

**Table S1.** Parameter values used to evaluate the human safety of a 40,000 bait ORV campaign for dogs in Goa, India.

	Value	Lower bound	Upper bound
<b>Vaccine Specific parameters for SPBN GASGAS</b>			
Probability a SAE will occur in an immune competent person who has made contact with the bait on a mucosal membrane (direct or via lick)	0.00009	0.0000009	0.009
Probability a SAE will occur in an immune competent person who has made contact with the bait transdermally (direct or via bite)	0.00009	0.0000009	0.009
Probability a SAE will occur in an immune competent person who has received a severe bite from an animal who has recently consumed the bait	0.00009	0.0000009	0.009
Probability a SAE will occur in an immune compromised person who has made contact with the bait on a mucosal membrane (direct or via lick)	0.0378	0.011	0.378
Probability a SAE will occur in an immune compromised person who has made contact with the bait transdermally (direct or via bite)	0.0142	0.00142	0.142
Probability a SAE will occur in an immune compromised person who has received a severe bite from an animal who has recently consumed the bait	0.0779	0.0366	0.779
Percent of animals who shed the vaccine in their saliva	0.2	0.1	0.3
Length of time virus can be shed in the saliva of an animal that has recently consumed the bait (days)	0.5	0.16667	1
Length of time the virus stays viable when left in the environment (days)	4	1.5	15
Probability an animal will experience a vaccine induced rabies case	0	0	0
Death rate of a rabid animal	0.071429	0.05	0.1
Probability someone with a severe bite that penetrates the cranial cavity or abdomen will not benefit from PEP	0.7	0.6	0.8
Probability that someone who receives PEP for any exposure other than a severe bite will not benefit from PEP	0	0	0
<b>Region-specific parameters</b>			
What proportion (0 to 1) of the population is severely immunocompromised?	0.001	0.0001	0.01
What proportion of the baits are expected to be ingested by the target animal?	0.8	0.4	1
What proportion of the baits are expected to be ingested by the non-target animal?	0.005	0.0025	0.0075
What proportion of the <i>unconsumed baits</i> are expected to be left in the environment?	0.1	0.05	0.15
How often will humans come into contact with a bait that is left in the environment? (Contacts/bait in environment/day)	0.00002	0.000002	0.002
What is the probability that a human who makes direct contact with a found bait will contaminate a mucosal membrane? (e.g. an open wound)	0.002	0.001	0.003
What is the probability that a human who makes direct contact with a found bait will get the vaccine inside their body (through nose, mouth, etc.)?	0.00002	0.000002	0.002

What percent of the human population will be licked each day by the target animal (Percent licked per year/365)?	0.002778	0.0003	0.03
What percent of the human population will be licked each day by the non-target animal (Percent licked per year/365)?	0.00002	0.000002	0.002
What is the probability that a human who is licked by an animal will receive the lick on a mucosal membrane (e.g. open wound, mouth)?	0.002	0.0002	0.02
What percent of the human population will be bitten each day by the target animal (Percent bitten per year/365)?	0.003044	0.0015	0.0045
What percent of the human population will be bitten each day by the non-target animal (Percent bitten per year/365)?	0.00002	0.000002	0.002
What proportion of rabid target animals will bite a human before it dies?	0.4	0.2	0.6
What proportion of rabid non-target animals will bite a human before it dies?	0.002	0.0002	0.02
Among rabid target animals that bite, how many humans, on average, will the rabid target animal bite per day?	0.266667	0.027	2.7
Among rabid non-target animals that bite, how many humans, on average, will the rabid non-target animal bite per day?	0.002	0.0002	0.02
What is the probability a bite from an animal will penetrate the cranial or peritoneal cavity?	0.00002	0.000002	0.002
What proportion of humans who have physically handled the bait in such a manner that the vaccine touched a mucosal membrane or entered the body will seek care?	0.5	0.05	1
What proportion of humans that have been licked on a mucosal membrane (e.g. open wound, mouth) by an animal that had recently consumed the bait will seek care?	0.7	0.07	1
What proportion of humans that have been bitten by an animal that has recently consumed the bait will seek care?	0.8	0.08	1
What proportion of humans that have received a severe bite (one that penetrates the cranial or abdomen) will seek care?	0.999	0.1	1