

A little bit of background to start.

MMV's mission:

*“To reduce the burden of malaria in disease endemic countries by **discovering, developing, and facilitating delivery of** new, effective, and **affordable** antimalarial drugs”*

3 random areas to discuss:

- **Pyramax**
- **Costs of novel drugs (OZ439)**
- **Role of MMV in encouraging cost / price reductions**

Pyramax

- **Novel ACT (pyronaridine artesunate), little drug pressure**
- **SRA approved, WHO preQ, only approved in 2 countries – Vietnam, S Korea**
- **Current label is restrictive, new label expected June**
- **Initial expectation that use will be in resistance containment countries**
- **Intention of manufacturer is to submit in 22 African countries (2nd line alternative to AL)**

BUT:

- **No listing on WHO Standard Treatment Guidelines**
- **Monopoly situation: only 1 preQ'd supplier**
- **Cost of pyronaridine claimed to be \$800/kg, MMV own data suggests \$350-500 with other (non preQ) suppliers**
- **Lack of transparency re CoGs**
- **At current price, Pyramax would be one of the most expensive ACTs and this will limit uptake**
- **CHALLENGE: to encourage manufacturer to reduce cost AND to support pre-qualification of alternative API suppliers**

New drugs: OZ439

- **OZ439 (artefenomel) is a novel, fully synthetic antimalarial being developed as a SDC (2018 launch)**
- **MMV target cost per treatment course is \$1 for adults, \$0.50 for children)**
- **Initial analysis of known costs indicate that this may be hard to achieve – dependent on partner drug**
- **Potential partners currently are PQP or FQ**
- **2013 market research in 6 African countries indicates that country decision makers *may* be prepared to pay more for a single dose cure**
- **Evidence required of improved compliance, lower associated costs (staff time, repeat dosing due to poor compliance, treatment failure etc)**

The role of MMV in cost/price reduction

- **Encourage alternative new suppliers to submit quality products for WHO preQ**
- **Build CoGs into TPP**
- **Build cost ceiling (cap) into contracts with partners**
- **Robust quantification of market size and demand**
- **Consolidate forecasts across purchasing countries**
- **Own cost breakdown / calculations**
- **Ensure capacity**
- **Incentivise (financially if necessary) preQ application (external inspection expertise etc)**

We get monthly feedback on API costs from a variety of manufacturers

Artemether

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English Name	Chinese Name	Website	Capacity mts/a	Price USD/kg	Price RMB/kg	Note	Certificate /GMP	Contact
Hunan Keyuan Bio-products Co Ltd	湖南科源生物制品有限公司	www.hnkeyuan.com		715	4,350	It has stock (<500kg).	/	Ms Deng Tel: 86 731 478 3428 huyun_123@hnkeyuan.com
Shanghai Acebright Pharmaceuticals Group Co Ltd (Shanghai Desano)	上海创诺医药集团有限公司(原上海迪赛诺集团)	www.acebright.com				Would not give quotation without real order.	/	Mr Xu T: +86 21 6075 3300 ext. 54070 wei.xu@acebright.com
Chengdu Superman Plant & Chemical Development	成都超人植化开发有限公司	www.superman-pharm.com	Output: < 10 mtpa	985	6,000	It has stock (100kg). One month lead-time for 500 kg.	/	Ms Gao Min Tel: 86 28 8627 3298 mingao001@126.com
Taizhou Creating Chemical Co Ltd	台州市开创化工有限公司	www.creatingchem.com				Only provide small volume. Purchase Artemesinin.	/	Ms Ji Tel: 86 576 88827176 post@creatingchem.com
Chengdu Okay Medicine	成都欧康植化科技有限公司	www.okaypharm.com	Output: 10 mtpa	655	4,000	In stock.	/	Ms Wu Li wuli76@hotmail.com
Hubei Onward Bio-Development Co Ltd	湖北恩华生物开发有限公司	www.hb-onward.com.cn	5	780	4,750	In stock (200-300kgs).	/	Ms Han Tel: 86 718 841 7012 marjeena2008@gmail.com
Jiangsu Swellxin Bio-Pharm Co Ltd	江苏斯威森生物医药工程研究中心有限公司	www.szswschina.com		1,100	6,700	It has stock (100kg).	/	Mr Zhao Tel: 86 512 5636 2800
Shaanxi Sciphar Biotechnology Co Ltd	陕西森弗生物技术有限公司	www.sciphar.com	Output: <0.5 mtpa	985	6,000	Only provide small volume (<50kg).	/	Mr Shao Tel: 86 29 8860 5676 mail08@sciphar.com
Herbstars (Xuzhou) Pharmaceutical Co Ltd	徐州弘康科技有限公司	www.herbstars.com	20-30			No stock. It could provide the product in August.	/	Ms Wu Tel: 86 574 66105155 juanhua_wu@yahoo.com.cn
Tianjin Hi-tesion Bio&Chem Co Ltd	天津市海琛生物化工有限公司	www.hi-tesion.com				No stock. Artemesinin is in short supply.	/	Manager Sun Tel: 86 22 2372 5099 elina3153@yahoo.com.cn
Xi'an App-Chem Bio (Tech) Co Ltd	西安应化生物技术有限公司	www.appchem.cn		950	5,800	It has stock (20kg).	/	Mr Wang Tel: 86 29 8831 8908 lin@appchem.cn