The in Vitro and in Vivo Pharmacology of AB101, a Potential Once-Weekly Basal Subcutaneous Insulin

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Forward-Looking Statements

This presentation contains forward-looking statements about AntriaBio, Inc. (the "Company"). These forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements relate to the Company's lead product candidate AB101, AB101's potential and related matters, which involve known and unknown risks and uncertainties. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we do not plan to publically update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Disclosures

All authors are employees and stock option holders of AntriaBio, Inc., the sponsor/company developing AB101

AB101 Addresses an Unmet Need for a Longer-Acting Basal Insulin

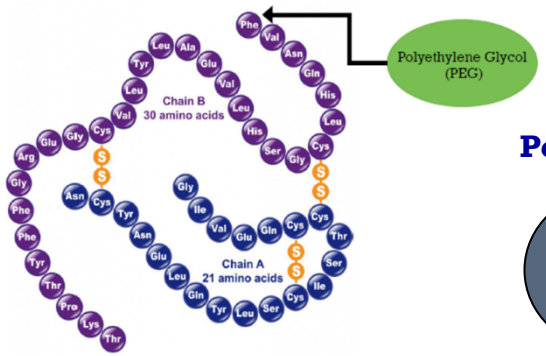
- **Barriers to adequate insulin utilization may include**
  - Insulin/needle-averse patients
  - Safety concerns, including hypoglycemia
  - Weight gain

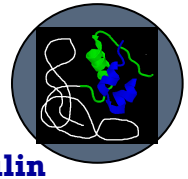
- **A longer-acting basal insulin represents a convenient, effective, and safe treatment option**
  - AB101 is being developed as a once-weekly subcutaneous insulin injection
  - In contrast to currently available basal insulin analogs, AB101 requires no modification to the native recombinant insulin structure

AB101 is a Slow Release Microsphere Encapsulated Peg (5 kDa)-insulin

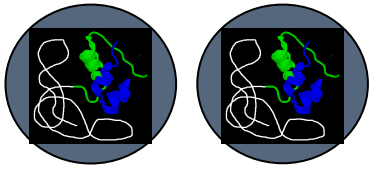
PEG+ native Insulin = soluble insulin

5 kDa PEG attached to the N-terminus of insulin's B-Chain using site-specific amine PEGylation.

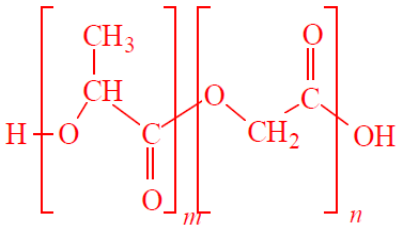




Peginsulin



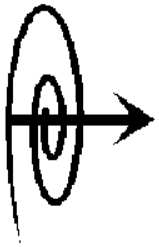
PLGA



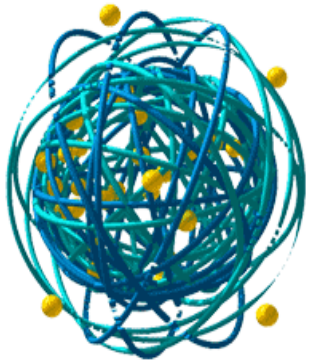
Poly(lactic-*co*-glycolic acid) (PLGA)

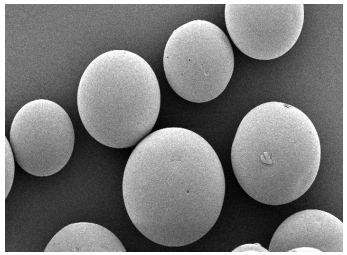
Peginsulin + PLGA = slow release microspheres

Emulsion Process



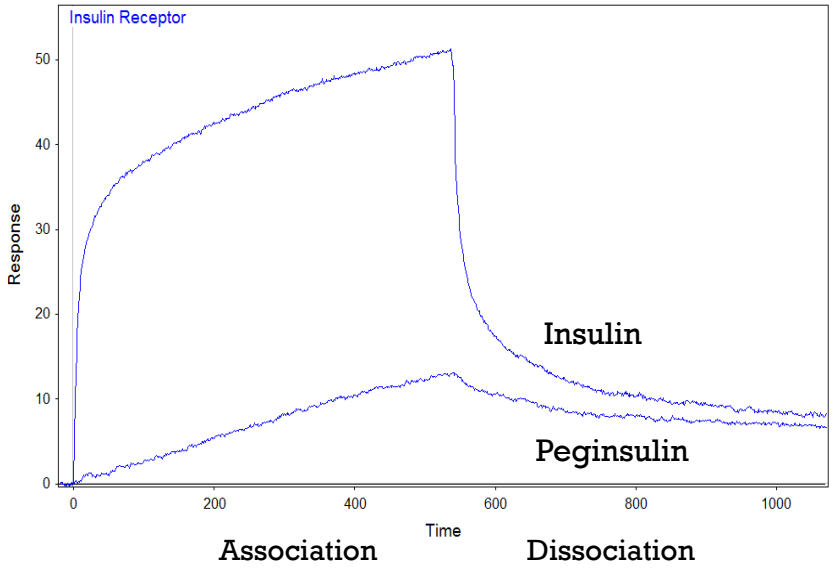
End Result: AB101
Drug dispersed evenly throughout microspheres

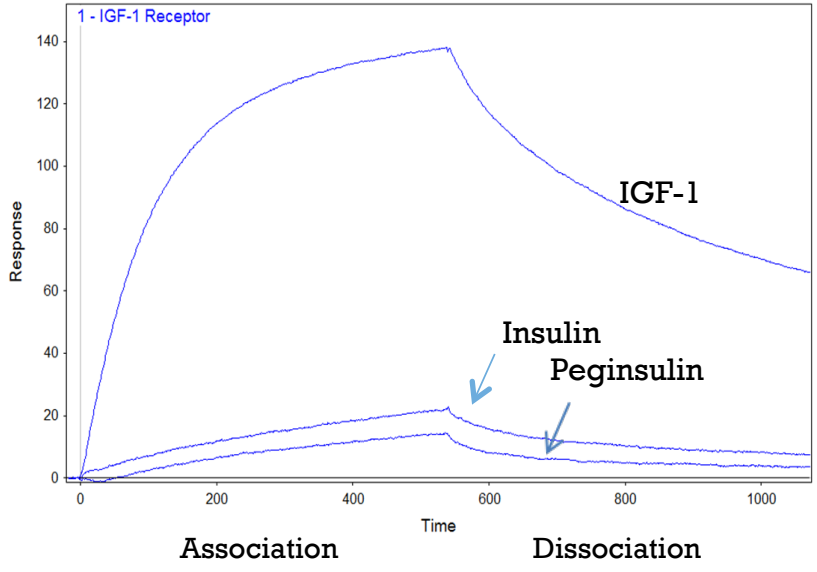




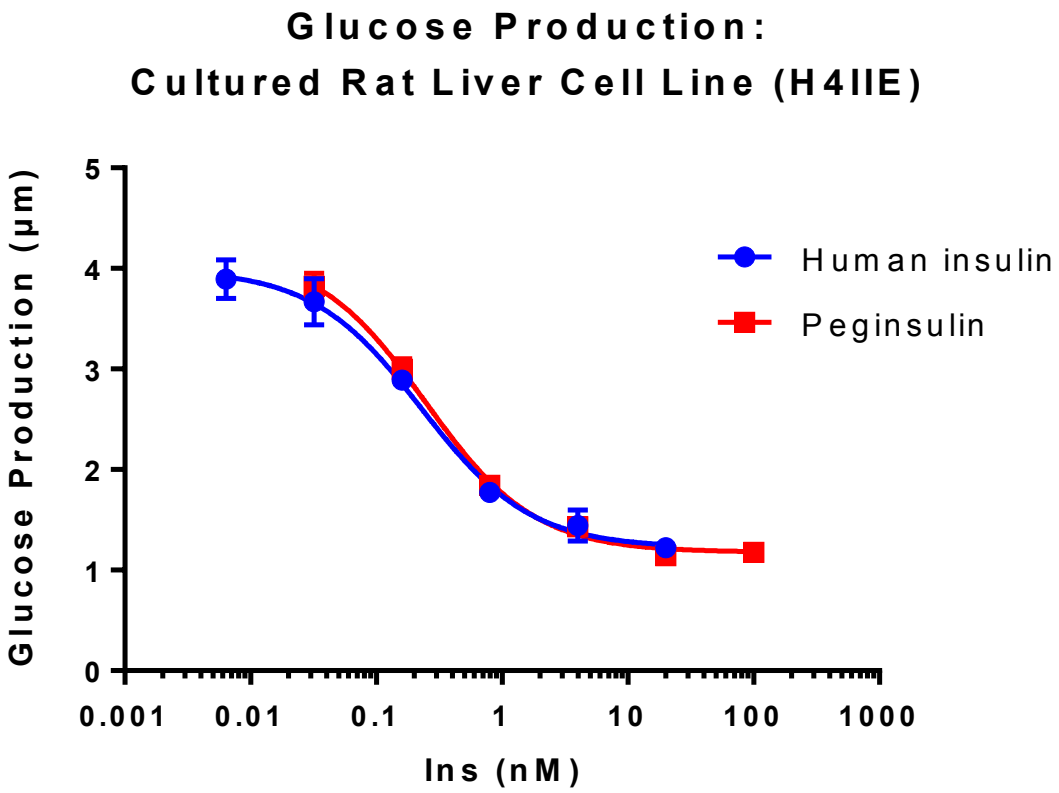
Peginsulin (Drug Substance) Exhibits Receptor Binding Kinetics Predictive of Desired Pharmacology with Low Mitogenic Potential

Insulin and IGF-1 receptor binding kinetics Using Surface Plasmon Resonance (Biacore 3000)



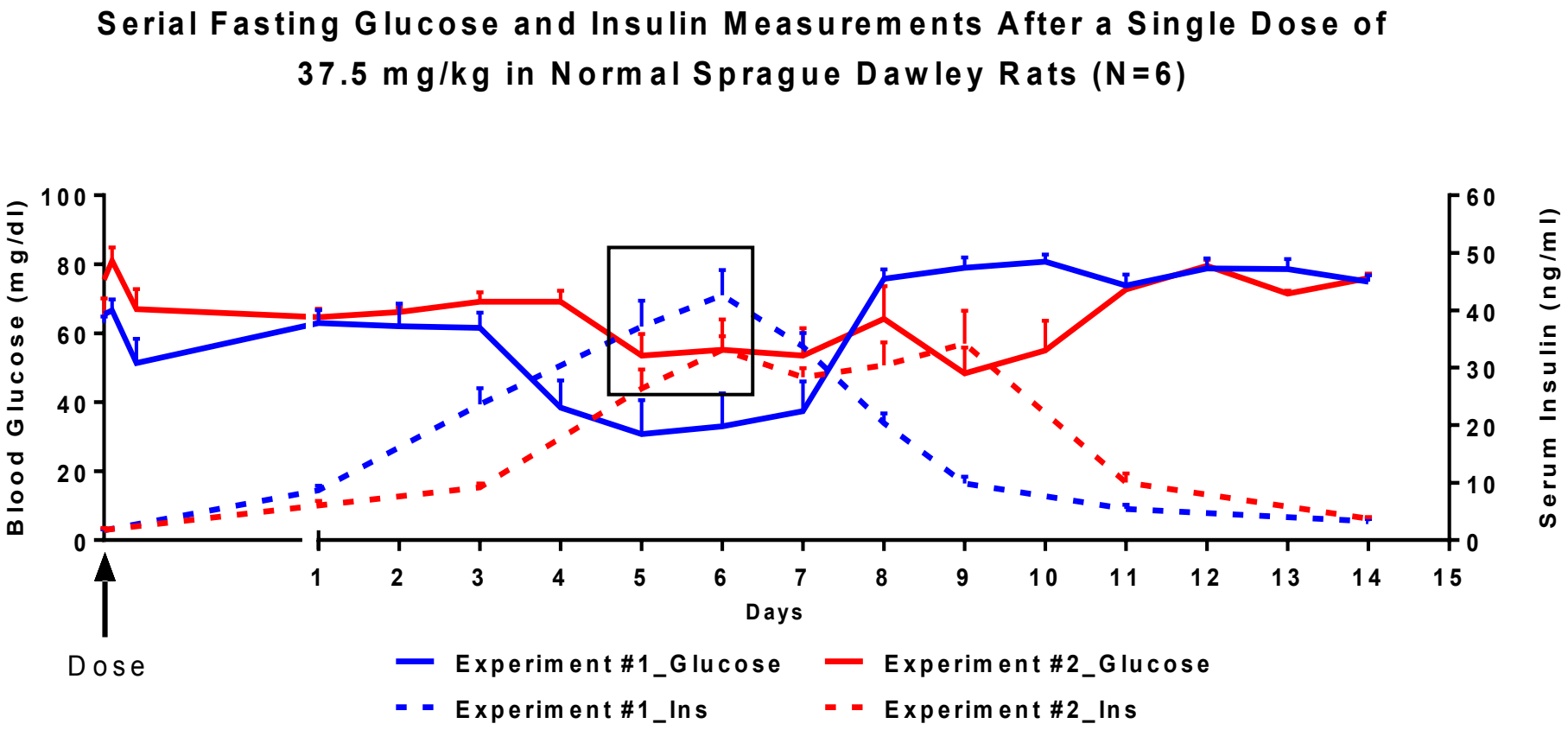


Peginsulin (Drug Substance) Exhibits in Vitro Pharmacology Comparable to Regular Insulin

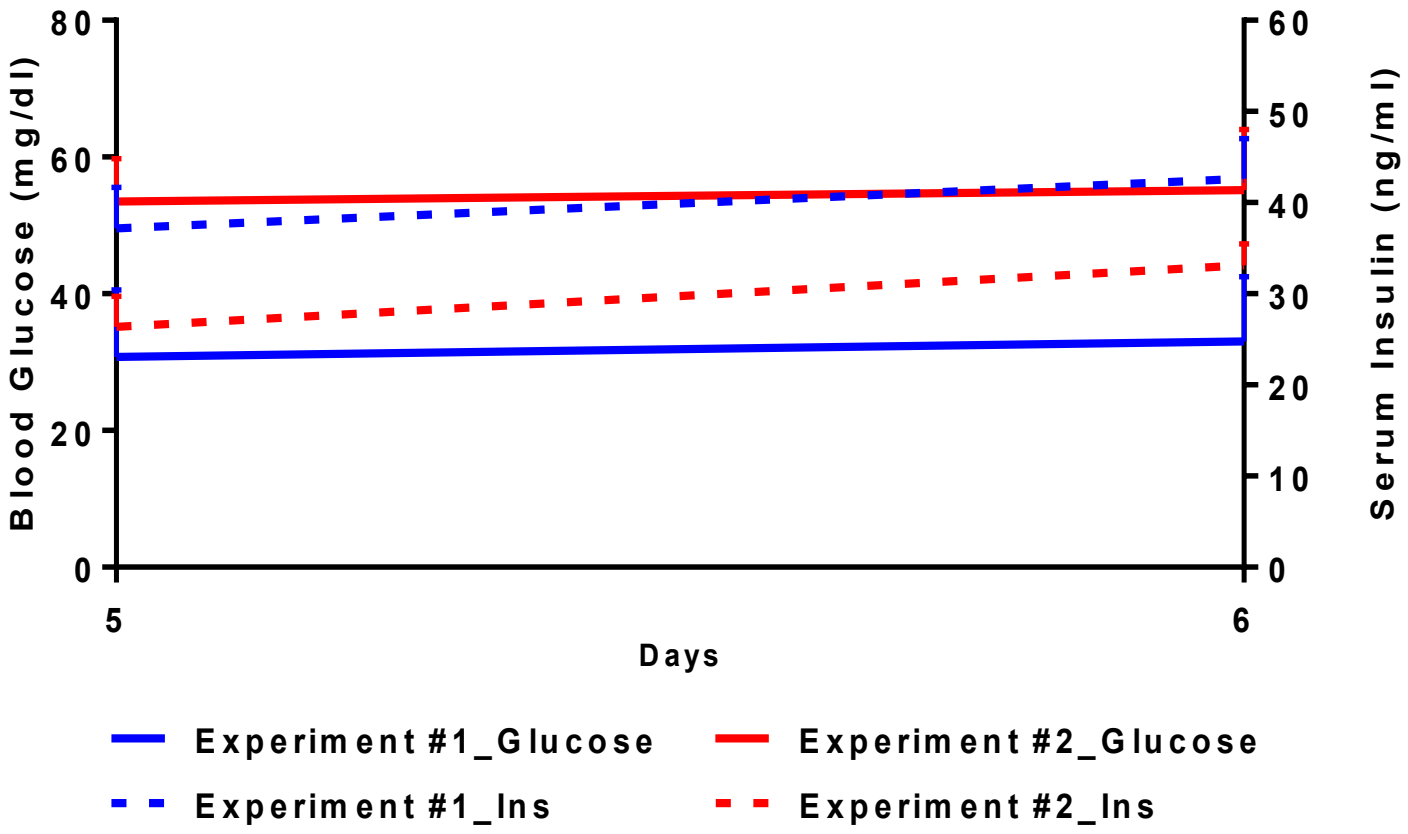


	Human insulin	Peginsulin
IC50 nM	0.2285	0.2445

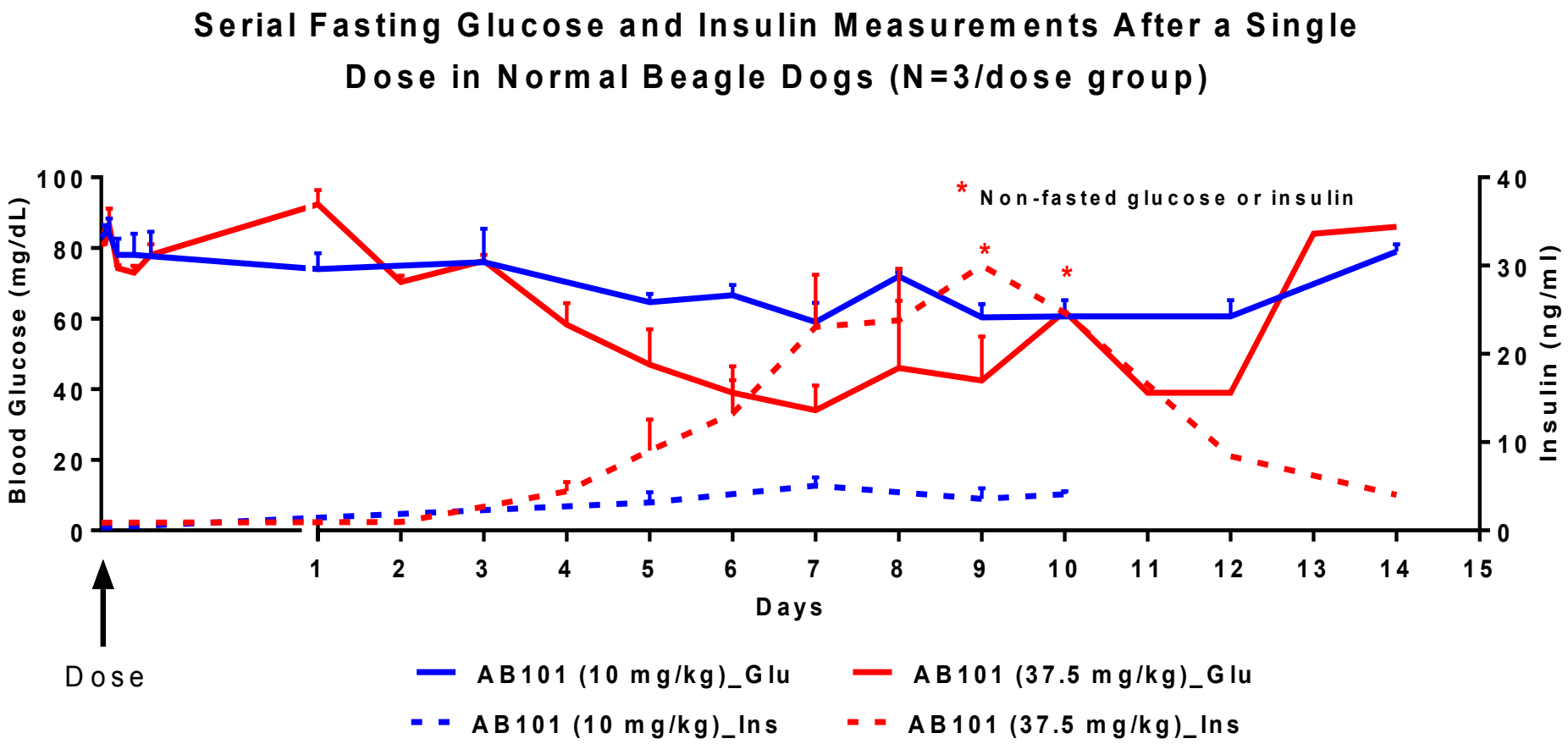
AB101 Single Dose SC Administration to Normal Rats Results in Slow Onset, Sustained PK-PD



AB101 Produces Peakless Pharmacology Over the Time-Action Duration Associated with Currently Available Basal Insulins (24h)

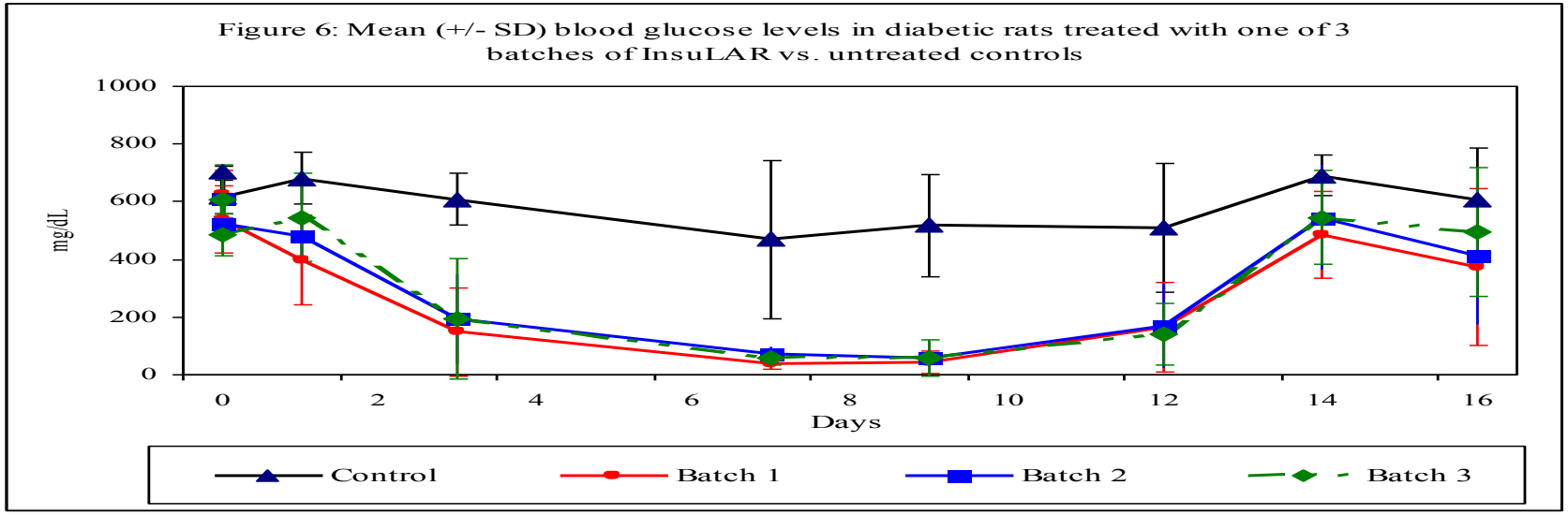


AB101 Single Dose SC Administration to Normal Dogs Results in Slow Onset, Sustained PK-PD



Pharmacology Summary

- Potency and activity are comparable to recombinant human insulin
- Slow onset, sustained insulin increases and corresponding glucose reductions over the course of ~1 week in 2 species (rats and dogs)
- No acute insulin release or glucose reduction observed
- Data support weekly dosing as a basal insulin
- To our knowledge, only non-analog (native human insulin) to have an extended duration of action
- Similar results previously reported in a STZ-induced diabetes rat model



Hinds et al, JCR, 2005

How Does this Translate to the Treatment of Diabetes?

- Inter-species homology of insulin/receptor predicts insulin activity in humans
- No expected differences in activity in diabetes compared to non-diabetes (time-action profile or pharmacodynamics)
- Pharmacology in dogs observed at predicted doses based on:
  - Typical daily insulin needs supplied over one week
  - Allometric predictions
  - Adjustments for minor differences in receptor potency/activity
- Efficacious doses in dogs can be readily translated to human clinically relevant doses
- Projected human doses can be administered via acceptable volumes and needle gauge
- IND-enabling work is ongoing and an IND application for clinical trials is forthcoming

Acknowledgements

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