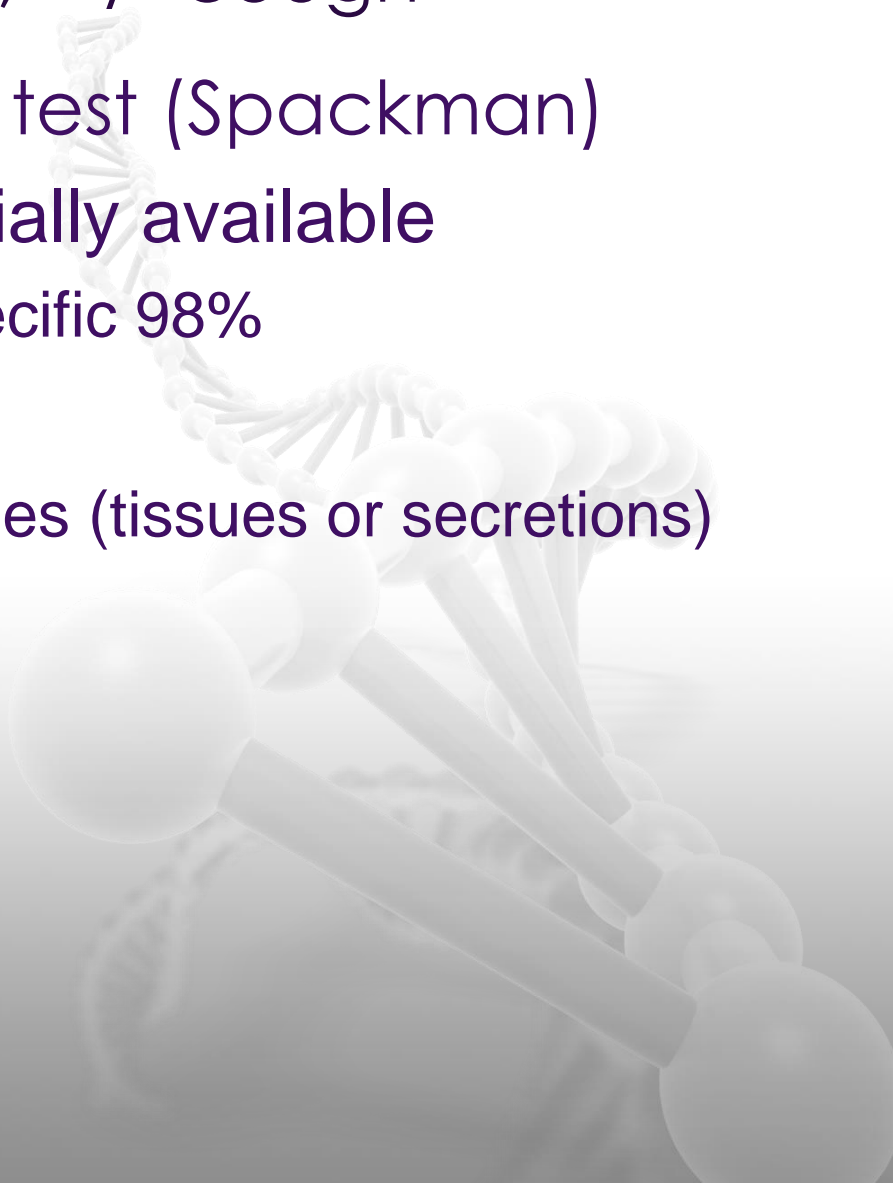




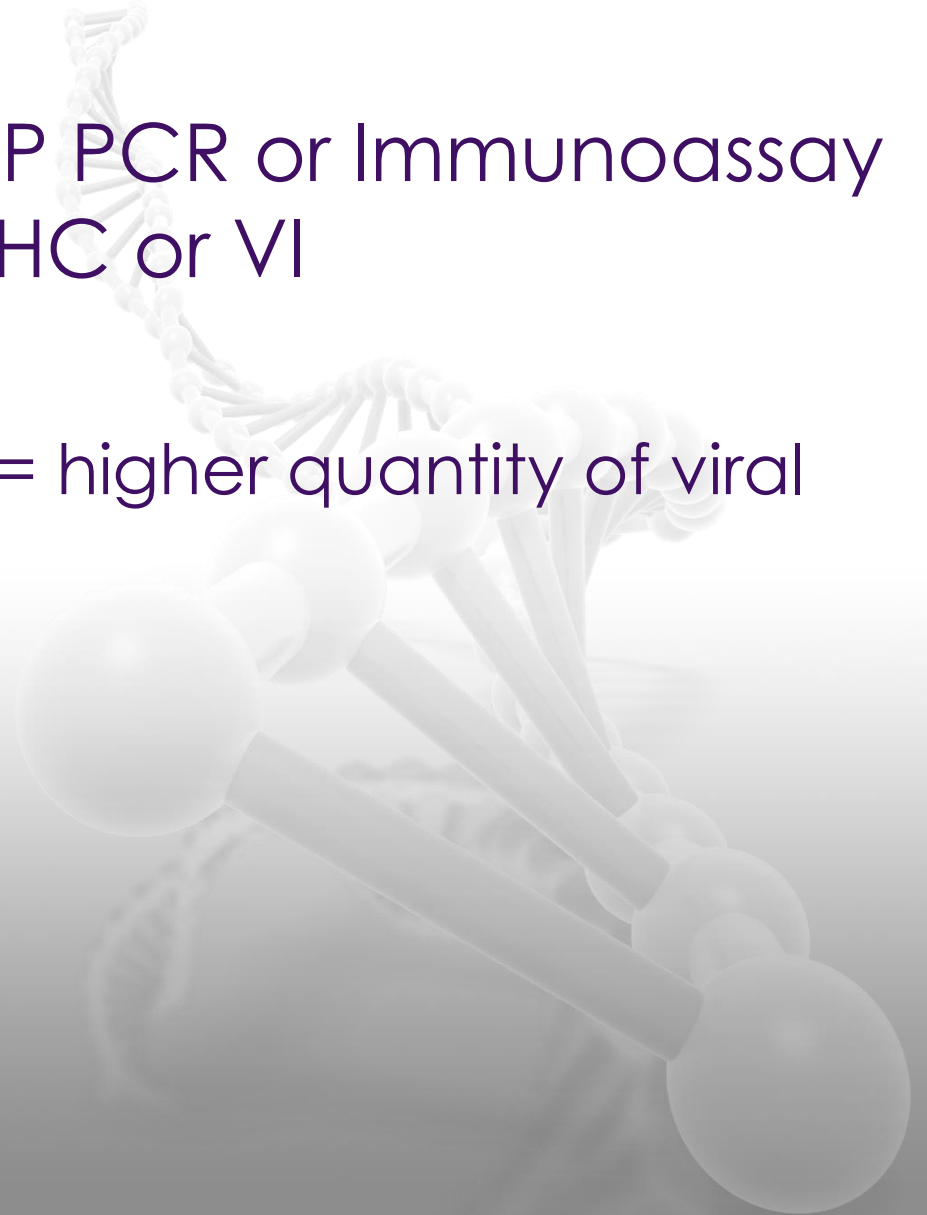
Regional lists of viruses and appropriate diagnostic tests

Ian, Marie, Sabrina,
Ariel, Hualan, Frank,
Take, Kristien, Nicola

- Select Appropriate Pig with fever, serous nasal discharge, +/- cough
 - Flu A Matrix RRT-PCR test (Spackman)
 - Routine and commercially available
 - Sensitive 98% and Specific 98%
 - Sample types:
 - Respiratory tract samples (tissues or secretions)
 - Bronchial swabs
 - Nasal swabs
 - Oral fluids
 - Tracheal swabs
 - Aerosols
 - Water
 - Environment
- 

•Flu A Matrix Real-Time RT-PCR test

- More sensitive than NP PCR or Immunoassay or Histopathology or IHC or VI
- Semi-quantitative
 - (Ct values → lower Ct = higher quantity of viral RNA)



• Which Sample Type Is Best?

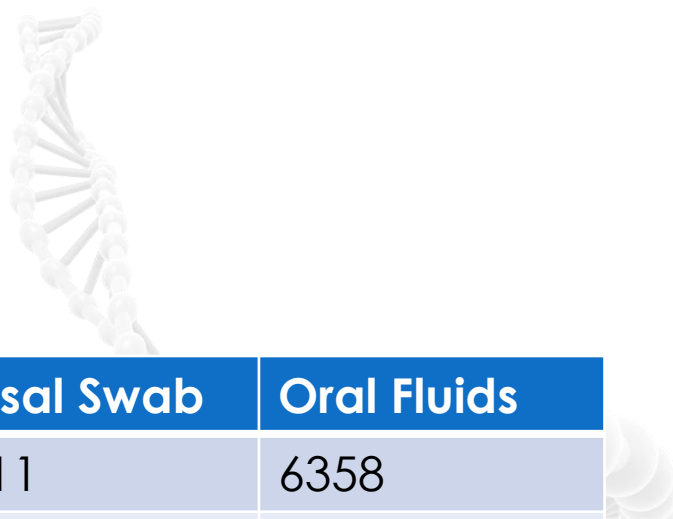


ISU-VDL and UMN-VDL Flu Surveillance (2 years of shared data)

		Flu A Matrix PCR				Total	Ct<35
		Ct<25	Ct 25-<30	Ct 30-<35	Ct 35-<40		
Lung	# VI attempted	353	185	121	336	995	659
	# VI Positive	334	158	35	13	540	527
	VI Success rate	94.6%	85.4%	28.9%	3.9%	54.3%	80.0%
Nasal Swab	# VI attempted	156	147	160	8	471	463
	# VI Positive	129	91	37	0	257	257
	VI Success rate	82.7%	61.9%	23.1%	0.0%	54.6%	55.5%
Oral Fluid	# VI attempted	36	62	119	0	217	217
	# VI Positive	15	17	11	NA	43	43
	VI Success rate	41.7%	27.4%	9.2%	NA	19.8%	19.8%

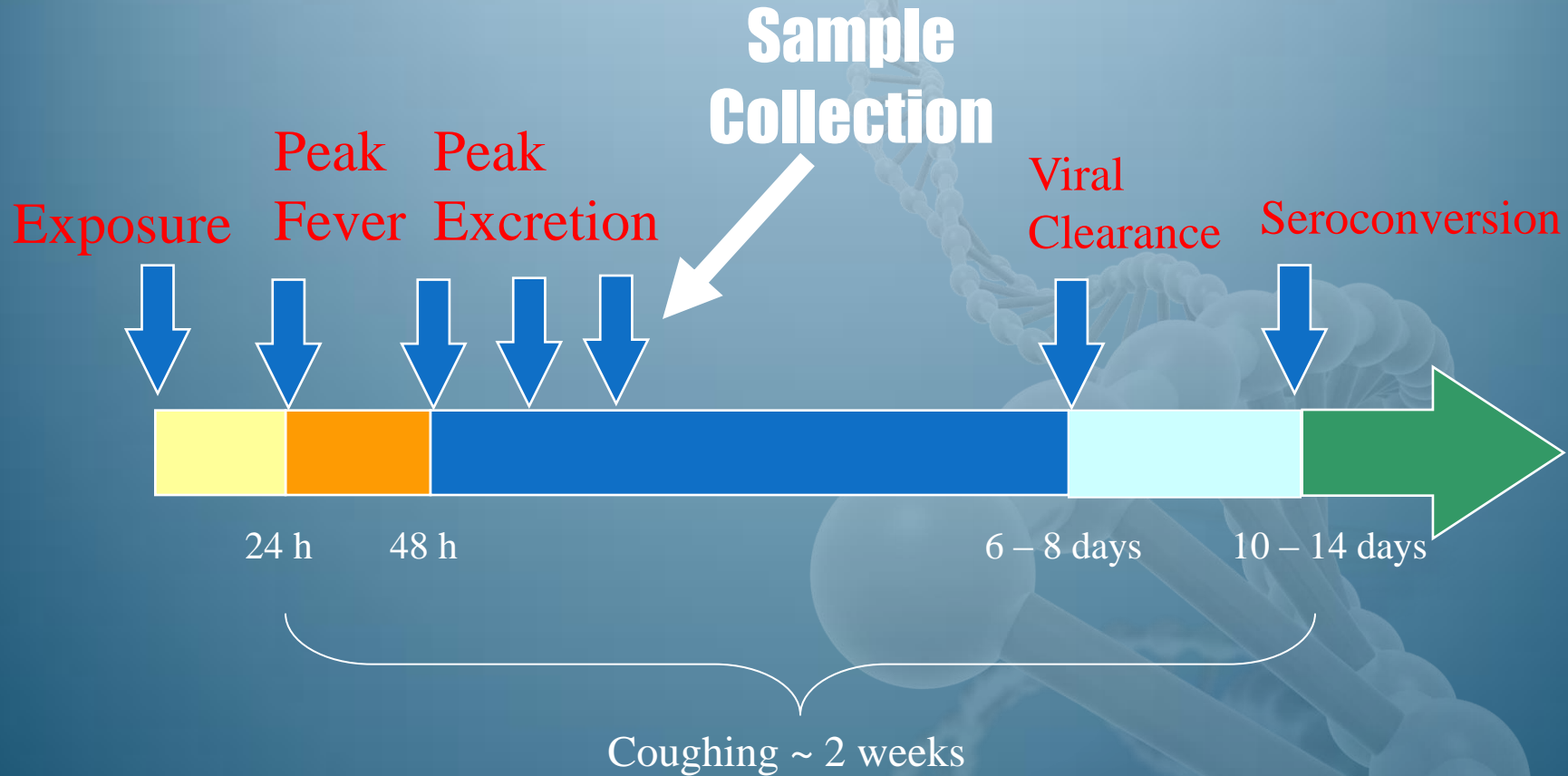
SIV VI success rate especially on oral fluid is relatively low and needs improvement

•U of MN VDL 2013 numbers



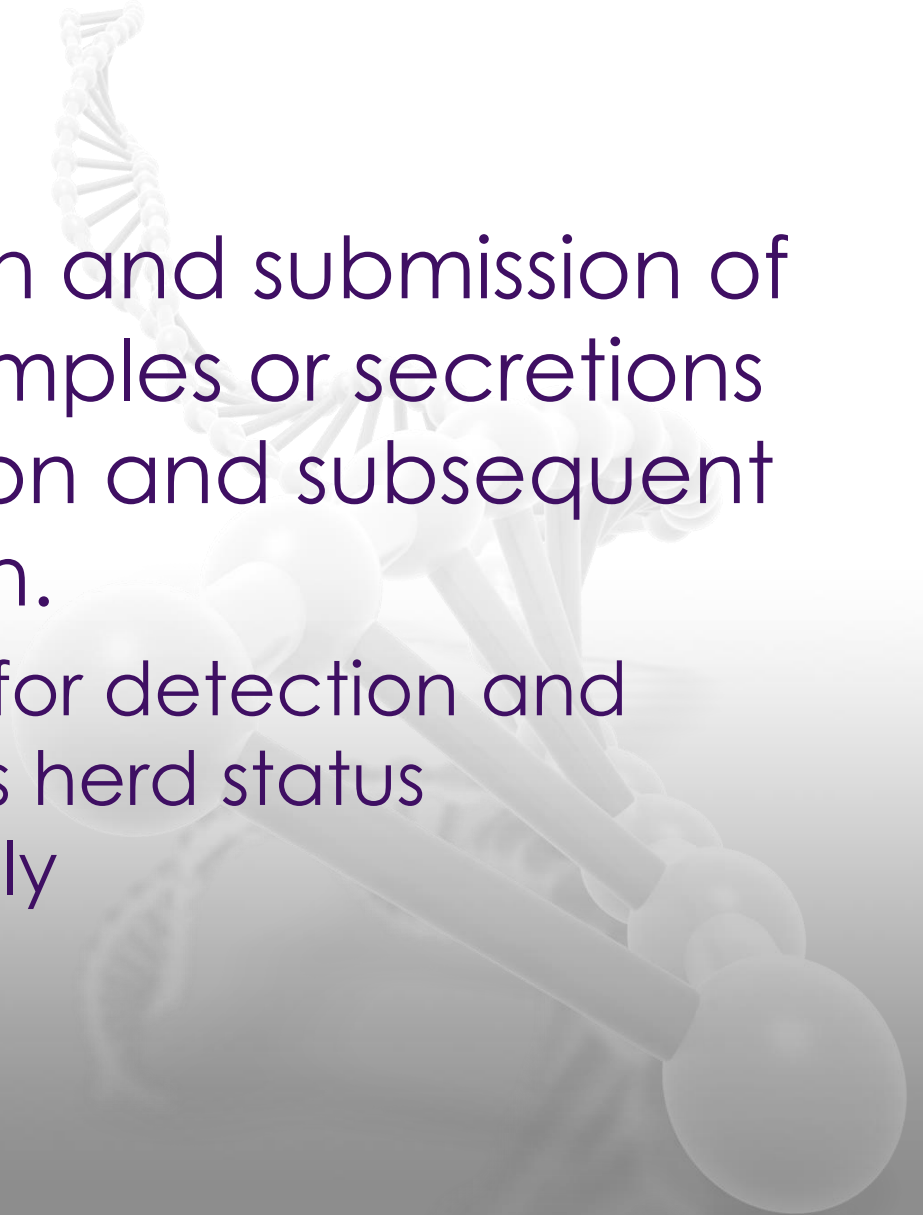
	Lung	Nasal Swab	Oral Fluids
# of Flu PCRs	80	5211	6358
% Positive`	49%	10%	17%
Average Ct Value	23.04	27.59	29.06
% VI Positive	75%	82%	15%

• Diagnostic Tests for the Detection of Influenza Virus in Swine



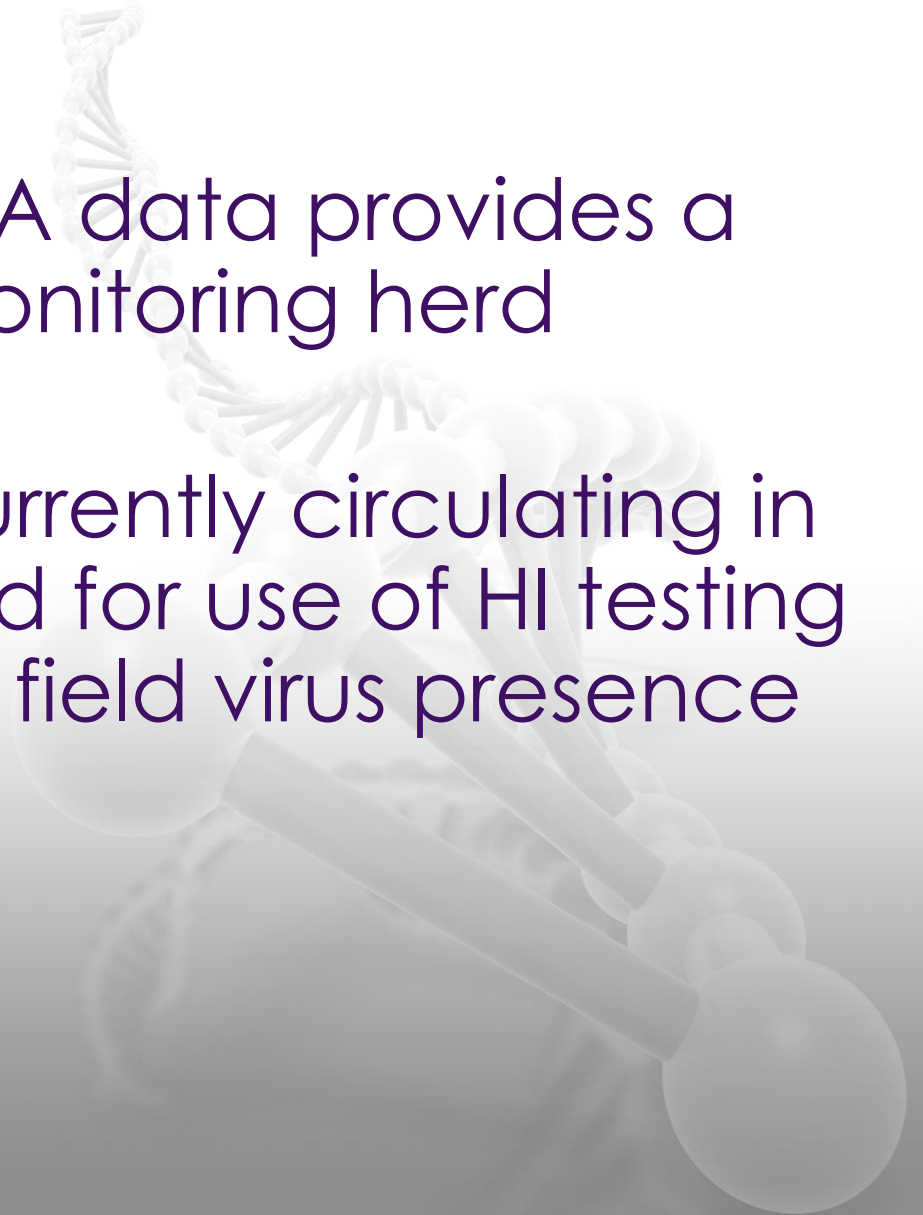
•Detection of Influenza A virus in pigs

- Proper pig selection and submission of respiratory tract samples or secretions best for virus isolation and subsequent full characterization.
- Oral fluids very useful for detection and subtyping and reveals herd status (pos/neg) quickly/easily



•Serology

- Consistency of ELISA data provides a reliable basis for monitoring herd exposure
- Variety of strains currently circulating in swine dictates need for use of HI testing to monitor/confirm field virus presence





THANK YOU