Figure 3.1 Preoperative appearance of umbilical hernia in a female Gir calf (a), ventral hernia in an adult Gir cow (b). Radiographic (c) and ultrasonographic (d) appearance of umbilical hernia in a female Gir calf.
Figure 3.2  Intraoperative images of large hernial ring (a, c) repaired with decellularized aortic matrix (b) and decellularized diaphragmatic matrix (d).
Figure 4.1 Macroscopic images of native aorta (a), native diaphragm (b), decellularized aortic matrix (DAM) (c) and decellularized diaphragmatic matrix (DDM) (d) of bubaline origin.

Figure 4.2 Sterility test of stored phosphate buffered saline solution containing 0.048 % gentamicin and 0.1 % sodium azide on day 20.
Figure 4.3 Hematoxylin-eosin stained images of native aorta (a) and decellularized aortic matrix (d) (X 100; 200 µm scale bar). Masson’s trichrome stained images of native aorta (b) and decellularized aortic matrix (e) (X 100; 200 µm scale bar). Weigert’s resorcin fuschin stained images of native aorta (c) and decellularized aortic matrix (f) (X 100; 200 µm scale bar).
Figure 4.4 Hematoxylin-eosin stained images of native diaphragm (a) and decellularized diaphragmatic matrix (b) (X 400; 200 µm scale bar). Masson’s Trichrome stained images of native diaphragm (c) and decellularized diaphragmatic matrix (d) (X 400; 200 µm scale bar).
Figure 4.5 Hematoxylin-eosin stained images of bubaline diaphragm after biological detergent treatments at different time intervals (X400; 200 µm scale bar.)
Figure 4.6 Masson’s trichrome stained images of bubaline diaphragm after biological detergent treatments at different time intervals (X400 magnification, 200 µm scale bar).
Figure 4.7 SEM images of native aorta (NA) and decellularized aortic matrix (DAM).
Figure 4.8 SEM images of native diaphragm (ND) and decellularized diaphragmatic matrix (DDM).
Figure 4.9 Image showing spectra of DNA content of native aorta (a), native diaphragm (b), decellularized aortic matrix (c), decellularized diaphragmatic matrix (d) at 260 nm wavelength.
Figure 4.11 FTIR spectra of bovine skin collagen (BSC), native aorta (NA), native diaphragm (ND), decellularized aortic (DAM) and decellularized diaphragmatic (DDM) matrices showing different peaks.
Figure 4.15  Images of clinical follow-up showing inflammatory edema (case 11) (a) and dehiscence (case 12) (c) in DDM (II) group; suture abscess (case 1) (b) in DAM (II) group and of calf completely repaired with hernioplasty on day 25 (d) in group DAM (I).