## ROUTES OF ADMINISTRATION, VOLUME, AND NEEDLE GAUGES FOR DRUG ADMINISTRATIONS

University of South Florida provides the following as guidelines only for use by IACUC-certified faculty and staff.

<table>
<thead>
<tr>
<th>Species</th>
<th>PO</th>
<th>SC</th>
<th>IM</th>
<th>IP</th>
<th>IV (bolus)</th>
<th>IV (slow)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mouse</strong></td>
<td>10 μl/g</td>
<td>10 μl/g scuff, dorsum ≤23 gauge</td>
<td>Insufficient muscle mass; Not recommended</td>
<td>20 μl/g ≤21 gauge</td>
<td>5 μl/g lateral tail v. ≤21 gauge</td>
<td>20 μl/g lateral tail v. ≤21 gauge</td>
</tr>
<tr>
<td></td>
<td>20-22 gauge gavage needle</td>
<td>≤23 gauge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rat</strong></td>
<td>10 μl/g</td>
<td>10 μl/g scuff, dorsum ≤20 gauge</td>
<td>300 μl/site quadriceps m. ≤21 gauge</td>
<td>20 μl/g ≤21 gauge</td>
<td>5 μl/g lateral tail or saphenous v. ≤21 gauge</td>
<td>20 μl/g lateral tail or saphenous v. ≤21 gauge</td>
</tr>
<tr>
<td></td>
<td>18-20 gauge gavage needle</td>
<td>≤20 gauge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cat</strong></td>
<td>10 ml/kg</td>
<td>1 ml/kg scuff, dorsum ≤20 gauge</td>
<td>0.25 ml/kg quadriceps m. ≤20 gauge</td>
<td>5 ml/kg ≤20 gauge</td>
<td>2 ml/kg cephalic or saphenous v. ≤21 gauge</td>
<td>10 ml/kg cephalic or saphenous v. ≤21 gauge</td>
</tr>
<tr>
<td><strong>Rabbit</strong></td>
<td>10 ml/kg</td>
<td>1 ml/kg scuff, dorsum ≤20 gauge</td>
<td>0.25 ml/kg quadriceps m. ≤20 gauge</td>
<td>5 ml/kg ≤20 gauge</td>
<td>2 ml/kg marginal ear v. ≤21 gauge</td>
<td>10 ml/kg marginal ear v. ≤21 gauge</td>
</tr>
<tr>
<td><strong>Pig</strong></td>
<td>10 ml/kg</td>
<td>1 ml/kg scuff, dorsum ≤20 gauge</td>
<td>0.25 ml/kg quadriceps m. ≤20 gauge</td>
<td>1 ml/kg ≤20 gauge</td>
<td>2.5 ml/kg ear v. ≤21 gauge</td>
<td>5 ml/kg ear v. ≤21 gauge</td>
</tr>
<tr>
<td><strong>Bird</strong></td>
<td>1-3% bdy wt pectoral, interscapular, inguinal folds ≤21 gauge</td>
<td>0.2 ml/100 g pectoral m. ≤21 gauge</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dog</strong></td>
<td>5 ml/kg</td>
<td>1 ml/kg scuff, dorsum ≤20 gauge</td>
<td>0.25 ml/kg quadriceps m. ≤20 gauge</td>
<td>2 ml/kg ≤20 gauge</td>
<td>2.5 ml/kg cephalic v. ≤20 gauge</td>
<td>5 ml/kg cephalic v. ≤20 gauge</td>
</tr>
</tbody>
</table>

1Does not apply to polyclonal/monoclonal antibody production (refer to IACUC Principle & Procedure XVII & XVIII), or fluid replacement volumes.

2≤3 SC sites per day.

3≤2 IM sites per day.

45-10 minutes duration.