Lung Surfactant

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Fall 03, Chemistry, INSET

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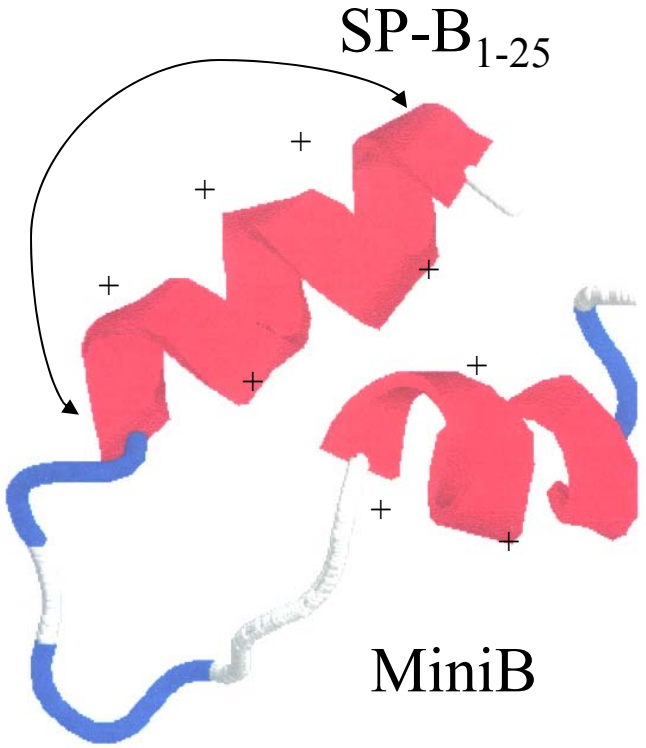
Funding: NIH, California State Tobacco Related Disease Program

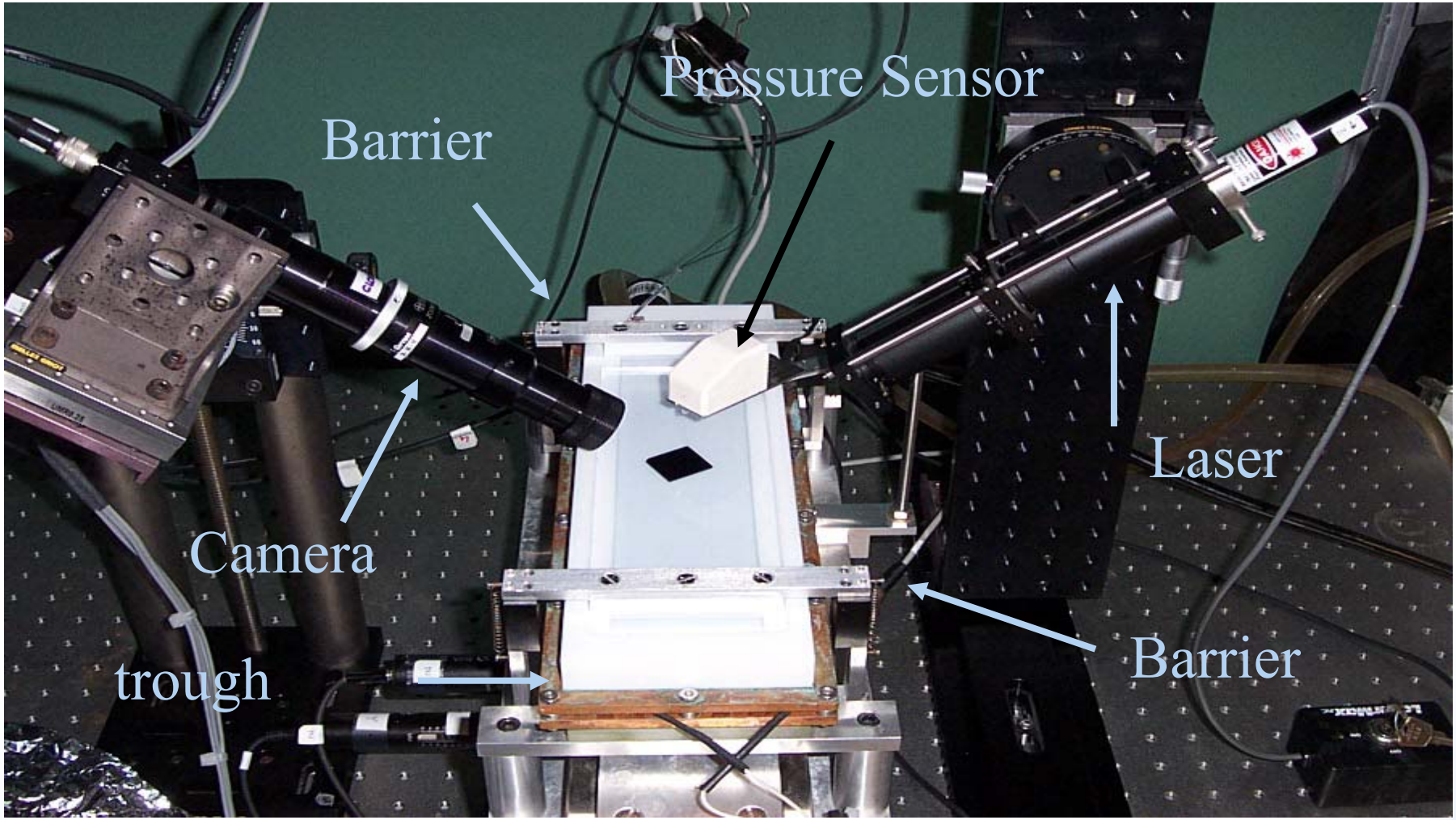
Synthetic Lung Surfactant Protein MiniB

- Two groups of lipids
  - Surface pressure, and ability to Respread
- Addition of Proteins
- SP-B to MiniB

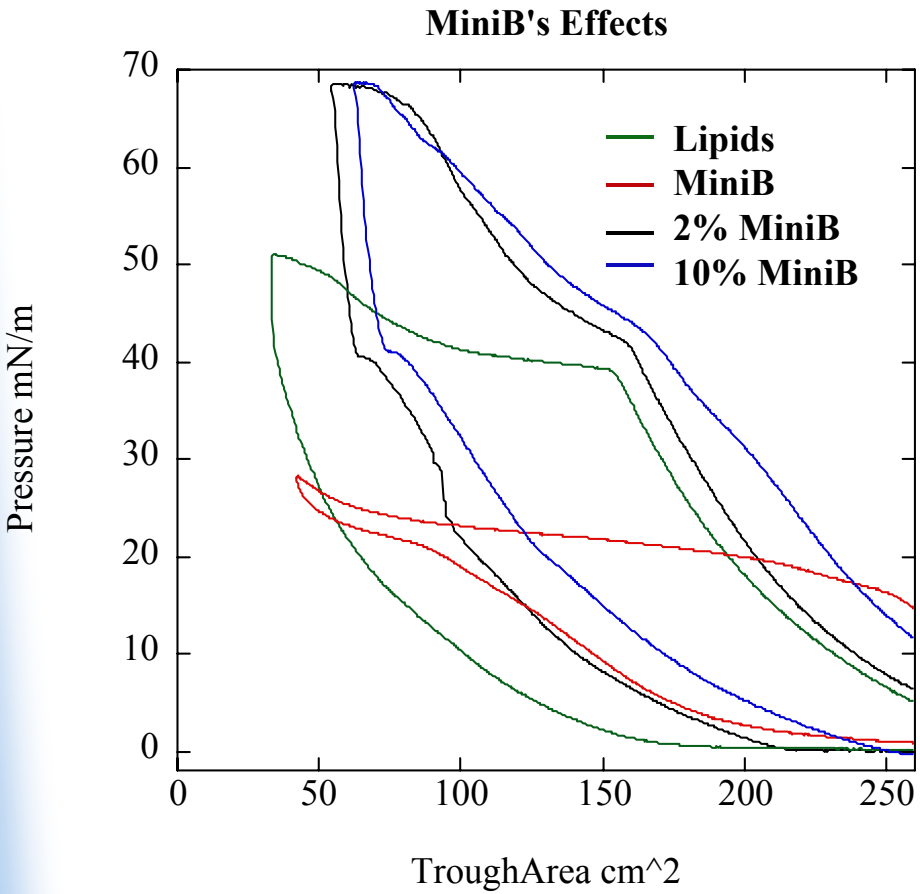


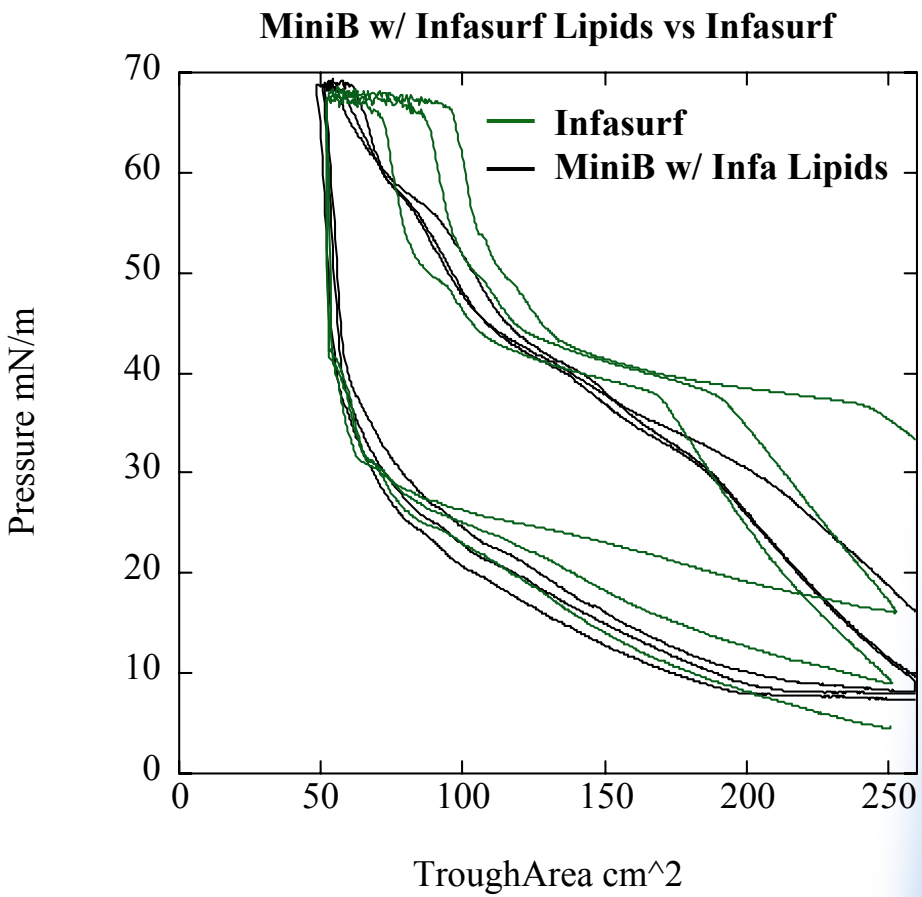
By: Dr. Alan Waring

Brewster Angle Microscopy

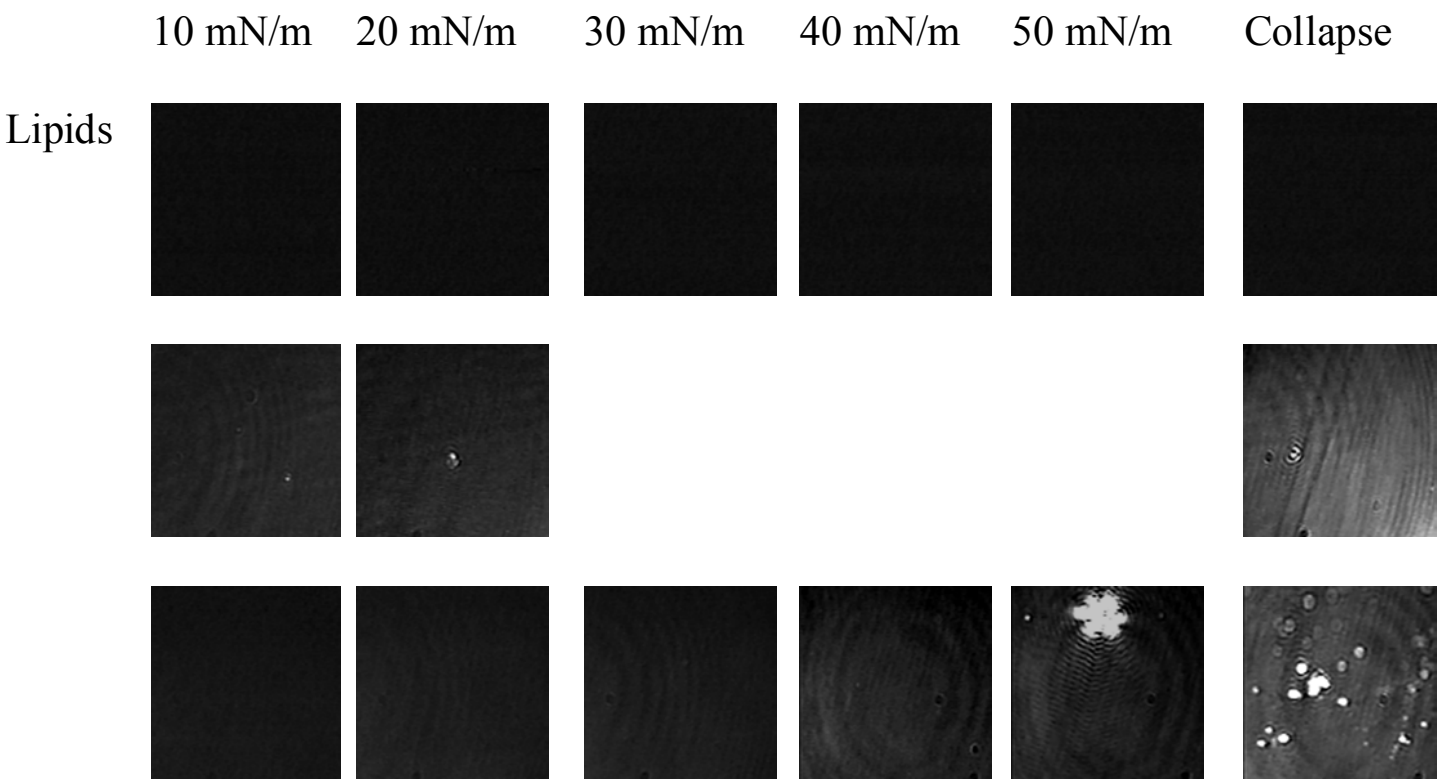


Isotherms of Solutions with MiniB



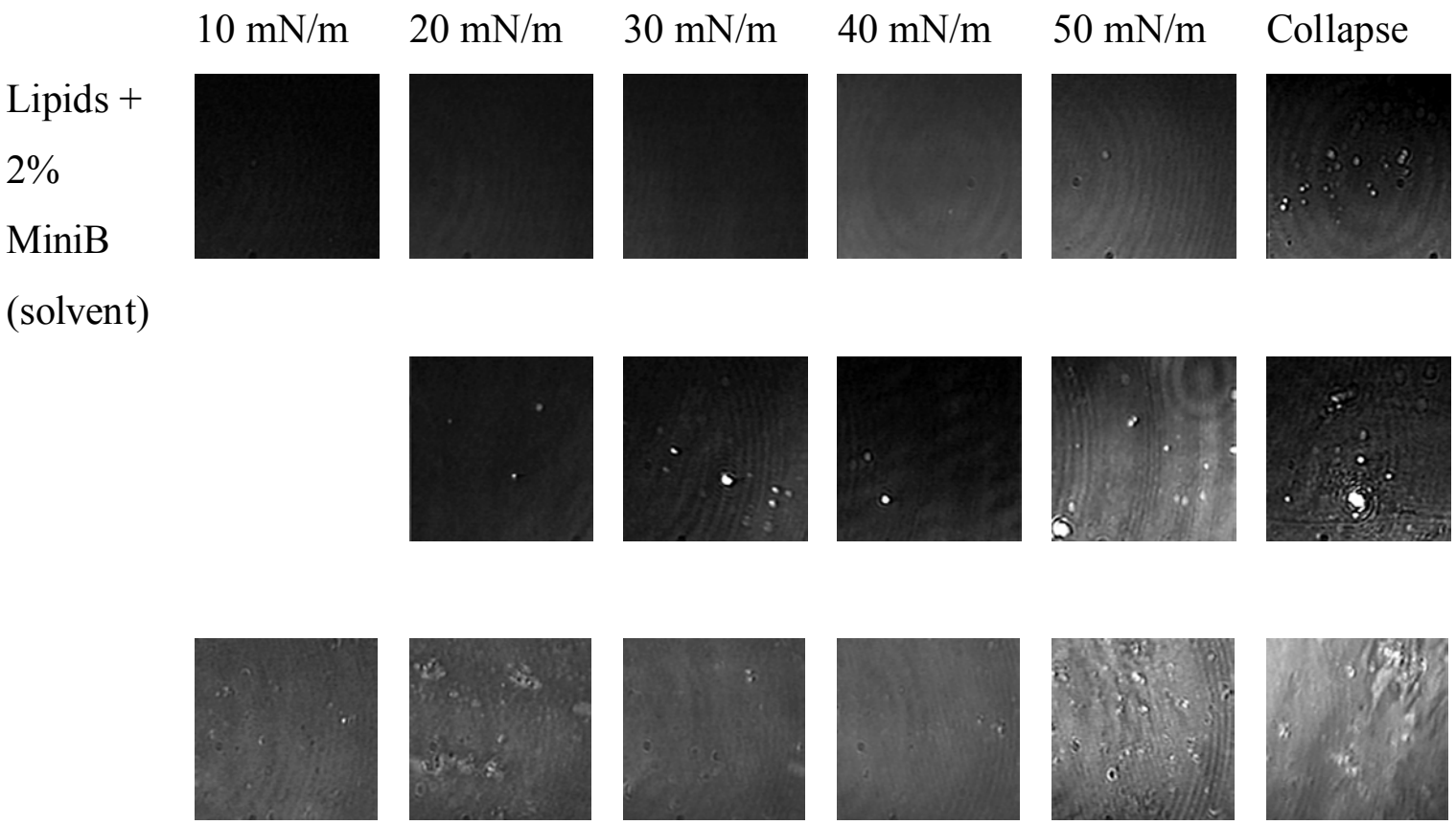


Images of MiniB Effects



Each Picture is 400um x 400um

Comparing Synthetic *vs.* Natural



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Conclusions

- MiniB helps the lipid mixture reach a high collapse pressure
- MiniB helps the lipid mixture to respread
- MiniB induces more material to be at the interface
- MiniB plus the lipids a synthetic mixture mimics natural lung surfactants well.

Special Thanks to: Tim Alig, Bill Taeusch M.D.,

and the rest of Joe Zasadzinski's lab