<table>
<thead>
<tr>
<th>Plate No.</th>
<th>Caption</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pig showing distorted snout suffering from atrophic rhinitis.</td>
</tr>
<tr>
<td>2</td>
<td>Normal pig lungs observed after post mortem</td>
</tr>
<tr>
<td>3</td>
<td>Appearance of lungs on post mortem from pigs suffering from varied degree of atrophic rhinitis</td>
</tr>
<tr>
<td>4</td>
<td><em>B. bronchiseptica</em> colony showing beta (β) hemolysis on Bordet Gengou agar supplemented with 10% sheep blood</td>
</tr>
<tr>
<td>5</td>
<td>Gram’s smear of <em>B. bronchiseptica</em> observed under microscope; oil immersion</td>
</tr>
<tr>
<td>6</td>
<td>Scanning electron micrograph (SEM) of <em>B. bronchiseptica</em> cells grown on Bordet Gengou agar</td>
</tr>
<tr>
<td>7</td>
<td>Appearance of lesion on lung surface on post mortem at 14th day postinoculation of live <em>B. bronchiseptica</em> in rabbit</td>
</tr>
<tr>
<td>8</td>
<td>Scanning electron micrograph of tracheal epithelium on post mortem at 14th day postinoculation of <em>B. bronchiseptica</em> in rabbit</td>
</tr>
<tr>
<td></td>
<td>(a): Uninoculated control shows tracheal surface epithelium covered with normal healthy cilia. (X 1200)</td>
</tr>
<tr>
<td></td>
<td>(b): Uninoculated control showing normal architecture of tracheal epithelium with lengthy wavy cilia. (X 7500)</td>
</tr>
<tr>
<td></td>
<td>(c): Tracheal epithelium of experimental inoculation showing matting and reduction in height of cilia exposing openings of the goblet cells. (X 4000)</td>
</tr>
<tr>
<td></td>
<td>(d): Tracheal epithelium on experimental inoculation showing porous surface of epithelial layer with the presence of fibrilar and globular appearance of mucus. (X 4000)</td>
</tr>
</tbody>
</table>
(e): Tracheal epithelium on experimental inoculation showing colonization of bacteria on matted cilia. (X 6000)
(f): Tracheal epithelium on experimental inoculation showing focal area of disrupted cilia along with matting. (X 8000)

9 Scanning electron micrograph of lung on post mortem at 14th day postinoculation of *B. bronchiseptica* in rabbit

(a): Uninoculated control shows lung from control rabbit with normal architecture of the alveoli. (X 950)

(b): Lung on experimental inoculation showing thickening of the alveolar wall, obliteration of alveolar lumen with red blood cells, macrophages, fibrin and cellular debris. (X 950)

(c): Lung on experimental inoculation showing the alveolar wall covered with infiltrated macrophages, RBCs, fibrin and colonized bacterial rods on pneumocytes. SEM X 2,200

(d): Lung on experimental inoculation showing distorted bronchiolar opening with cellular debris. SEM X 500

10 Congo red binding test of *B. bronchiseptica* isolates showing positive brick red coloured colonies and pale coloured colonies showing negative reaction

11 Hemagglutination reaction of *B. bronchiseptica* isolates

12 *B. bronchiseptica* colonies showing Bvg positive (Bvg+) and Bvg negative (Bvg-) phase on different agar medias

13 SDS-PAGE profile of non modulated and modulated *B. bronchiseptica* isolates

14 Ventral surface of rabbit showing dermonecrotic reaction after intradermal inoculation of crude dermonecrotic toxin

15 Cytopathic effect of crude toxin from *B. bronchiseptica* on vero cell line stained with May Gruenwalds solution after 24 – 72 hr infection

16 Cytopathic effect of crude toxin from *B. bronchiseptica* on vero cell line stained with Giemsa's stain after 24 – 72 hr infection
17 PCR detection of *bugAS* toxin gene of *B. bronchiseptica*
18 PCR detection of *dnt* toxin gene of *B. bronchiseptica*
19 PCR detection of *achlyA* toxin gene of *B. bronchiseptica*
20 PCR detection of *fhaB* toxin gene of *B. bronchiseptica*
21 PCR detection of *fhaC* toxin gene of *B. bronchiseptica*
22 PCR detection of *fim2* toxin gene of *B. bronchiseptica*
23 PCR detection of *fim3* toxin gene of *B. bronchiseptica*
24 PCR detection of *tcfA* toxin gene of *B. bronchiseptica*
25 PCR detection of *KMT1* toxin gene of *P. multocida*
26 Detection of purified DNT toxin by SDS-PAGE
27 Detection of immunogenecity of DNT toxin by Western blot using hyperimmune serum against DNT raised in rabbit
28 Polypeptide profile of *B. bronchiseptica* isolates analyzed by SDS-PAGE
29 Lipopolysaccharide profile of *B. bronchiseptica* isolates by tricine SDS-PAGE
30 Plasmid DNA of *B. bronchiseptica* isolates
31 Different genotyping patterns of *Bordetella bronchiseptica* isolates with OPG–2 random primer
32 Different genotyping patterns of *Bordetella bronchiseptica* isolates with OPG–5 random primer
33 Restriction enzyme analysis of *B. bronchiseptica* isolates with *DdeI* enzyme
34 Restriction enzyme analysis of *B. bronchiseptica* isolates with *Hinfl* enzyme
Detection of major immunogens of *B. bronchiseptica* isolates

Detection of major immunogens of modulated *B. bronchiseptica* isolates

Purified DNA of *B. bronchiseptica* dermonecrotic toxin (*dnt*; 599bp fragment) gene after PCR amplification

Purified DNA of *B. bronchiseptica* adenylate cyclase hemolysin toxin (*achlyA*; 745bp fragment) gene after PCR amplification

Blue white selection of positive clones on LB agar containing ampicillin–IPTG–X-gal

PCR detection of *dnt* toxin (599bp fragment) gene of *B. bronchiseptica* in *E. coli* DH5α clones

PCR detection of *B. bronchiseptica* Ac-hlyA toxin (745bp fragment) gene in *E. coli* DH5α clones