**Table 1.** Enterobacteriaceae by CPE enzyme type for January-August 2017 and September 2017 atthe AMRL-CC, CHARM, NICD.

| Organism               | OXA-48 & Vari-<br>ants |              | NDM             |              | VIM             |              | КРС             |              |
|------------------------|------------------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|
|                        | Jan-Aug<br>2017        | Sept<br>2017 | Jan-Aug<br>2017 | Sept<br>2017 | Jan-Aug<br>2017 | Sept<br>2017 | Jan-Aug<br>2017 | Sept<br>2017 |
| Enterobacter aerogenes | 5                      | -            | -               | -            | -               | -            | -               | -            |
| Enterobacter asburiae  | -                      | -            | 2               | -            | -               | -            | -               | -            |
| Enterobacter cloacae   | 63                     | 1            | 14              | 3            | -               | -            | 2               | -            |
| Klebsiella pneumoniae  | 511                    | 51           | 129             | 3            | 7               | 1            | 2               | 3            |
| Providencia rettgeri   | 2                      | -            | 13              | 1            | -               | -            | -               | -            |
| Serratia marcescens    | 10                     | 1            | 1               | 1            | -               | -            | -               | -            |
| Total                  | 591                    | 53           | 159             | 8            | 7               | 1            | 4               | 3            |

**NDM**: New Delhi metallo-beta-lactamase; **OXA**: Oxacillinase; **VIM**: Verona intergron-encoded metallobeta-lactamase; **KPC**: *Klebsiella pneumoniae* carbapenemase.

# 6 BEYOND OUR BORDERS

The 'Beyond our Borders' column focuses on selected and current international diseases that may affect South Africans travelling abroad. Numbers correspond to Figure 7 on page 10.

### 1. Plague: Madagascar and Seychelles

See article on page 2.

#### 2. Cholera: Yemen

The cholera epidemic in Yemen is ongoing. The death toll has risen to 2 151 as of 7 October 2017. A total of 800 626 people from 22 provinces out of total 23 have been infected. Most deaths were reported from the northern province of Hajjah, while most cases were reported from the northwestern port province of Hodeidah on the coast of the Red Sea, both under control of Shiite Houthi rebels. The International Committee of the Red Cross/Crescent expected the epidemic to reach one million cases by the end of 2017.

#### 3. Anthrax: Namibia/Botswana

Anthrax has killed over 100 hippos in the Okavango River, which flows through the Caprivi strip in Namibia before entering Botswana. Wild animal anthrax is a natural occurrence in many areas in southern Africa. Outbreaks of anthrax in hippos are well recognised across the region. In dry seasons, there is a concentration of both animals and anthrax spores in reduced volums of water, and the infection is able to spread rapidly. Tourists and other persons are not at risk for anthrax if they avoid direct contact with the dead hippos. New sightings of hippo carcasses should be reported to game reserve or public health officials.

#### 4. Marburg virus disease, Uganda

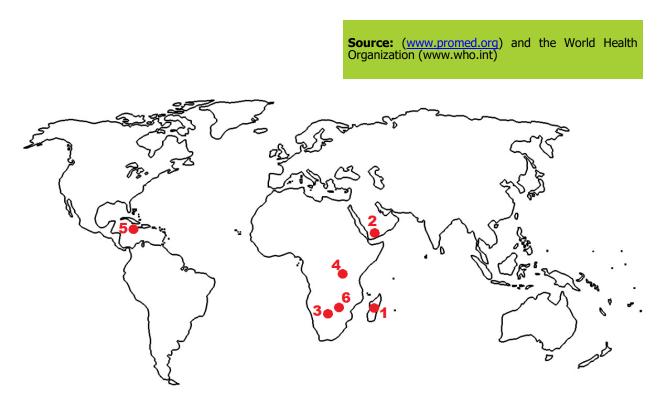
The Ugandan Ministry of Health announced the death of a confirmed case of Marburg virus disease. The case was a 50-year-old female from Chemuron village, Moyok Parish, Moyok sub-county, Kween District in Eastern Uganda. She presented with signs and symptoms suggestive of a viral hemorrhagic fever (VHF) and died on 11 Oct 2017. Subsequently 2 health care workers have developed symptoms and test results are pending. Over 155 persons are under observation.

## 5. Leptospirosis, Puerto Rico

Puerto Rico has reported at least 76 cases of suspected and confirmed leptospirosis, including a handful of deaths, during the month after Hurricane Maria. Around 50-70 cases of leptospirosis are seen per annum in Puerto Rico. This increase in cases is likely due to disruption of potable water services, and increased exposure to rodent urinecontaminated water following the flooding. Leptospirosis is notifiable in Puerto Rico.

#### 6. Typhoid, Zimbabwe

A localised outbreak of typhoid was reported on 23 October from Mbare's Matapi flats—a densely populated housing establishment in Harare. The outbreak has been blamed on water shortages, raw sewage spillages and uncollected garbage.



**Figure 7.** Current outbreaks that may have implications for travellers. Numbers correspond to text above. The red dot is the approximate location of the outbreak or event