

FIG. 1

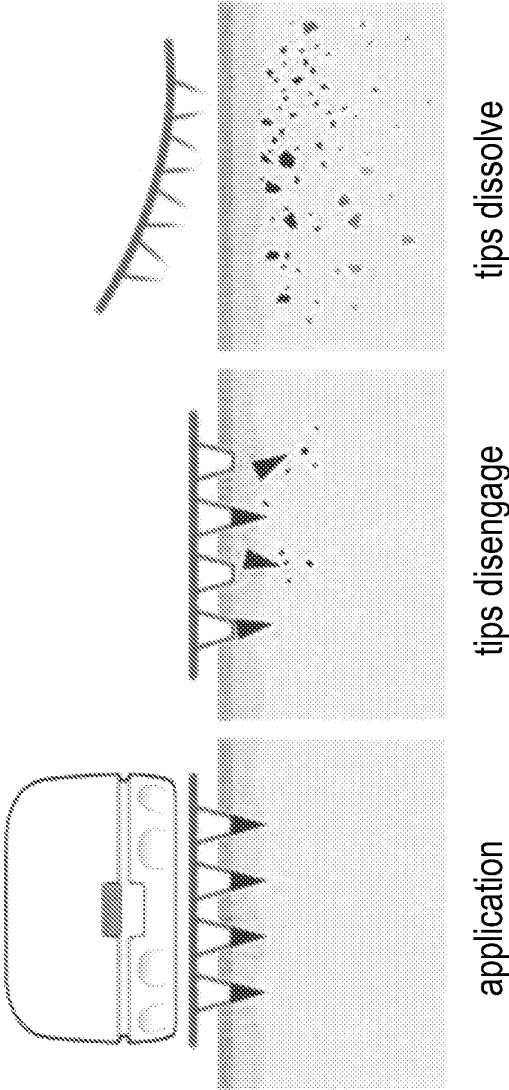


FIG. 2

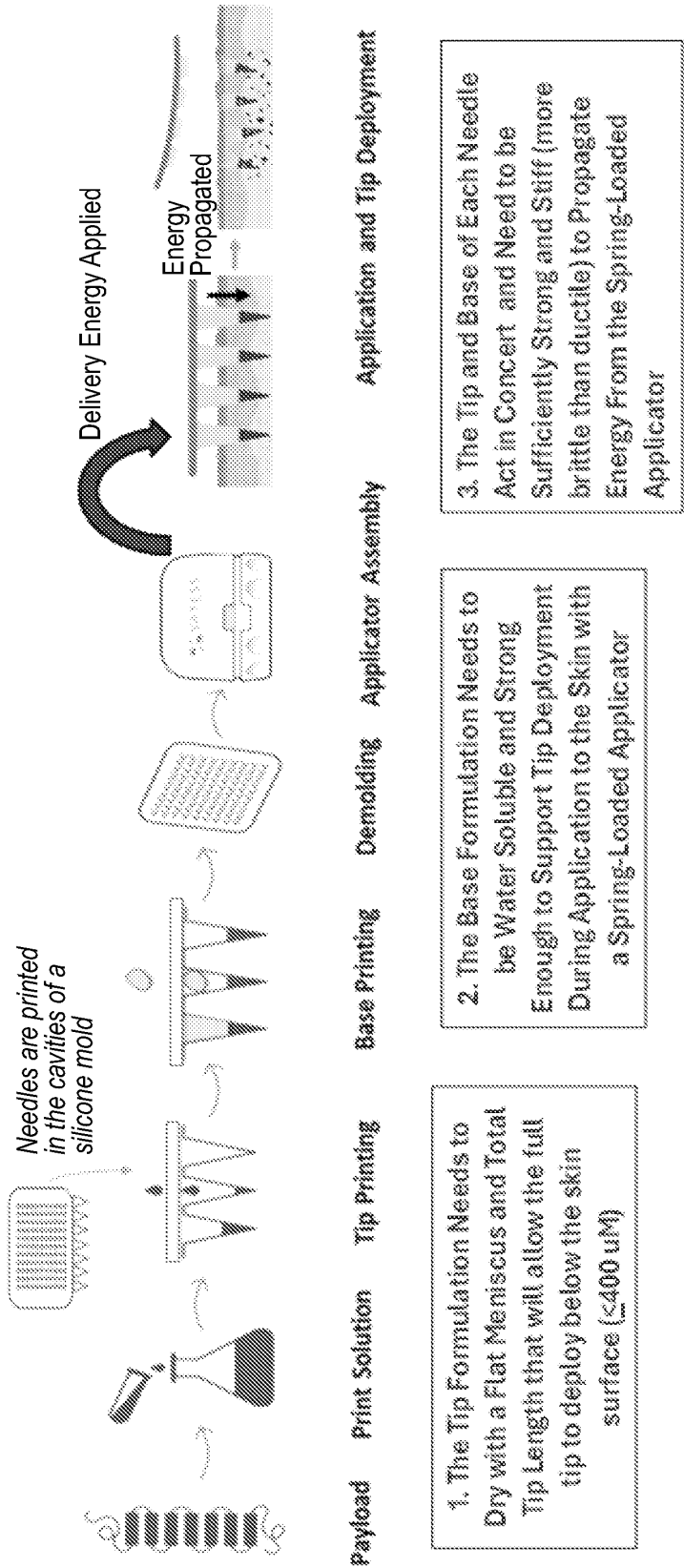


FIG. 3

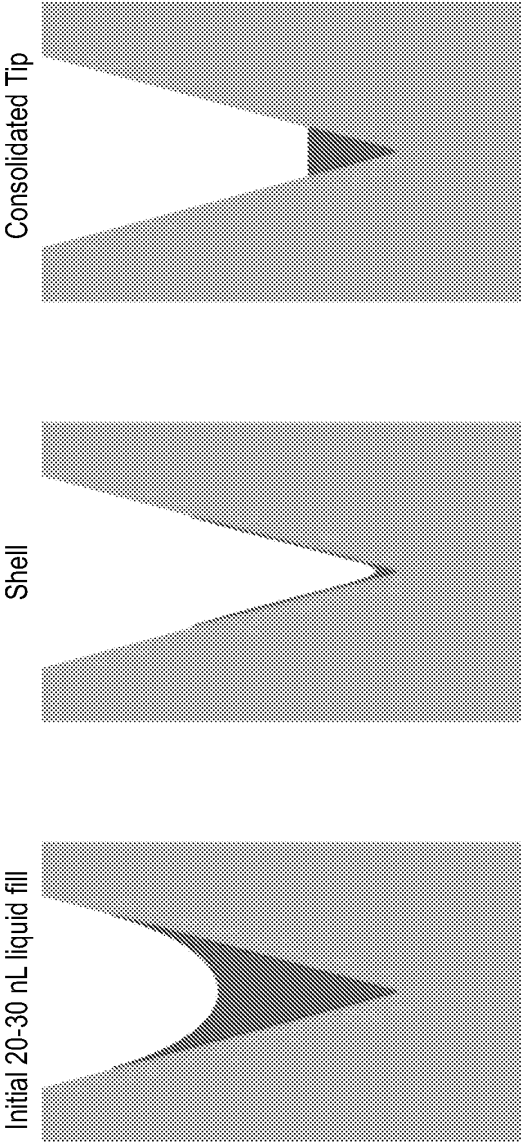


FIG. 4

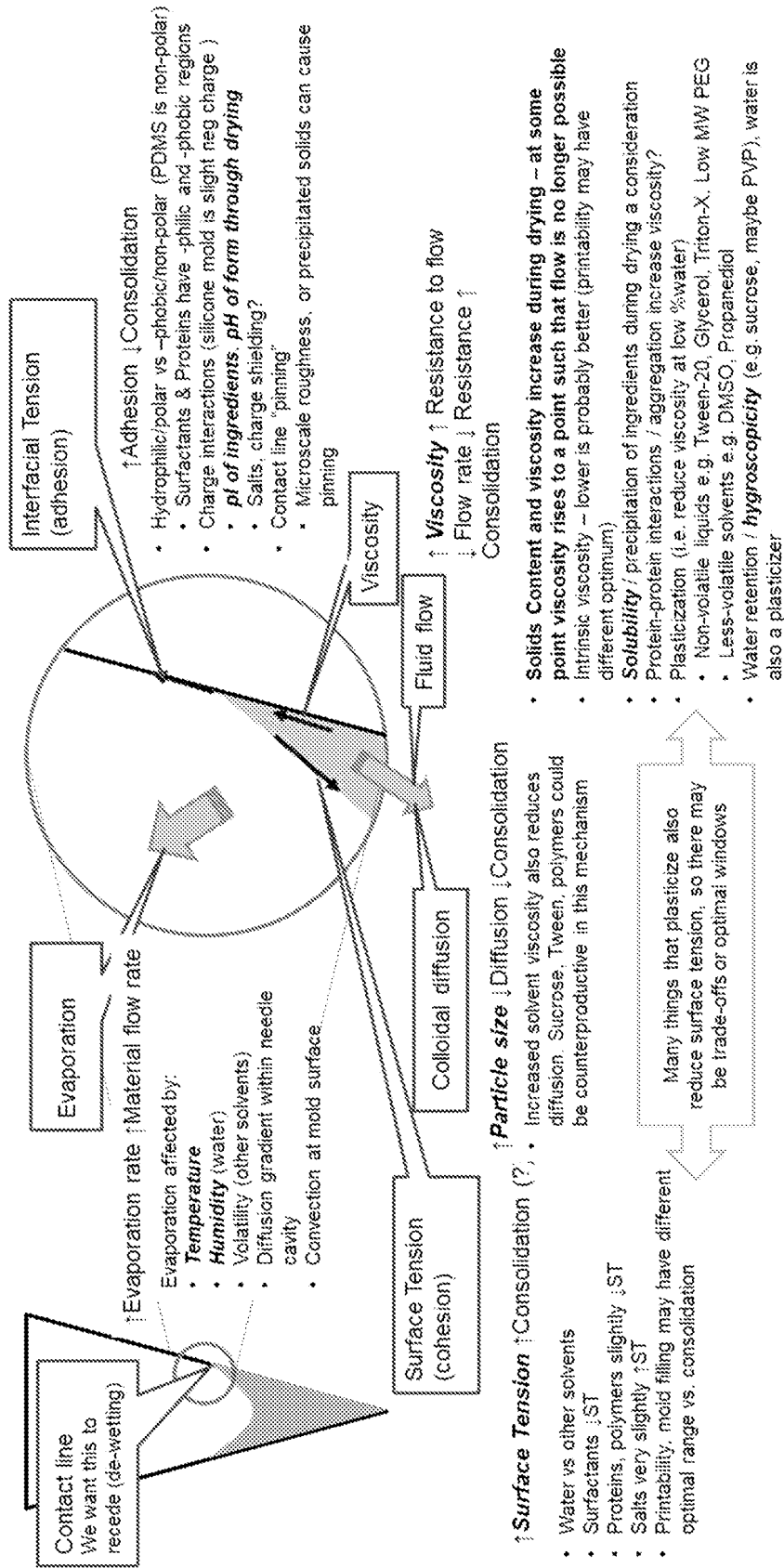


FIG. 5

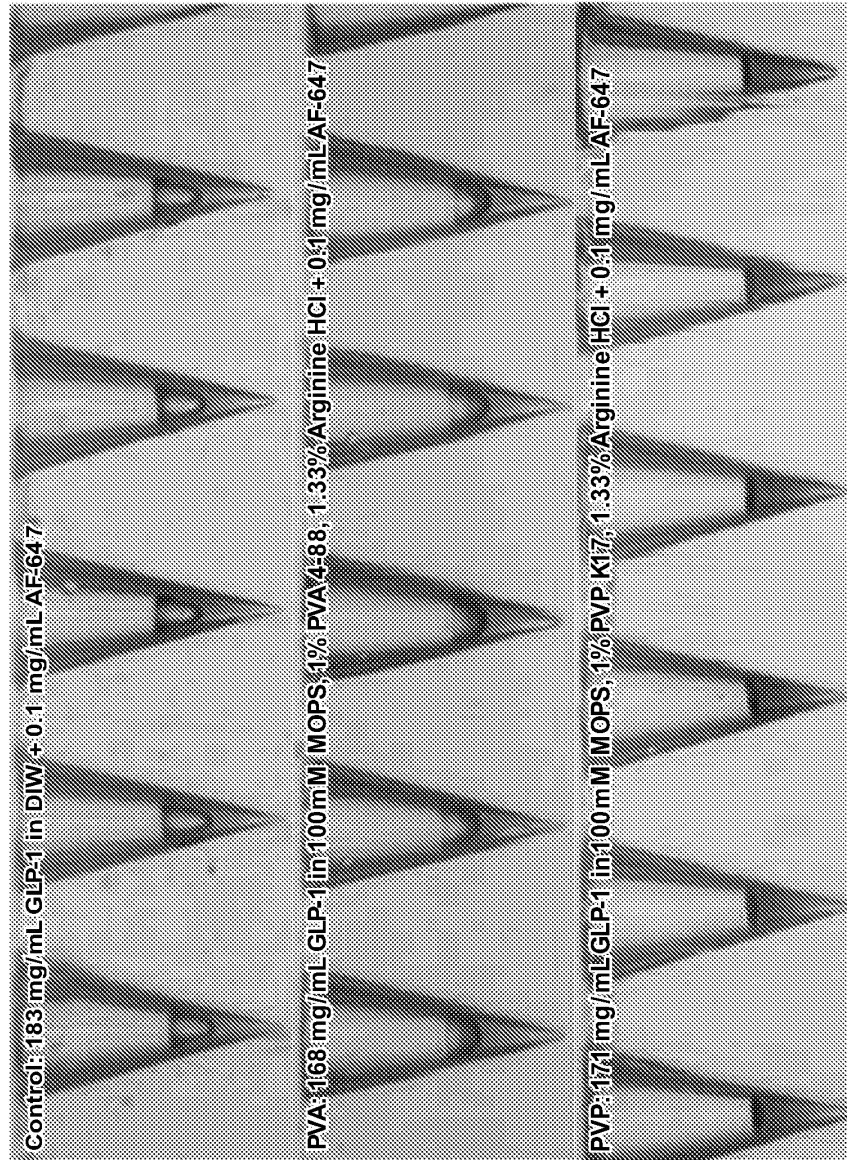
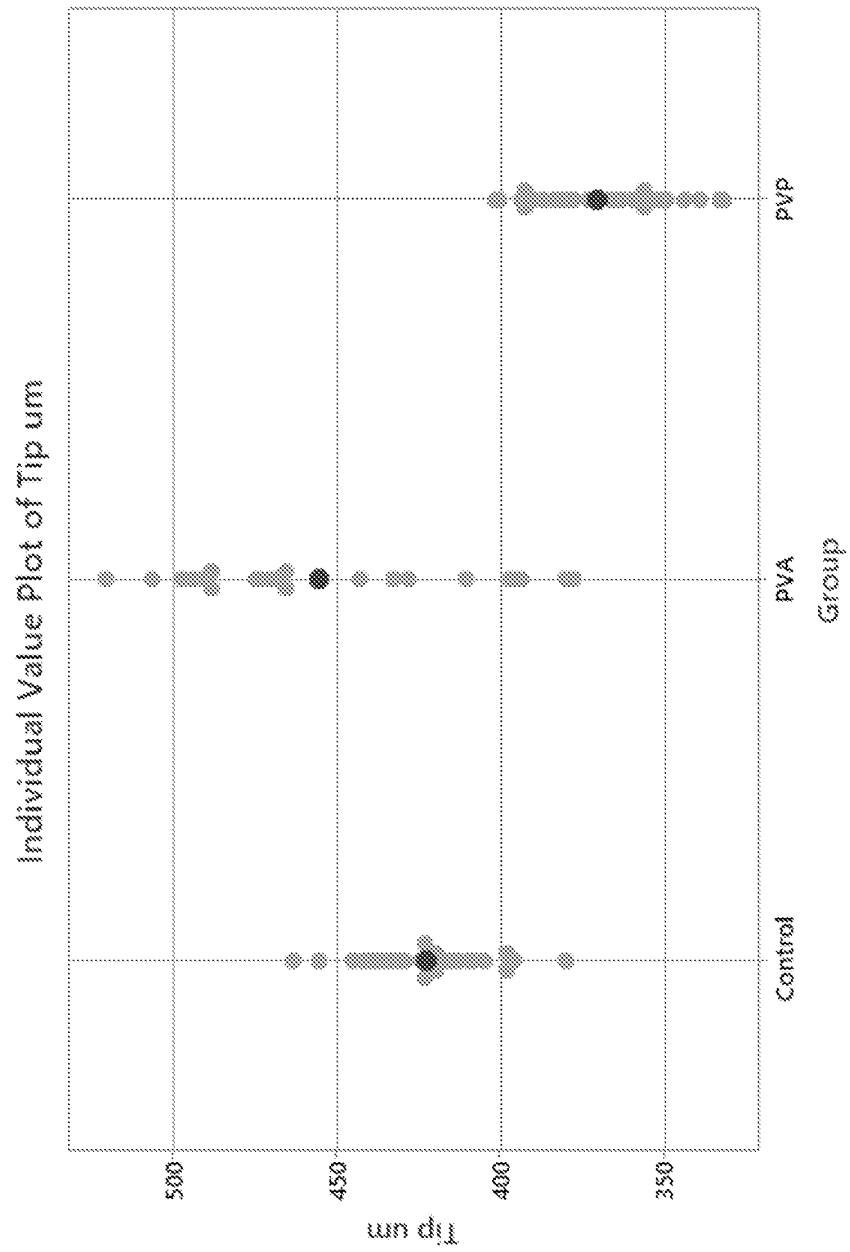


FIG. 6



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FIG. 7

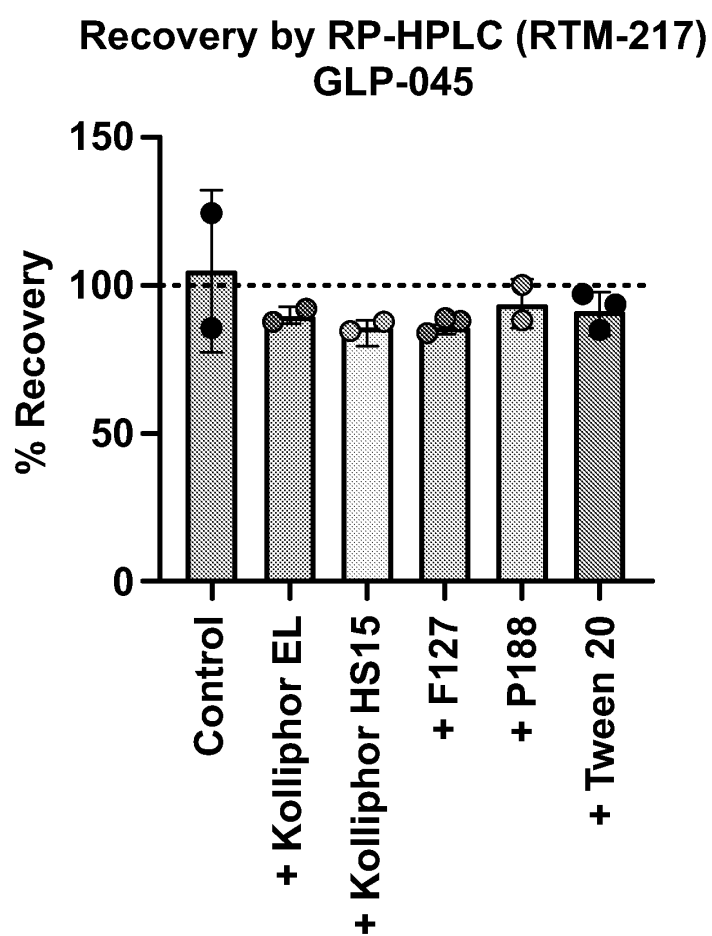


FIG. 8

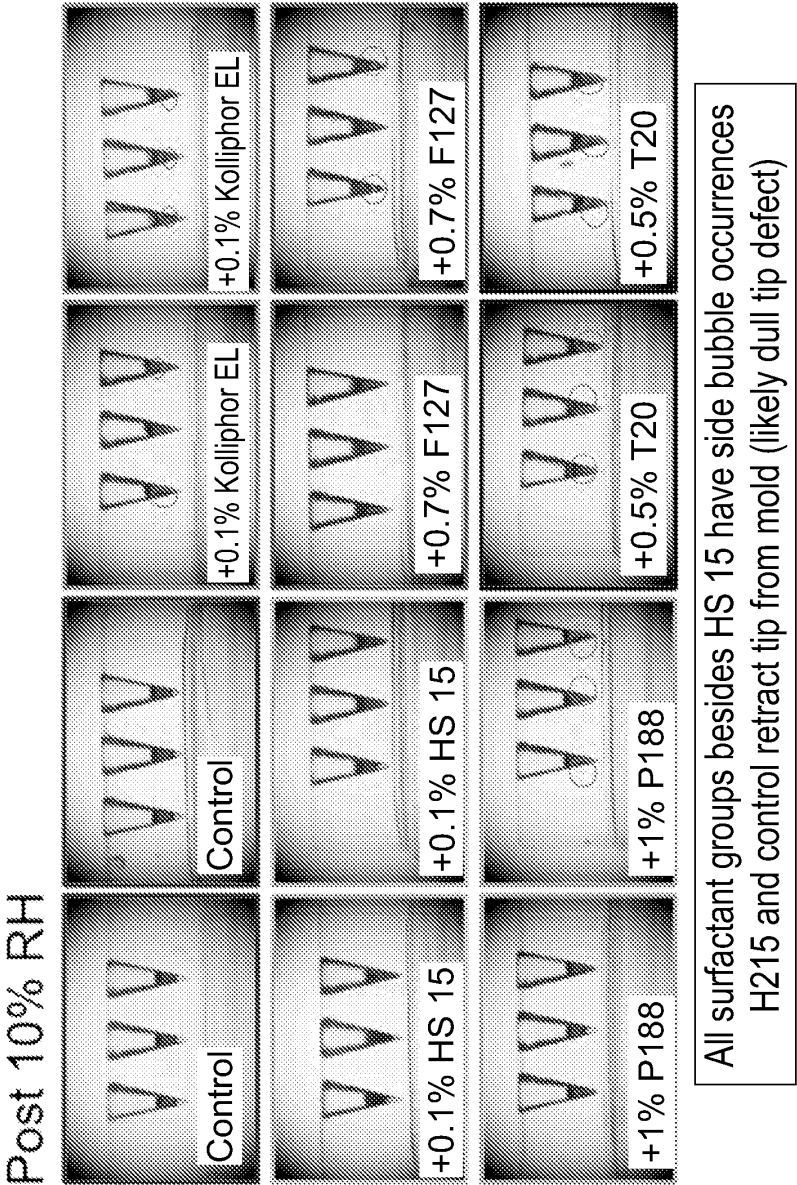


FIG. 9

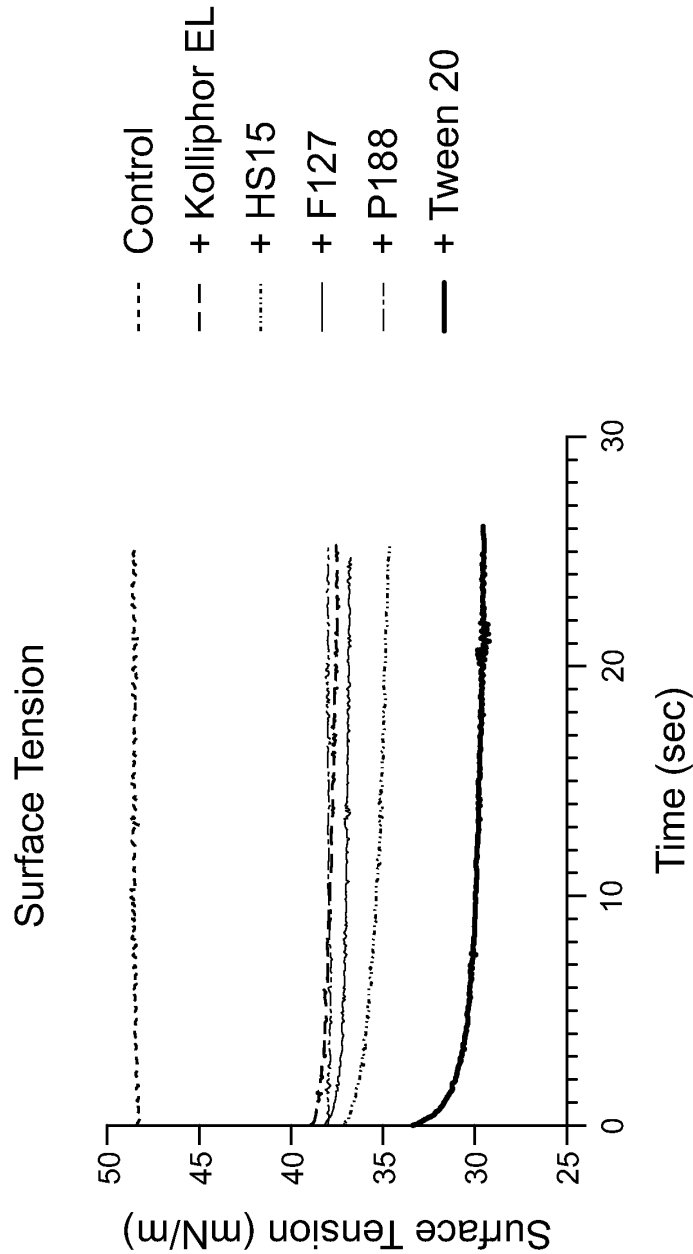


FIG. 10
Shell length as a portion of overall tip length

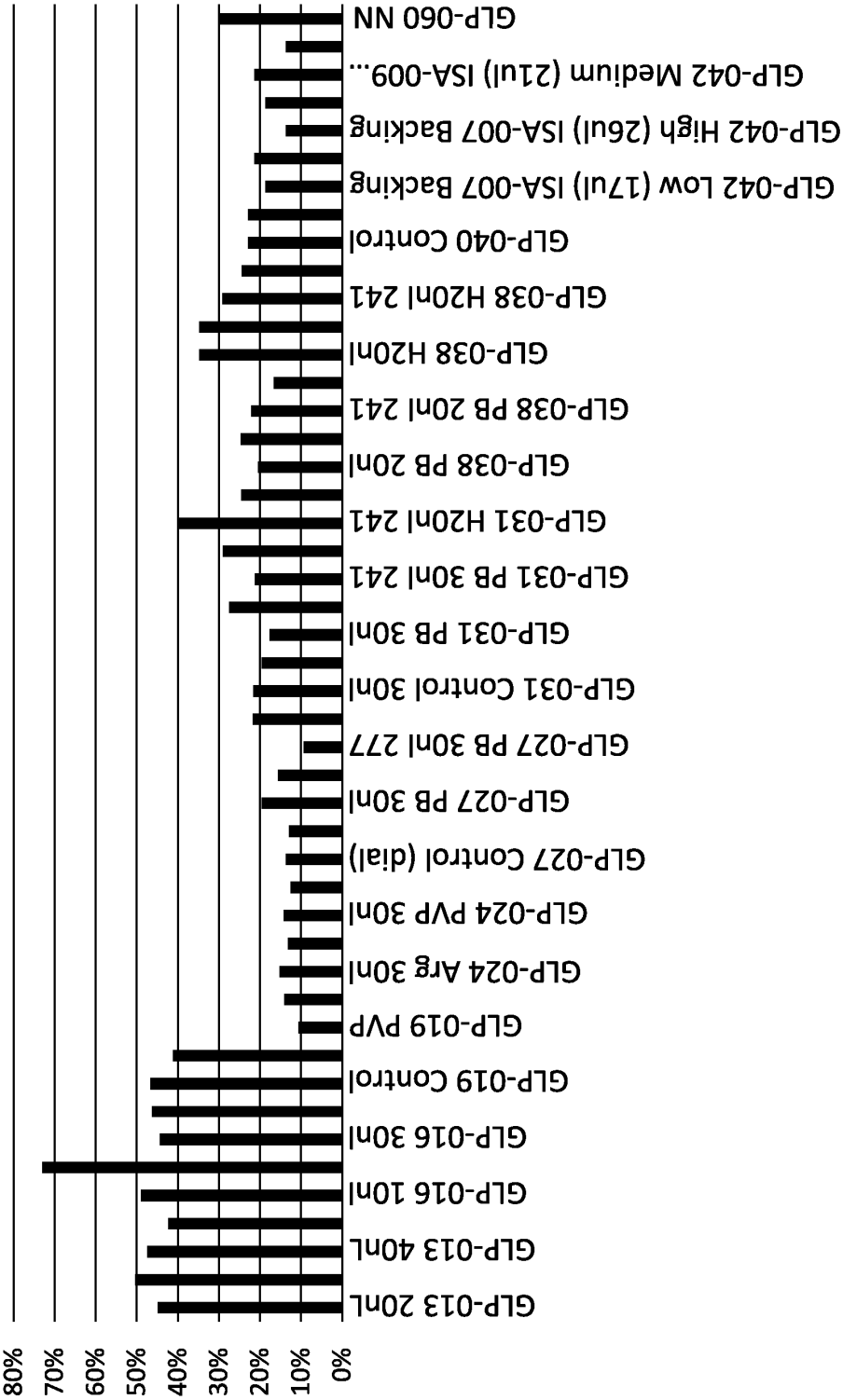


FIG. 11

% Delivery into ex vivo porcine skin

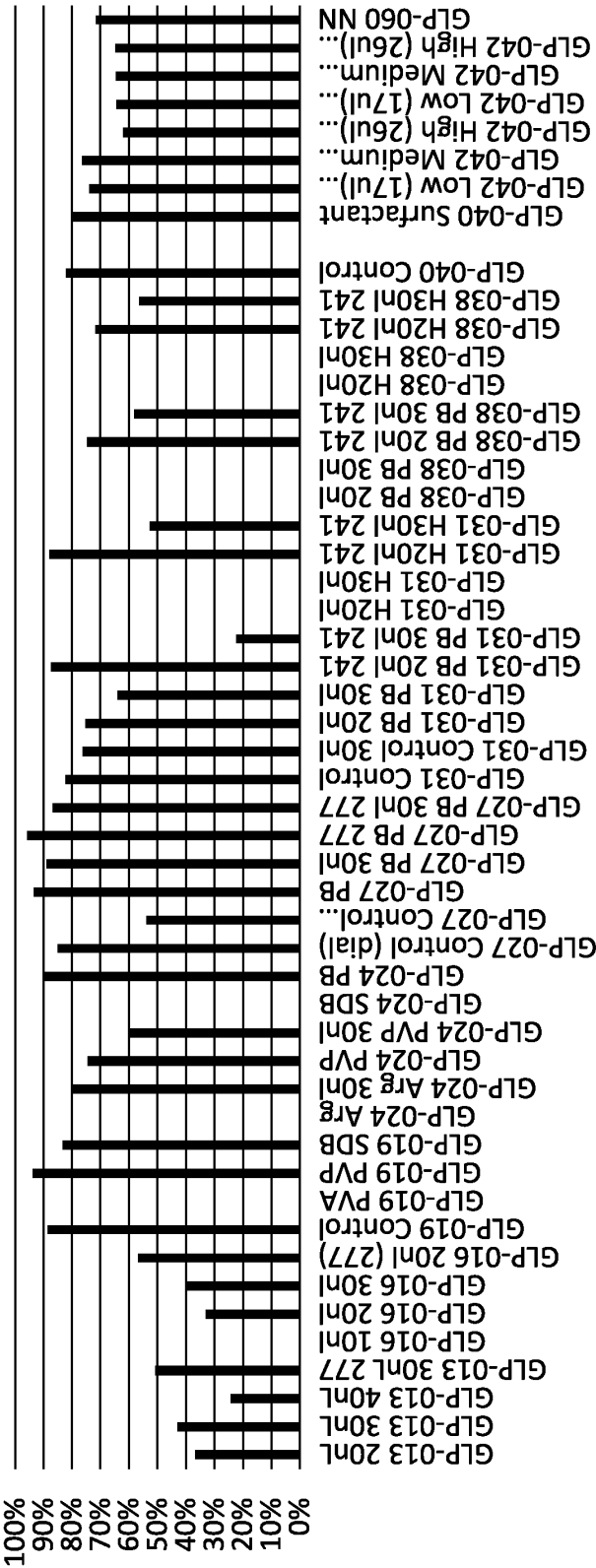


FIG. 12

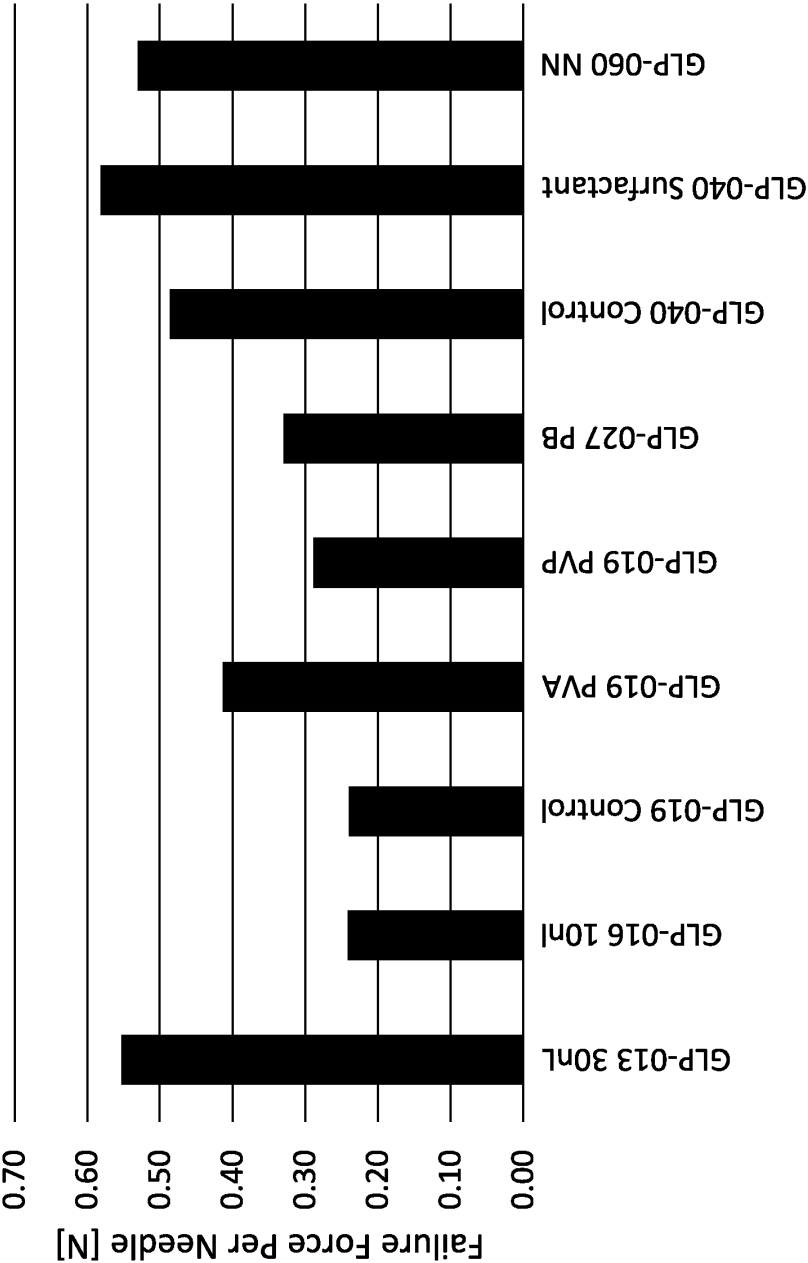


FIG. 13A

Deployment depth (um)- VX-103 vs GLP-1

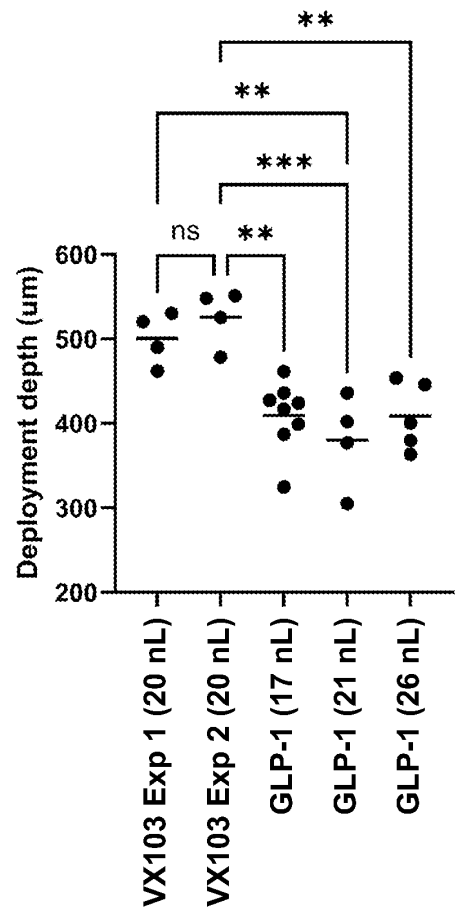


FIG. 13B

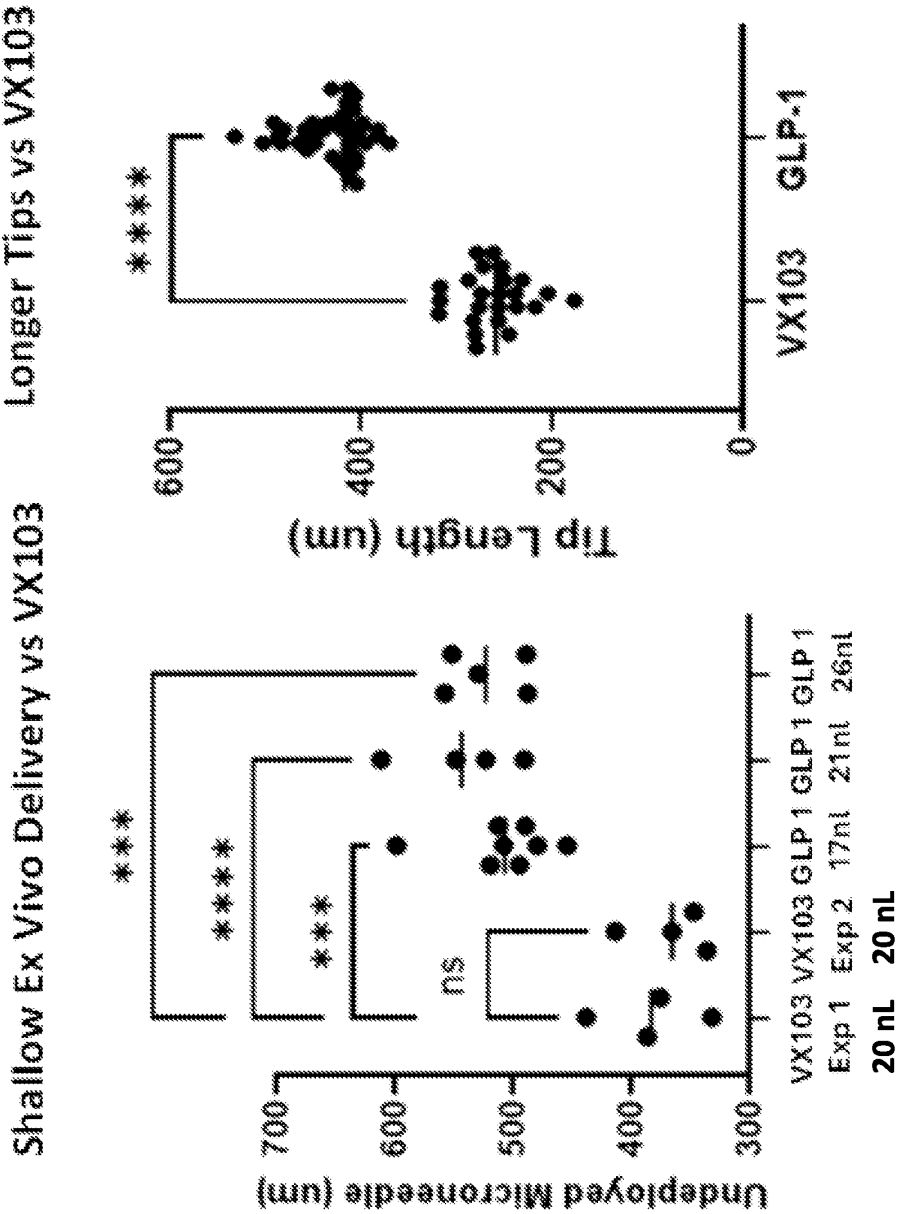


FIG. 13C

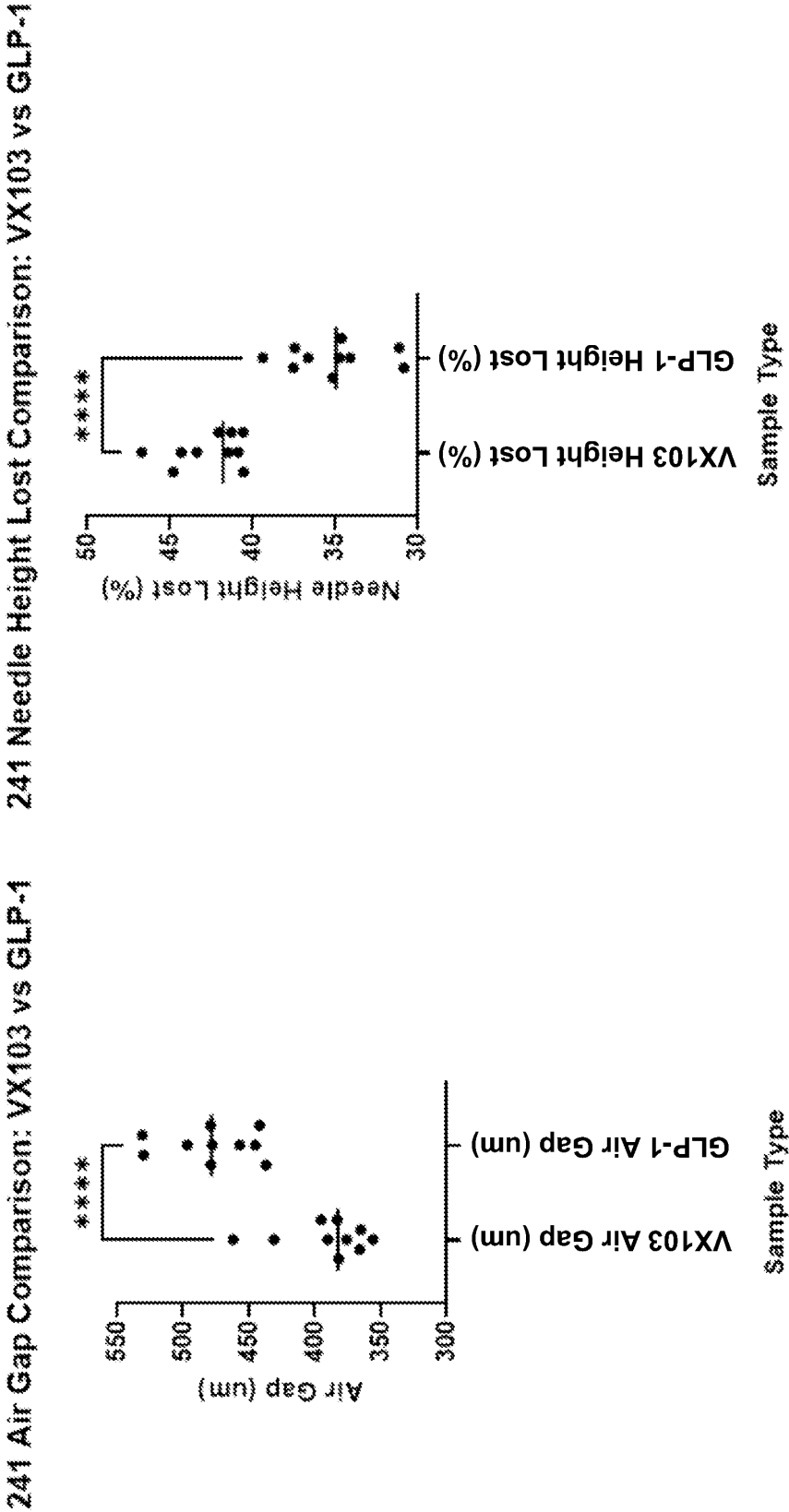
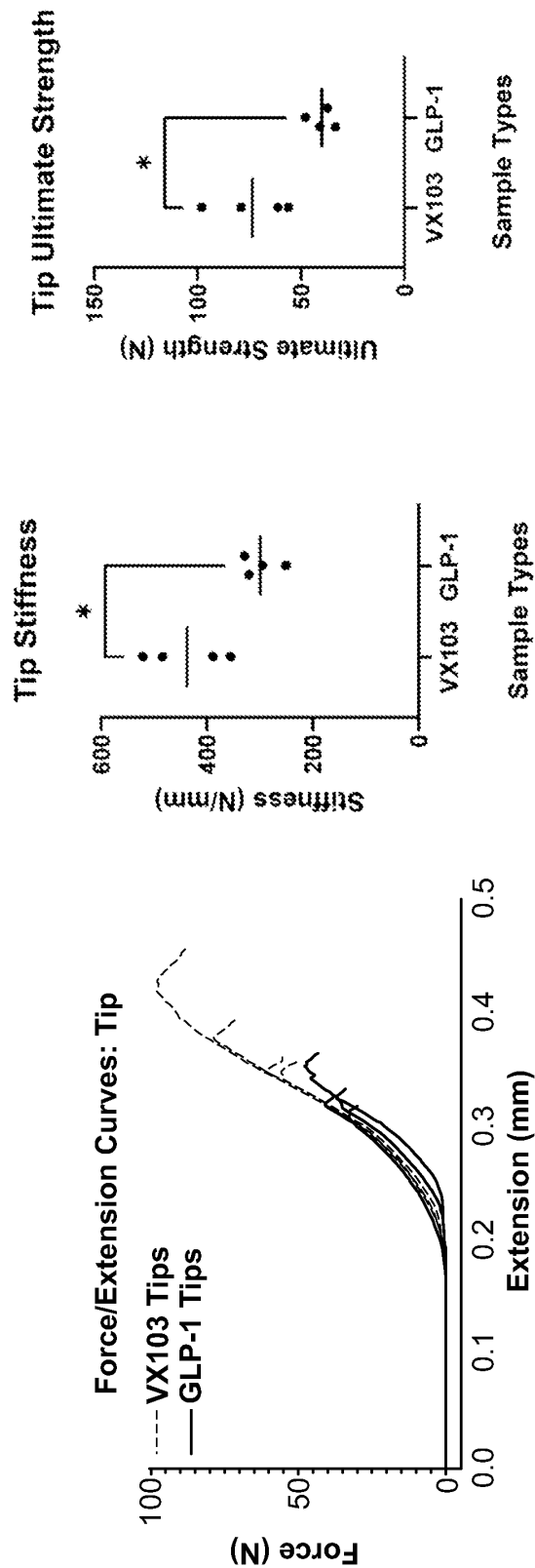


FIG. 13D
Force / extension curves of GLP-1 MAPs vs VX-103 MAPs



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FIG. 13E

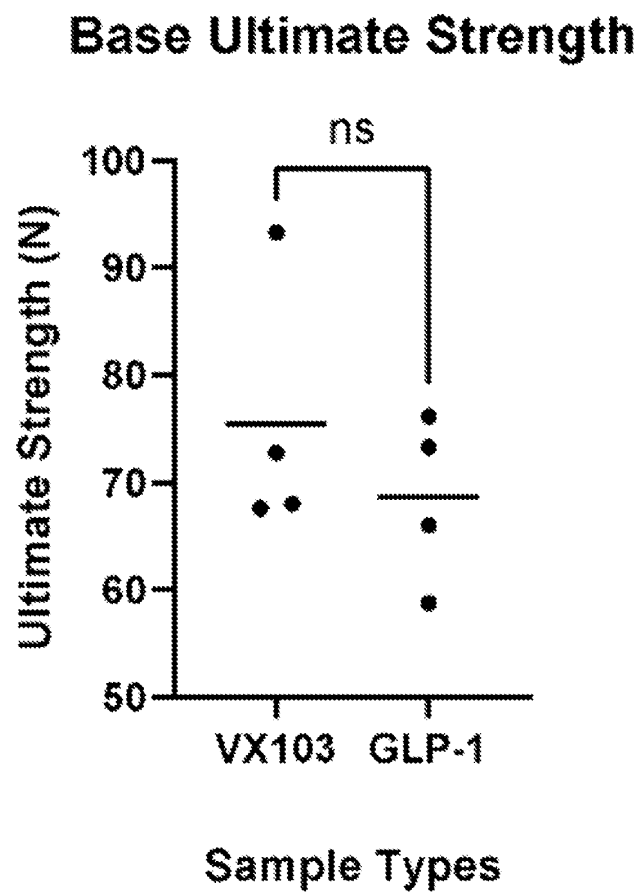


FIG. 14

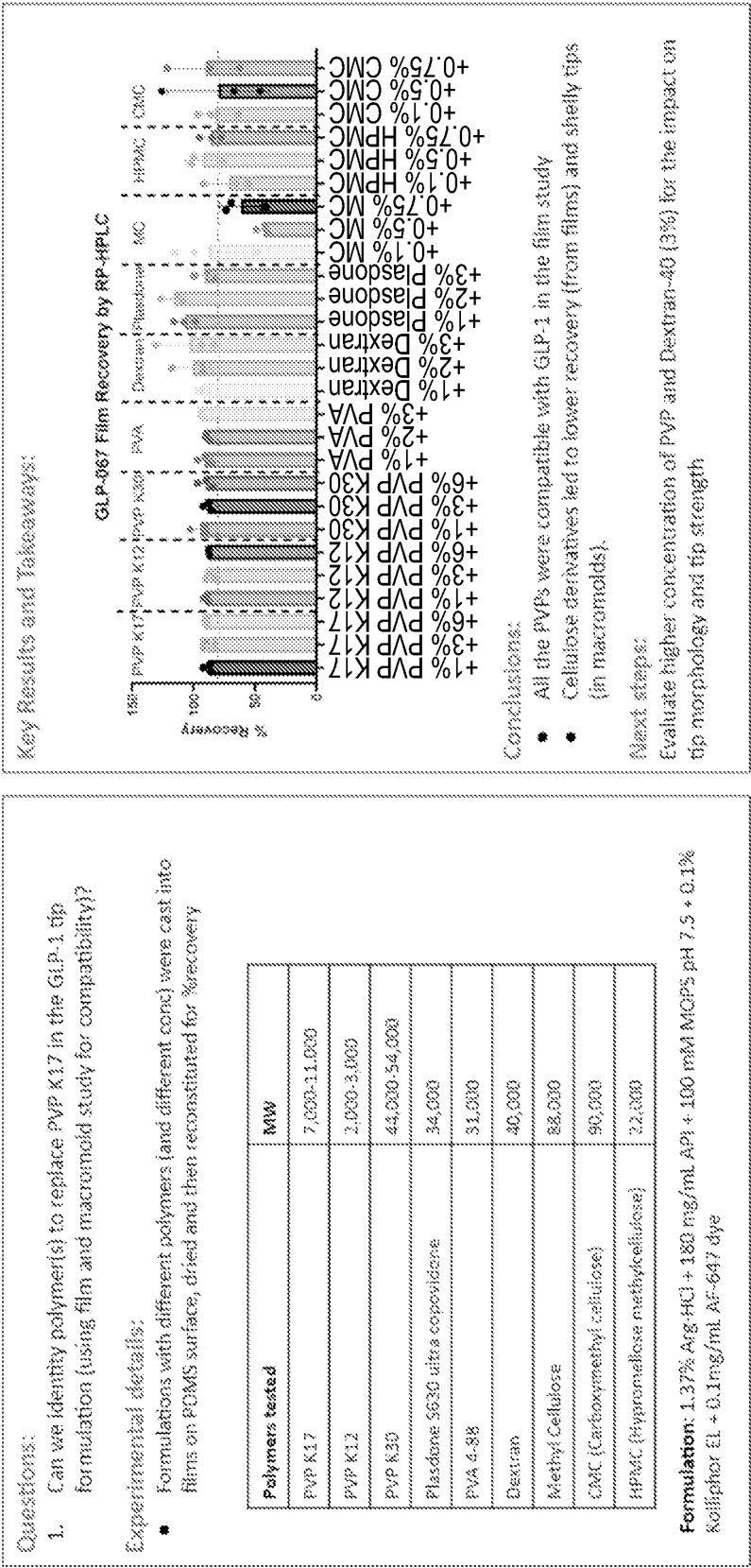
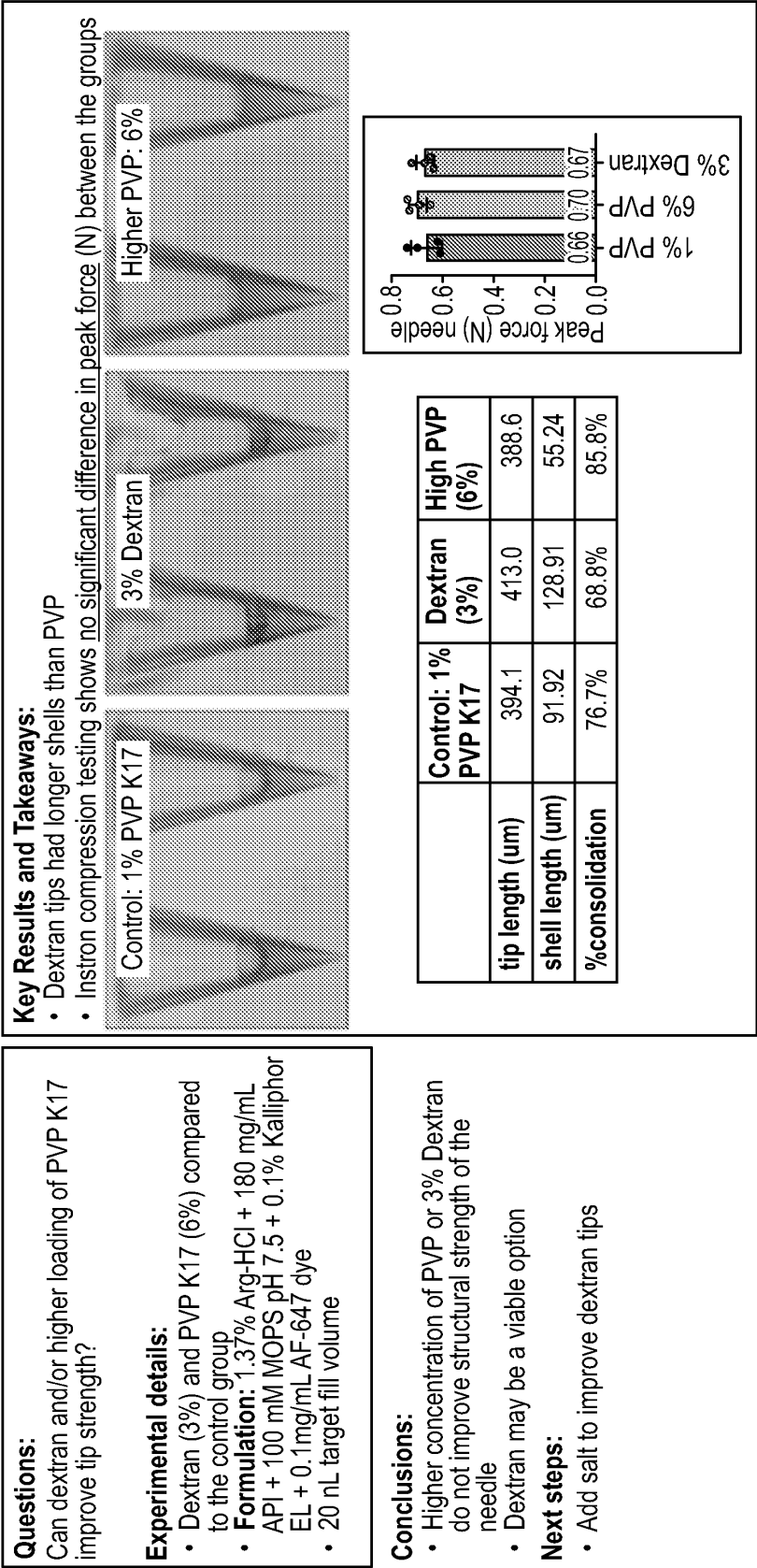


FIG. 15



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FIG. 16

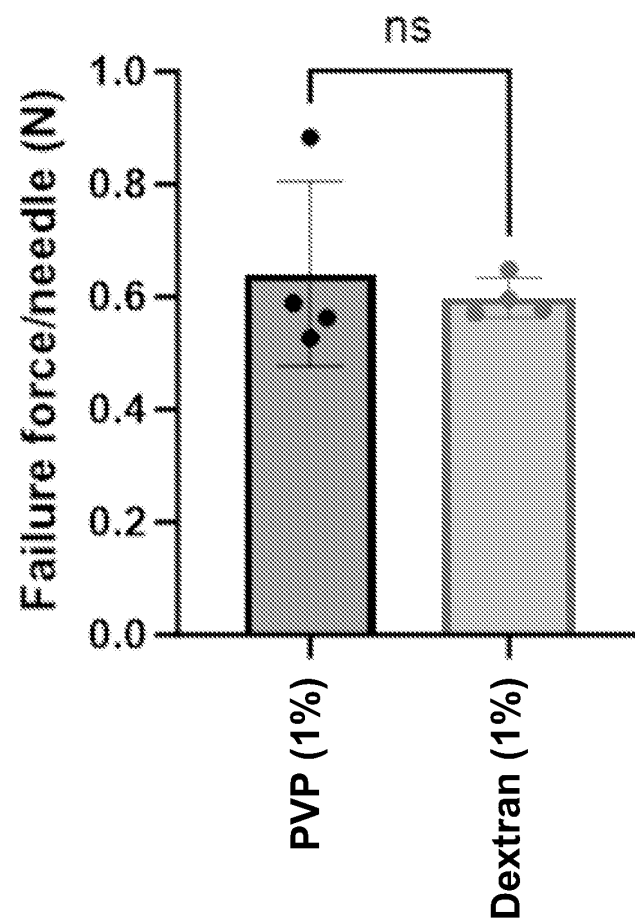
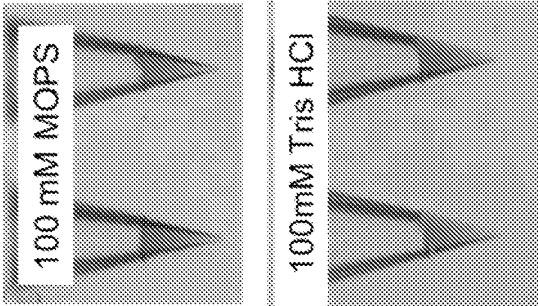


FIG. 17



Tip length, %consolidation and tip strength were comparable

	100 mM MOPS (pH 7.9)	100 mM Tris-HCl (pH 8.2)
Fill per needle (nL)	19.60	19.36
Tip length (um)	368.2	366.2
Shell length (um)	52.57	56.14
%Consolidation	85.7%	84.7%

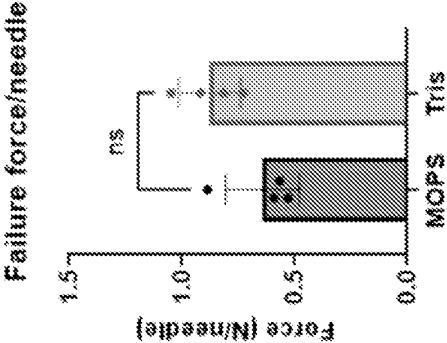
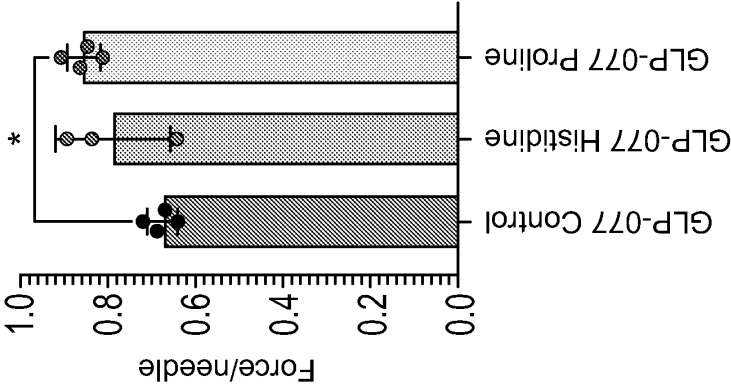


FIG. 18



	Arg-HCl (1.37%)	Histidine (0.5%)	Proline (0.75%)
Tip length (um)	392.3	415.0	381.3
Shell length (um)	96.6	134.6	82.4
%Consolidation	75.4%	67.6%	78.4%

FIG. 19

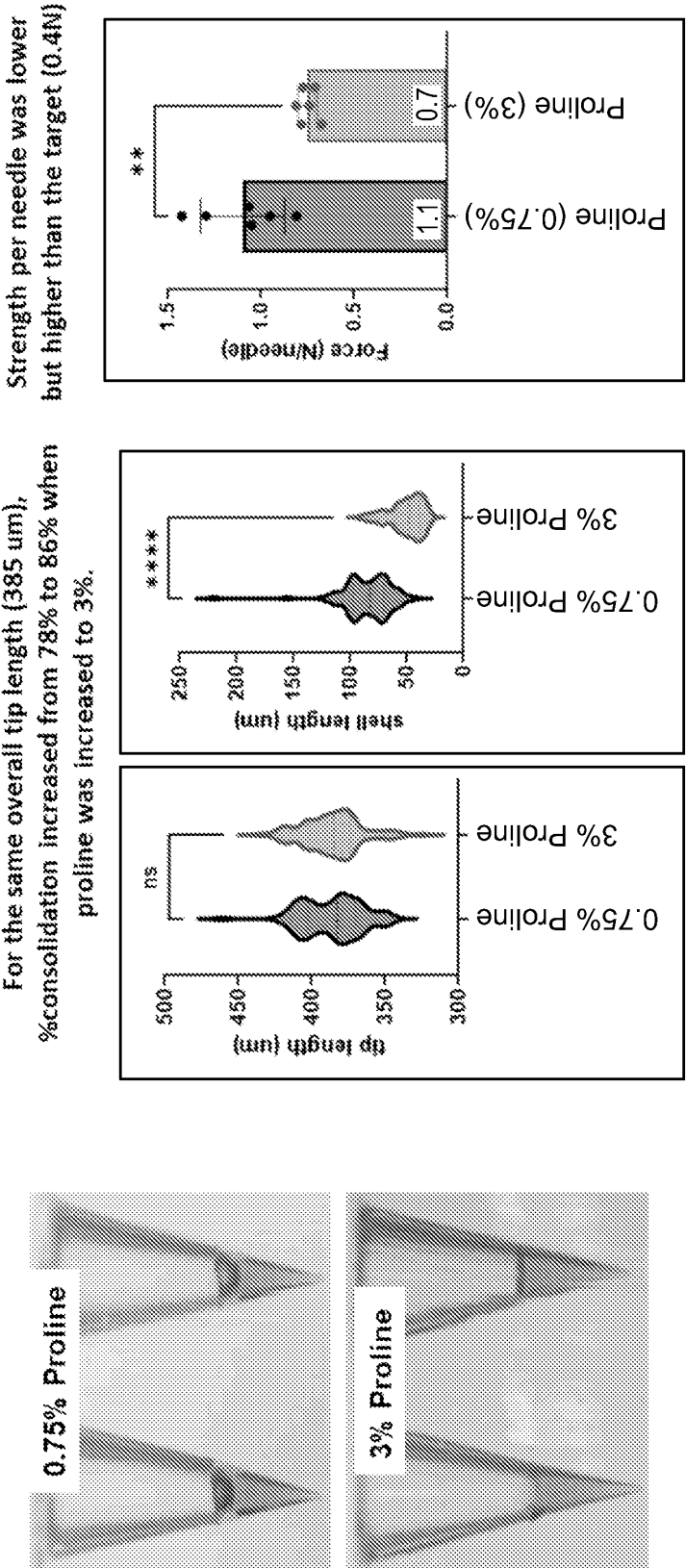
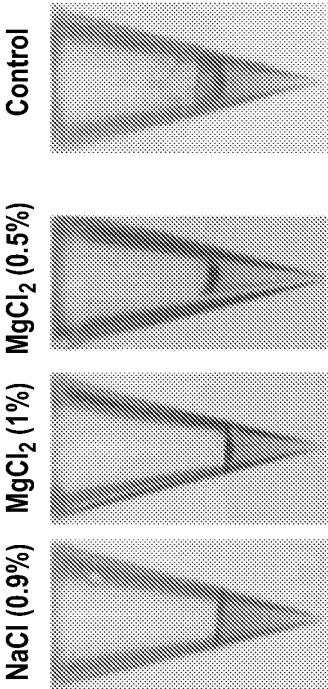


FIG. 20



	NaCl (0.9%)	MgCl2 (1%)	MgCl2 (0.5%)	Control (GLP-060)
tip length (um)	378.1	340.8	378.1	397.5
shell length (um)	55.2	59.8	55.2	80.5
%consolidation	85.4%	82.4%	85.4%	79.7%

FIG. 21

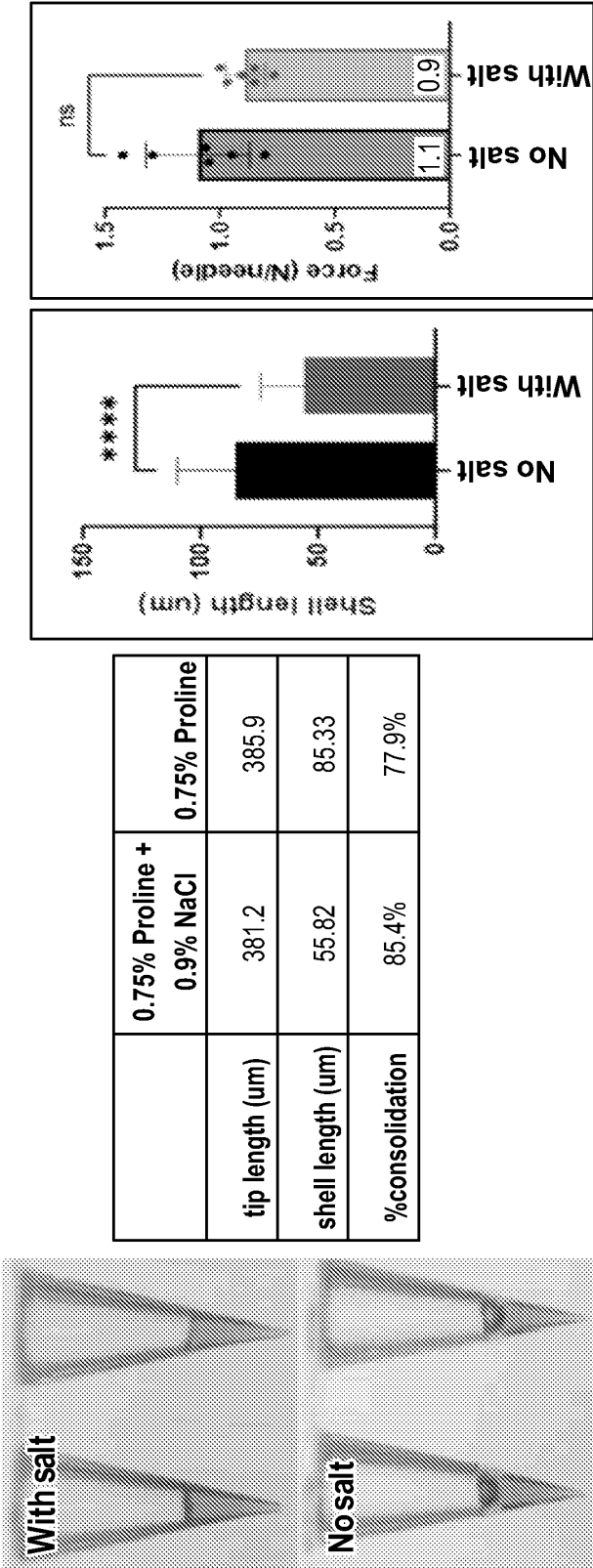
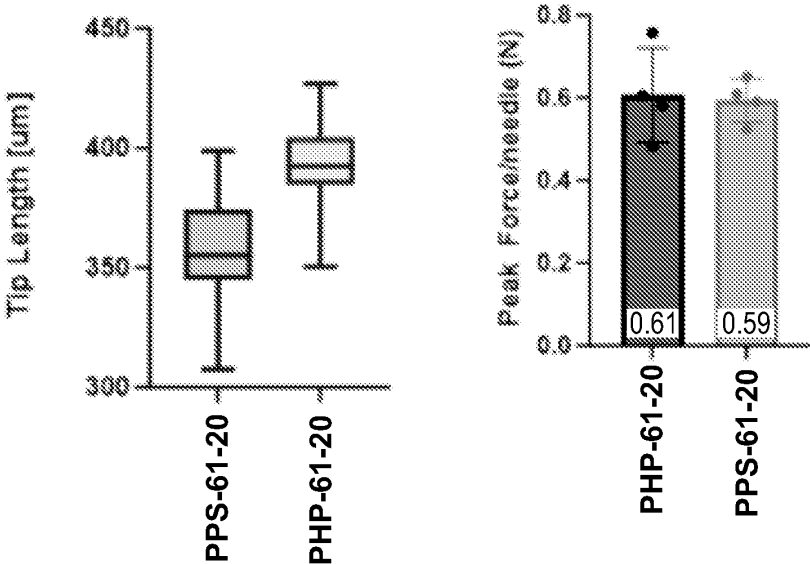


FIG. 22

GLP-136



GLP-142

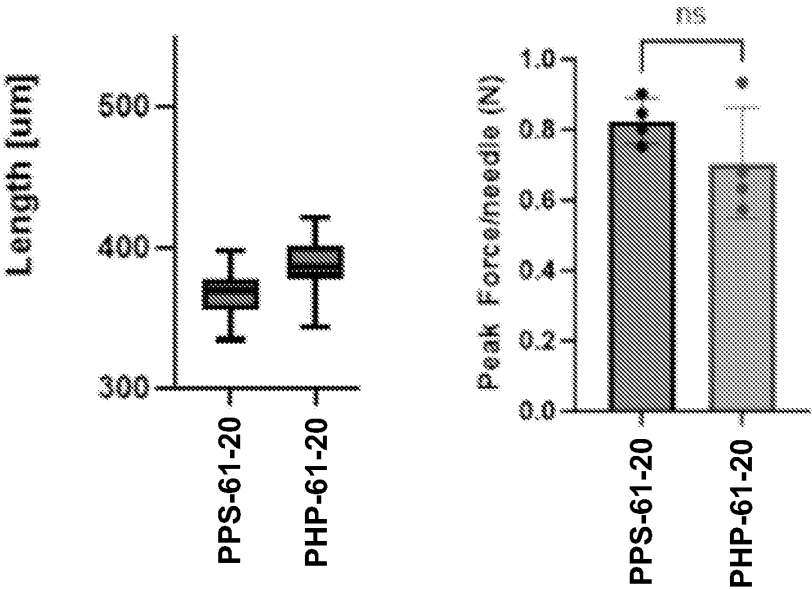


FIG. 23A

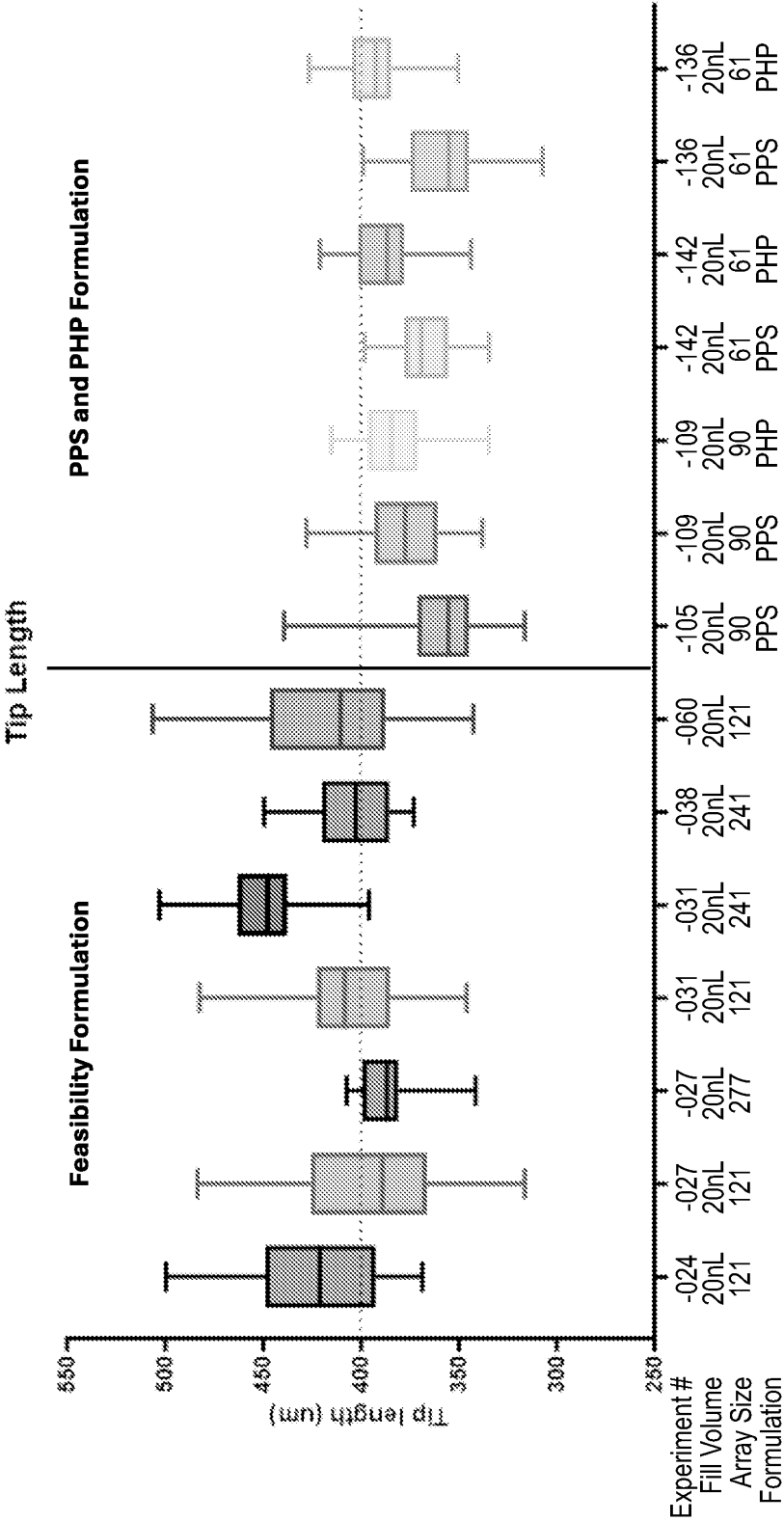


FIG. 23B

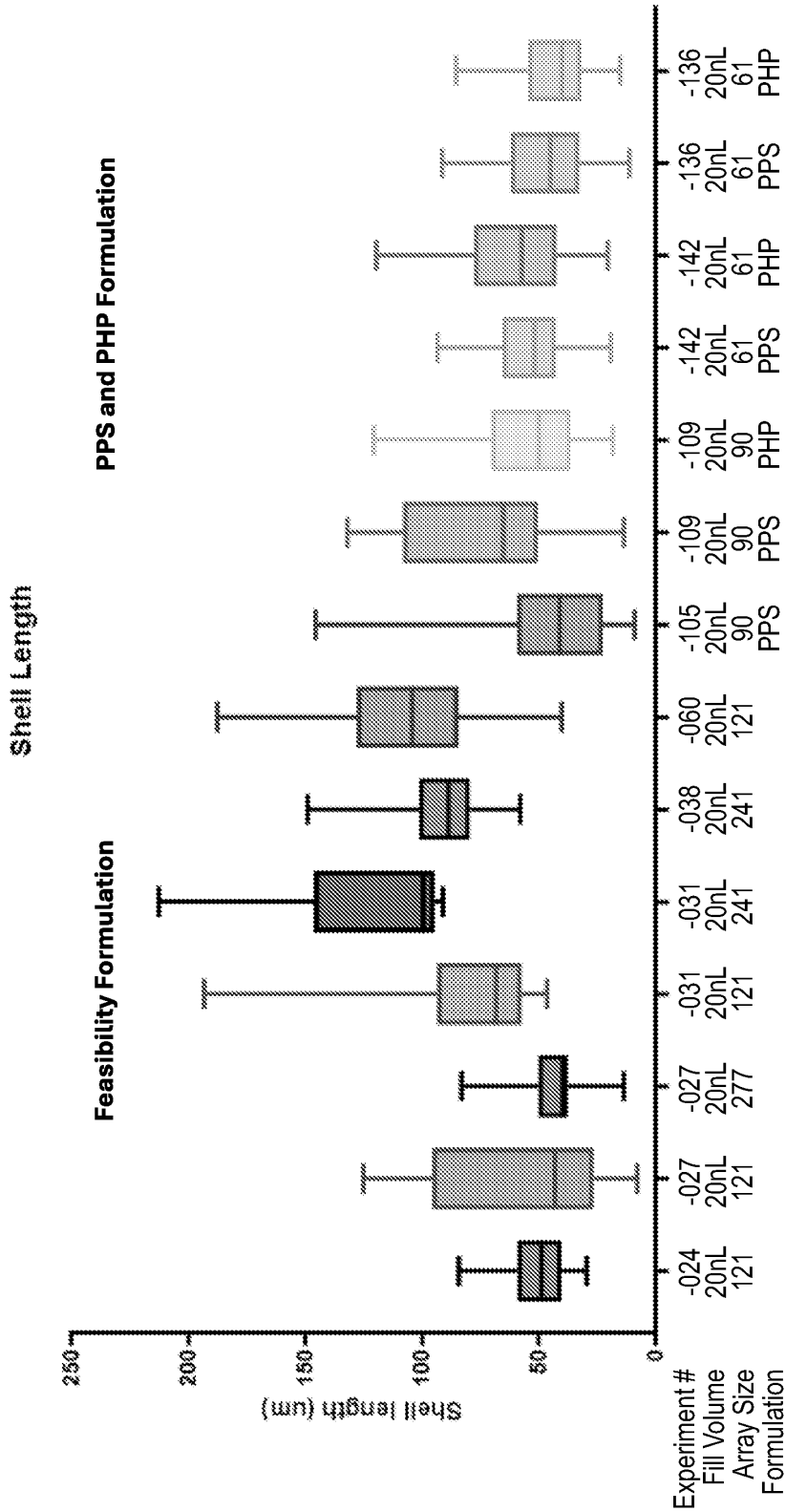


FIG. 24
Compiled PD-IVR Results

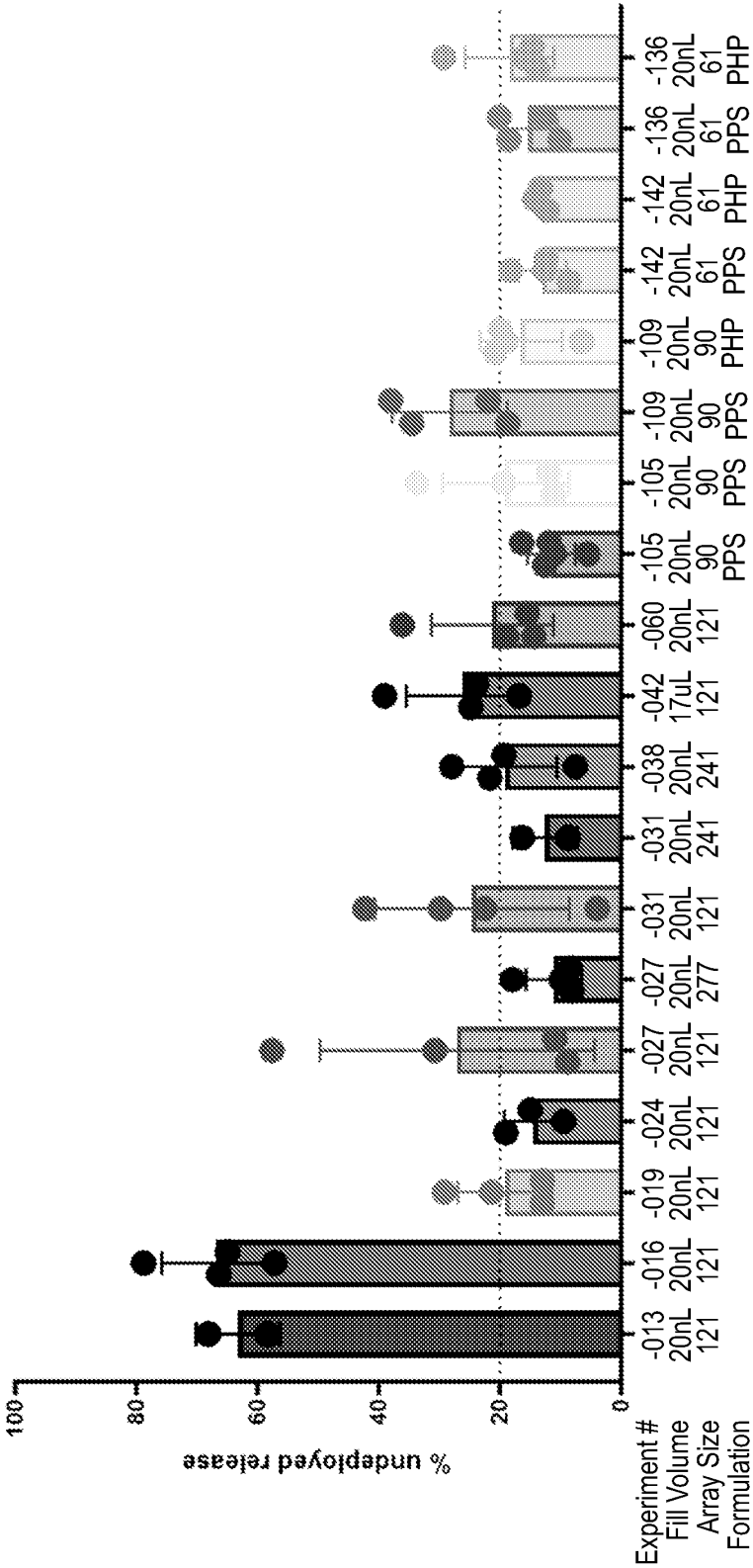
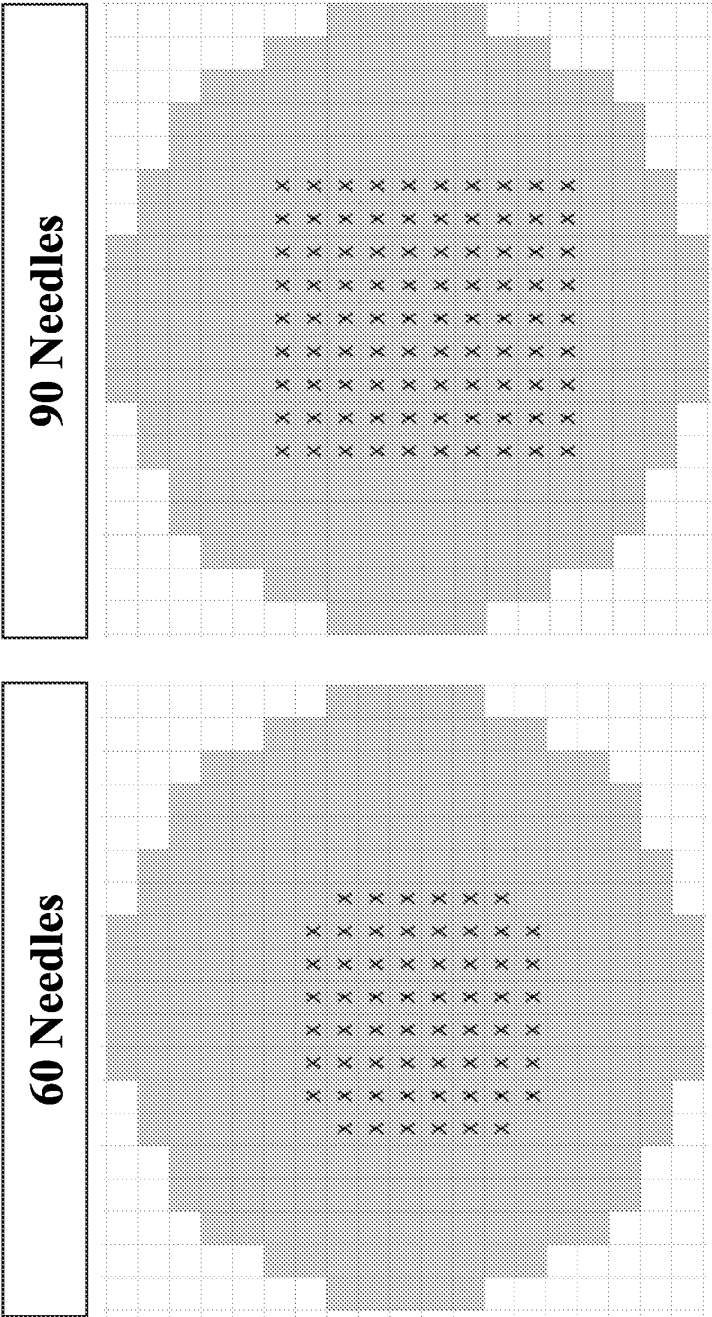
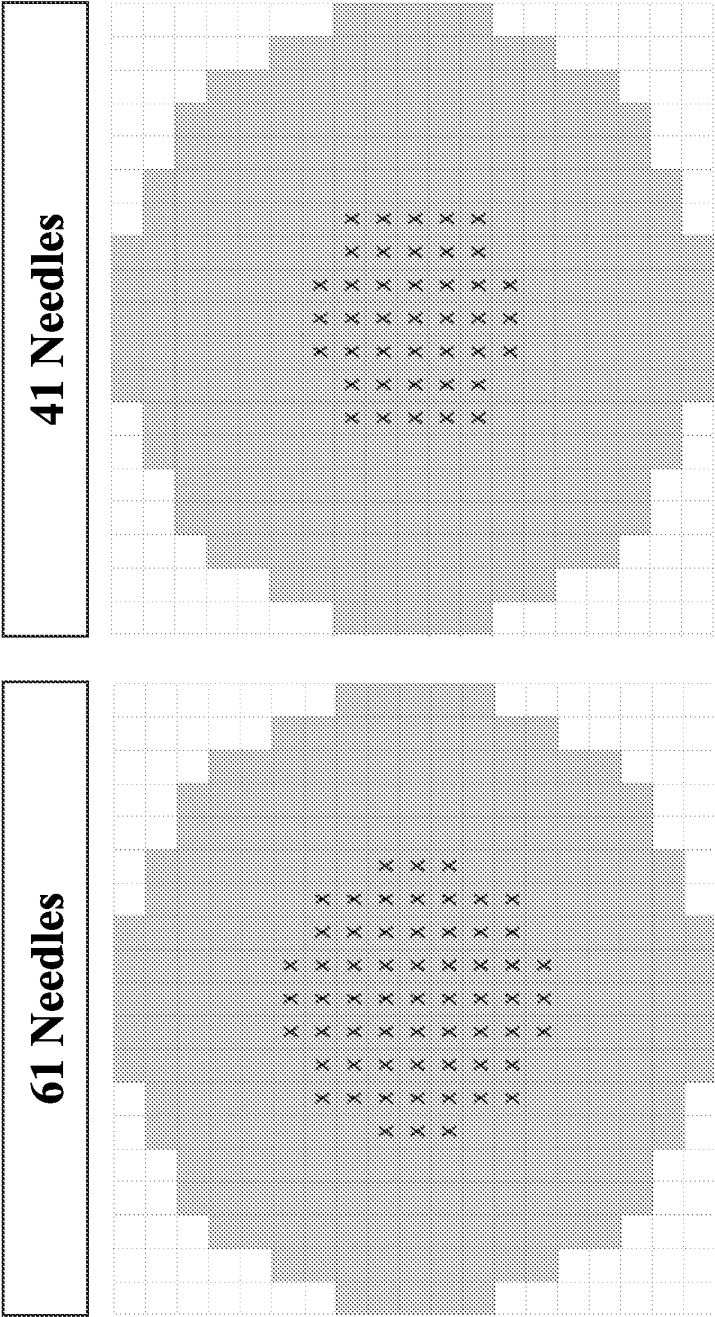


FIG. 25A

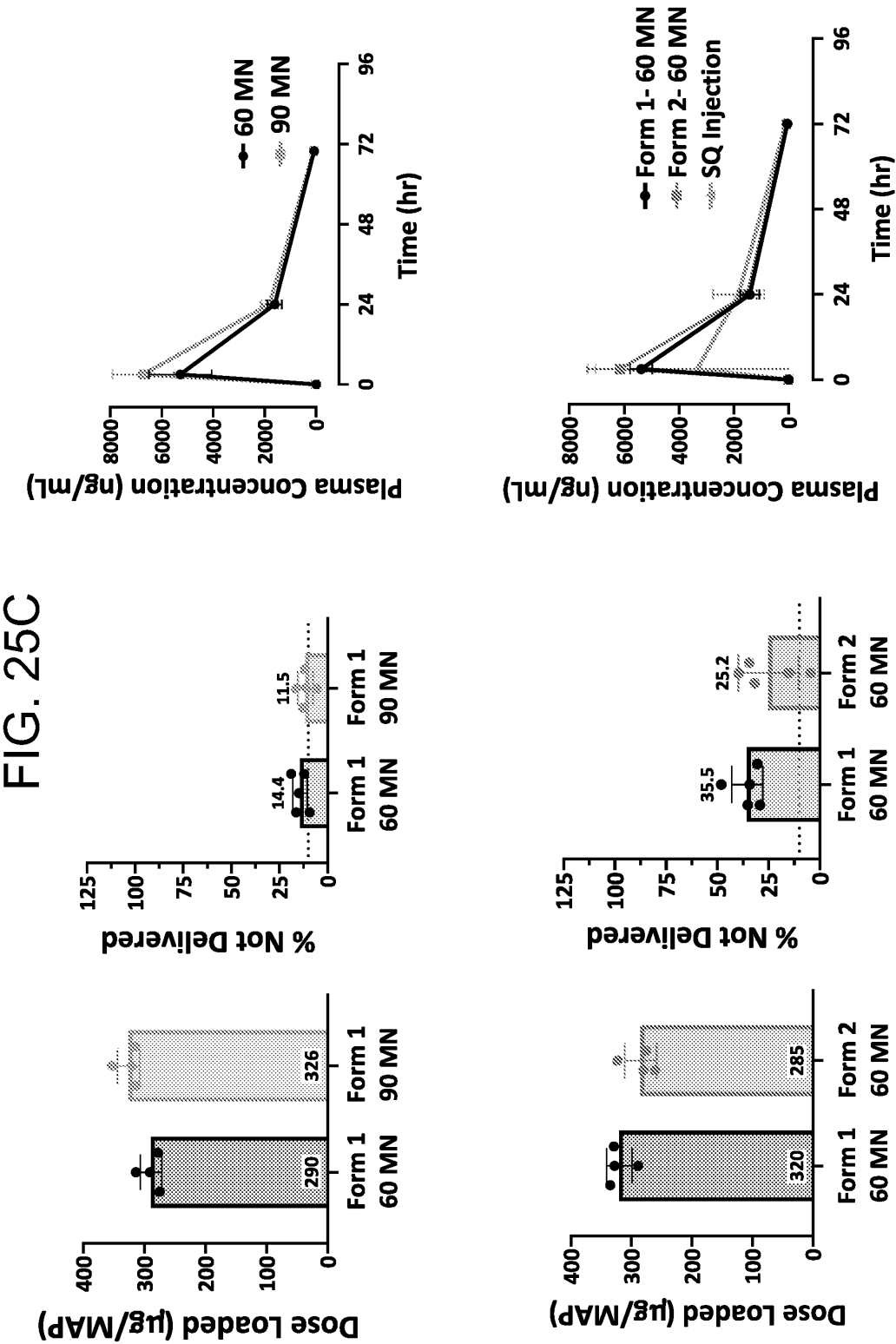


Rectangular sub-arrays
Filled needles are indicated by an X, all other mold cavities are left empty

FIG. 25B



Circular sub-arrays
Filled needles are indicated by an X, all other mold cavities are left empty



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FIG. 26A

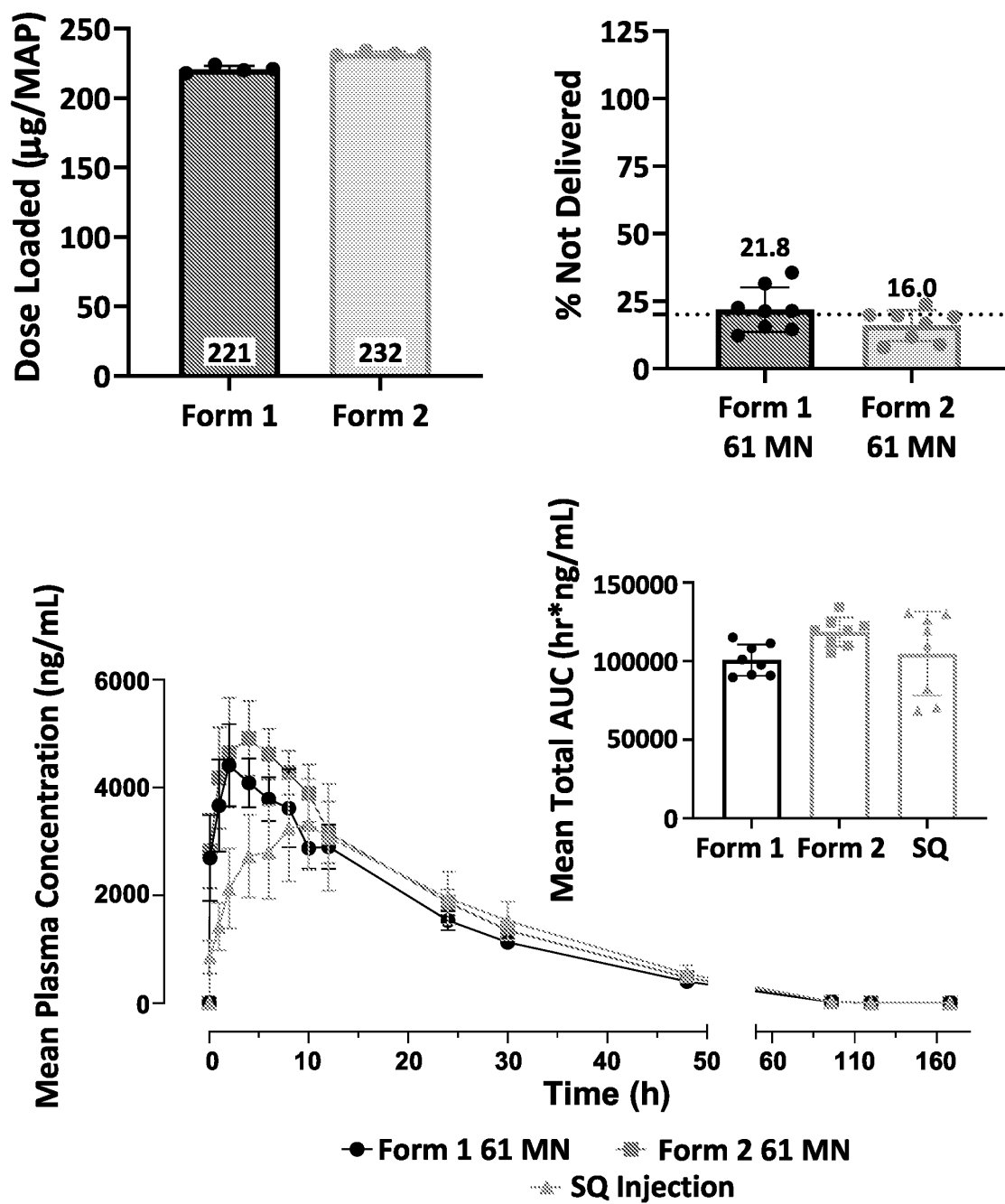


FIG. 26B

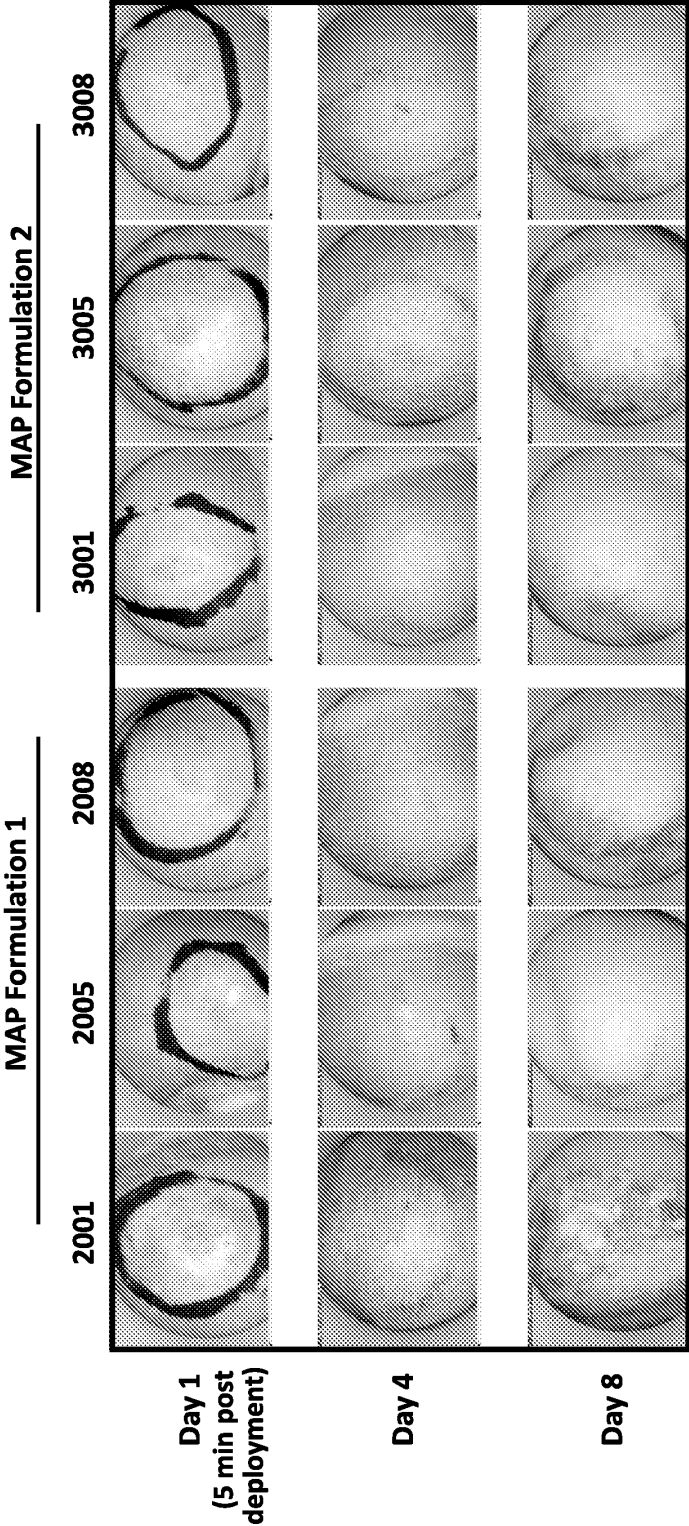


FIG. 26C

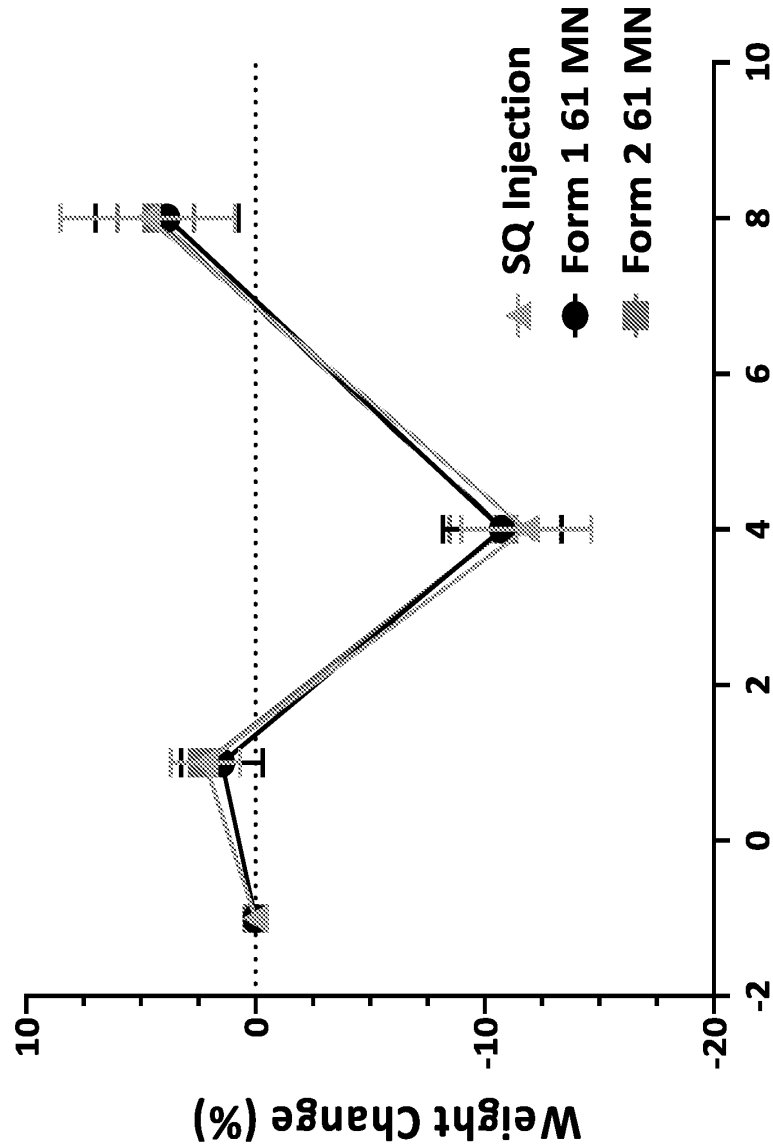
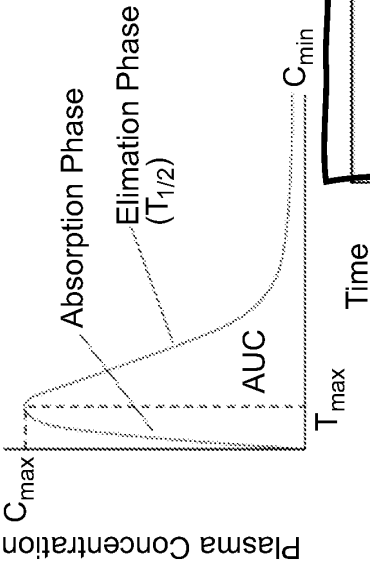


FIG. 27



Group 1 SC (0.73 mg/kg; 220ug per dose) Semaglutide									
	$T_{1/2}$ (hr)	T_{max} (hr)	C_{max} ng/mL	AUClast (hr*ng/mL)	AUCINF_obs (hr*ng/mL)	AUC %Extrap (%)	MRTINF_obs (hr)		
Mean	10.6	8.50	3393	104443	104676	0.229	22.6		
SD	0.984	2.78	1032	26675	26711	0.0715	1.46		
%CV	9.3%	32.7%	30.4%	25.5%	25.5%	31.2%	6.5%		

Group 2 MAP Form 1 (0.73 mg/kg; 220ug per dose) Semaglutide									
	$T_{1/2}$ (hr)	T_{max} (hr)	C_{max} ng/mL	AUClast (hr*ng/mL)	AUCINF_obs (hr*ng/mL)	AUC %Extrap (%)	MRTINF_obs (hr)		
Mean	11.1	3.25	4490	100313	100621	0.305	18.9		
SD	0.603	2.12	726	9898	9940	0.0686	0.87		
%CV	5.4%	65.3%	16.2%	9.9%	9.9%	22.5%	4.6%		

MAP Form 2 (0.73 mg/kg; 220ug per dose) Semaglutide									
	$T_{1/2}$ (hr)	T_{max} (hr)	C_{max} ng/mL	AUClast (hr*ng/mL)	AUCINF_obs (hr*ng/mL)	AUC %Extrap (%)	MRTINF_obs (hr)		
Mean	11.1	4.25	5089	118151	118463	0.265	19.0		
SD	0.530	2.25	715	9159	9177	0.0835	1.17		
%CV	4.8%	53.0%	14.1%	7.8%	7.7%	31.6%	6.2%		

FIG. 28A

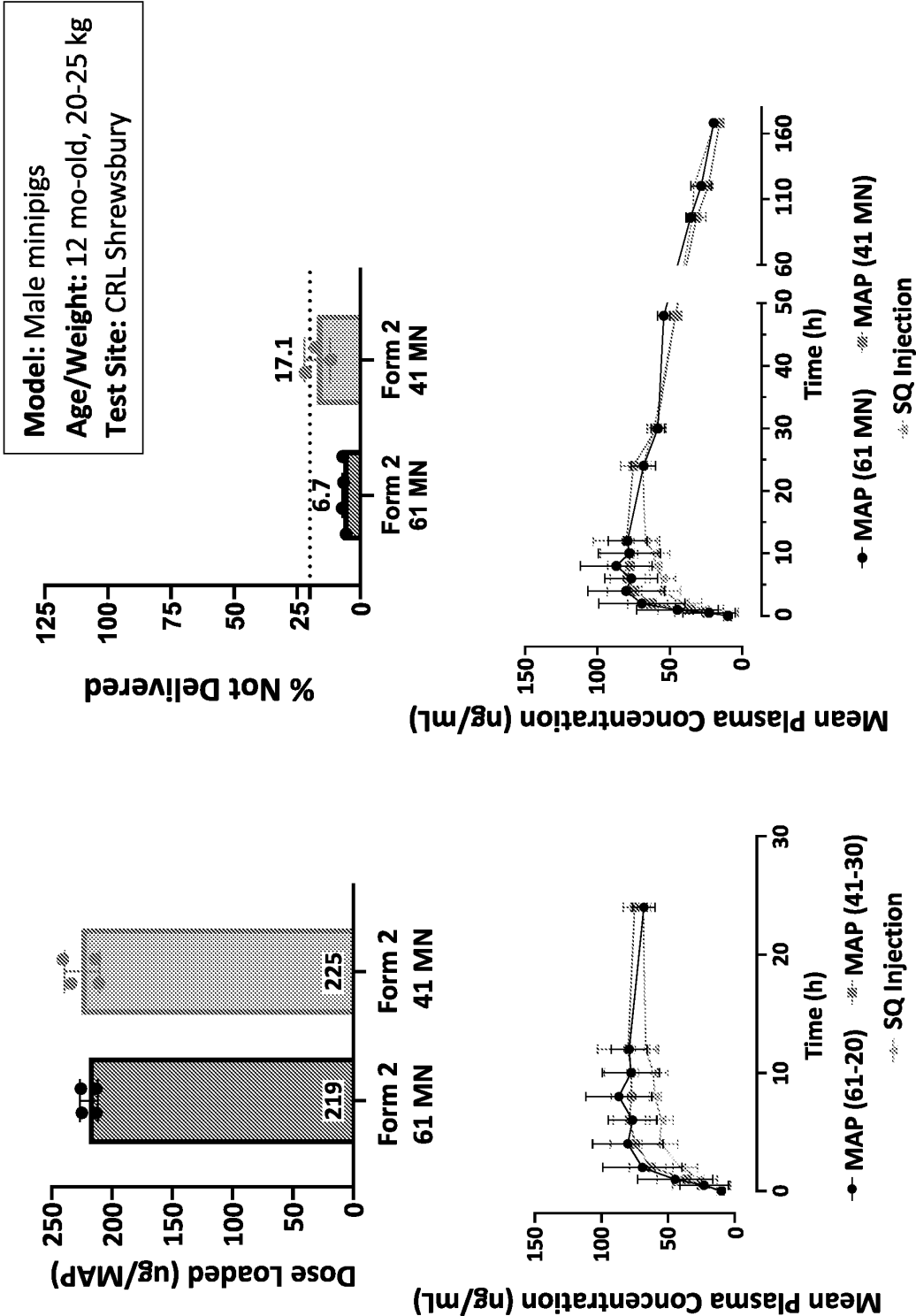


FIG. 28B

Route	Group	Subject	Test Article	Dose		Rsq	T _{1/2} (h)	T _{max} (h)	C _{max} (ng/mL)	T _{last} (h)	AUC _{last} (h*ng/mL)	AUC _{INF} (h*ng/mL)	AUC%Extrap (%)
				ug									
MAP	1	1001	61 MN	220		0.986	91.7	8.00	114	168	8370	11300	26.1
	1	1002	61 MN	220		0.977	83.3	12.0	72.6	168	6540	8910	26.6
	1	1103	61 MN	220		0.994	92.9	24.0	79.7	168	7220	10000	27.9
	1	1104	61 MN	220		0.966	70.0	8.00	101	168	6790	8400	19.2
				Mean		0.981	84.5	13.0	91.8	168	7230	9660	25.0
				SD		0.0119	10.6	7.57	19.1	0	811	1300	3.90
				CV%		1.2	12.5	58.2	20.8	0	11.2	13.4	15.6
Route	Group	Subject	Test Article	Dose		Rsq	T _{1/2} (h)	T _{max} (h)	C _{max} (ng/mL)	T _{last} (h)	AUC _{last} (h*ng/mL)	AUC _{INF} (h*ng/mL)	AUC%Extrap (%)
				ug									
MAP	2	2101	41 MN	220		0.995	65.3	6.0	67.5	168	6230	7520	17.2
	2	2102	41 MN	220		0.951	92.1	12.0	83.6	168	6770	9160	26.1
	2	2103	41 MN	220		0.979	102	12.0	101	168	6730	8960	24.9
				Mean		0.975	86.5	10.0	84.0	168	6580	8550	22.7
				SD		0.0223	18.8	3.46	16.8	0	302	896	4.84
				CV%		2.3	21.8	34.6	19.9	0	4.6	10.5	21.3
Route	Group	Subject	Test Article	Dose		Rsq	T _{1/2} (h)	T _{max} (h)	C _{max} (ng/mL)	T _{last} (h)	AUC _{last} (h*ng/mL)	AUC _{INF} (h*ng/mL)	AUC%Extrap (%)
				ug									
SC	3	3001	SubQ	220		0.954	88.4	24.0	74.0	168	7110	9590	25.9
	3	3102	SubQ	220		0.917	83.9	12.0	75.3	168	6530	8630	24.3
	3	3003	SubQ	220		1.00	86.8	4.00	65.6	168	6760	9380	27.9
				Mean		0.957	86.3	13.3	71.6	168	6800	9200	26.0
				SD		0.0416	2.29	10.1	5.27	0	289	508	1.82
				CV%		4.4	2.7	75.5	7.35	0	4.3	5.5	7.0

FIG. 29A

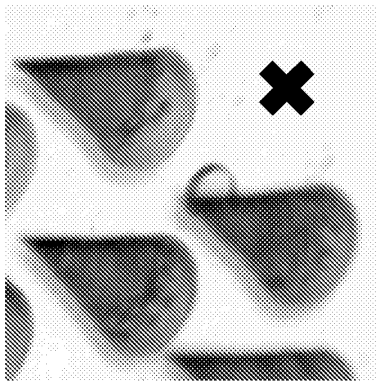
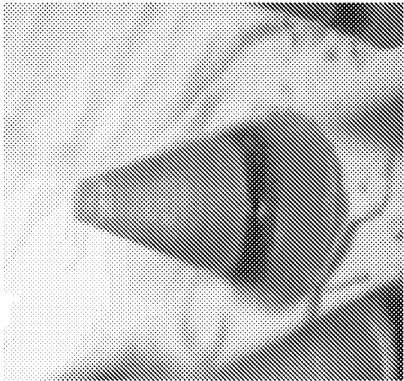
Defect Type	Description	Exemplary Images of Defects
Missing Tip & Base	The entire needle including the base portion and tip portion are not present on the demolded patch.	
Missing Tip	The base portion of a needle has been demolded onto the patch, however, there is no tip attached to the base portion.	
Other	Any other abnormality (specify)	

FIG. 29B

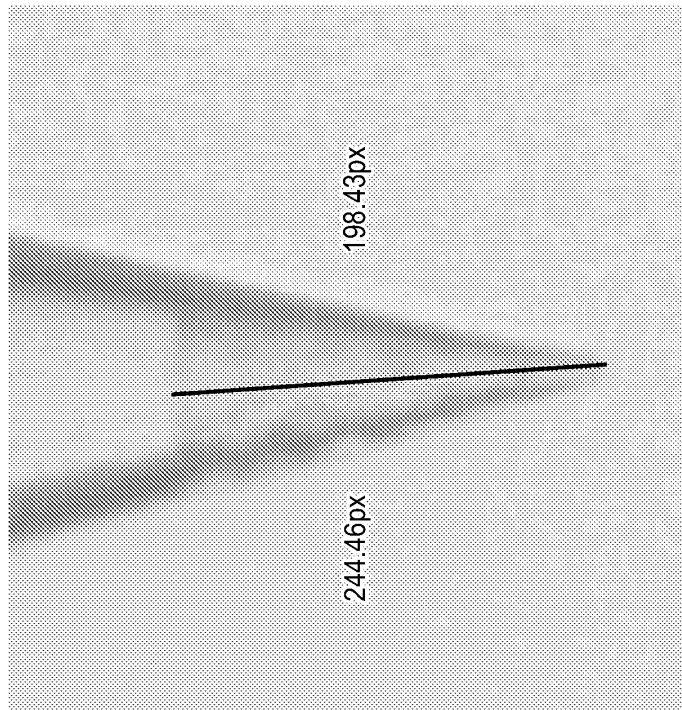


FIG. 29C

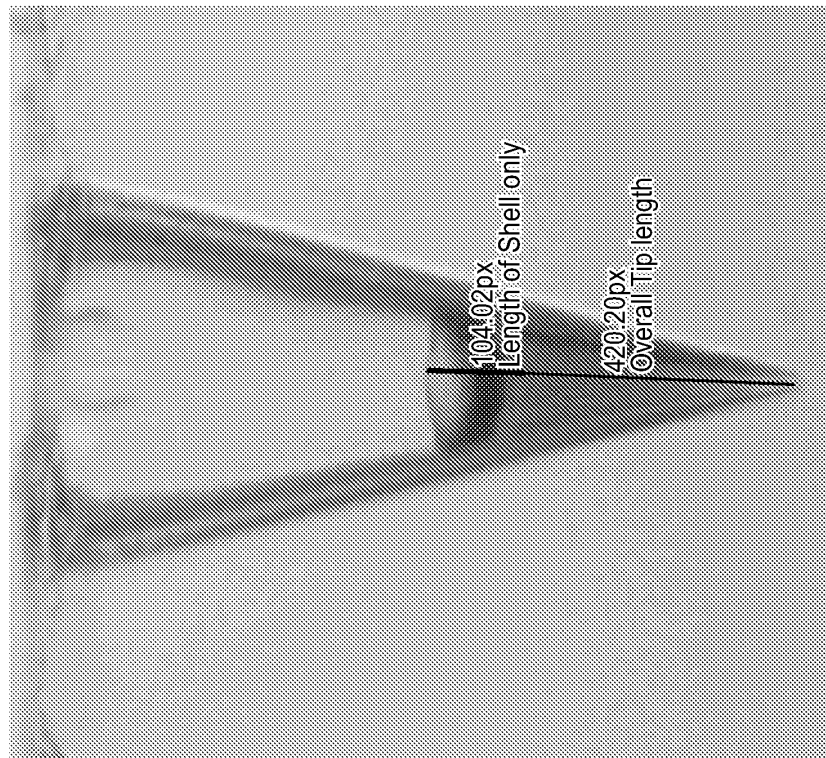


FIG. 30

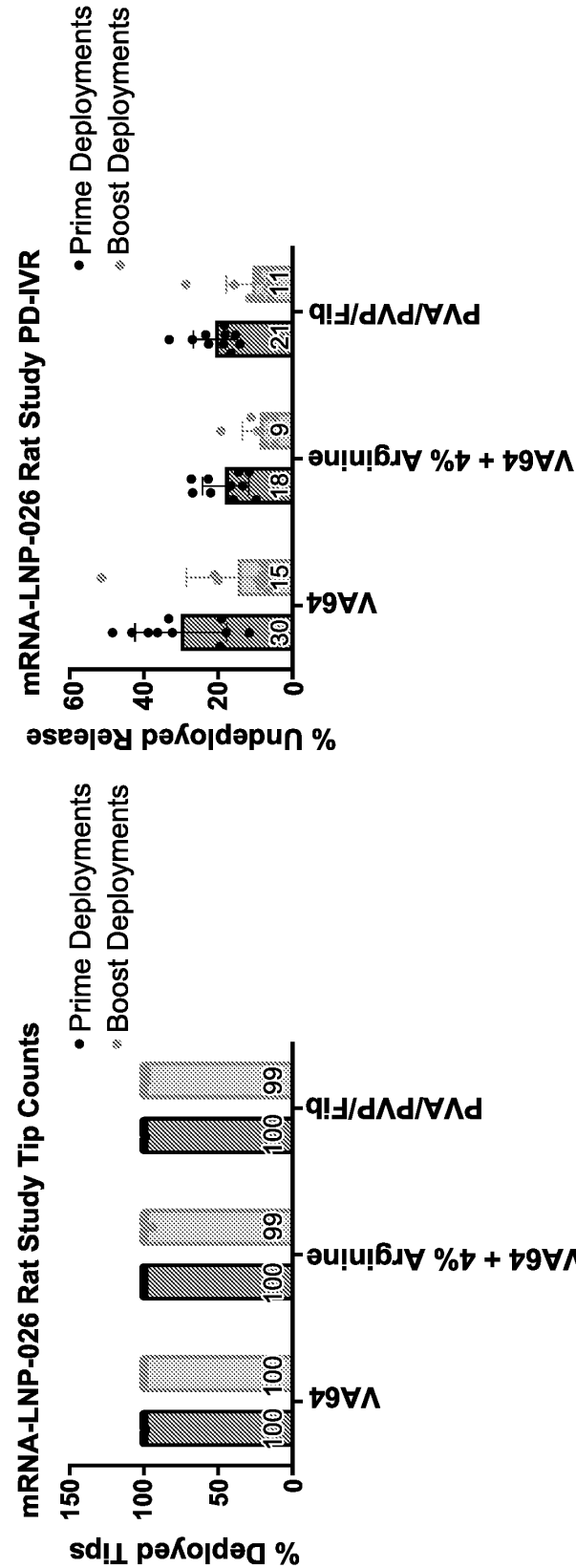
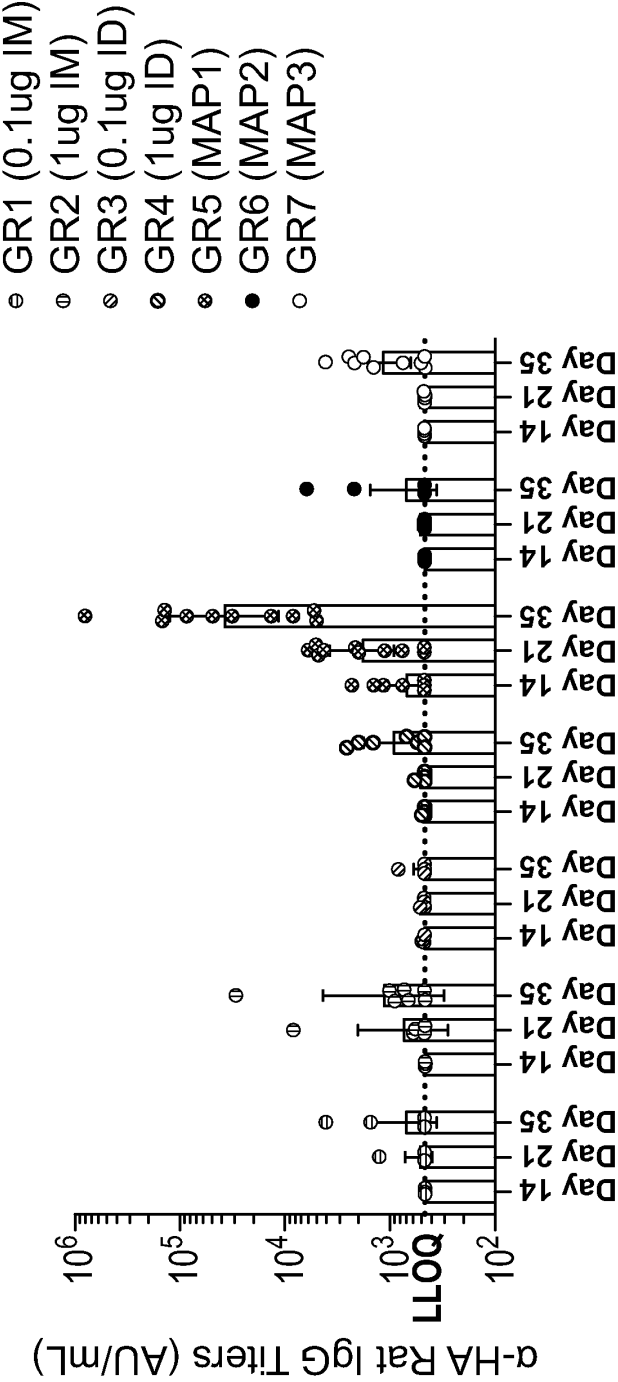


FIG. 31A



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FIG. 31B

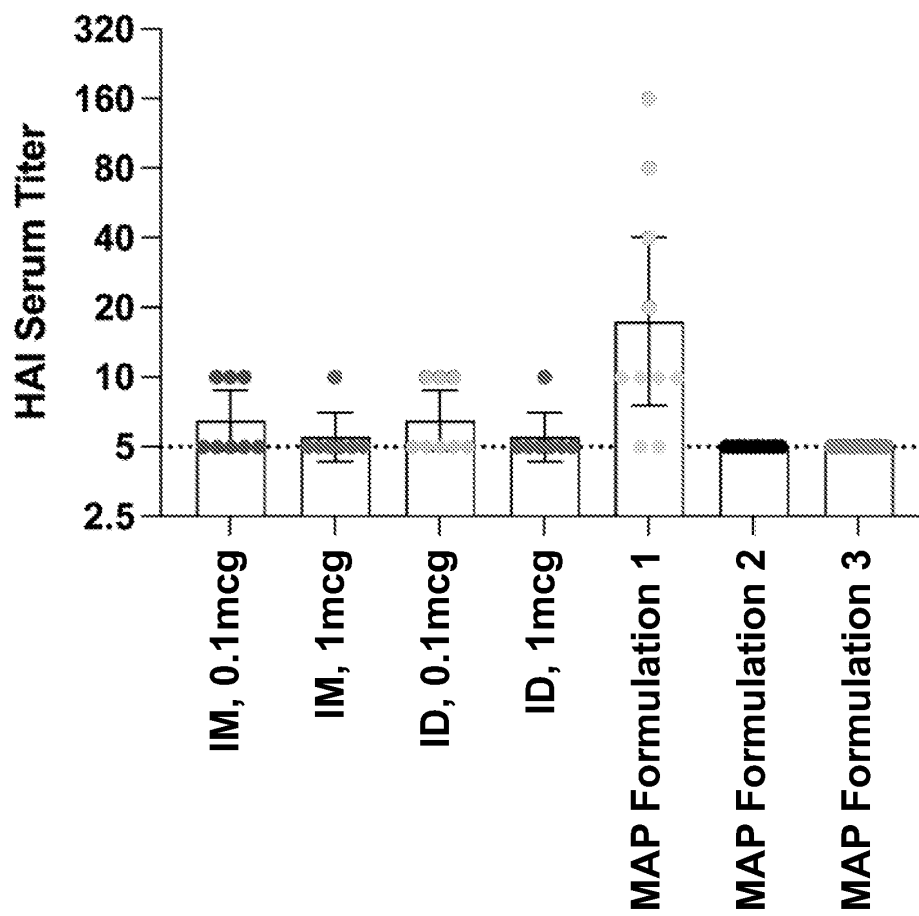


FIG. 32A

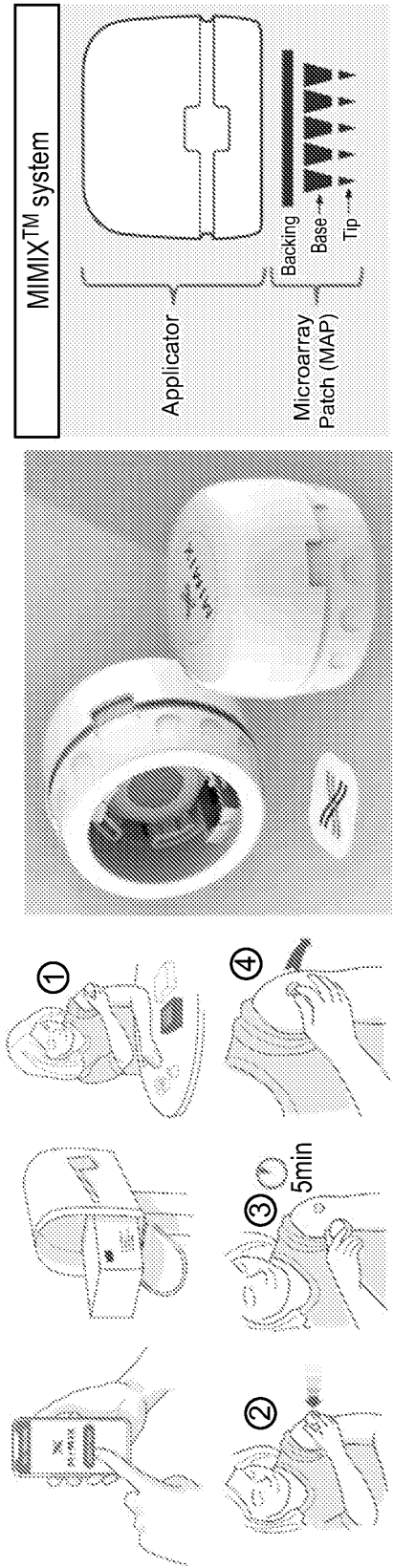
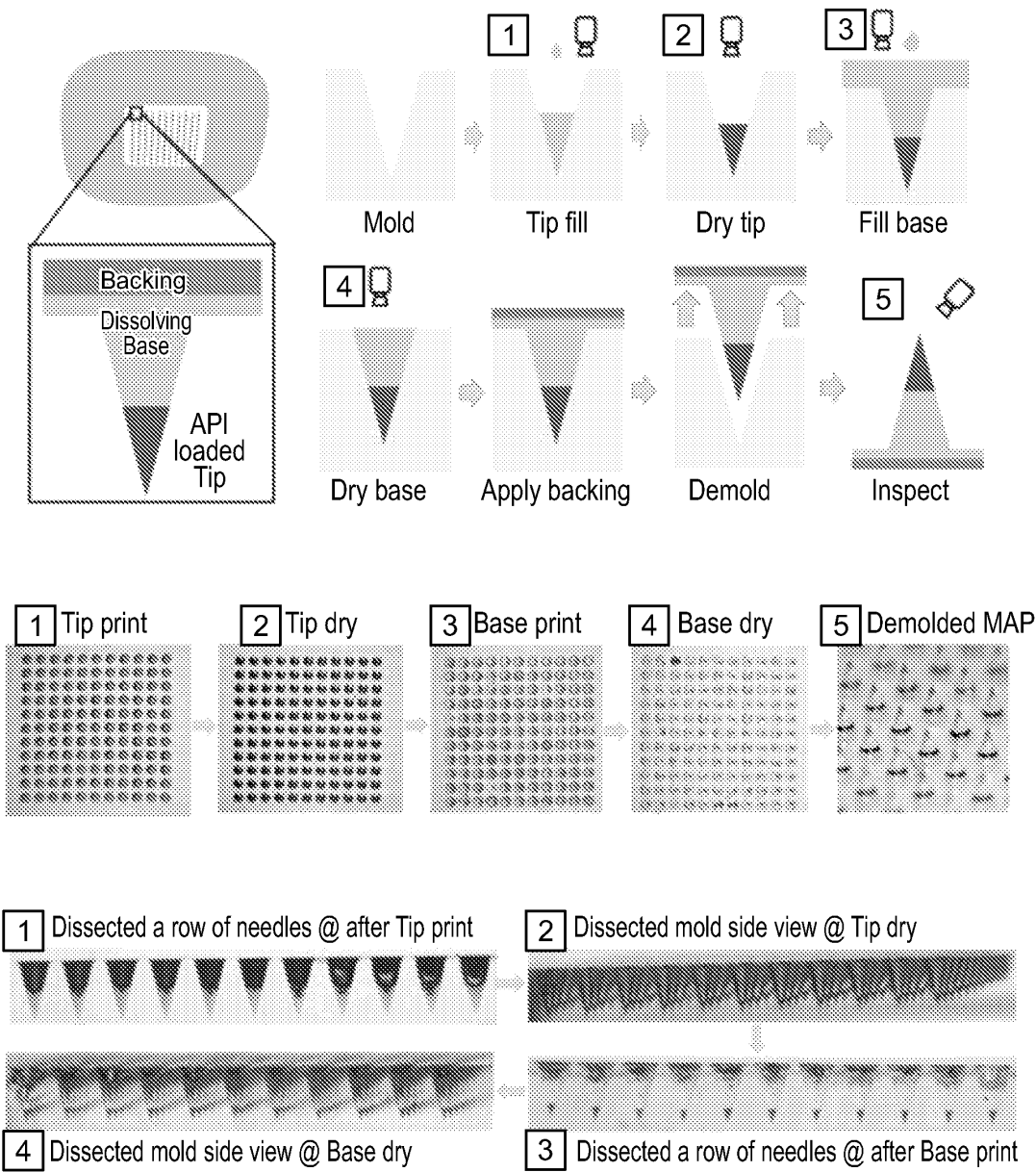


FIG. 32B



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FIG. 33

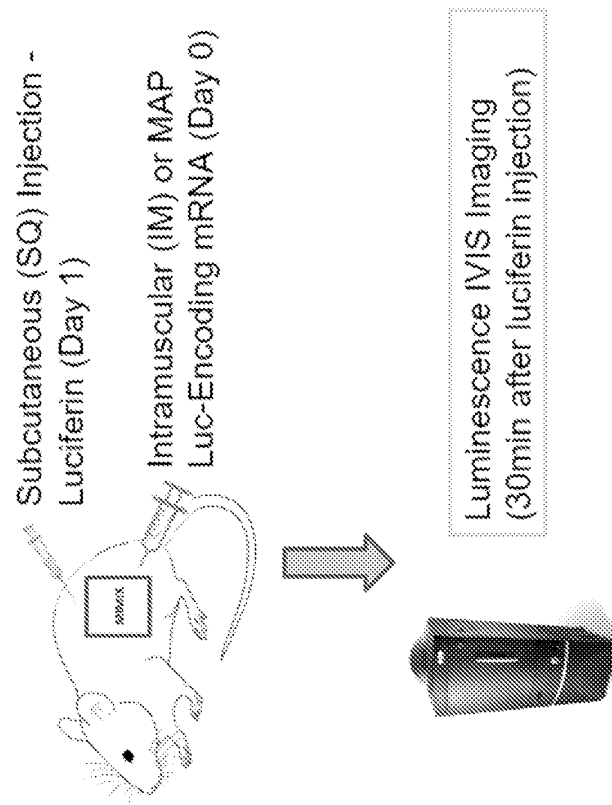


FIG. 34

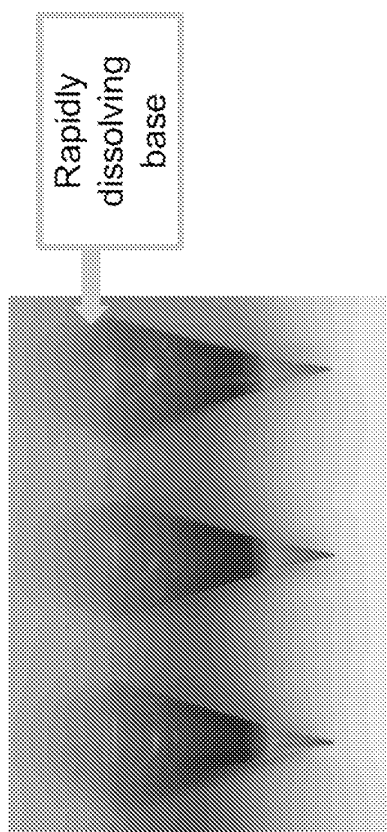


FIG. 35A

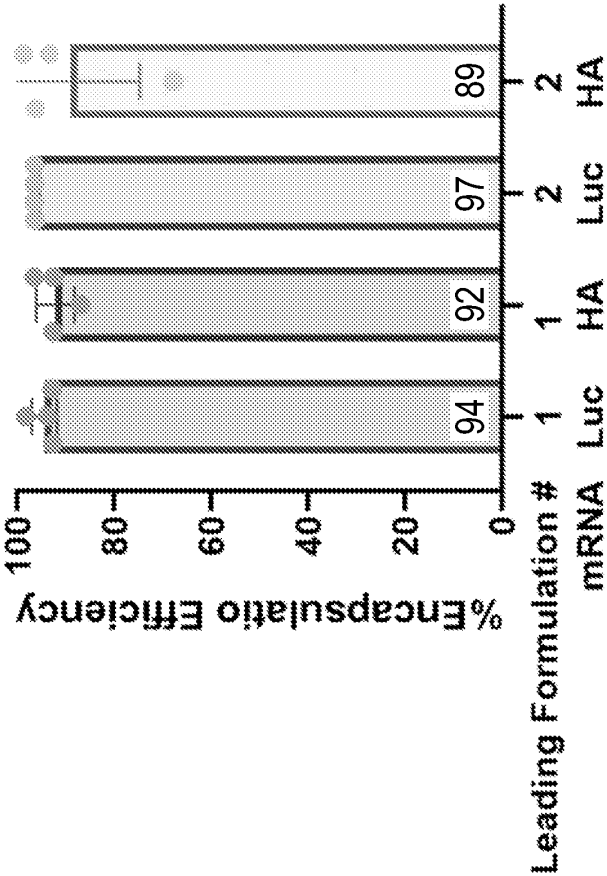
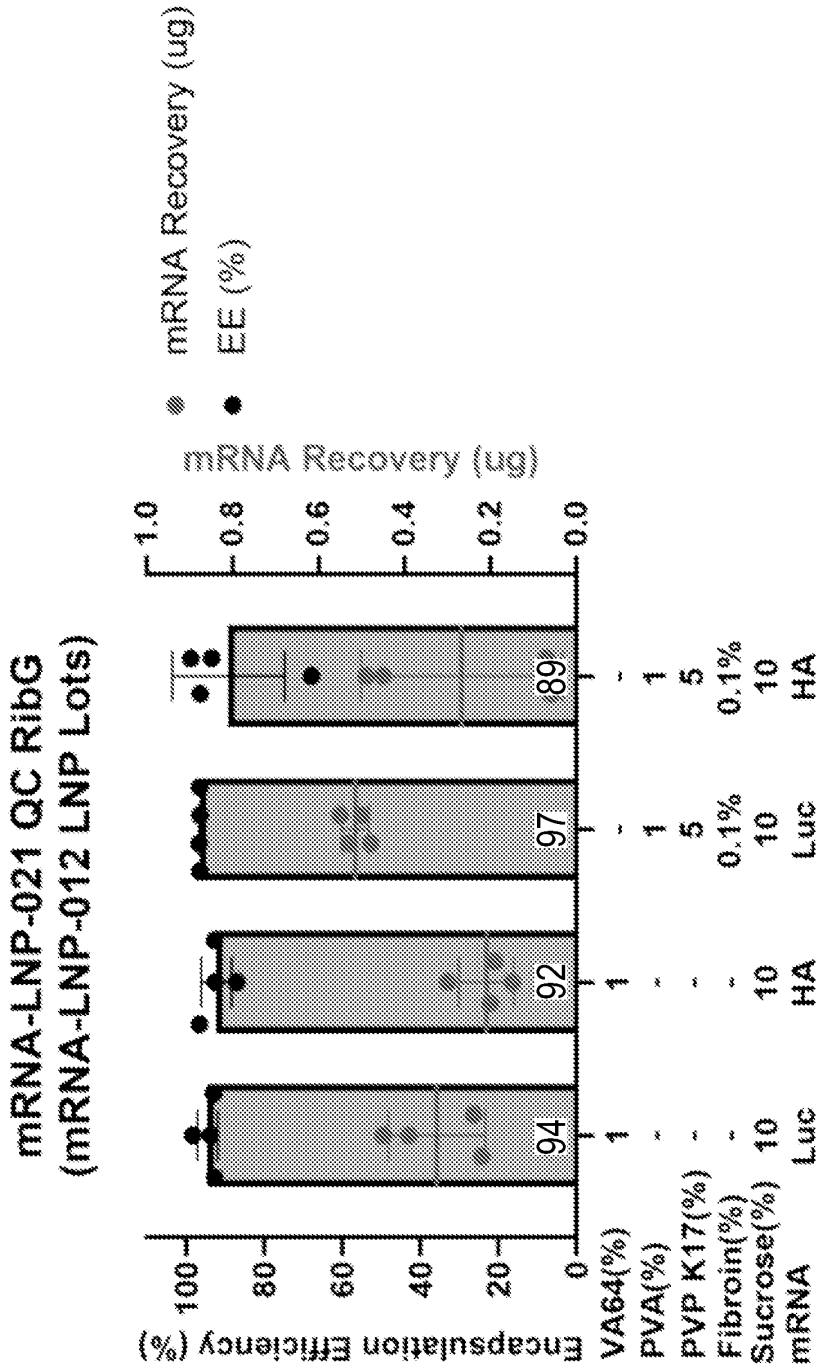


FIG. 35B



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FIG. 36A

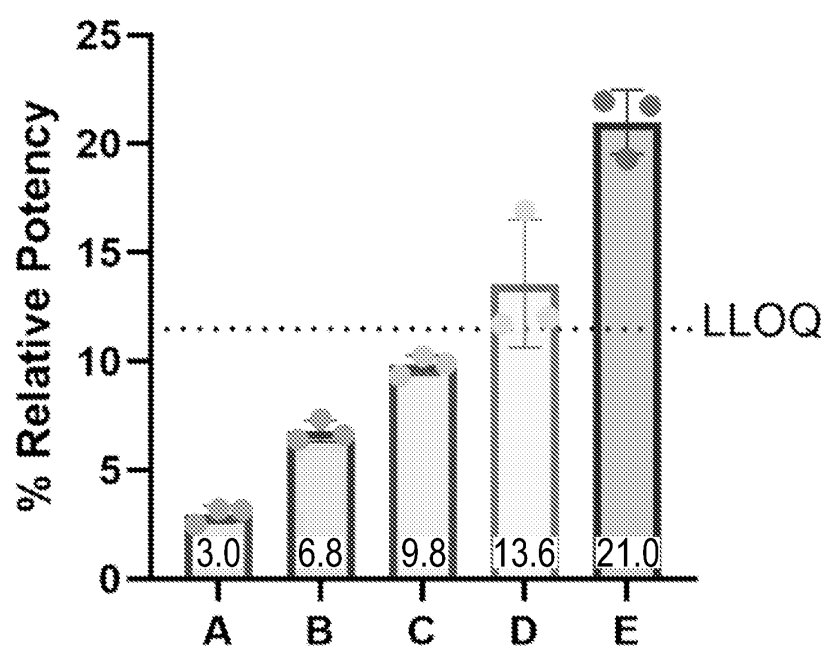
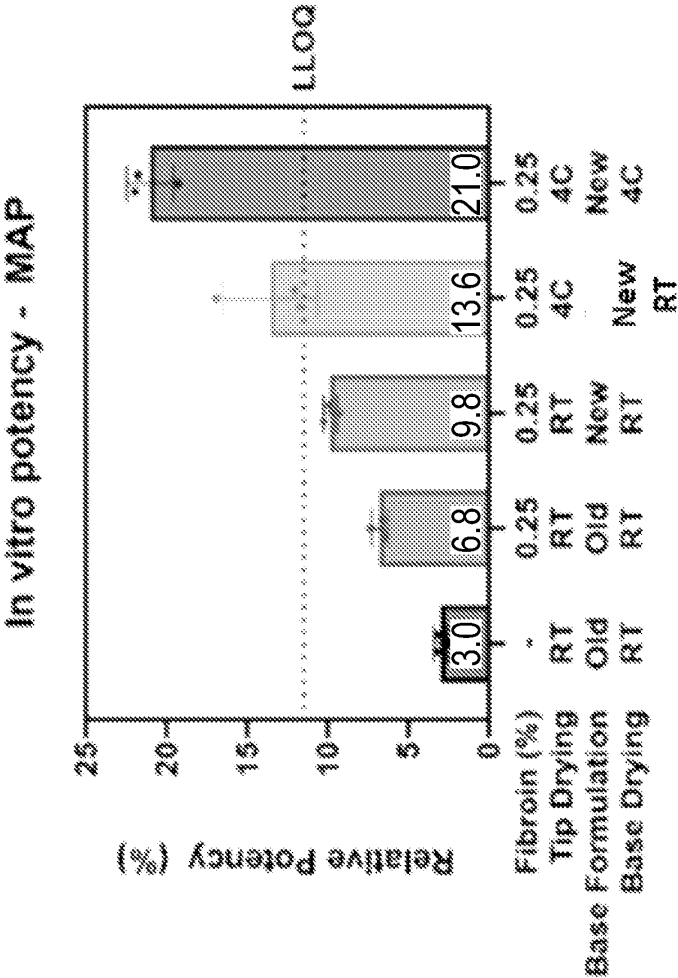
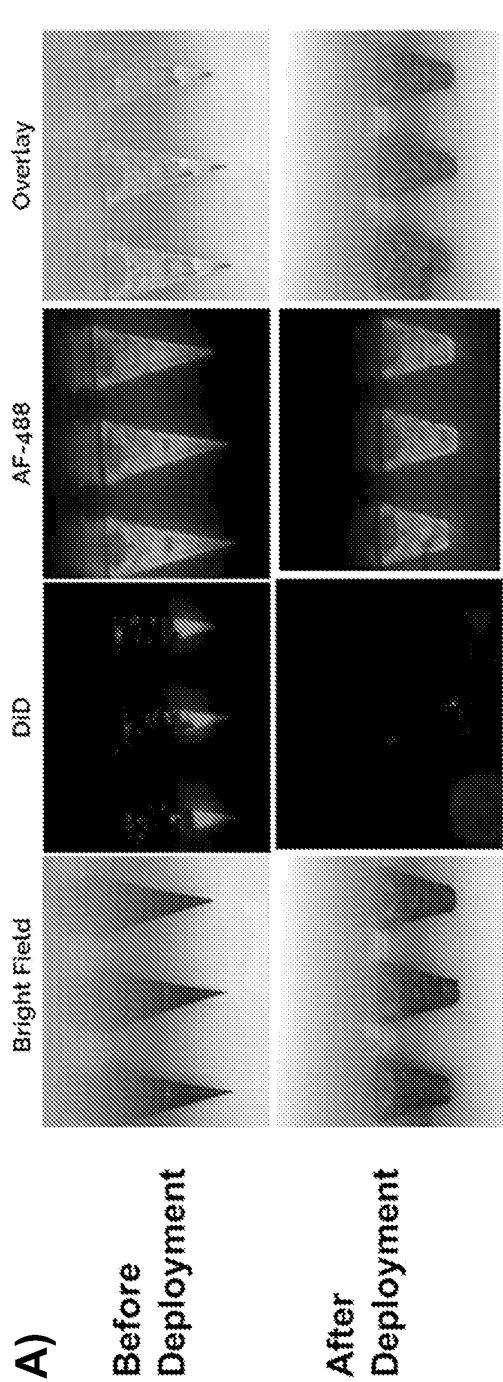


FIG. 36B

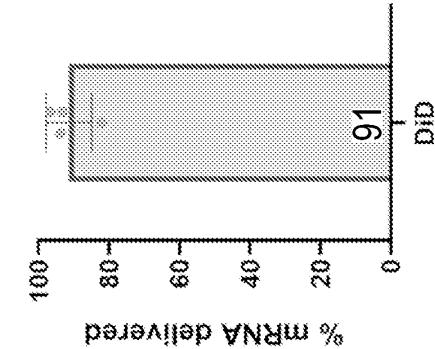


- All tip formulations: 1% PVA 4-88, 5% PVP K17, 10% Sucrose, 1X TE
- Old base = 17.7% Sucrose, 17.7% PVA 4-88, 17.7% PVP K-17, Nozzle temp = 60C
- New Base = 50% PVP K12 / 0.5% PVA 4-88 / 1X TE, Nozzle Temp = 25C

FIG. 37



C) Ex vivo delivery efficiency



B) Dino Lite

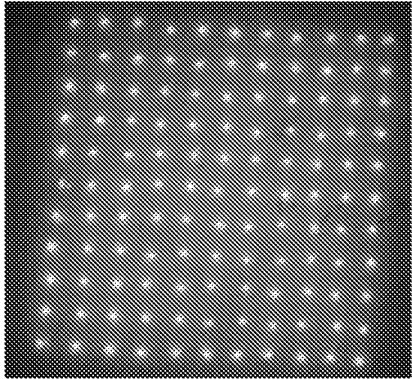
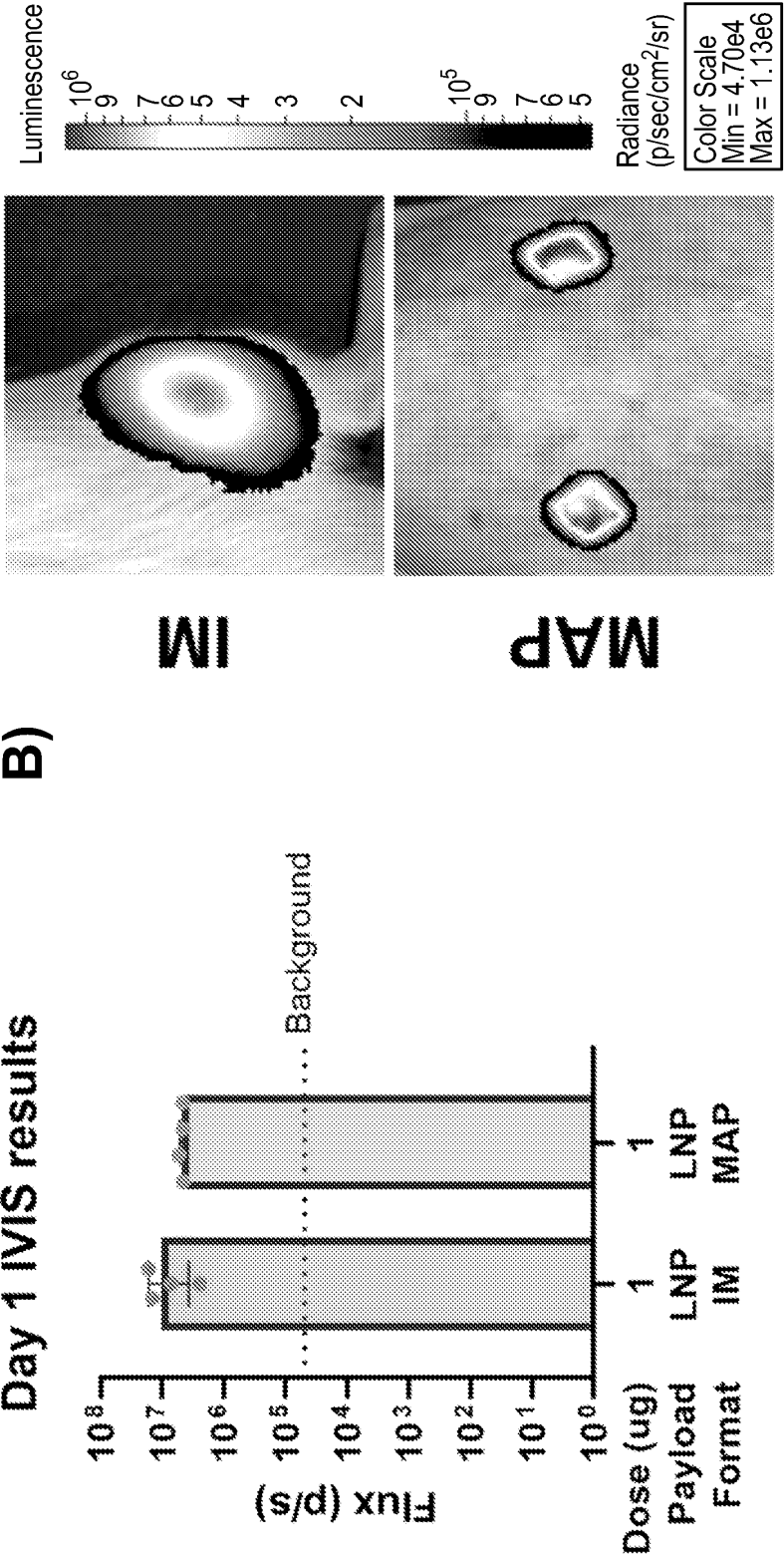


FIG. 38

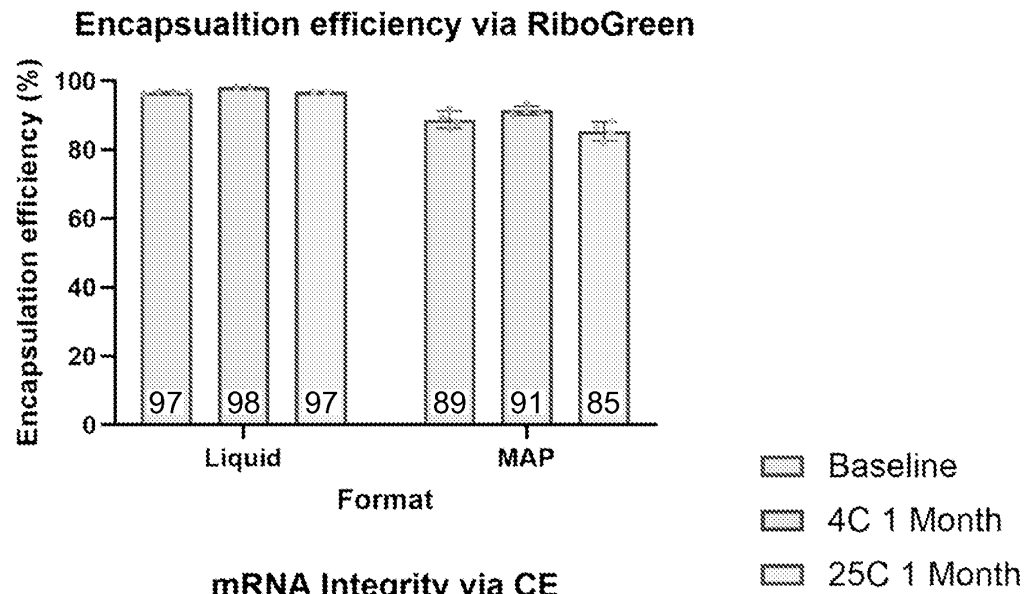
A) Day 1 IVIS results B)



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FIG. 39

A)



B)

