1. **Comments based on the review report**

   a. **Evidence on dependence and abuse potential**

      **Dependence potential:**
      The Critical Review Report stated that no published animal and human studies on physical dependence associated with ethylphenidate. However, there is one published case describing the person (who had previously been dependent on cannabis, heroin/morphine and occasionally used stimulants) developed dependence on ethylphenidate. Review of self-reports published on internet forums described persistent impulses to redose, urges to prolong the effects, an inability to control craving for the drug and failed attempts to restrain use.

      **Abuse potential:**
      The Critical Review Report states there are no published animal and human studies regarding abuse potential.

   b. **Risks to individual and society because of misuse**

      Review of reports on user internet forums described as producing adverse effects similar to other amphetamine-like stimulants including increased heart rate, sweating, muscle tension (sometimes manifested as jaw clenching, teeth grinding or tremor), decreased appetite, insomnia, agitation and restlessness, anxiety, paranoia, hallucinations and impaired thinking. Three cases of acute toxicity requiring hospitalization reported in the UK. The cause of a death in Germany in 2014 was suggested to be due to cardiovascular actions of ethylphenidate. 19 deaths were reported to occur between July 2013 and December 2014. In most of these cases, ethylphenidate was found in post-mortem femoral blood in combination with other psychoactive substances. The most recent cases were reported between February 2013 and January 2015 in the UK (7 deaths). The causes of death were hanging (2 cases), mixed drug toxicity (4 cases) and ethylphenidate toxicity (1 case).
c. **Magnitude of the problem in countries (misuse, illicit production, smuggling etc)**
   The Critical Review Report (Chapter 14) highlights ethylphenidate actions and effects of an amphetamine-like stimulant related to physical and mental health (including paranoia, psychotic effects, anxiety, depression) along with an increase in risky behavior (e.g. sharing equipment, infection transmission) and risk of potentially fatal cardiovascular disorders. Problems related to the route of administration have been reported such as via nasal insufflation associated with intense pain, nosebleeds and tears; injection associated with severe soft tissue infections (9 cases in UK) and the presence of other drugs and substances (e.g. citric acid) in the injection solution, contamination and poor injection technique. Ethylphenidate, in tablets and powder form, has been seized in a number of countries including France, Germany, UK and Italy.

d. **Need of the substance for medical (including veterinary) practice**
   Ethylphenidate has no medical or veterinary use.

e. **Need of the substance for other purposes (e.g. industrial)**
   Ethylphenidate has no current legitimate industrial, cosmetic, agrochemical, human or animal use. It may be used as a reference standard in forensic laboratories.

f. **Measures taken by countries to curb misuse**
   Ethylphenidate is under control in the following countries: United Kingdom (2015), Germany (2013), Denmark (2013), Poland (2015), China (2015), Austria (2012) and Sweden. It is also covered by analogue legislation in a number of countries due to its similarity to methylphenidate.

g. **Impact if this substance is scheduled**
   Since Ethylphenidate has no medical and industrial use has been identified, the impact would be nil.

2. **Are there absent data that would be determinative for scheduling?**
   There are no scientific evidences on animal and human studies on dependence and abuse potential. Adverse effects determined from case studies and user internet forums.

3. **Other comments or opinions**
   No other comments
4. Expert reviewer’s view on scheduling with rationale

Ethylphenidate is a structural analogue of methylphenidate and it is convertible into methylphenidate and vice versa. Methylphenidate is controlled as a Schedule II substance under the U.N. 1971 Convention on Psychotropic Substances and a stimulant used in the treatment of attention deficit hyperactivity disorder (ADHD) and narcolepsy. Ethylphenidate possesses similar effect of an amphetamine-like stimulant. Ethylphenidate has not been previously pre-reviewed or critically reviewed. The current review is based on information that ethylphenidate is clandestinely manufactured, poses a public health risk and has no therapeutic use. The available evidences satisfying the requirements for inclusion in Schedule II substance under the 1971 Convention. This is on the basis that the substance has a liability to abuse constitutes a substantial risk to public health and which have little to moderate therapeutic usefulness.