FIGURE 1A

Ab-30Rm + LISS Buffers + x%PEG3350 Osmolality data Ab-30Rm in A52SuPs20 Osmolality=337mOsm/Kg								
#	LISS buffers	PEG 3350 concentration						Hampton's LISS Buffers Osmolality
		4%PEG	8%PEG	12%PEG	16%PEG	20%PEG	24%PEG	
1	0.05 M Potassium Chloride pH2.0	144	172	192	243	280	349	105
2	0.05M Citric acid pH 3.0	138	173	186	226	288	321	68
3	0.05M Citric acid pH 3.5	152	177	193	235	292	342	82
4	0.05M Citric acid pH 4.0	131	192	197	237	295	347	97
5	0.05M Citric acid pH 4.5	151	210	203	245	303	342	108
6	0.05M Citric acid pH 5.0	161	190	212	252	322	350	121
7	0.05M Citric acid pH 5.5	179	184	210	249	308	359	133
8	0.05M MES pH 6.0	149	165	185	227	284	332	68
9	0.05 M Bis Tris pH 6.5	142	170	192	231	280	354	71
10	0.05 M Imidazole pH 7.0	142	149	186	230	280	315	71
11	0.05 M HEPES pH 7.5	141	167	192	238	284	349	74
12	0.05 M Tris pH 8.0	145	165	188	235	309	371	76
13	0.05 M Tris pH 8.5	138	170	190	223	286	354	65
14	0.05 M Glycine pH 9.0	139	197	185	225	285	348	55
15	0.05 M Glycine pH 9.5	146	193	207	233	322	323	67
16	0.05 M Glycine pH 10.0	124	187	194	240	280	351	78
17	0.05 M Sodium phosphate dibasic pH 11.0	156	196	209	253	303	363	132
18	0.05 M Sodium phosphate dibasic pH 12.0	148	143	211	264	311	408	154
Falls within the osmolality range 250 – 350 mOsm/Kg								

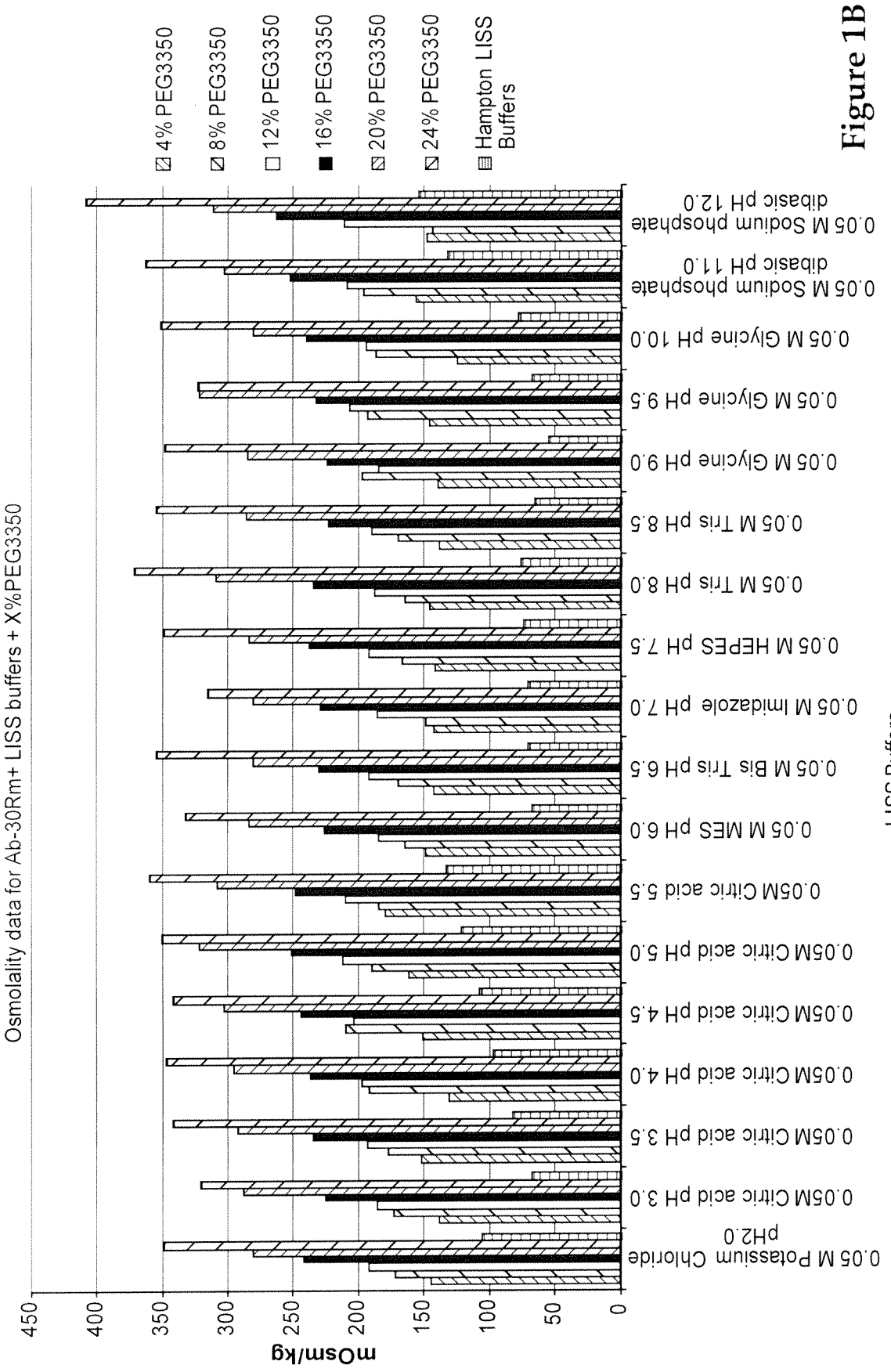
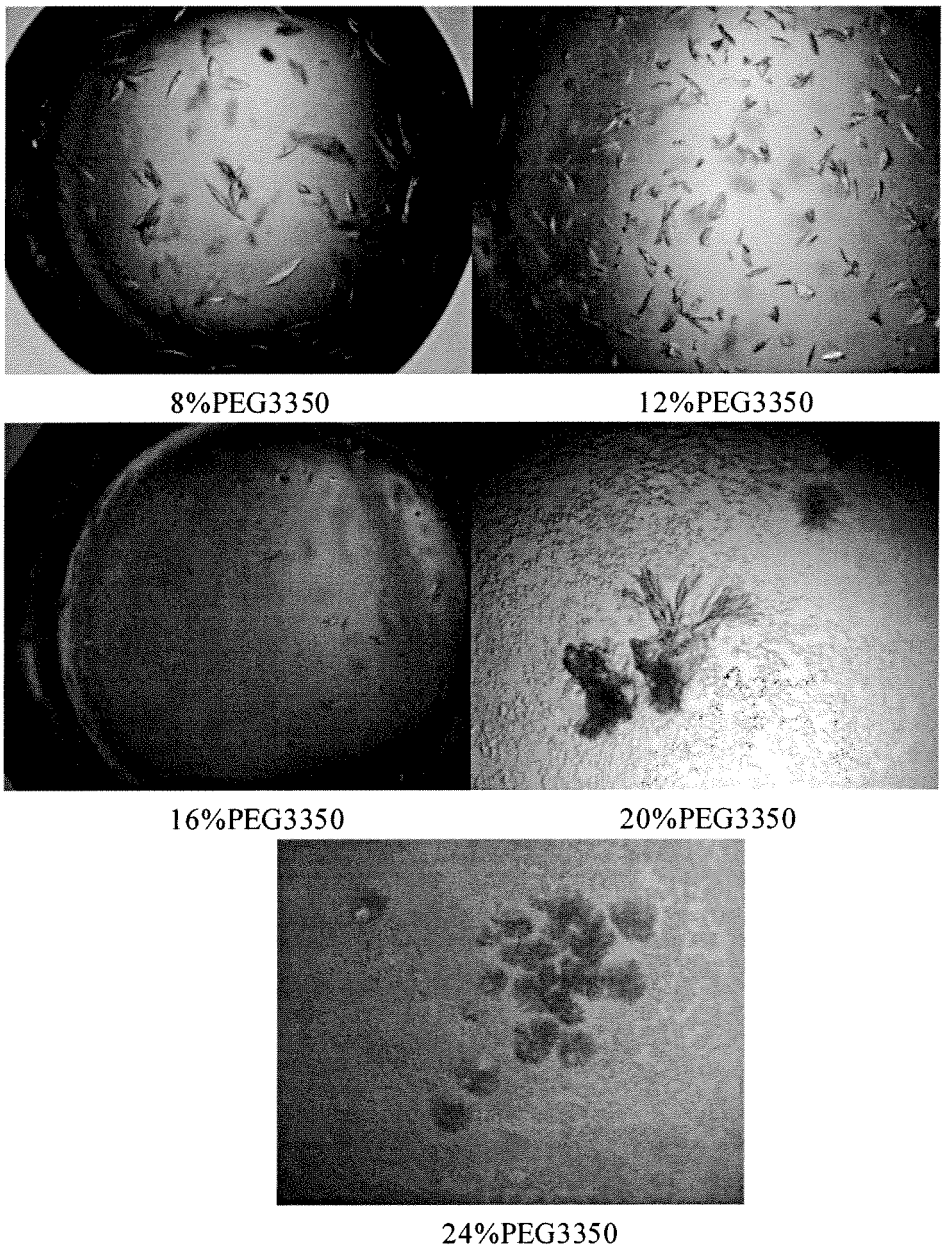

Osmolality data for Ab-30Rm+ LISS buffers + X%PEG3350
mOsm/kg
450
400
350
300
250
200
150
100
50
0
4% PEG3350
8% PEG3350
12% PEG3350
16% PEG3350
20% PEG3350
24% PEG3350
Hampton LISS Buffers
0.05 M Potassium Chloride pH2.0
0.05M Citric acid pH 3.0
0.05M Citric acid pH 3.5
0.05M Citric acid pH 4.0
0.05M Citric acid pH 4.5
0.05M Citric acid pH 5.0
0.05M Citric acid 5.5
0.05 M MES pH 6.0
0.05 M Bis Tris pH 6.5
0.05 M Imidazole pH 7.0
0.05 M HEPES pH 7.5
0.05 M Tris pH 8.0
0.05 M Tris pH 8.5
0.05 M Glycine pH 9.0
0.05 M Glycine pH 9.5
0.05 M Glycine pH 10.0
0.05 M Sodium phosphate dibasic pH 11.0
0.05 M Sodium phosphate dibasic pH 12.0
LISS Buffers

Figure 1B

Figure 2: Ab-30Rm crystal morphology in #12 0.05M Tris pH8.0 and different percentages of PEG3350



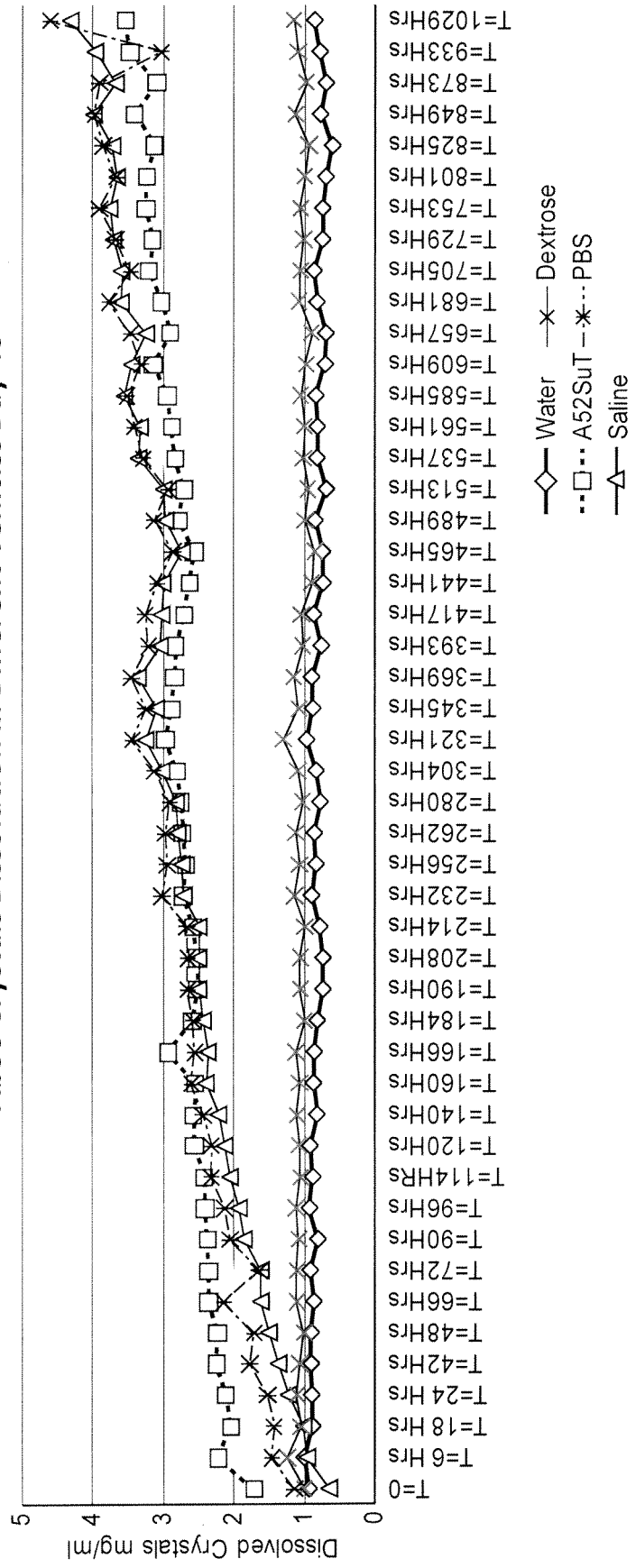

Ab30 Crystals Dissolution in Different Vehicles Day 46
Dissolved Crystals mg/ml
0
1
2
3
4
5
T=0
T=6 Hrs
T=18 Hrs
T=24 Hrs
T=42Hrs
T=48Hrs
T=66Hrs
T=72Hrs
T=90Hrs
T=96Hrs
T=114HRs
T=120Hrs
T=140Hrs
T=160Hrs
T=166Hrs
T=184Hrs
T=190Hrs
T=208Hrs
T=214Hrs
T=232Hrs
T=256Hrs
T=262Hrs
T=280Hrs
T=304Hrs
T=321Hrs
T=345Hrs
T=369Hrs
T=393Hrs
T=417Hrs
T=441Hrs
T=465Hrs
T=489Hrs
T=513Hrs
T=537Hrs
T=561Hrs
T=585Hrs
T=609Hrs
T=657Hrs
T=681Hrs
T=705Hrs
T=729Hrs
T=753Hrs
T=801Hrs
T=825Hrs
T=849Hrs
T=873Hrs
T=933Hrs
T=1029Hrs
Water
Dextrose
A52SuT
PBS
Saline

Figure 3A

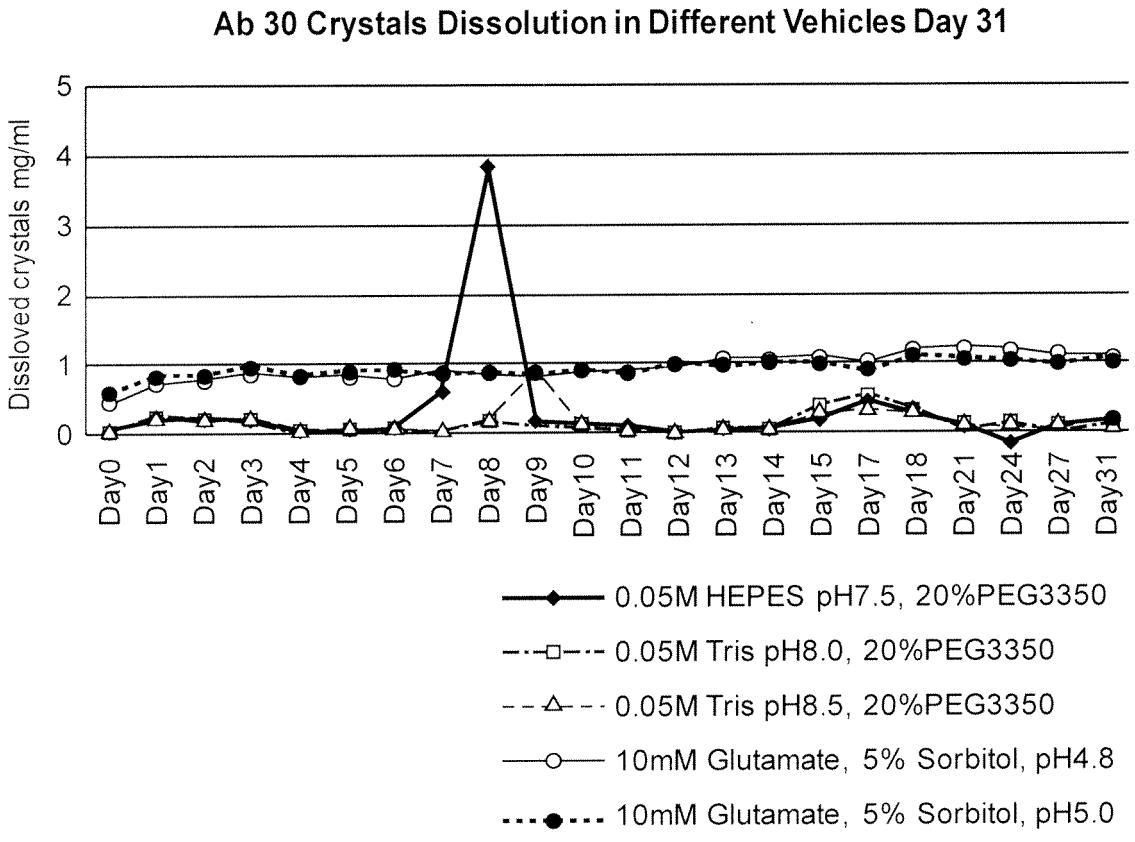

Ab 30 Crystals Dissolution in Different Vehicles Day 31
Dissloved crystals mg/ml
5
4
3
2
1
0
Day0
Day1
Day2
Day3
Day4
Day5
Day6
Day7
Day8
Day9
Day10
Day11
Day12
Day13
Day14
Day15
Day17
Day18
Day21
Day24
Day27
Day31
0.05M HEPES pH7.5, 20%PEG3350
0.05M Tris pH8.0, 20%PEG3350
0.05M Tris pH8.5, 20%PEG3350
10mM Glutamate, 5% Sorbitol, pH4.8
10mM Glutamate, 5% Sorbitol, pH5.0

Figure 3B

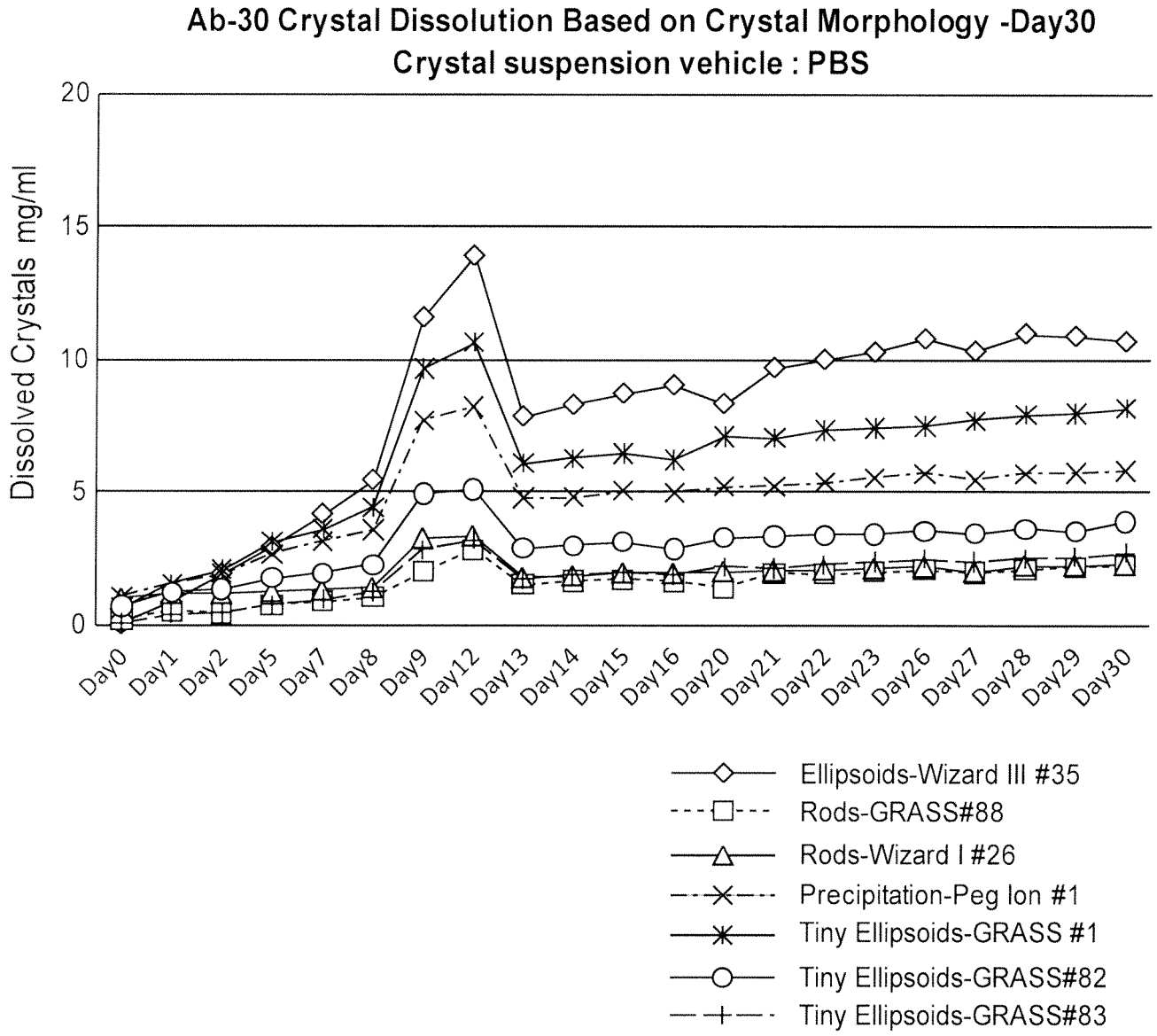

Ab-30 Crystal Dissolution Based on Crystal Morphology -Day30
Crystal suspension vehicle : PBS
Dissolved Crystals mg/ml
20
15
10
5
0
Day0
Day1
Day2
Day5
Day7
Day8
Day9
Day12
Day13
Day14
Day15
Day16
Day20
Day21
Day22
Day23
Day26
Day27
Day28
Day29
Day30
Ellipsoids-Wizard III #35
Rods-GRASS#88
Rods-Wizard I #26
Precipitation-Peg Ion #1
Tiny Ellipsoids-GRASS #1
Tiny Ellipsoids-GRASS#82
Tiny Ellipsoids-GRASS#83

Figure 4

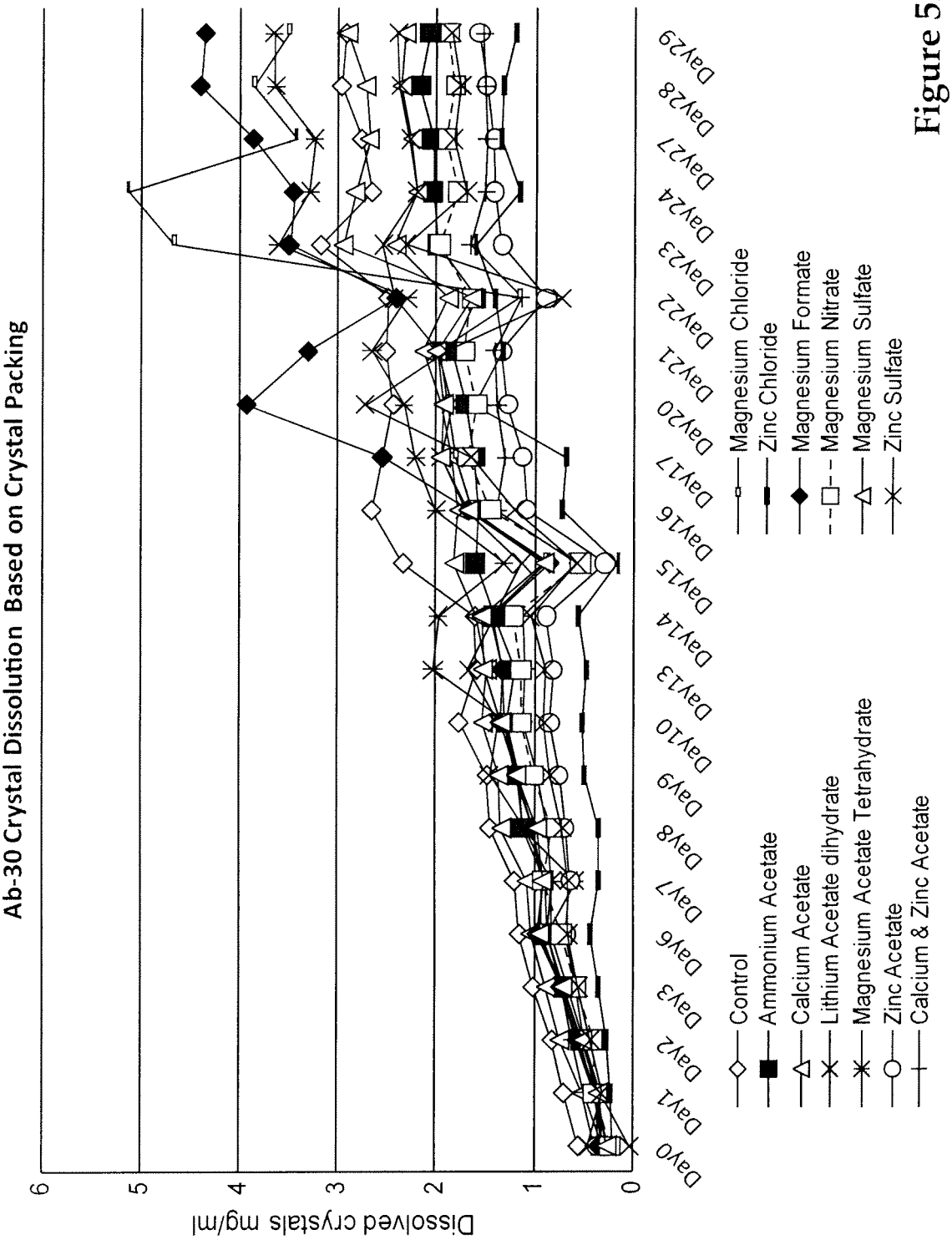

Ab-30 Crystal Dissolution Based on Crystal Packing
Dissolved crystals mg/ml
0
1
2
3
4
5
6
Day0
Day1
Day2
Day3
Day6
Day7
Day8
Day9
Day10
Day13
Day14
Day15
Day16
Day17
Day20
Day21
Day22
Day23
Day24
Day27
Day28
Day29
Control
Ammonium Acetate
Calcium Acetate
Lithium Acetate dihydrate
Magnesium Acetate Tetrahydrate
Zinc Acetate
Calcium & Zinc Acetate
Magnesium Chloride
Zinc Chloride
Magnesium Formate
Magnesium Nitrate
Magnesium Sulfate
Zinc Sulfate

Figure 5A

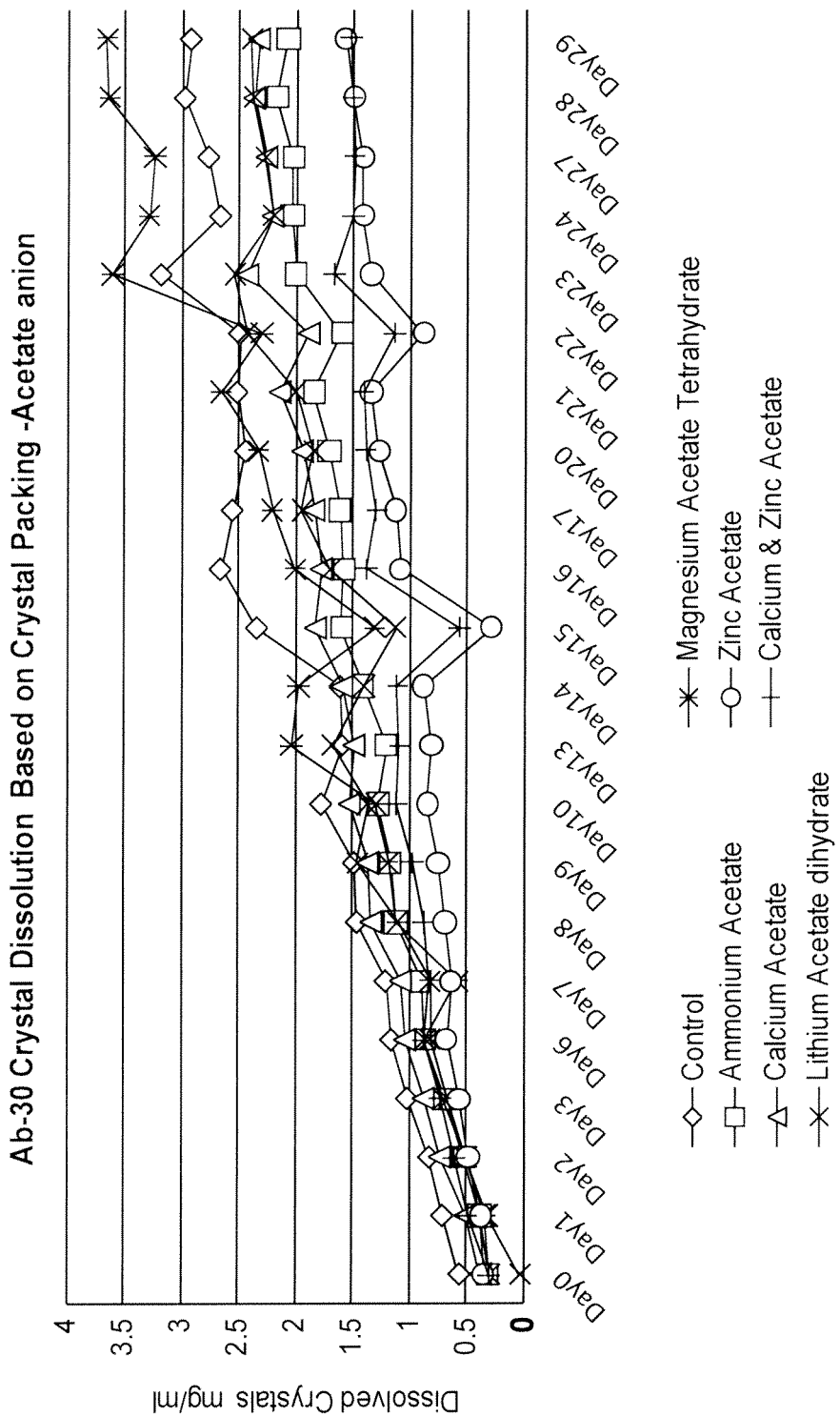

Ab-30 Crystal Dissolution Based on Crystal Packing -Acetate anion
Dissolved Crystals mg/ml
4
3.5
3
2.5
2
1.5
1
0.5
0
Day0
Day1
Day2
Day3
Day6
Day7
Day8
Day9
Day10
Day13
Day14
Day15
Day16
Day17
Day20
Day21
Day22
Day23
Day24
Day27
Day28
Day29
Control
Ammonium Acetate
Calcium Acetate
Lithium Acetate dihydrate
Magnesium Acetate Tetrahydrate
Zinc Acetate
Calcium & Zinc Acetate

Figure 5B

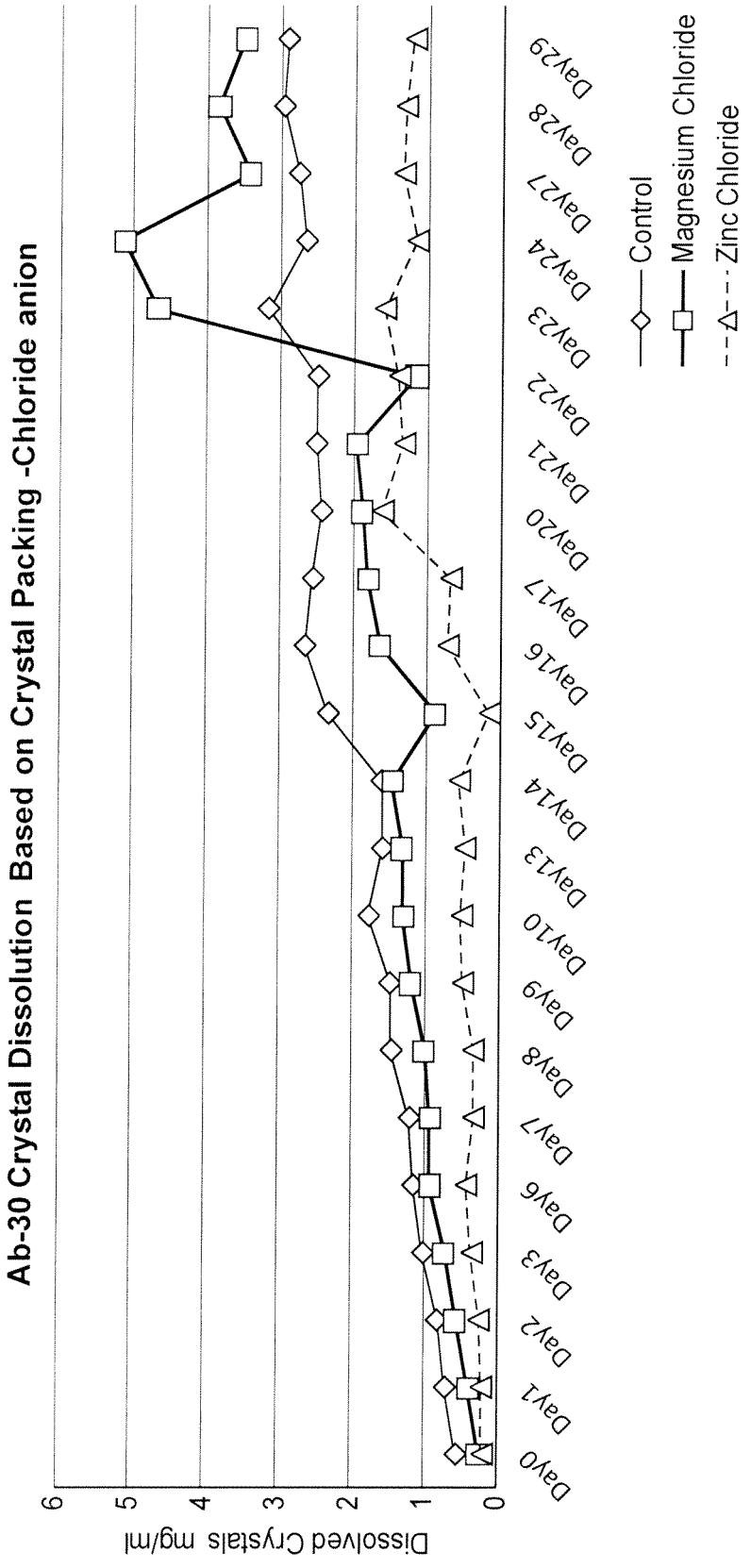

Ab-30 Crystal Dissolution Based on Crystal Packing -Chloride anion
Dissolved Crystals mg/ml
0
1
2
3
4
5
6
Day0
Day1
Day2
Day3
Day6
Day7
Day8
Day9
Day10
Day13
Day14
Day15
Day16
Day17
Day20
Day21
Day22
Day23
Day24
Day27
Day28
Day29
Control
Magnesium Chloride
Zinc Chloride

Figure 5C

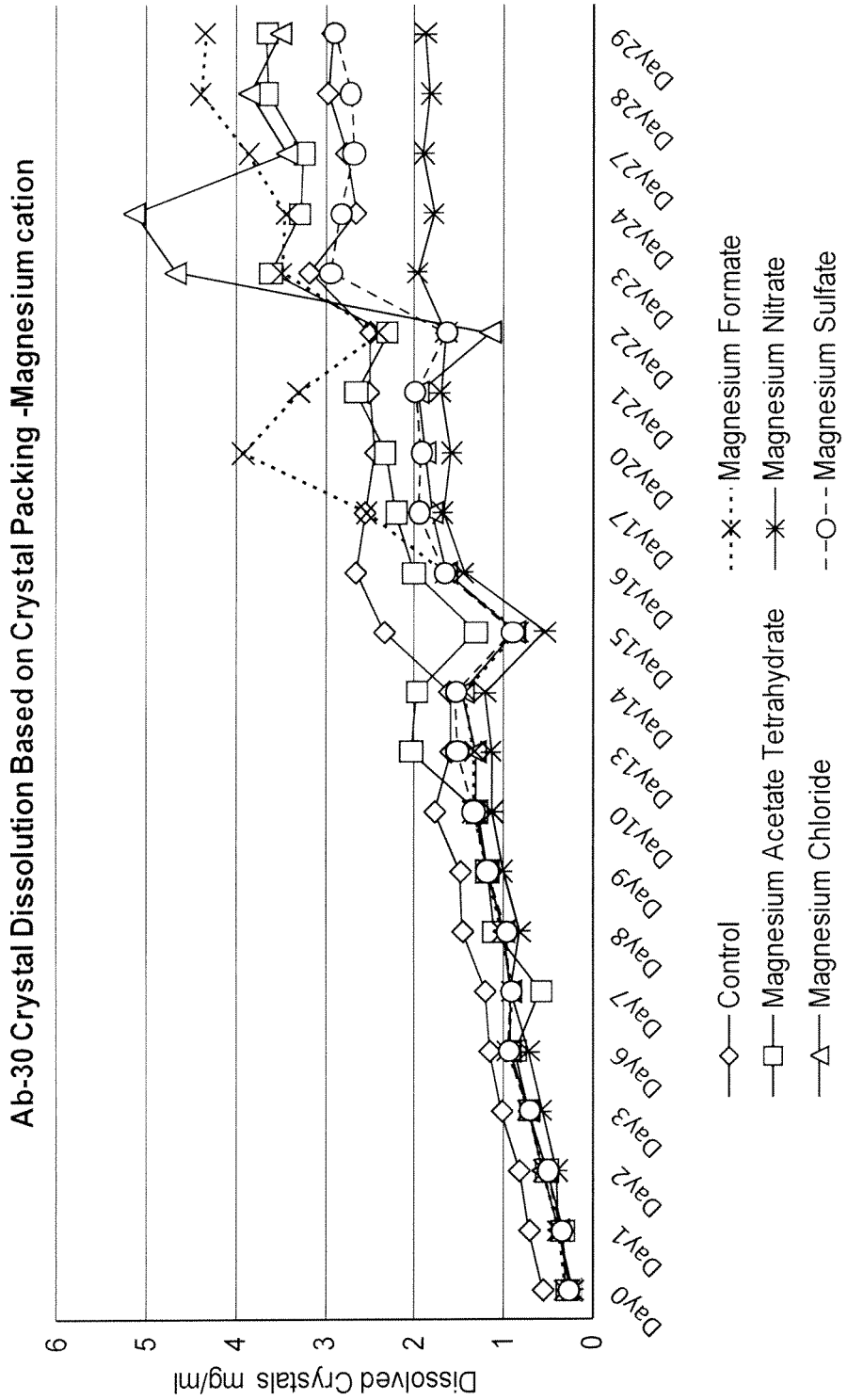

Ab-30 Crystal Dissolution Based on Crystal Packing -Magnesium cation
Dissolved Crystals mg/ml
0
1
2
3
4
5
6
Day0
Day1
Day2
Day3
Day6
Day7
Day8
Day9
Day10
Day13
Day14
Day15
Day16
Day17
Day20
Day21
Day22
Day23
Day24
Day27
Day28
Day29
Control
Magnesium Formate
Magnesium Acetate Tetrahydrate
Magnesium Nitrate
Magnesium Chloride
Magnesium Sulfate

Figure 5D

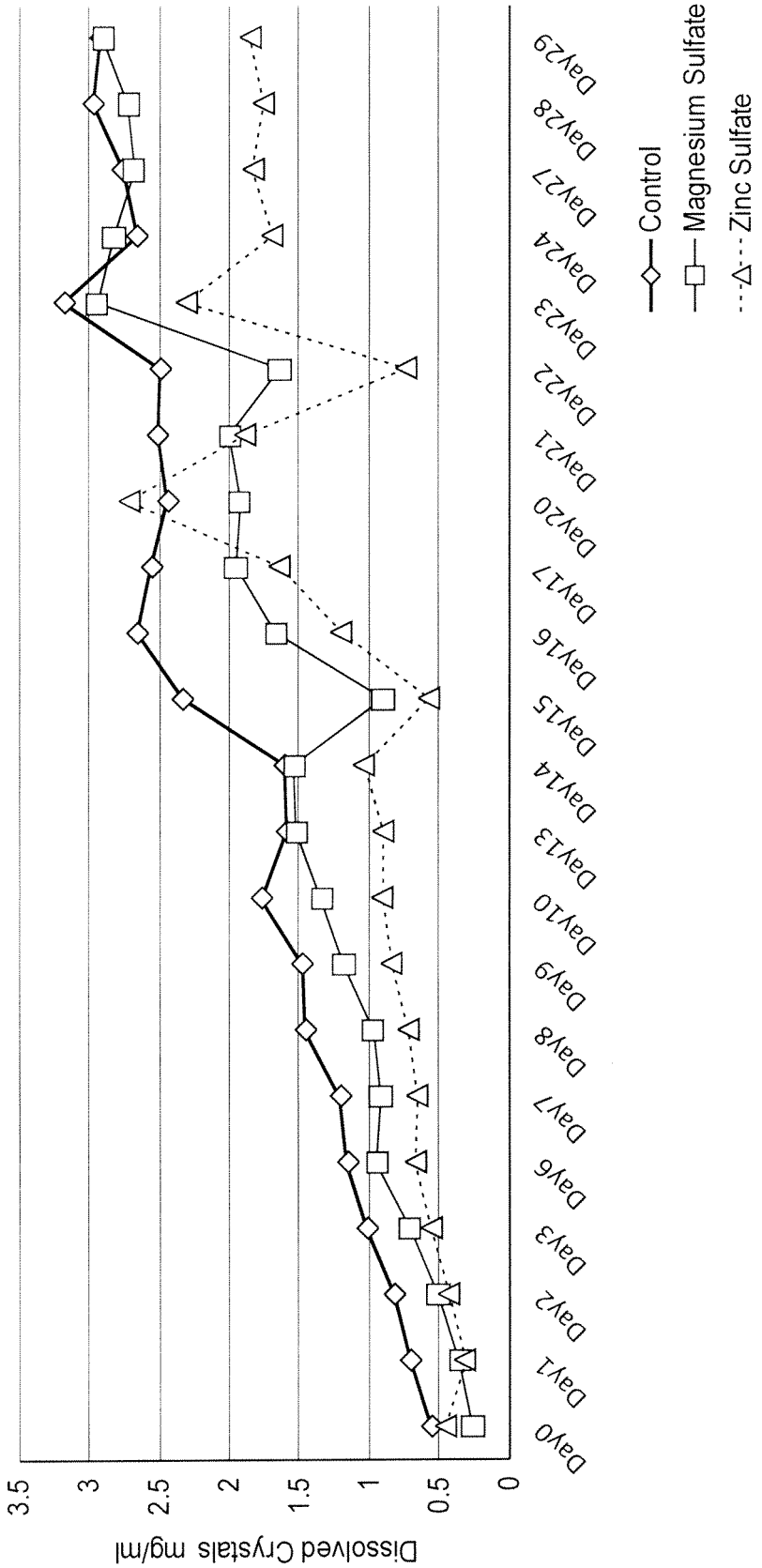

AMG785 Crystal Dissolution Based on Crystal Packing -Sulfate anion
Dissolved Crystals mg/ml
3.5
3
2.5
2
1.5
1
0.5
0
Day0
Day1
Day2
Day3
Day6
Day7
Day8
Day9
Day10
Day13
Day14
Day15
Day16
Day17
Day20
Day21
Day22
Day23
Day24
Day27
Day28
Day29
Control
Magnesium Sulfate
Zinc Sulfate

Figure 5E

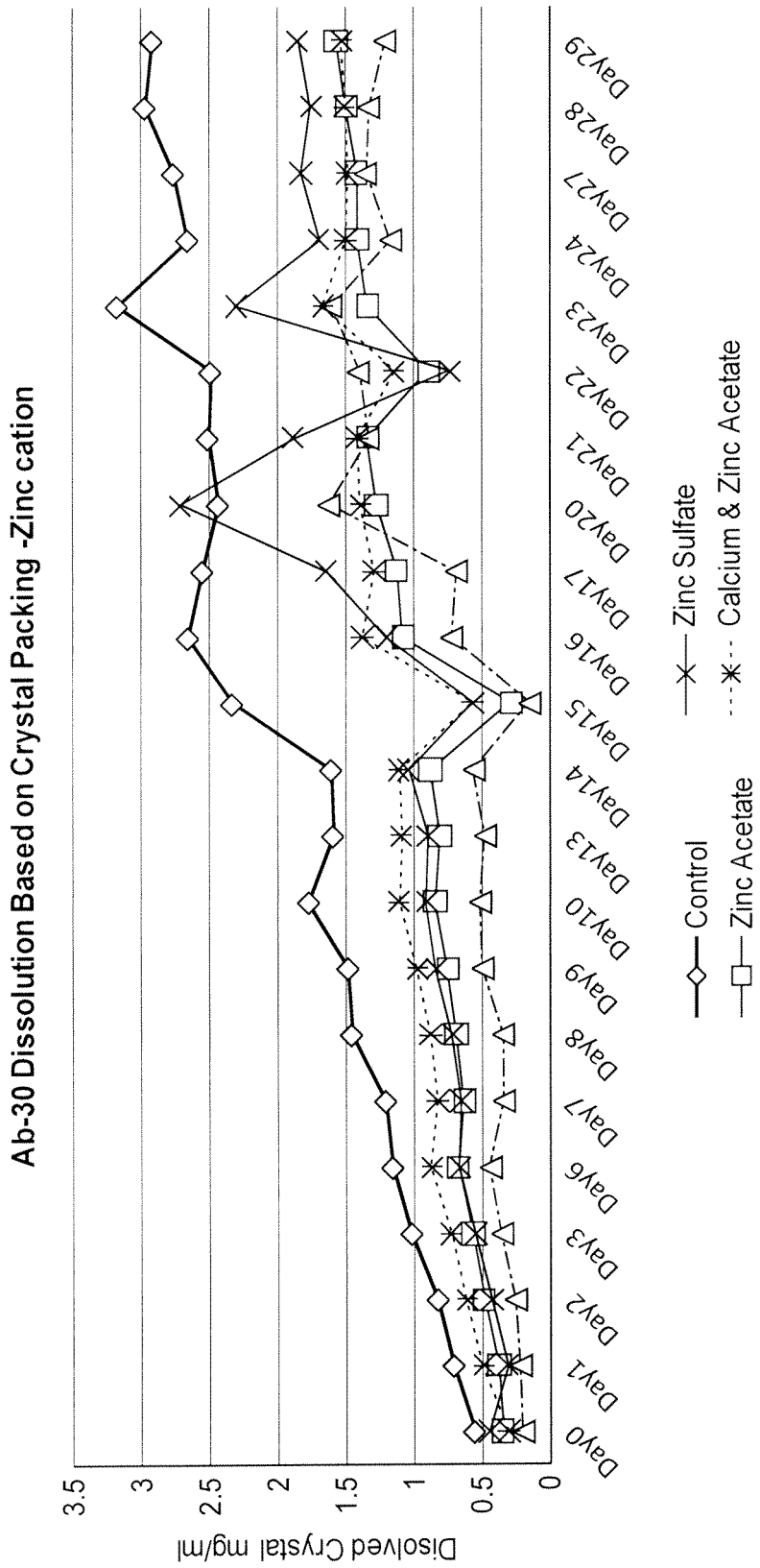

Ab-30 Dissolution Based on Crystal Packing -Zinc cation
Dissolved Crystal mg/ml
3.5
3
2.5
2
1.5
1
0.5
0
Day0
Day1
Day2
Day3
Day6
Day7
Day8
Day9
Day10
Day13
Day14
Day15
Day16
Day17
Day20
Day21
Day22
Day23
Day24
Day27
Day28
Day29
Control
Zinc Sulfate
Zinc Acetate
Calcium & Zinc Acetate
Zinc Chloride

Figure 5F

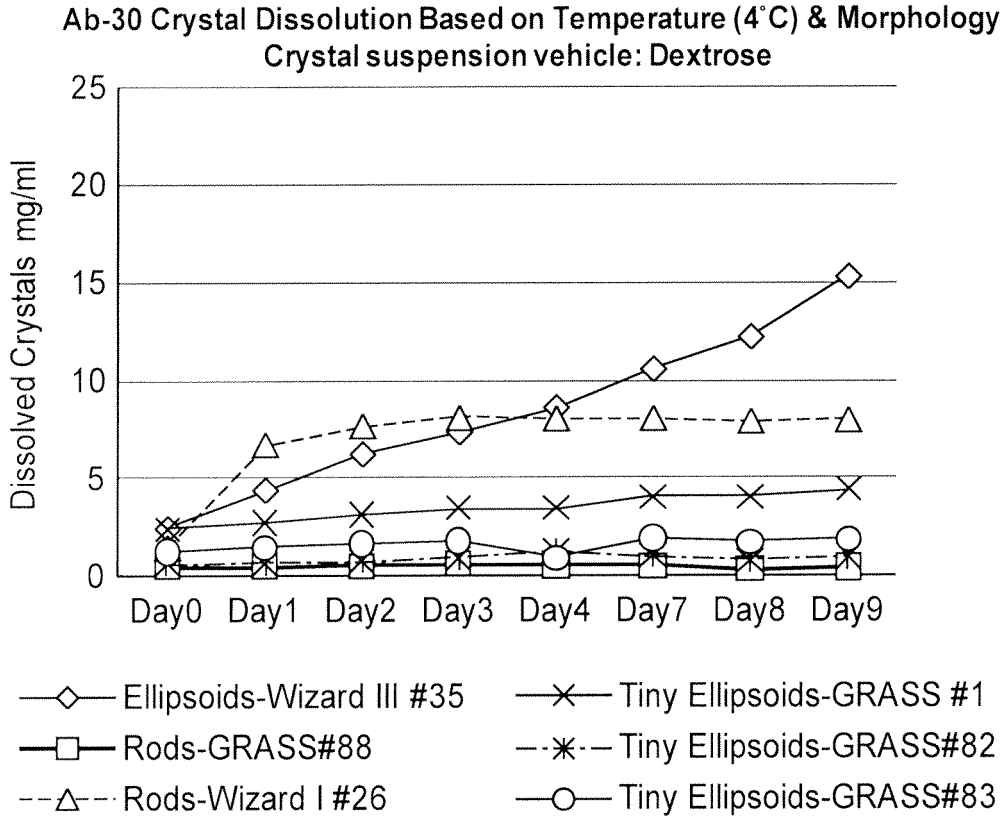


Figure 6A

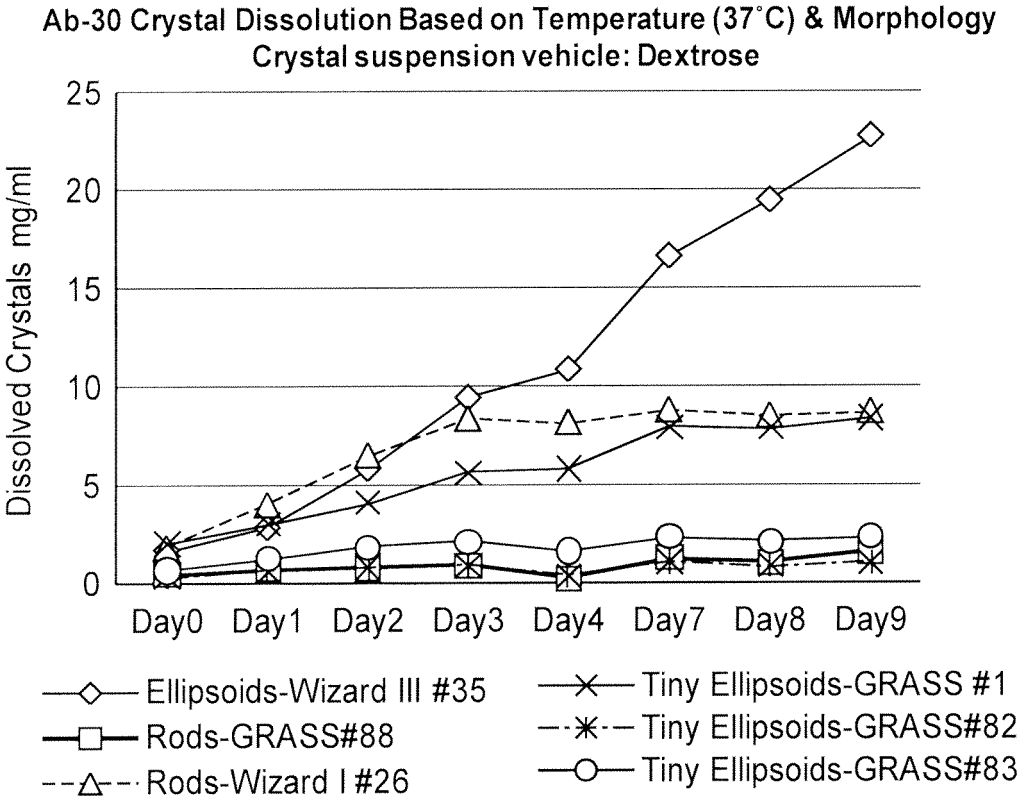


Figure 6B

Figure 7A

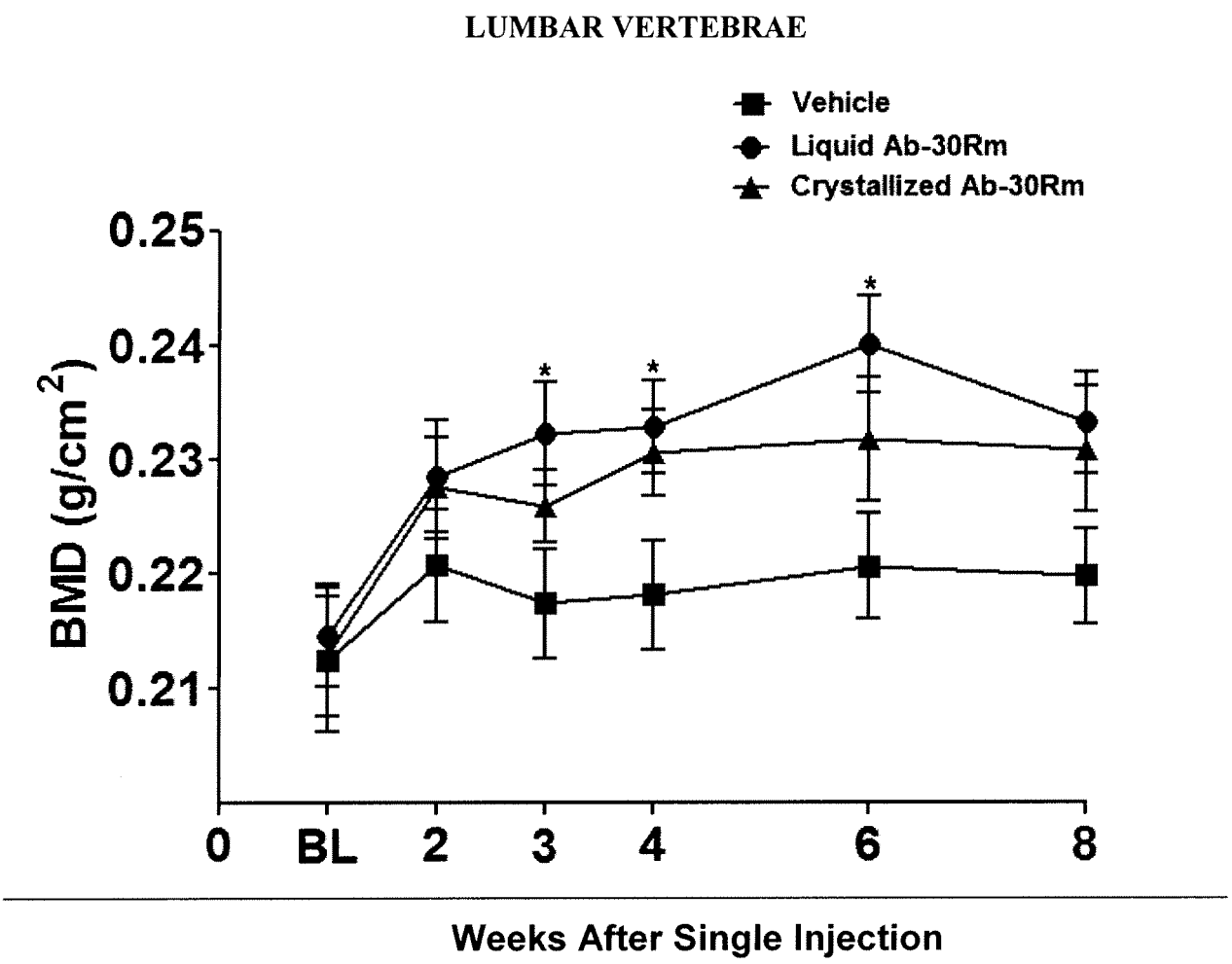

LUMBAR VERTEBRAE
Vehicle
Liquid Ab-30Rm
Crystallized Ab-30Rm
BMD (g/cm2)
0.25
0.24
0.23
0.22
0.21
*
*
*
0
BL
2
3
4
6
8
Weeks After Single Injection

Figure 7B

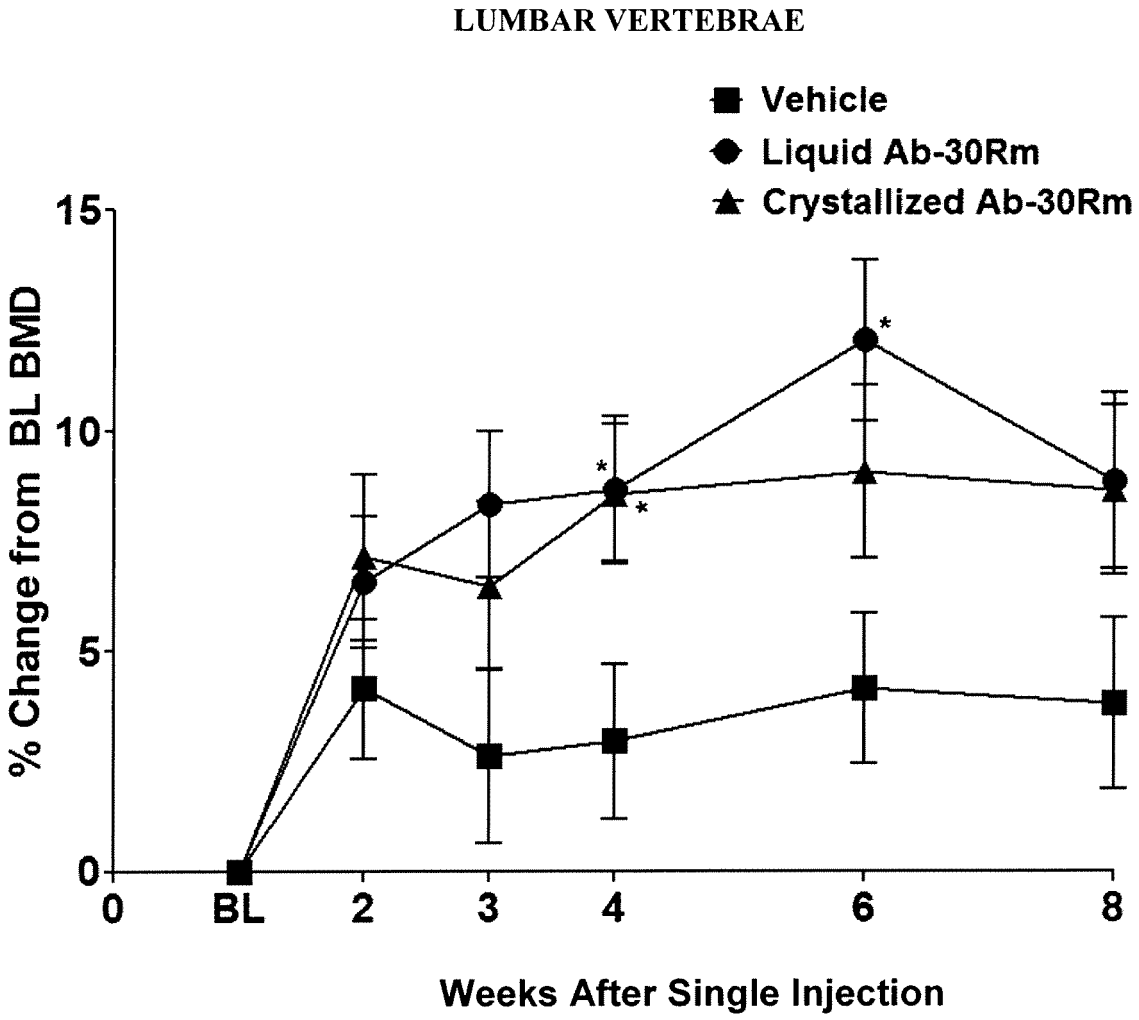

LUMBAR VERTEBRAE
Vehicle
Liquid Ab-30Rm
Crystallized Ab-30Rm
% Change from BL BMD
15
10
5
0
0
BL
2
3
4
6
8
Weeks After Single Injection
*
*
*

Figure 8A

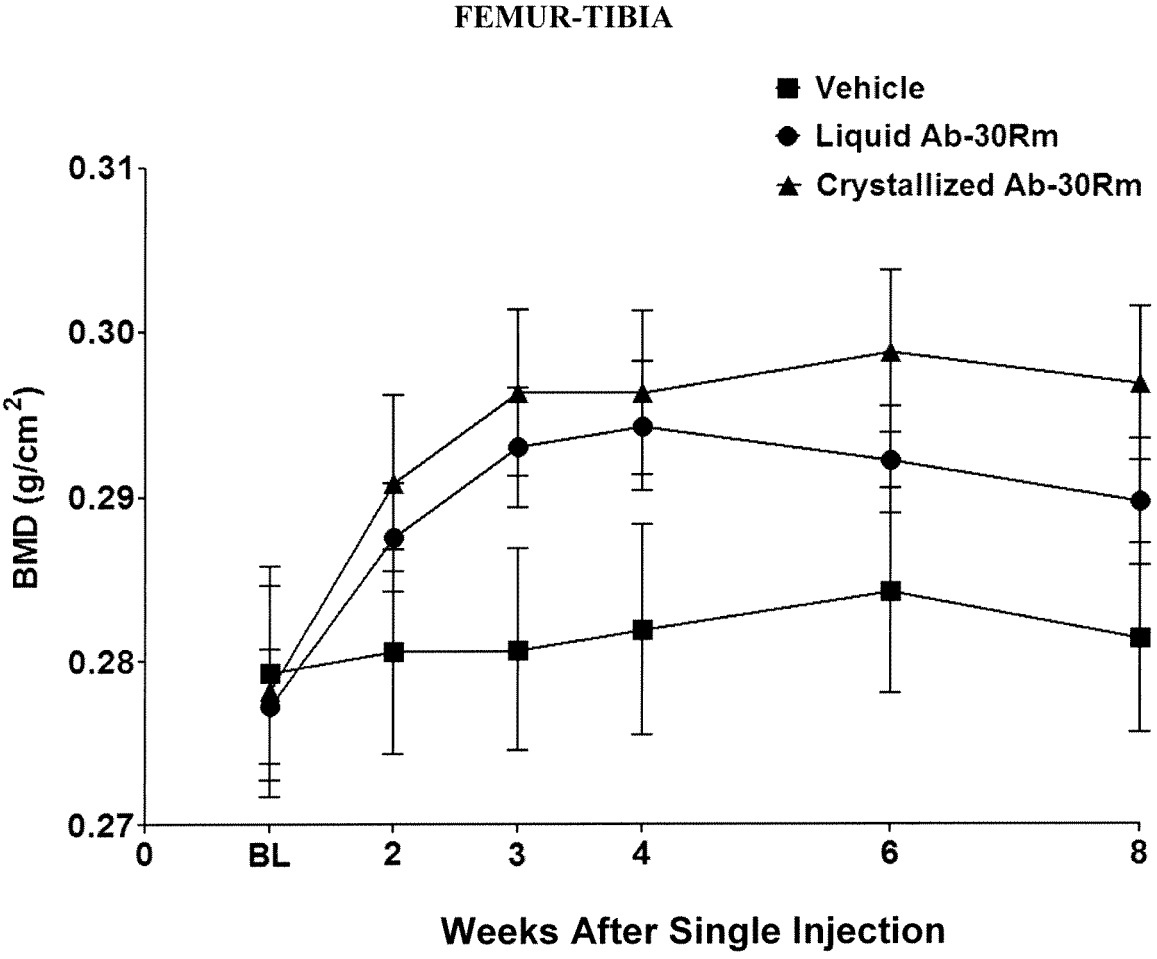

FEMUR-TIBIA
Vehicle
Liquid Ab-30Rm
Crystallized Ab-30Rm
BMD (g/cm2)
0.31
0.30
0.29
0.28
0.27
0
BL
2
3
4
6
8
Weeks After Single Injection

Figure 8B

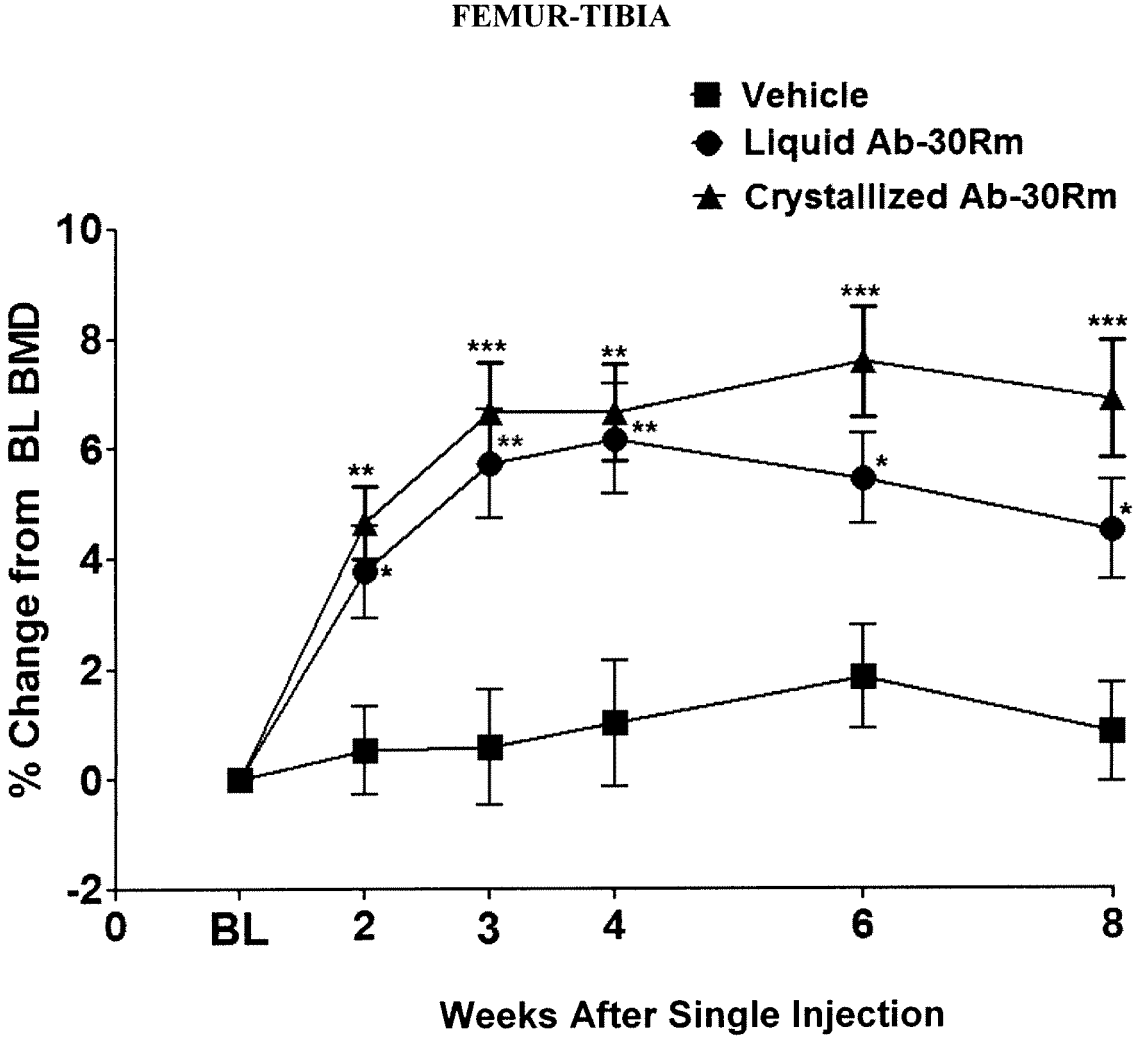

FEMUR-TIBIA
Vehicle
Liquid Ab-30Rm
Crystallized Ab-30Rm
% Change from BL BMD
10
8
6
4
2
0
-2
0
BL
2
3
4
6
8
Weeks After Single Injection
*
**
***

Figure 9A

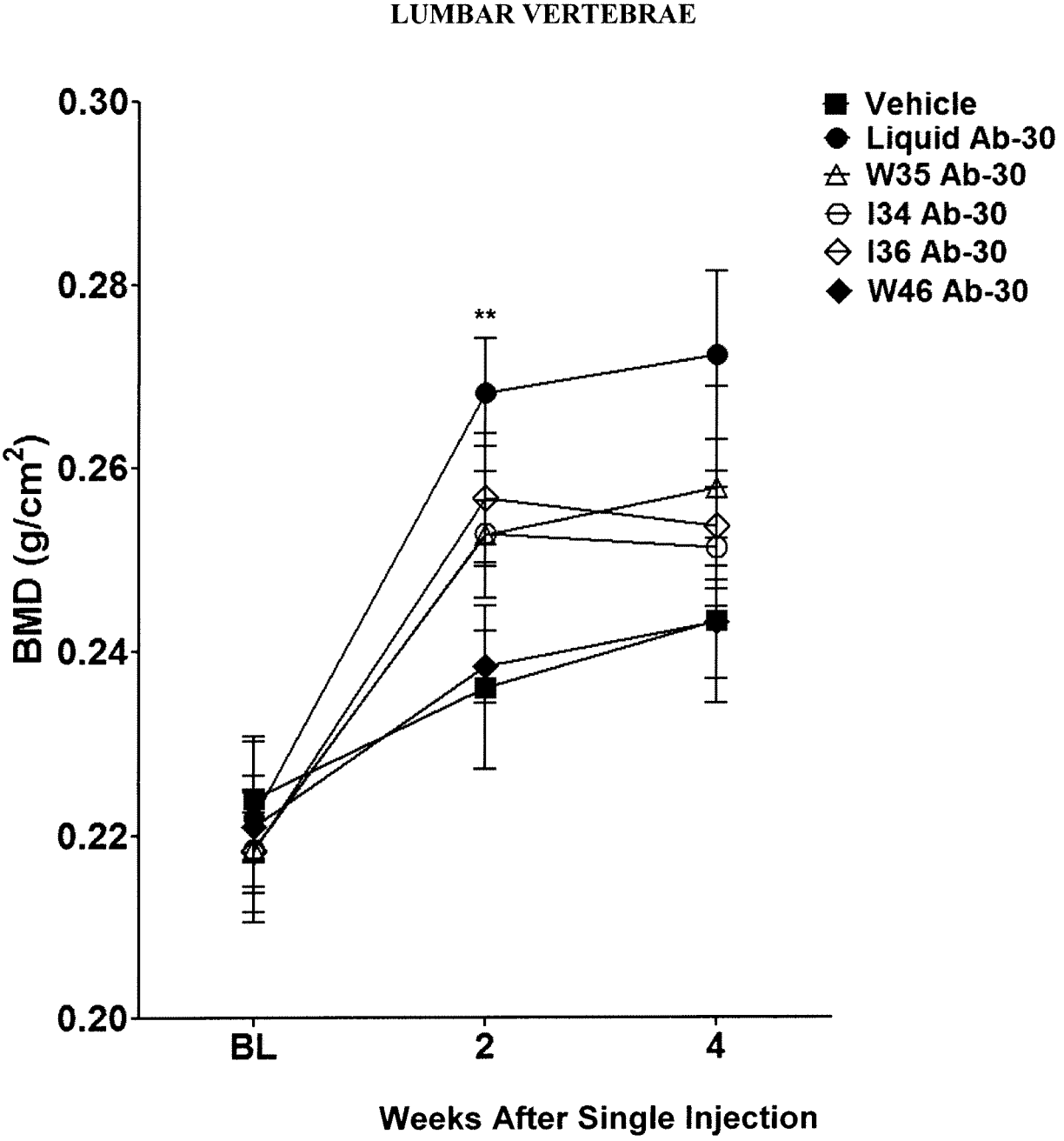

LUMBAR VERTEBRAE
Vehicle
Liquid Ab-30
W35 Ab-30
I34 Ab-30
I36 Ab-30
W46 Ab-30
**
BMD (g/cm2)
0.30
0.28
0.26
0.24
0.22
0.20
BL
2
4
Weeks After Single Injection

Figure 9B

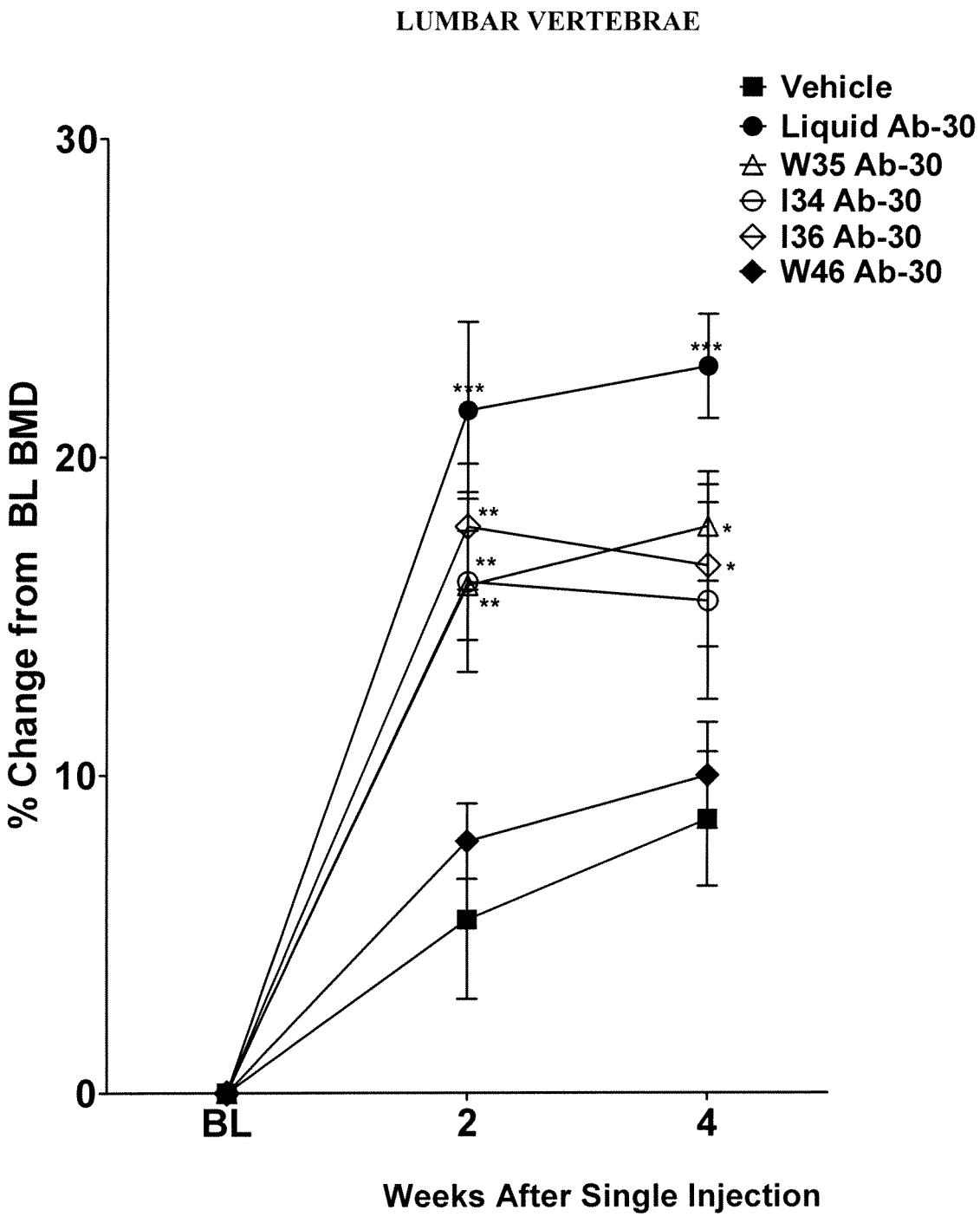

LUMBAR VERTEBRAE
Vehicle
Liquid Ab-30
W35 Ab-30
I34 Ab-30
I36 Ab-30
W46 Ab-30
% Change from BL BMD
30
20
10
0
BL
2
4
Weeks After Single Injection
***
***
**
**
**
*
*

Figure 10A

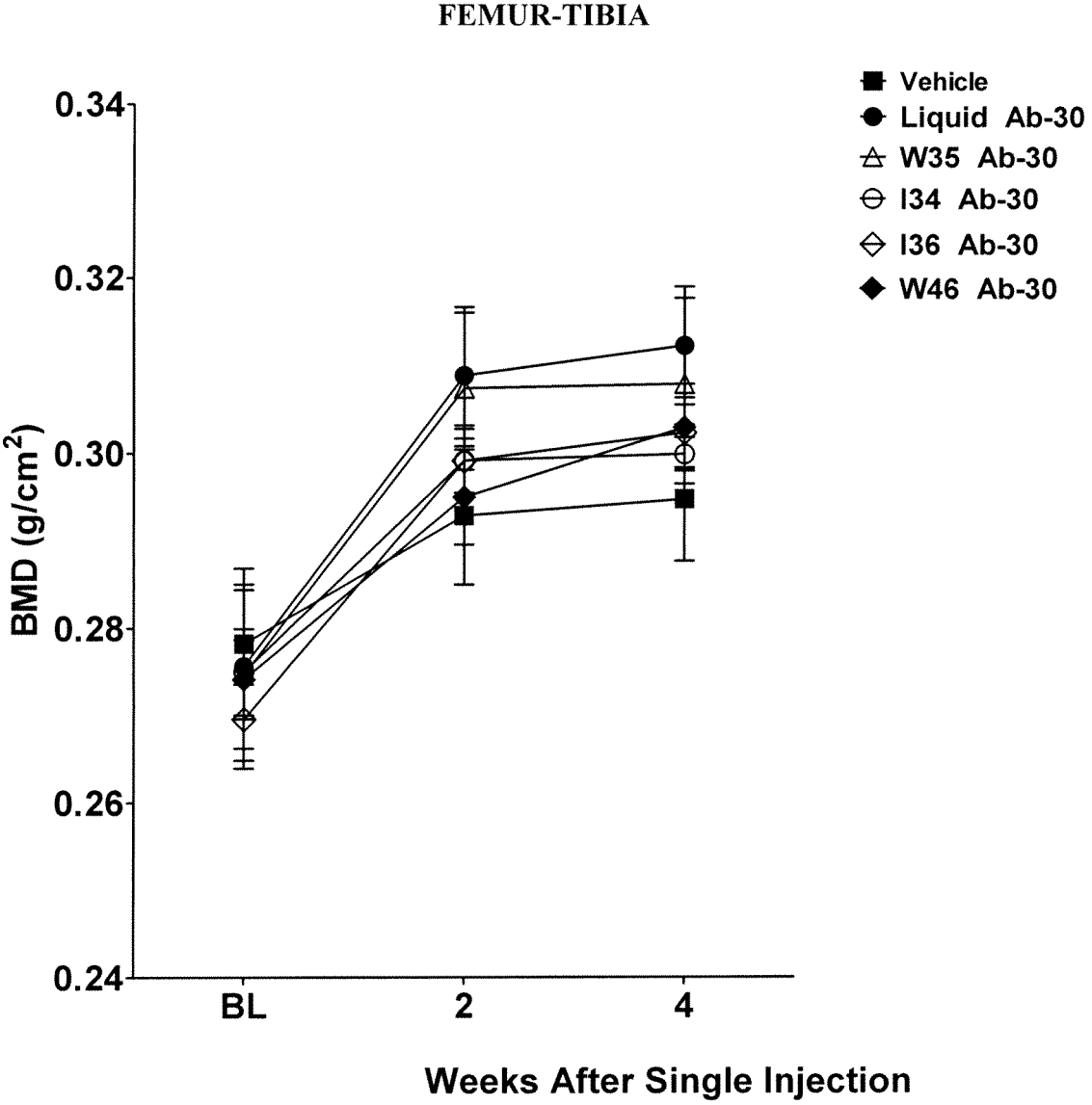
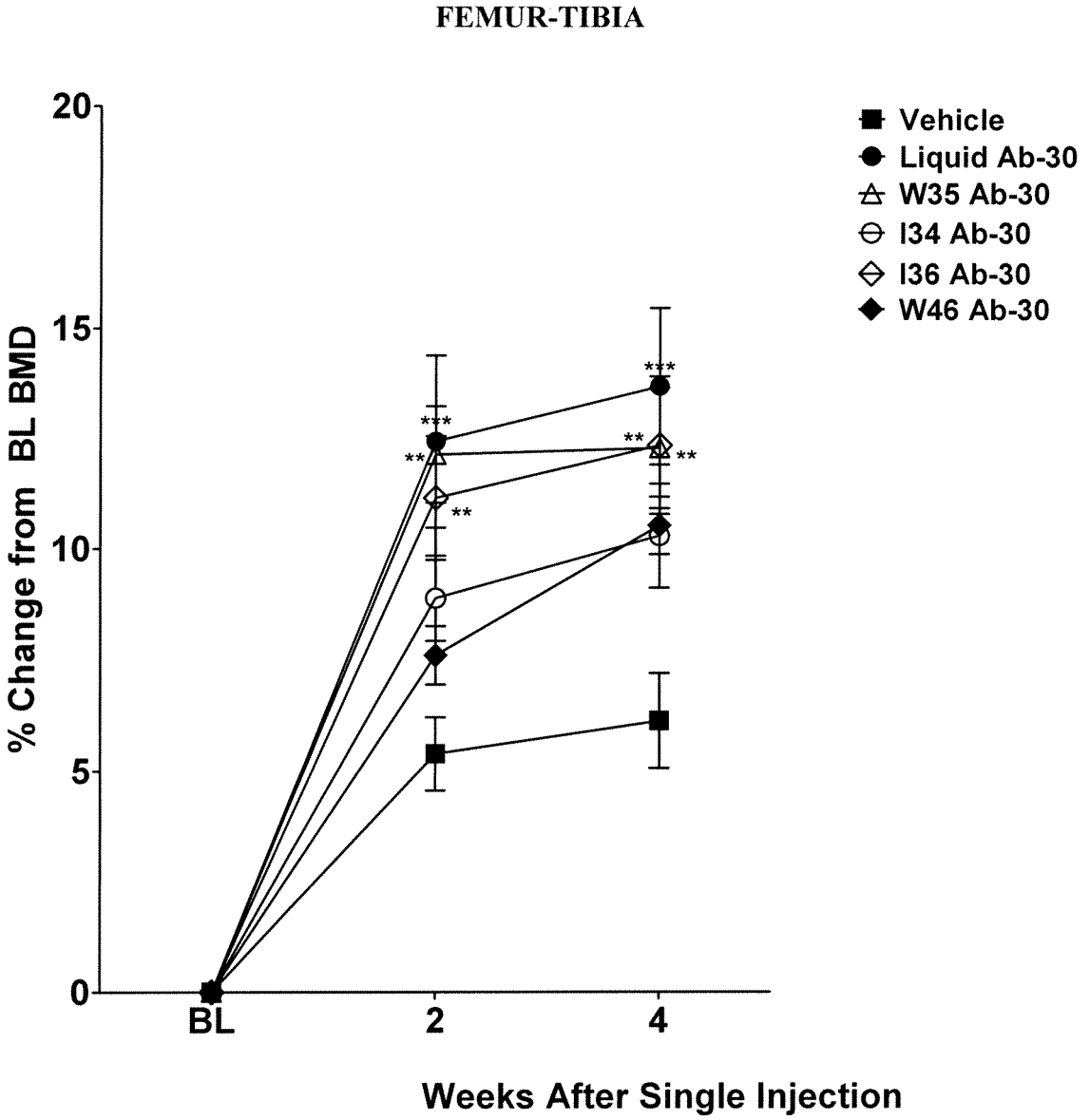

FEMUR-TIBIA
Vehicle
Liquid Ab-30
W35 Ab-30
I34 Ab-30
I36 Ab-30
W46 Ab-30
BMD (g/cm2)
0.34
0.32
0.30
0.28
0.26
0.24
BL
2
4
Weeks After Single Injection

Figure 10B


FEMUR-TIBIA
20
15
10
5
0
% Change from BL BMD
BL
2
4
Weeks After Single Injection
Vehicle
Liquid Ab-30
W35 Ab-30
I34 Ab-30
I36 Ab-30
W46 Ab-30
***
**
**
**
**