A REVIEW OF THE ECONOMIC EVALUATION OF

PROLONGED RELEASE MELATONIN (CIRCADIN®)

FOR THE SHORT-TERM TREATMENT OF PRIMARY INSOMNIA

NATIONAL CENTRE FOR PHARMACOECONOMICS **OCTOBER 2008**

Summary

1. In August 2008, Lundbeck submitted an economic evaluation on the use of prolonged release (PR) melatonin 2mg for the short-term treatment of primary insomnia in patients 55 years and older, to support its application for reimbursement under the Community Drugs Schemes. The cost-effectiveness of PR-melatonin in the Irish healthcare system was reviewed using standard criteria.

2. For this economic evaluation PR-melatonin was compared to the benzodiazepine (BNZ) and BNZ-like drugs. The clinical effectiveness of PR-melatonin and the BNZ or BNZ-like drugs were assumed to be equivalent. Therefore a cost minimisation analysis was performed. The economic evaluation is based on the assumption that the treatments differed in no other significant respects except that patients prescribed PR-melatonin were less likely to experience nocturnal falls than those prescribed BNZ or BNZ-like drugs.

3. Two pivotal trials were considered for the analysis of efficacy of PR-melatonin; NEURIM VII (Lemoine et al., 2007) and NEURIM IX (Wade et al, 2007). A number of limitations were noted by the review team including, a small effect size in a relatively small fraction of patients, as well as a short-term follow up. Furthermore, both trials compare PR-melatonin to placebo and no direct comparisons have been made between PR-melatonin and the BNZ or BNZ-like drugs.

4. In the base case scenario (HSE perspective), PR-melatonin could result in savings of €0.33 per patient under the GMS scheme, as a result of nocturnal falls avoided. However, the results of the analysis are sensitive to many of the assumptions included in the model.

5. The economic evaluation of PR-melatonin is influenced by the following parameters that were varied in one-way sensitivity analysis: risk of nocturnal falls due to BNZ or BNZ-like drugs, +/- 20% variation in the price of PR-melatonin, the duration of long-term care resulting from falls, as well as, the number of 3 week treatment courses prescribed.

6. The budget impact for PR-melatonin was performed over a 5 year time horizon. The insomnia market for patients aged 55 years and older under the GMS and Drug Payments schemes is predicted at 67.5% and 32.5% respectively. The cost of reimbursement of PR-melatonin under the GMS and DP schemes over 5 years is estimated at €1,651,785.

7. The review team have a number of concerns about the evidence presented including:
    - No direct comparison between PR-melatonin and the comparator i.e. BNZ or BNZ-like drugs
    - Small effect size demonstrated in the clinical trials (NEURIM VII and NEURIM IX)
    - Lack of evidence linking PR-melatonin to a reduced number of falls in the elderly.

8. The drug acquisition costs for PR-melatonin are significantly greater than other drugs currently licensed for insomnia. The review team consider that there is currently insufficient evidence to demonstrate that the increased acquisition costs of PR-melatonin would be offset by the reduction in healthcare resources incurred by nocturnal falls in the elderly.