

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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KVK-Tech, Inc.  
Petitioner,

v.

SHIRE, LLC  
Patent Owner.

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Case IPR2018-00293  
US Patent No. 9,173,857

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**PETITIONER REPLY**

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## UPDATED EXHIBIT LIST

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