FDA Analgesic and Anesthetic Drug Advisory Committee meeting on Moxduo
April 22, 2014

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we have no conflicts of interest
Rates of Opioid Sales, OD Deaths, and Treatment, 1999–2010

CDC. MMWR 2011
Adding “new” opioids is certain to increase, not diminish the epidemic

• QRX’s original thinking that combined morphine and oxycodone would be “synergistic” for pain efficacy has now been abandoned: it is not mentioned in the last NDA submission. The QRX substitute “advantage” is less toxicity than individual components

• Why has no other pharmaceutical company acted on this “thinking” in the almost 20 years that both drugs have been available (10 years for generic oxycodone)?
U.S. already leads the world in oxycodone consumption

• U.S. has 4.4% of the world’s population but consumes 82% (over 77 tons) of world’s total annual oxycodone

• U.S. also leads the world in population-adjusted daily doses of oxycodone with 8,900 defined daily doses per million inhabitants or 0.89 doses per 100 persons per day

• The approval of Moxduo would most likely increase U.S. consumption

International Narcotics Control Board: 2013 report
Narcotic Drugs (Data based on 2012 consumption)
Necessity of FDA’s Combination Drug Regulations

QRX Objection: "The combination rule does not require that Moxduo demonstrates an efficacy, safety or convenience advantage over the individual components at comparable doses."

The Combination Rule was created to assure that the combination of two fixed-dose drugs provides some benefit to patients that could not be obtained by prescribing the individual components alone. The OTC rule adds that that active ingredients from the same therapeutic category with the same mechanism of action should not ordinarily be combined unless there is some advantage over the single ingredients in terms of enhanced effectiveness, safety...
Figure 8: Study 022 Safety Endpoints Pre-specified as of Special Interest

- **Emesis**
  - Moxduo: 31%
  - Morphine: 28%
  - Oxycodone: 42%

- **Nausea**
  - Moxduo: 16%
  - Morphine: 10%
  - Oxycodone: 11%

- **Dizziness**
  - Moxduo: 6%
  - Morphine: 1%
  - Oxycodone: 2%

**Moderate and Severe Treatment Emergent Adverse Events**
Figure 5: Study 022 Supplemental Oxygen Incidence

% subjects who received supplemental oxygen for a desaturation

- Moxduo: 22%
- Morphine: 16%
- Oxycodone: 16%
Moxduo was not superior to morphine or oxycodone on the *pre-specified primary analysis*, oxygen desaturation rate: That is, the number of desaturations less than 90% divided by the time oxygen saturation was monitored in the treatment period.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Moxduo</th>
<th>Morphine</th>
<th>Oxycodone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Rate</td>
<td>0.281</td>
<td>0.244</td>
<td>0.258</td>
</tr>
<tr>
<td>Estimated Rate Difference</td>
<td>-0.037</td>
<td>-0.023</td>
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</tbody>
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• “These important benefits* provide the potential for significant healthcare cost reductions in the treatment of patients receiving opioid therapy and is a significant step toward achieving the Holy Grail of opioid therapy.”

• * (“an appreciably lower incidence of experiencing nausea, vomiting, dizziness, somnolence and pruritus compared to patients receiving equianalgesic doses of morphine or oxycodone…… the first opioid product to demonstrate a lower risk of respiratory depression in a clinical study comparing morphine equivalent (equianalgesic) doses.”)
“MoxDuo IR is expected to launch in the US into a dynamically changing acute pain marketplace in 2013 as a Schedule II opioid. The anticipated rescheduling of Vicodin……creates a significant void in the acute pain marketplace and thus provides significant upside for the sales potential of MoxDuo IR. A modest market share will translate into substantial sales of MoxDuo IR.”
Conclusions

MOXDUO should not be approved because:

• It has no efficacy advantage compared to either component used at a morphine-equivalent dose

• No safety advantage compared to either component used at a morphine-equivalent dose, including respiratory safety and other adverse events

• If substituted for drugs such as Vicodin, an avowed competitor, it may well be subject to more abuse

• Given the yet un-checked, growing epidemic of prescription opioid overuse, abuse and unintentional deaths, the last thing needed is an unprecedented, “new” opioid with no advantages