schoutedeni</i> <i>Plasmodium gallinaceum</i> , <i>Plasmodium juxtannucleare</i> <i>Plasmodium durae</i> <i>Isospora</i>	Avian influenza	<i>Aegyptianella pullorum</i>	<i>Cryptococcus neoformans</i> <i>Histoplasma capsulatum</i>
Pig	<b>Babesia trautmanni</b> <b>Babesia perroncitoi</b> <b>Eperythrozoon suis</b> <b>Eperythrozoon parvum.</b> <b>Trypanosoma spp</b> <b>Anaplasma spp</b>	African swine fever virus	<i>Brucella suis</i>	<i>Aspergillus sp.</i>
Fish	HAEMOGREGARINA BIGEMINA <i>Cryptobia</i> <i>Trypanosoma</i>	Cyprinid herpesvirus-3 (CyHV-3),	<i>Aeromonas spp.</i> , <i>Mycobacterium</i> , <i>Salmonella spp.</i> , <i>Streptococcus spp.</i> , <i>Vibrio spp</i>	<i>Branchiomysces sanguinis</i> <i>Ichthyophonus hoferi</i>