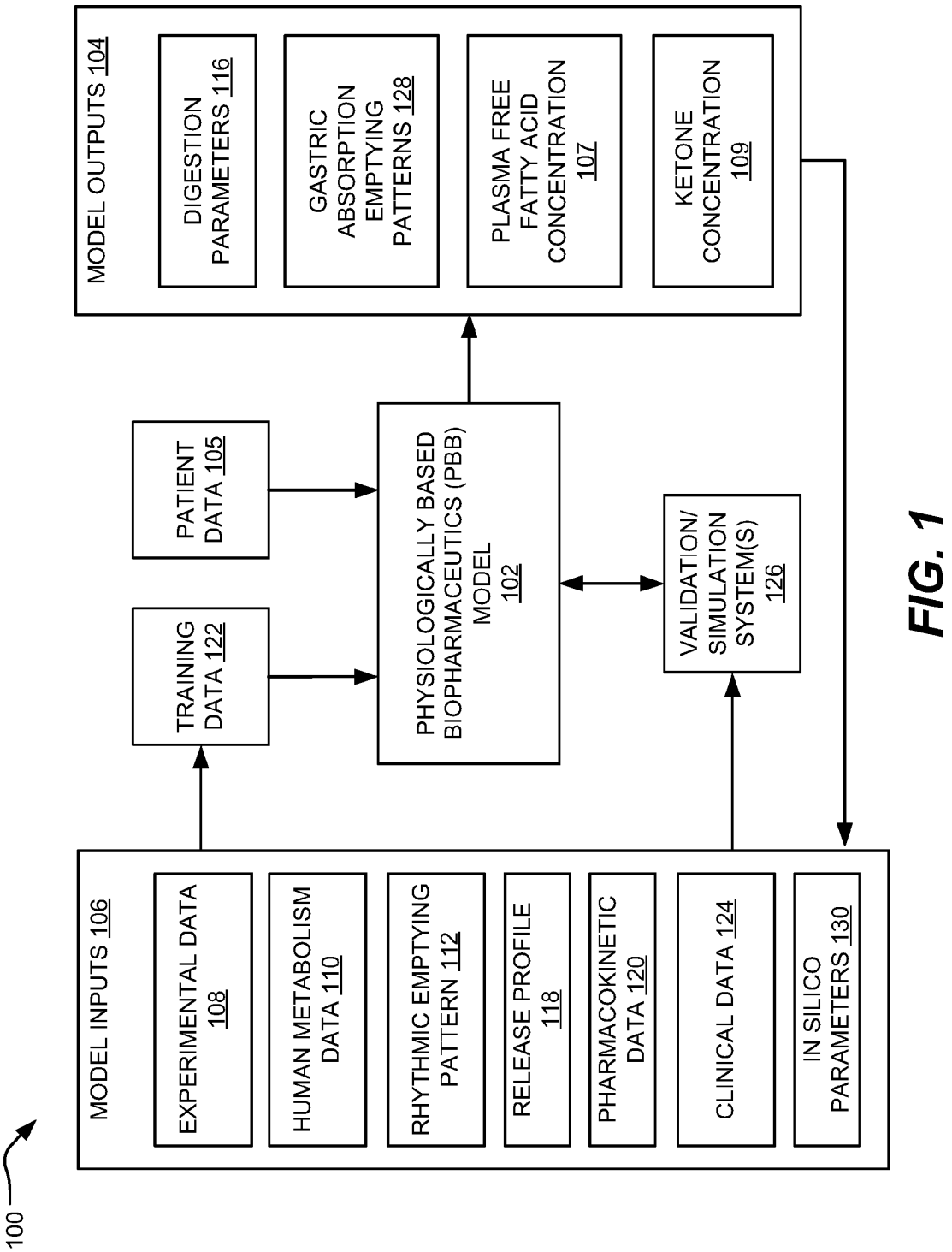

100
MODEL INPUTS 106
EXPERIMENTAL DATA 108
HUMAN METABOLISM DATA 110
RHYTHMIC EMPTYING PATTERN 112
RELEASE PROFILE 118
PHARMACOKINETIC DATA 120
CLINICAL DATA 124
IN SILICO PARAMETERS 130
TRAINING DATA 122
PATIENT DATA 105
PHYSIOLOGICALLY BASED BIOPHARMACEUTICS (PBB) MODEL 102
VALIDATION/ SIMULATION SYSTEM(S) 126
MODEL OUTPUTS 104
DIGESTION PARAMETERS 116
GASTRIC ABSORPTION EMPTYING PATTERNS 128
PLASMA FREE FATTY ACID CONCENTRATION 107
KETONE CONCENTRATION 109

FIG. 1

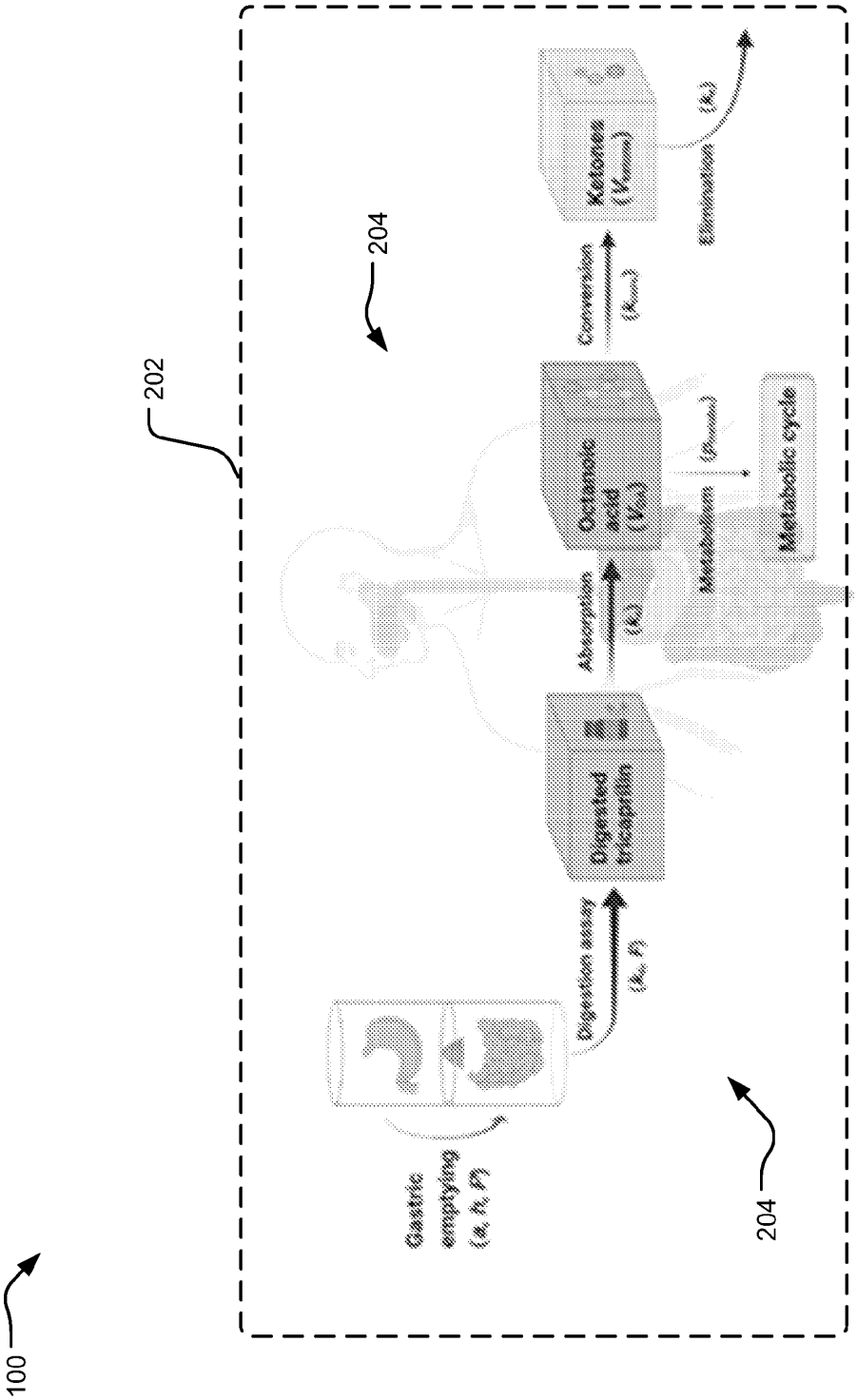

100
202
204
204
Gastric emptying
Digestion assay
Digested triacylglycerols
Absorption
Octanoic acid
Metabolism
Metabolic cycle
Conversion
Ketones
Elimination

FIG. 2

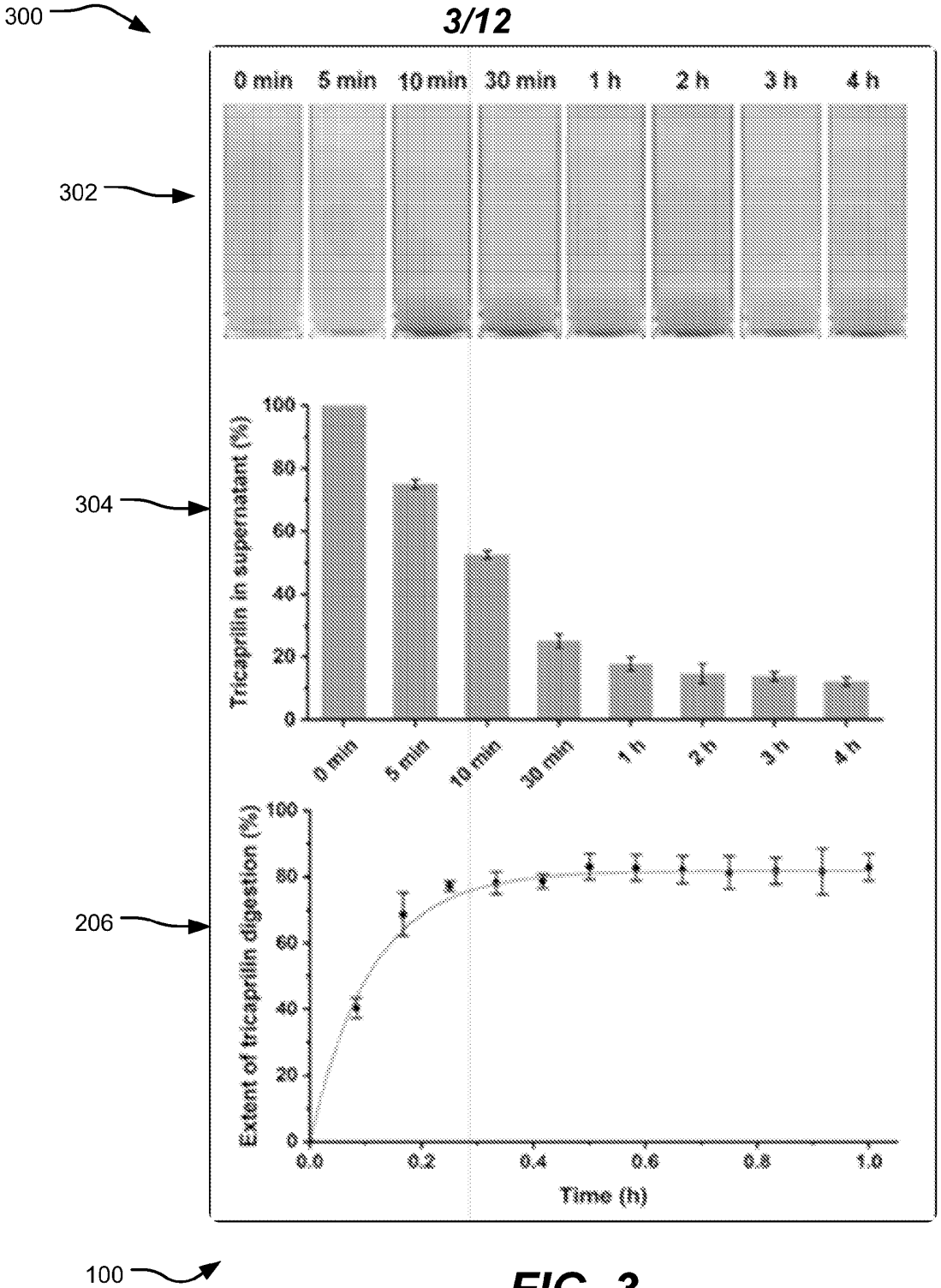

300
302
304
206
100
0 min
5 min
10 min
30 min
1 h
2 h
3 h
4 h
Tricaprilin in supernatant (%)
Extent of tricaprilin digestion (%)
Time (h)

FIG. 3

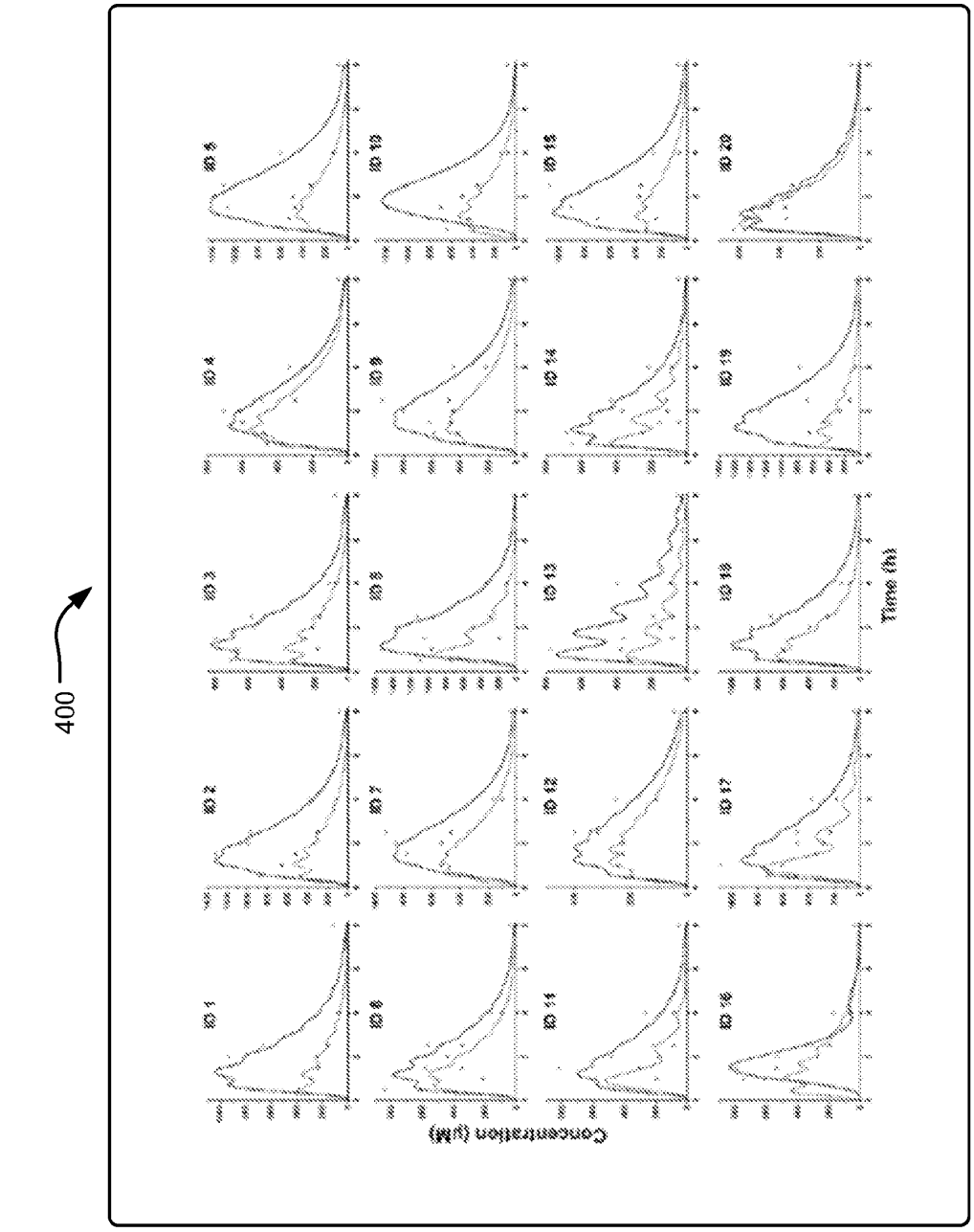


FIG. 4

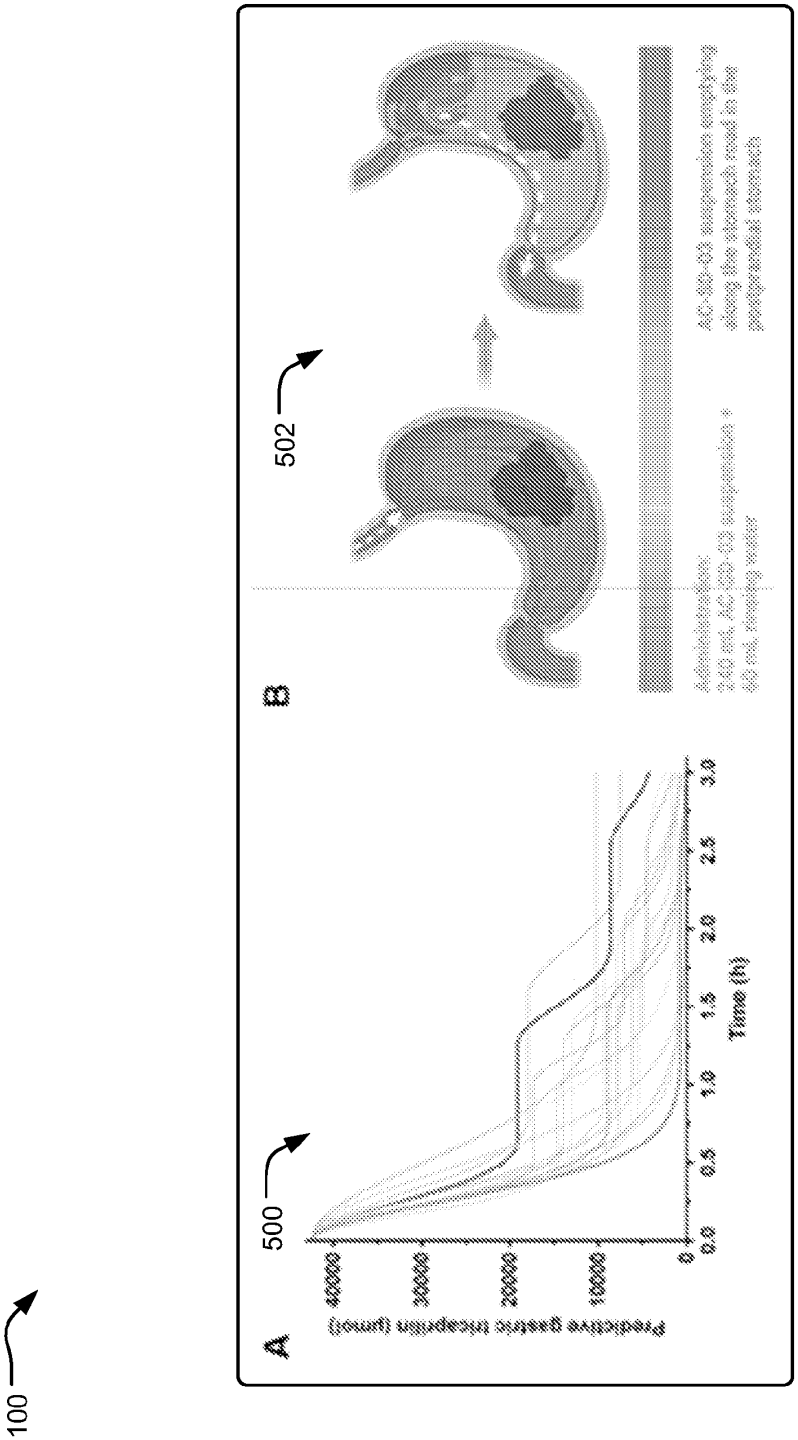

100
A
500
Predictive gastric absorption (µmol)
40000
30000
20000
10000
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (h)
B
502
Administration:
2.10 mL AC-SD-03 suspension *
60 mL tomato soup
AC-SD-03 suspension emptying
along the stomach wall to the
pylorus and duodenum

FIG. 5

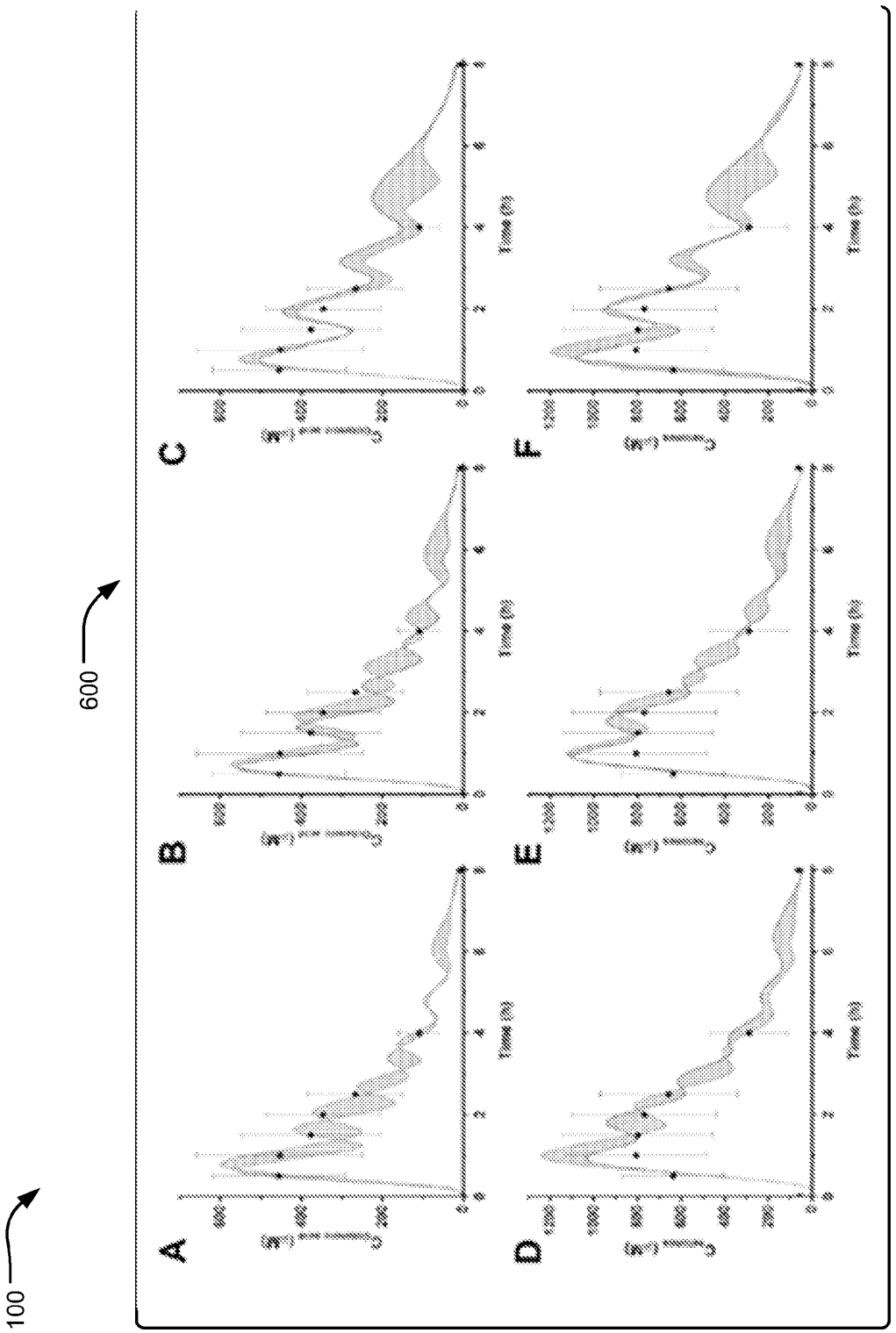


FIG. 6

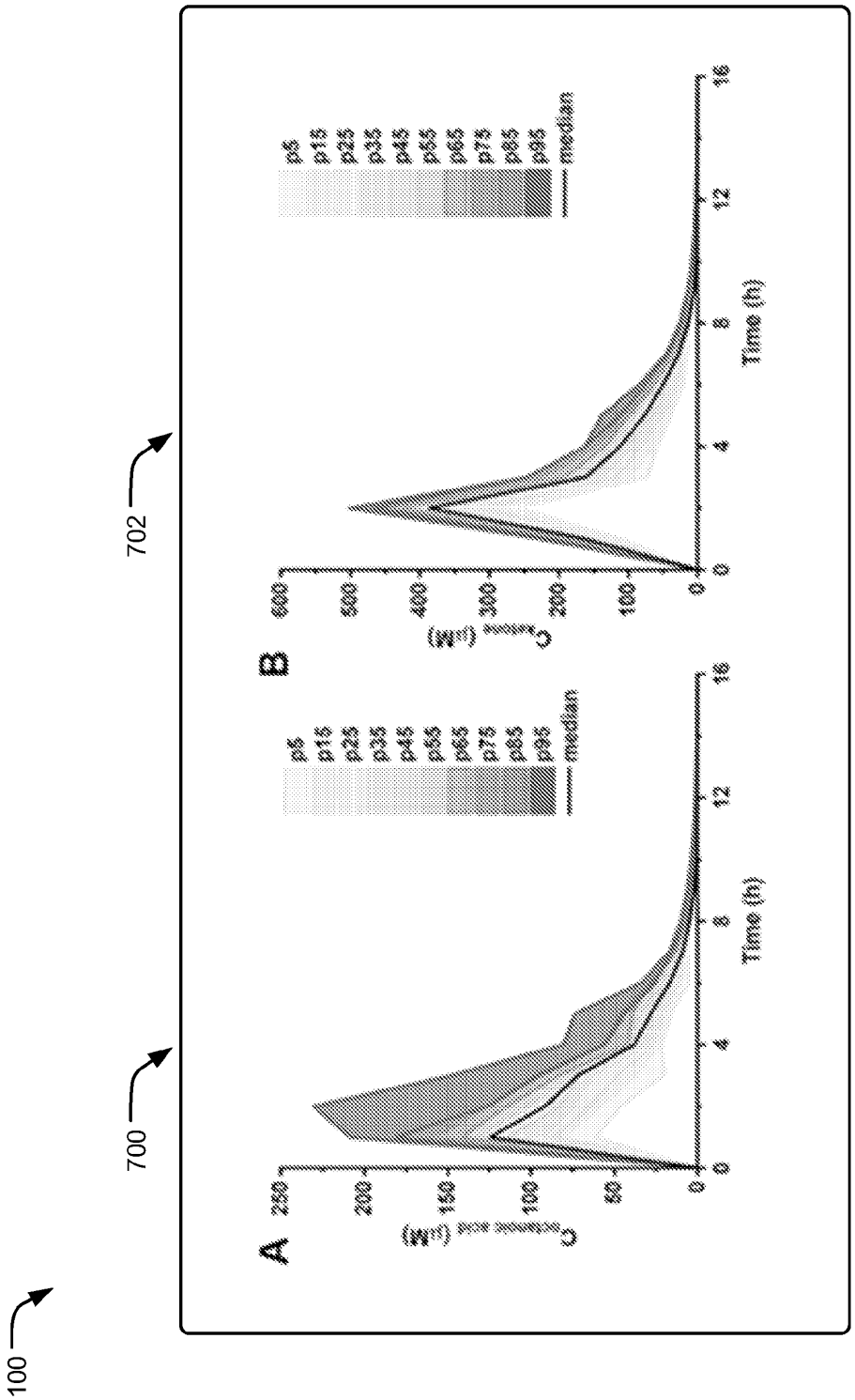

100
700
702
A
B
p5
p15
p25
p35
p45
p55
p65
p75
p85
p95
median
Time (h)

FIG. 7

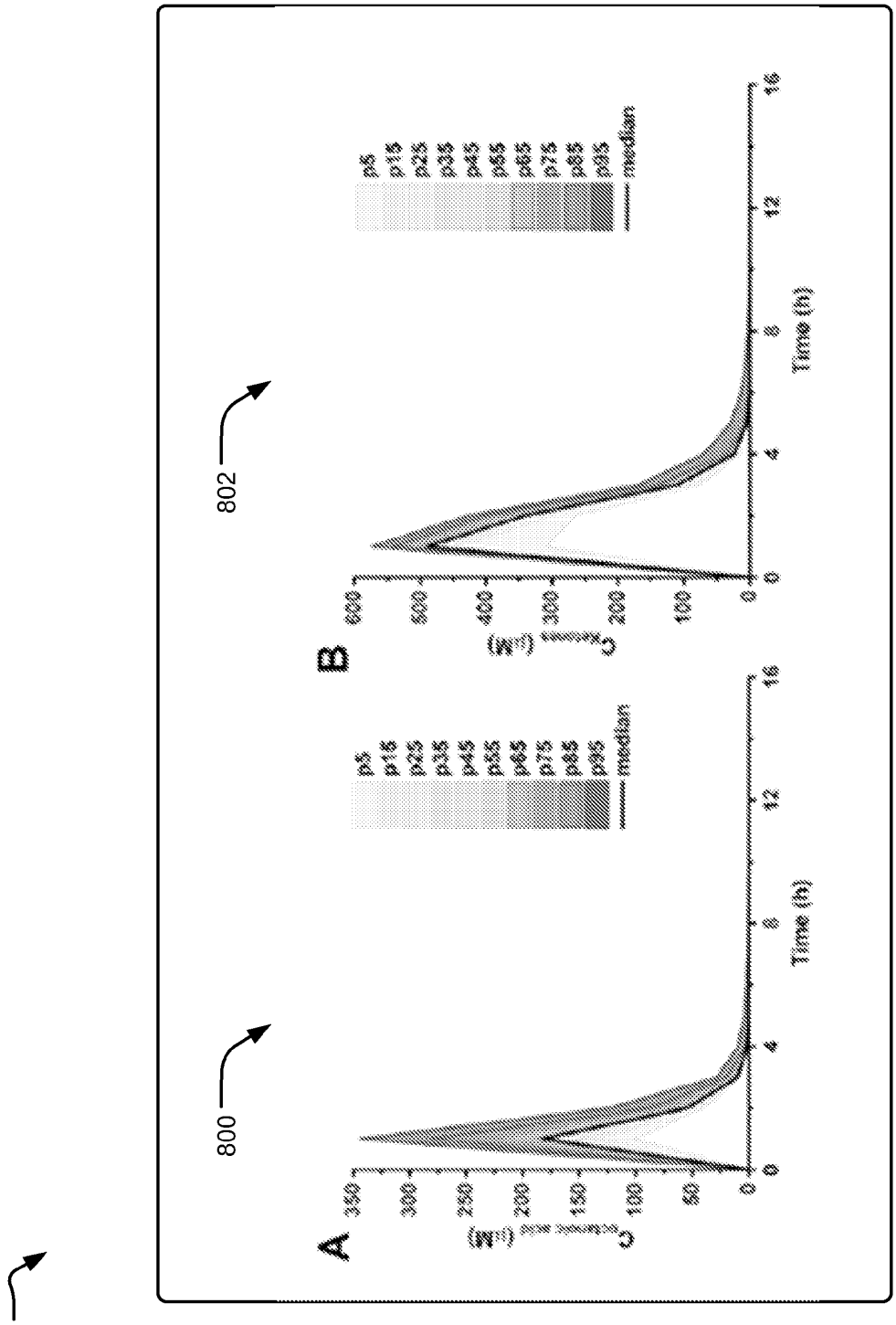

100
800
802
A
B
p5
p15
p25
p35
p45
p55
p65
p75
p85
p95
median
Time (h)
0
4
8
12
16
0
50
100
150
200
250
300
350
100
200
300
400
500
600

FIG. 8

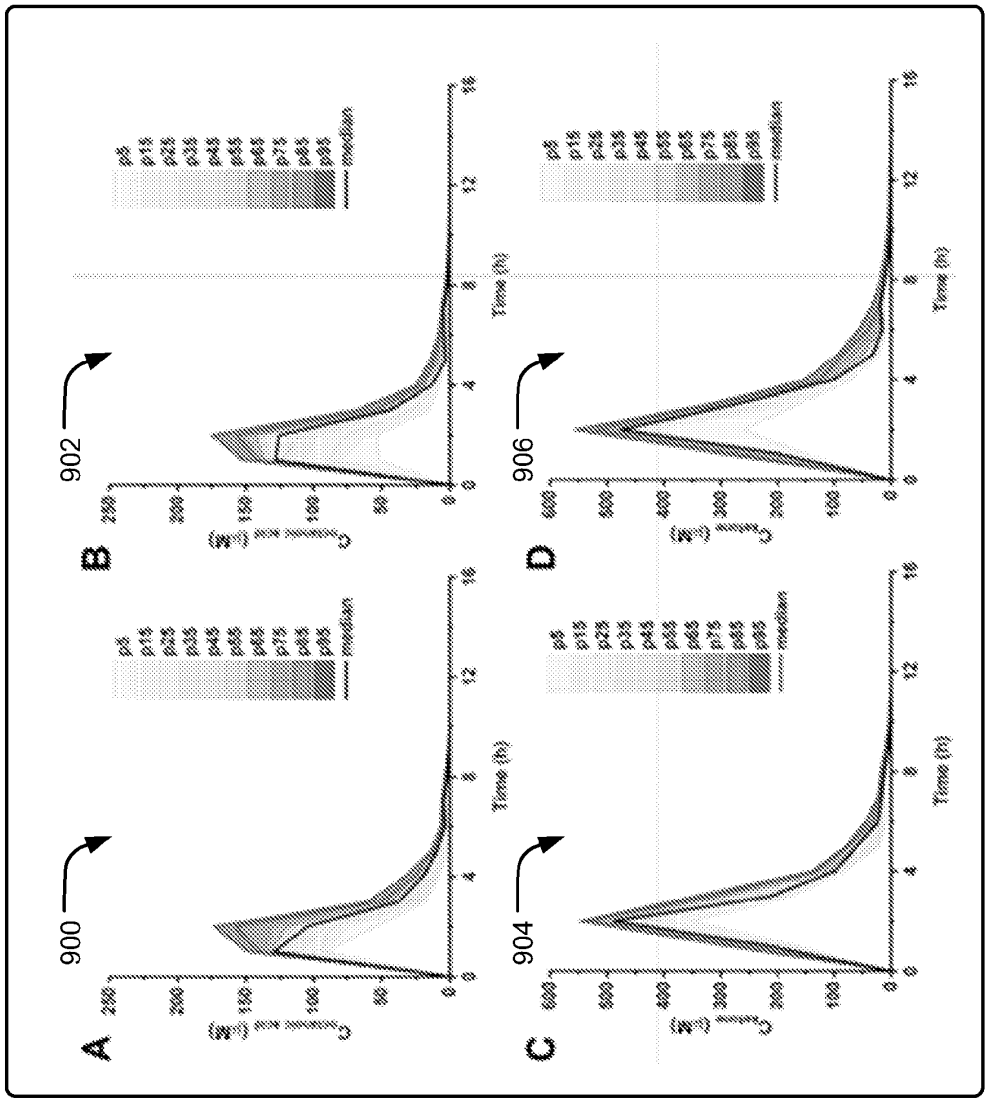


FIG. 9

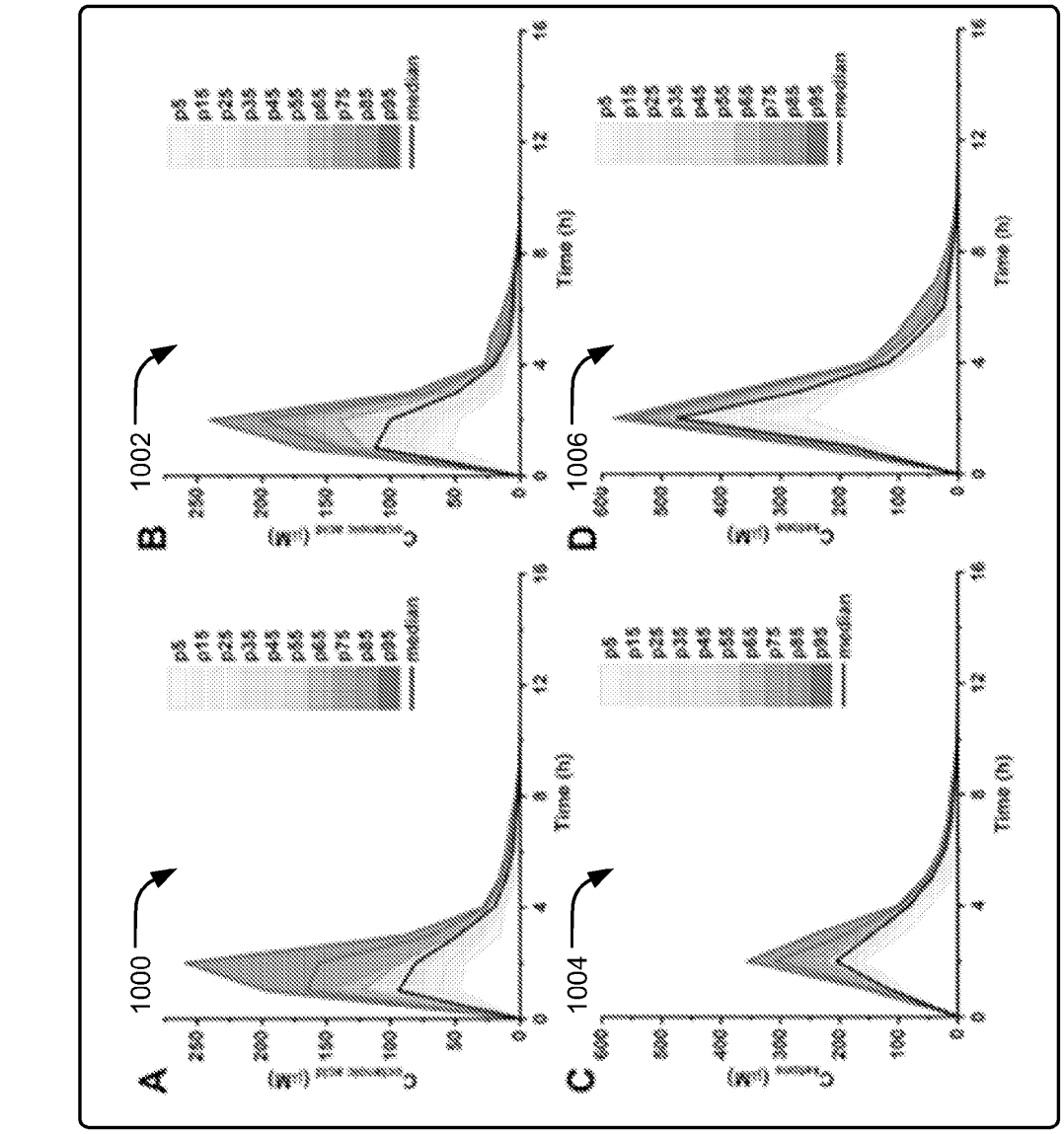


FIG. 10

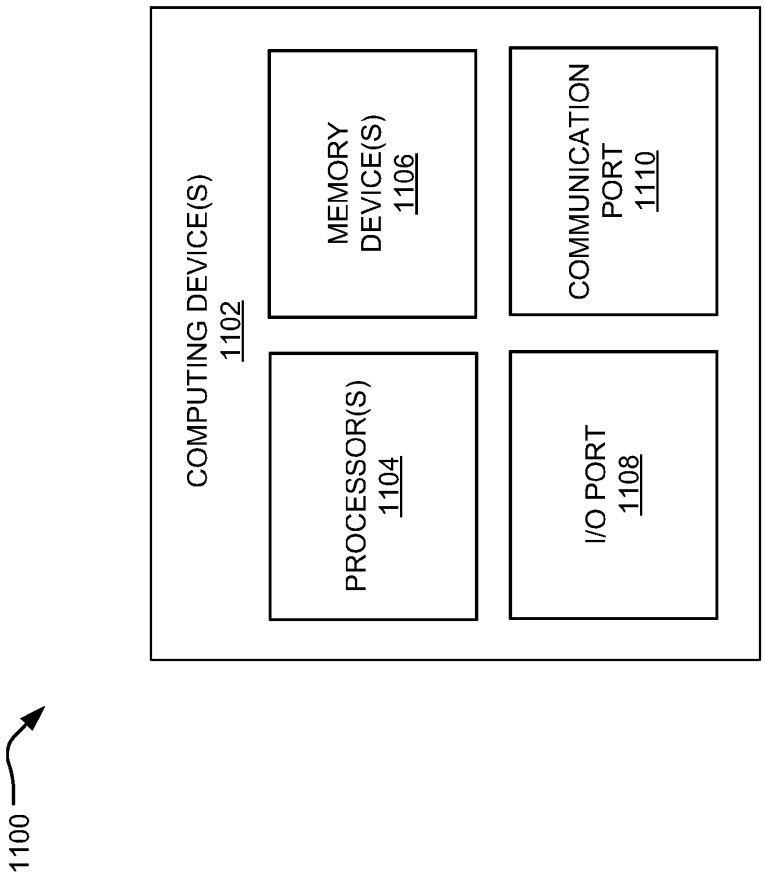

1100
COMPUTING DEVICE(S)
1102
PROCESSOR(S)
1104
MEMORY
DEVICE(S)
1106
I/O PORT
1108
COMMUNICATION
PORT
1110

FIG. 11

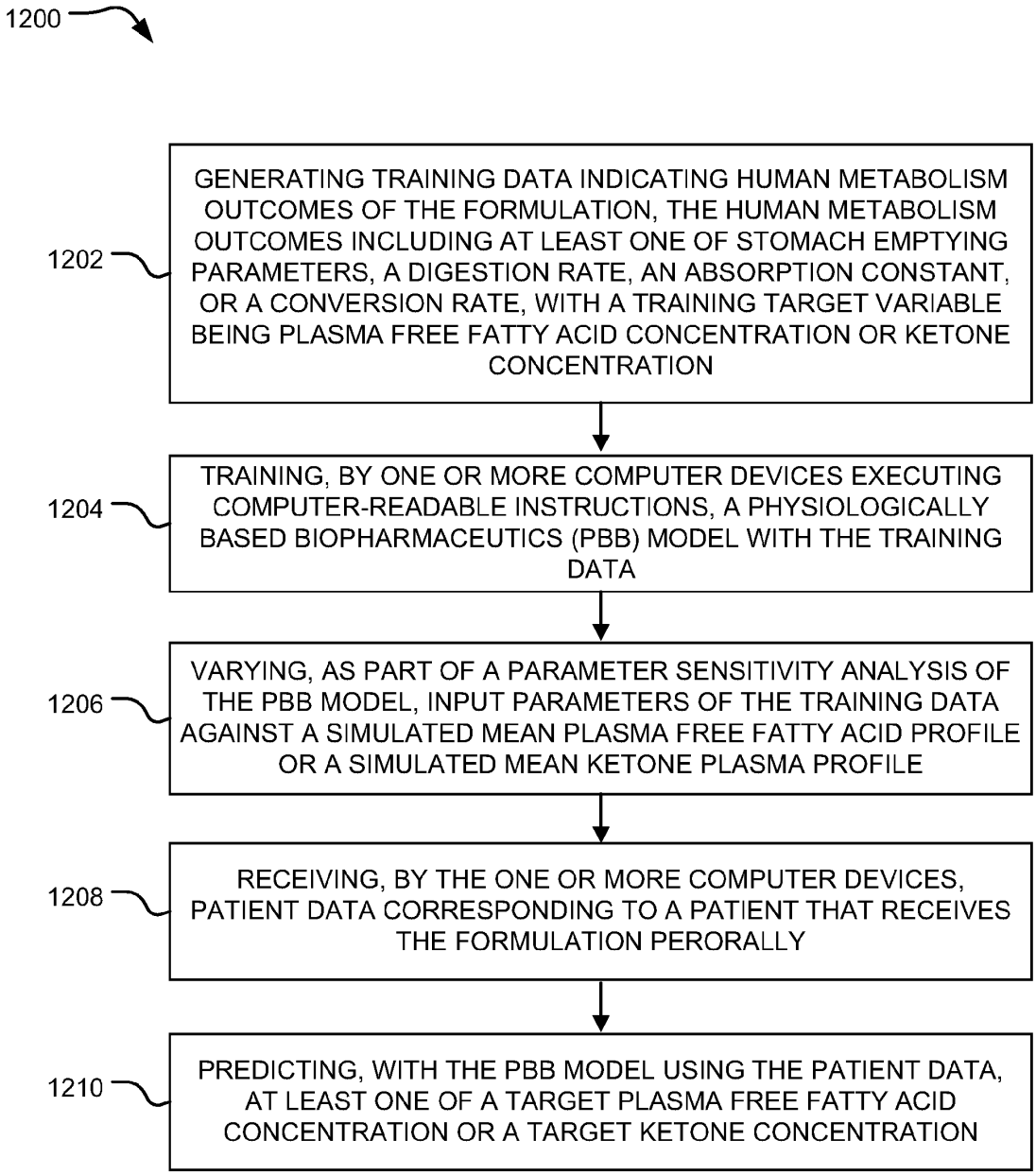

1200
1202
GENERATING TRAINING DATA INDICATING HUMAN METABOLISM OUTCOMES OF THE FORMULATION, THE HUMAN METABOLISM OUTCOMES INCLUDING AT LEAST ONE OF STOMACH EMPTYING PARAMETERS, A DIGESTION RATE, AN ABSORPTION CONSTANT, OR A CONVERSION RATE, WITH A TRAINING TARGET VARIABLE BEING PLASMA FREE FATTY ACID CONCENTRATION OR KETONE CONCENTRATION
1204
TRAINING, BY ONE OR MORE COMPUTER DEVICES EXECUTING COMPUTER-READABLE INSTRUCTIONS, A PHYSIOLOGICALLY BASED BIOPHARMACEUTICS (PBB) MODEL WITH THE TRAINING DATA
1206
VARYING, AS PART OF A PARAMETER SENSITIVITY ANALYSIS OF THE PBB MODEL, INPUT PARAMETERS OF THE TRAINING DATA AGAINST A SIMULATED MEAN PLASMA FREE FATTY ACID PROFILE OR A SIMULATED MEAN KETONE PLASMA PROFILE
1208
RECEIVING, BY THE ONE OR MORE COMPUTER DEVICES, PATIENT DATA CORRESPONDING TO A PATIENT THAT RECEIVES THE FORMULATION PERORALLY
1210
PREDICTING, WITH THE PBB MODEL USING THE PATIENT DATA, AT LEAST ONE OF A TARGET PLASMA FREE FATTY ACID CONCENTRATION OR A TARGET KETONE CONCENTRATION

FIG. 12