

J-C Health Care Ltd.

נובמבר 2015

רופא/ה נכבד/ה
רוקח/ת נכבד/ת

ברצוננו להביא לידיעתכם כי משרד הבריאות אישר את **תוספת ההתוויה** הבאה לתכשירים
:Resolor 1mg & 2mg

נוסח ההתוויה החדשה כפי שאושר על ידי משרד הבריאות הינו :

**Resolor is indicated for symptomatic treatment of chronic constipation in
women-adults in whom laxatives fail to provide adequate relief.**

כמו כן, ברצוננו להביא לידיעתכם את העדכונים בעלון לרופא ולצרכן של התכשיר.

השינויים מסומנים בעלונים המצורפים כאשר הטקסט המודגש באדום הוסף לעלון ואילו
הטקסט המחוק בכחול נגרע ממנו.

העלונים מפורסמים במלואם במאגר התרופות שבאתר משרד הבריאות.

כמו כן, ניתן לקבל את העלונים המודפסים בפניה אלינו לטלפון 09-9591111 .

להלן העדכונים.

בברכה,

ליליאנה בלטר
רוקחת ממונה

פורמט עלון זה נקבע ע"י משרד הבריאות ותוכנו נבדק ואושר

עלון לצרכן לפי תקנות הרוקחים (תכשירים) התשמ"ו-1986

התרופה משווקת על פי מרשם רופא בלבד

שם התכשיר צורתו והחוזק

רזולור 1 מ"ג, טבליות מצופות

רזולור 2 מ"ג, טבליות מצופות

חומר פעיל וכמותו:

Prucalopride 1mg (as prucalopride succinate)

Prucalopride 2mg (as prucalopride succinate)

פרוקלופריד 1 מ"ג (כפרוקלופריד סוקסינט)

פרוקלופריד 2 מ"ג (כפרוקלופריד סוקסינט)

חומרים בלתי פעילים ואלרגניים בתכשיר - ראה/י סעיף 6 "מידע נוסף"

קרא בעיון את העלון עד סופו בטרם תשתמשי בתרופה. עלון זה מכיל מידע תמציתי על התרופה. אם יש לך שאלות נוספות, פני אל הרופא או אל הרוקח.

תרופה זו נרשמה לטיפול במחלתך. אל תעבירי אותה לאחרים. היא עלולה להזיק להם אפילו אם נראה לך כי מחלתם דומה.

1. למה מיועדת התרופה?

רזולור שייכת לקבוצה של תרופות המגבירות את תנועתיות המעיין. רזולור מיועדת לטיפול סימפטומטי בעצירות כרונית בנשים במבוגרים שטיפול קודם במשלשלים נכשל

התרופה אינה מיועדת לשימוש בגברים, בילדים ובמתבגרים מתחת לגיל 18. התרופה נבדקה במידה בלתי מספקת באוכלוסיות אלו.

2. לפני השימוש בתרופה

אין להשתמש בתכשיר אם:

- אתה רגיש (אלרגית) לחומר הפעיל פרוקלופריד או לאחד מהמרכיבים הנוספים אשר מכילה התרופה רזולור. לרשימת המרכיבים הנוספים ראי סעיף 6 "מידע נוסף".

- הנך מטופל בדיאליזה
- הנך סובל מהנקבות המעי או, מחסימת מעיים, מדלקת חמורה של המעיים כמו מחלת קרוהן, קוליטיס כיבית (דלקת כיבית של המעי הגס), הרחבה של המעי הגס והחלחולת (מגה קולון או מגה רקטום).

אזהרות מיוחדות הנוגעות לשימוש בתרופה:

- **לפני הטיפול ברזולור, ספרי לרופא על מצבך:**
 - אם הינך סובל ממחלת כליה חמורה
 - אם הינך סובל ממחלת כבד חמורה
 - אם הנך תחת מעקב רפואי בשל בעיה רפואית חמורה כגון: מחלת ריאות, מחלת לב, בעיות רפואיות במערכת העצבים או בעיות בבריאות הנפש, סרטן, איידס או הפרעה הורמונלית.
 - במקרה שהנך סובלת משלשול חמור, יתכן וגלולות למניעת הריון לא תפעלנה כראוי ועל כן מומלץ להשתמש בשיטה נוספת למניעת הריון. יש לקרוא מידע נוסף בעלון לצרכן של הגלולות למניעת הריון בהן את משתמשת.
- **אם אתה לוקחת, או אם לקחת לאחרונה, תרופות אחרות כולל תרופות ללא מרשם ותוספי מזון, ספרי על כך לרופא או לרוקח.**
- **נטילת רזולור ומזון**

ניתן ליטול רזולור בכל שעות היממה, עם או בלי מזון ומשקה.
- **הריון והנקה**

הריון:
רזולור אינה מומלצת לשימוש במהלך ההריון.
ספרי לרופאך אם הינך בהריון או מתכננת להרות.
השתמשי באמצעי מניעה אמין במהלך השימוש ברזולור, על מנת למנוע הריון. התייעצי עם הרופא.
אם הינך נכנסת להריון במהלך השימוש ברזולור, ידעי את הרופא.
הנקה:
במהלך הנקה, החומר הפעיל פרוקלופריד יכול לעבור אל חלב האם. לא מומלץ להניק במהלך הטיפול עם רזולור. יש להתייעץ עם הרופא.
- **נהיגה ושימוש במכונות**

רזולור אינו צפוי להשפיע על יכולת הנהיגה והשימוש במכונות.
עם זאת, לעיתים, רזולור יכול לגרום לסחרחורת ועייפות, במיוחד ביום הראשון לטיפול, ויתכן ותהיה לכך השפעה על יכולת הנהיגה ושימוש במכונות.
- **רזולור מכיל לקטוז מונוהידרט**

אם ידוע לך כי יש לך חוסר סבילות לסוכרים מסוימים, פנה לרופאך לפני תחילת נטילת

רזולור.

3. כיצד תשתמש בתרופה?

תמיד יש להשתמש לפי הוראות הרופא.

עליך לבדוק עם הרופא או הרוקח אם אינך בטוח.

המינון ואופן הטיפול יקבעו על ידי הרופא בלבד.

עליך ליטול רזולור בכל יום למשך התקופה בה הרופא הורה לך על הטיפול.

יתכן ורופאך ירצה להעריך מחדש את מצבך ואת ההטבה בעקבות הטיפול לאחר 4 השבועות

הראשונים של הטיפול ולאחר מכן במרווחים קבועים.

המינון המקובל של רזולור לרוב המטופלים הינו טבלייה אחת של 2 מ"ג , פעם ביום.

אם גילך הוא מעל 65 שנים או שהנך סובל ממחלת כבד חמורה, המינון ההתחלתי הוא טבלייה אחת

של 1 מ"ג פעם ביום, ויתכן כי הרופא יעלה את המינון לטבלייה אחת של 2 מ"ג פעם ביום, לפי הצורך.

יתכן ורופאך ימליץ על מינון נמוך יותר, של טבלייה אחת של 1 מ"ג פעם ביום במקרה שהנך סובל

ממחלת כליה חמורה.

נטילה של מינון גבוה מן המומלץ לא תשפר את פעילות התרופה.

רזולור מיועד לנשים מבוגרות למבוגרים בלבד. אין לתת תרופה זו לגברים, לילדים או למתבגרים

מתחת לגיל 18

חשוב ליטול את התרופה על פי המינון שנקבע על ידי הרופא.

- אם נטלת בטעות מינון גבוה יותר של רזולור מן המומלץ, יתכן ותסבלי משלשול, כאב ראש ו/או בחילה. במקרה של שלשול, וודאי שאתה שותה כמות מספקת של מים.

• אם שכחת ליטול רזולור:

- אין ליטול מנה כפולה של רזולור כדי לפצות על טבלייה שנשכחה. קחי את המנה הבאה בזמן הרגיל.
- יש להתמיד בטיפול כפי שהומלץ על ידי הרופא.
- גם אם חל שיפור במצב בריאותך, אין להפסיק את הטיפול ברזולור ללא התייעצות עם הרופא או הרוקח.

- אם אתה מפסיקה את נטילת התרופה רזולור, תסמיני העצירות שלך עלולים לחזור.

- אין ליטול תרופות בחושך! בדקי בדוק התווית והמנה בכל פעם שהינך נוטלת תרופה. הרפטי הרכב משקפיים אם הינך זקוקה להם.

אם יש לך שאלות נוספות בנוגע לשימוש בתרופה, היוועצי ברופא או ברוקח.

4. תופעות לוואי

כמו בכל תרופה, השימוש ברזולור עלול לגרום לתופעות לוואי בחלק מהמשתמשים. אל תיבהלי למקרא רשימת תופעות הלוואי. יתכן ולא תסבולי מאף אחת מהן.

תופעות הלוואי, יתכנו בעיקר בתחילת הטיפול, ובדרך כלל ייעלמו תוך מספר ימים מתחילת הטיפול.

תופעות לוואי שכיחות מאד (very common) תופעות שמופיעות ביותר ממשתמש אחד מעשרה

- כאב ראש
- בחילה
- שלשול
- כאב בטן

תופעות לוואי שכיחות (common) תופעות שמופיעות ב- 10-1 משתמשים מתוך 100

- ירידה בתאבון
- סחרחורת
- הקאה
- קשיי עיכול (דיספפסיה)
- דימום מפי הטבעת
- גזים
- קולות לא רגילים מן המעי
- עלייה בתדירות מתן שתן
- עייפות

תופעות לוואי שאינן שכיחות (uncommon) תופעות שמופיעות ב 10-1 משתמשים מתוך 1,000

- אבדן תאבון
- רעד
- דפיקות לב
- דימום מפי הטבעת
- עלייה בתדירות מתן שתן (פולקיאוריה)
- חום
- הרגשה לא טובה

יש ליידע את הרופא במידה ואתה חשה בדפיקות לב.

במידה והנך חשה באחת מתופעות הלוואי, אם אחת מתופעות הלוואי מחמירה, או כאשר אתה סובלת מתופעת לוואי שלא הוזכרה בעלון, עליך להתייעץ עם הרופא.

דיווח על תופעות לוואי

ניתן לדווח על תופעות לוואי למשרד הבריאות באמצעות הטופס המקוון לדיווח על תופעות לוואי שנמצא בדף הבית של אתר משרד הבריאות www.health.gov.il או ע"י כניסה לקישור : <https://forms.gov.il/globaldata/getsequence/getsequence.aspx?formType=AdversEffectMedic@moh.gov.il>

5. איך לאחסן את התרופה?

- מנע-הרעלה! תרופה זו וכל תרופה אחרת יש לשמור במקום סגור מחוץ להישג ידם של ילדים ו/או תינוקות ועל ידי כך תמנע הרעלה. אל תגרום להקאה ללא הוראה מפורשת מהרופא.
- אין להשתמש בתרופה אחרי תאריך התפוגה (exp. Date) המופיע על גבי האריזה. תאריך התפוגה מתייחס ליום האחרון של אותו חודש.
- אין לאחסן את התרופה בטמפרטורה העולה על 30°C. יש להגן מפני לחות.
- יש לשמור את טבליות הרזולור באריזת הבליסטר המקורית כדי להגן על התרופה מלחות.

6. מידע נוסף

- נוסף על החומר הפעיל התרופה מכילה גם:
Lactose Monohydrate, Microcrystalline Cellulose,
Colloidal Silicon Dioxide, Magnesium Stearate, Hypromellose, Triacetin,
Titanium Dioxide (E171), Macrogol 3000.
טבליית 2 מ"ג מכילה גם:
Iron Oxide Red (E172) , Iron Oxide Yellow (E172), FD&C blue No. 2
מרכיבים אלרגנים: התרופה מכילה לקטוז. aluminium lake (E132)
כל טבליית רזולור 1 מ"ג מכילה 150 מ"ג לקטוז מונוהידרט.
כל טבליית רזולור 2 מ"ג מכילה 165 מ"ג לקטוז מונוהידרט.
- כיצד נראית התרופה ומה תוכן האריזה:
רזולור 1 מ"ג טבלייה מצופה הינה בצבע לבן עד לבן בגוון אופ וויט, קעורה בשני צידיה, עגולה, עם הכיתוב "PRU 1" בצד אחד.
רזולור 2 מ"ג טבלייה מצופה הינה בצבע ורוד, קעורה בשני צידיה, עגולה, עם הכיתוב "PRU 2" בצד אחד.
- האריזה מכילה 4 (אריזות מגש/בליסטר מאלומיניום עם סימון קלנדרי) כל בליסטר מכיל 7 טבליות מצופות.
- גודל אריזה, 28 טבליות מצופות .

בעל הרישום וכתובתו : ג'יי סי הלת'קר בע"מ, קיבוץ שפיים, 6099000.

שם היצרן וכתובתו: יאנסן-סילג S.P.A, לטינה, איטליה

עלון זה נבדק ואושר ע"י משרד הבריאות בתאריך: נובמבר 2015
מספר רישום התרופה בפנקס התרופות הממלכתי במשרד הבריאות :
רזולור 1 מ"ג: 149-82-33682-00
רזולור 2 מ"ג: 149-83-33683-00

פורמט עלון זה נקבע ע"י משרד הבריאות ותוכנו נבדק ואושר

Prescribing Information

Resolor 1 mg Film Coated Tablets Resolor 2 mg Film Coated Tablets

1. NAME OF THE MEDICINAL PRODUCT

Resolor 1 mg **film coated tablets**

Resolor 2 mg **film coated tablets**

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

1mg tablet:

Each film-coated tablet contains 1 mg prucalopride (as prucalopride succinate).

Excipients: Each film-coated tablet contains 150 mg lactose monohydrate.

For the full list of excipients, see section 6.1.

2mg tablet:

Each film-coated tablet contains 2 mg prucalopride (as prucalopride succinate).

Excipients: Each film-coated tablet contains 165 mg lactose monohydrate.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

1mg tablet:

Film-coated tablet (tablet).

White to off-white, round, biconvex tablets marked "PRU 1" on one side.

2mg tablet:

Film-coated tablet (tablet).

Pink, round, biconvex tablets marked "PRU 2" on one side.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Resolor is indicated for symptomatic treatment of chronic constipation in ~~women~~adults in whom laxatives fail to provide adequate relief.

4.2 Posology and method of administration

Posology

~~women~~adults: 2 mg once daily with or without food, at any time of the day.

Due to the specific mode of action of prucalopride (stimulation of propulsive motility), exceeding the daily dose of 2 mg is not expected to increase efficacy.

If the intake of once daily prucalopride is not effective after 4 weeks of treatment, the patient should be re-examined and the benefit of continuing treatment reconsidered.

The efficacy of prucalopride has been established in double-blind, placebo-controlled studies for up to 3 months. **Efficacy beyond three months has not been demonstrated in placebo-controlled studies (see section 5.1).** In case of prolonged treatment, the benefit should be reassessed at regular intervals.

~~Men: The safety and efficacy of Resolor for use in men has not been established in controlled clinical trials, therefore Resolor is not recommended for use in men until further data becomes available.~~

Special populations

Elderly (>65 years): Start with 1 mg once daily (see section 5.2); if needed the dose can be increased to 2 mg once daily.

Patients with renal impairment: The dose for patients with severe renal impairment (GFR < 30 ml/min/1.73 m²) is 1 mg once daily (see sections 4.3 and 5.2). No dose adjustment is required for patients with mild to moderate renal impairment.

Patients with hepatic impairment: Patients with severe hepatic impairment (Child-Pugh class C) start with 1 mg once daily which may be increased to 2 mg if required to improve efficacy and if the 1 mg dose is well tolerated (see sections 4.4 and 5.2). No dose adjustment is required for patients with mild to moderate hepatic impairment.

~~Paediatric population: Resolor is not recommended in children and adolescents younger than 18 years until further data become available. Currently available data are described in section 5.2~~

Paediatric population: Resolor should not be used in children and adolescents younger than 18 years (see section 5.1)

Method of administration

Oral use

4.3 Contraindications

- Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.
- Renal impairment requiring dialysis.
- Intestinal perforation or obstruction due to structural or functional disorder of the gut wall, obstructive ileus, severe inflammatory conditions of the intestinal tract, such as Crohn's disease, and ulcerative colitis and toxic megacolon/megarectum.

4.4 Special warnings and precautions for use

Renal excretion is the main route of elimination of prucalopride (see section 5.2). A dose of 1 mg is recommended in subjects with severe renal impairment (see section 4.2).

Caution should be exercised when prescribing Resolor to patients with severe hepatic impairment (Child-Pugh class C) due to limited data in patients with severe hepatic impairment (see section 4.2).

The safety and efficacy of Resolor for use in patients with severe and clinically unstable concomitant disease (e.g. cardiovascular or lung disease, neurological or psychiatric disorders, cancer or AIDS and other endocrine disorders) have not been established in controlled clinical studies. Caution should be exercised when prescribing Resolor to patients with these conditions especially when used in patients with a history of arrhythmias or ischaemic cardiovascular disease.

In case of severe diarrhoea, the efficacy of oral contraceptives may be reduced and the use of an additional contraceptive method is recommended to prevent possible failure of oral contraception (see the prescribing information of the oral contraceptive).

~~Men: The safety and efficacy of Resolor for use in men has not been established in controlled clinical trials, therefore, Resolor is not recommended for use in men until further data becomes available.~~

The tablets contain lactose. Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicinal product.

4.5 Interaction with other medicinal products and other forms of interaction

Prucalopride has a low pharmacokinetic interaction potential. It is extensively excreted unchanged in urine (approximately 60% of the dose) and *in vitro* metabolism is very slow. ~~Although 8 different metabolites are known, the most abundant of these, the carboxylic acid product of side chain oxidative O-demethylation, represents less than 4% of the dose.~~

Prucalopride did not inhibit specific CYP450 activities in *in vitro* studies in human liver microsomes at therapeutically relevant concentrations.

Although prucalopride may be a weak substrate for P-glycoprotein (P-gp), it is not an inhibitor of P-gp at clinically relevant concentrations.

Effects of prucalopride on pharmacokinetics of other drugs

A 30% increase in plasma concentrations of erythromycin was found during prucalopride co-administration. The mechanism for this interaction is not clear.

Prucalopride had no clinically relevant effects on the pharmacokinetics of warfarin, digoxin, alcohol, paroxetine or oral contraceptives.

Effects of other drugs on pharmacokinetics of prucalopride

Ketoconazole (200 mg twice daily), a potent inhibitor of CYP3A4 and of P-gp, increased the systemic exposure to prucalopride by approximately 40%. This effect is too small to be clinically relevant. Interactions of similar magnitude may be expected with other potent inhibitors of P-gp such as verapamil, cyclosporine A and quinidine.

Therapeutic doses of probenecid, cimetidine, erythromycin and paroxetine did not affect the pharmacokinetics of prucalopride.

4.6 Fertility, pregnancy and lactation

Pregnancy

Experience with prucalopride during pregnancy is limited. Cases of spontaneous abortion have been observed during clinical studies, although, in the presence of other risk factors, the relationship to prucalopride is unknown. Animal studies do not indicate direct or indirect harmful effects with respect to pregnancy, embryonal/foetal development, parturition or postnatal development (see section 5.3). Resolor is not recommended during pregnancy. Women of childbearing potential should use effective contraception during treatment with prucalopride.

Breast-feeding

Prucalopride is excreted in breast milk. However, at therapeutic doses of Resolor no effects on breastfed newborns/infants are anticipated. In the absence of human data, it is not recommended to use Resolor during breast-feeding.

Fertility

Animal studies indicate that there is no effect on male or female fertility.

4.7 Effects on ability to drive and use machines

Resolor may have a minor influence on the ability to drive and use machines, since dizziness and fatigue have been observed in clinical studies, particularly during the first day of treatment (see section 4.8).

4.8 Undesirable effects

Summary of the safety profile

In an integrated analysis of 17 double-blind placebo-controlled studies, Resolor ~~has been~~ was given orally to approximately ~~2,700~~ 3,300 patients with chronic constipation ~~in controlled clinical studies~~. Of these ~~patients, almost 1,000~~ over 1,500 patients received Resolor at the recommended dose of 2 mg per day, while ~~approximately about 1,300~~ 1,360 patients were treated with 4 mg prucalopride daily. ~~Total exposure in the clinical development plan exceeded 2,600 patient years~~. The most frequently reported adverse reactions associated with Resolor 2mg therapy are headache (17.8%) and gastrointestinal symptoms (abdominal pain

(13.7%), nausea (13.7%) and/or diarrhea (12.0%) occurring in approximately 20% of patients each. The adverse reactions occur predominantly at the start of therapy and usually disappear within a few days with continued treatment. Other adverse reactions have been reported occasionally. The majority of adverse events were mild to moderate in intensity.

Tabulated list of adverse reactions

The following adverse reactions were reported in controlled clinical studies at the recommended dose of 2 mg with frequencies corresponding to Very common ($\geq 1/10$), Common ($\geq 1/100$ to $< 1/10$), Uncommon ($\geq 1/1,000$ to $< 1/100$), Rare ($\geq 1/10,000$ to $< 1/1,000$) and Very rare ($< 1/10,000$) and not known (cannot be estimated from the available data). Within each frequency grouping, undesirable effects are presented in order of decreasing seriousness. Frequencies are calculated based on the integrated analysis of 17 double-blind placebo-controlled clinical studies y-data.

Table 1: Adverse Drug Reactions (ADRs) Associated with Resolor		
System/Organ Class	Incidence Category	Adverse Drug Reaction
Metabolism and nutrition disorders	Common	Decreased appetite
Nervous system disorders	Very common	Headache
	Common	Dizziness
	Uncommon	Tremors
Cardiac disorders	Uncommon	Palpitations
Gastrointestinal disorders	Very common	Nausea, diarrhea, abdominal pain
	Common	Vomiting, dyspepsia, flatulence, gastrointestinal sounds abnormal
	Uncommon	Rectal hemorrhage
Renal and urinary disorders	Uncommon	Pollakiuria
General disorders and administration site conditions	Common	Fatigue
	Uncommon	Pyrexia, malaise

Metabolism and nutrition disorders
Uncommon: anorexia
Nervous system disorders
Very common: headache
Common: dizziness
Uncommon: tremors
Cardiac disorders
Uncommon: palpitations
Gastrointestinal disorders
Very common: nausea, diarrhoea, abdominal pain
Common: vomiting, dyspepsia, rectal haemorrhage, flatulence, abnormal bowel sounds
Renal and urinary disorders
Common: pollakiuria
General disorders and administration site conditions

Common: fatigue
Uncommon: fever, malaise

Description of selected adverse reactions

After the first day of treatment, the most common adverse reactions were reported in similar frequencies (incidence ~~no more~~ ~~less than~~ 1% different between prucalopride and placebo) during Resolor therapy as during placebo, with the exception of nausea and diarrhoea that still occurred more frequently during Resolor therapy, but less pronounced (difference in incidence between ~~prucalopride~~ ~~Resolor~~ and placebo of 1.3% and 3.4%, respectively) ~~between 1 and 3%~~).

Palpitations were reported in 0.7% of the placebo patients, ~~1.0%~~ 0.9% of the 1 mg prucalopride patients, ~~0.7%~~ 0.9% of the 2 mg prucalopride patients and 1.9% of the 4 mg prucalopride patients. The majority of patients continued using prucalopride. As with any new symptom, patients should discuss the new onset of palpitations with their physician.

Reporting of suspected adverse reactions

Any suspected adverse events should be reported to the Ministry of Health according to the National Regulation by using an online form ([@moh.health.gov.il](http://forms.gov.il/globaldata/getsequence/getsequence.aspx?formType=AdversEffectMedic)) or by email (adr@MOH.HEALTH.GOV.IL).

4.9 Overdose

In a study in healthy volunteers, treatment with prucalopride was well tolerated when given in an up-titrating scheme up to 20 mg once daily (10 times the recommended therapeutic dose). An overdose may result in symptoms resulting from an exaggeration of ~~the medicinal product's~~ ~~prucalopride's~~ known pharmacodynamic effects and include headache, nausea and diarrhoea. Specific treatment is not available for Resolor overdose. Should an overdose occur, the patient should be treated symptomatically and supportive measures instituted, as required. Extensive fluid loss by diarrhoea or vomiting may require correction of electrolyte disturbances.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: other drugs for constipation, ATC code: A06AX05.

Mechanism of action

Prucalopride is a dihydrobenzofurancarboxamide with gastrointestinal prokinetic activities. Prucalopride is a selective, high affinity serotonin (5-HT₄) receptor agonist, which is likely to explain its prokinetic effects. *In vitro*, only at concentrations exceeding its 5-HT₄ receptor affinity by at least 150-fold, affinity for other receptors was detected. In rats prucalopride *in vivo* at doses above 5 mg/kg (at and above 30-70 times the clinical exposure) induced hyperprolactinaemia caused by an antagonistic action at the D₂ receptor.

In dogs, prucalopride alters colonic motility patterns via serotonin 5-HT₄ receptor stimulation: it stimulates proximal colonic motility, enhances gastroduodenal motility and

accelerates delayed gastric emptying. Furthermore, giant migrating contractions are induced by prucalopride. These are equivalent to the colonic mass movements in humans, and provide the main propulsive force to defecation. In dogs, the effects observed in the gastrointestinal tract are sensitive to blockade with selective 5-HT₄ receptor antagonists illustrating that the observed effects are exerted via selective action on 5-HT₄ receptors.

These pharmacodynamic effects of prucalopride have been confirmed in human subjects with chronic constipation using manometry in an open-label, randomised, crossover, reader-blinded study investigating the effect of prucalopride 2mg and an osmotic laxative on colon motility as determined by the number of colonic high-amplitude propagating contractions (HAPCs, also known as giant migrating contractions). Compared with a constipation treatment working through osmotic action, prokinetic stimulation with prucalopride increased colonic motility as measured by the number of HAPCs during the first 12 hours after intake of the investigational product. The clinical significance or benefit of this mechanism of action when compared with other laxatives has not been investigated.

Clinical efficacy and safety

Adult population

The efficacy of ~~prucalopride~~ Resolor was established in three multicentre, randomised, double-blind, 12-week placebo-controlled studies in subjects with chronic constipation (n=1,279 on ~~prucalopride~~ Resolor, 1,124 females, 155 males). The ~~prucalopride~~ Resolor doses studied in each of these three studies included 2 mg and 4 mg once daily. The primary efficacy endpoint was the proportion (%) of subjects that reached normalisation of bowel movements defined as an average of three or more spontaneous, complete bowel movements (SCBM) per week over the 12-week treatment period.

~~For the population targeted in this label, the results are the following:~~

The proportion of female patients in whom laxatives fail to provide adequate relief (~~target population~~) treated with the recommended dose of 2 mg ~~prucalopride~~ Resolor (n=458) that reached an average of ≥ 3 SCBM per week was 31.0% (week 4) and 24.7% (week 12), versus 8.6% (week 4) and 9.2% (week 12) on placebo. A clinically meaningful improvement of ≥ 1 SCBM per week, the most important secondary efficacy endpoint, was achieved in 51.0% (week 4) and 44.2% (week 12) treated with 2 mg ~~prucalopride~~ Resolor versus 21.7% (week 4) and 22.6% (week 12) of placebo patients.

~~Prucalopride's~~ The effect of Resolor on spontaneous bowel movements (SBM) also proved to be statistically superior to placebo for the portion of patients that had an increase of ≥ 1 SBM/week over the 12-week treatment period. At week 12, 68.3% of patients treated with 2 mg prucalopride had an average increase of ≥ 1 SBM/week versus 37.0% of placebo patients (p<0.001 vs placebo).

In all three studies, treatment with ~~prucalopride~~ Resolor also resulted in significant improvements in a validated and disease specific set of symptom measures (PAC SYM), including abdominal (bloating, discomfort, pain and cramps), stool (incomplete bowel movements, false alarm, straining, too hard, too small) and rectal symptoms (painful bowel movements, burning, bleeding/tearing), determined at week 4 and week 12. At week 4, the proportion of patients with an improvement of ≥ 1 versus baseline in the PAC SYM abdominal, stool, and rectal symptom subscales was 41.3%, 41.6%, and 31.3% respectively in patients treated with prucalopride 2 mg compared with 26.9%, 24.4% and 22.9% in patients on placebo. Similar results were observed at Week 12: 43.4%, 42.9%, and 31.7% respectively in 2 mg ~~prucalopride~~ Resolor patients versus 26.9%, 27.2%, and 23.4% in placebo patients ($p < 0.001$ vs placebo).

A significant benefit on a number of Quality of Life measures, such as degree of satisfaction with treatment and with bowel habits, physical and psychosocial discomfort and worries and concerns, was also observed at both the 4 and 12 week assessment time points. At Week 4, the proportion of patients with an improvement of ≥ 1 versus baseline in the Patient Assessment of Constipation-Quality of Life satisfaction subscale (PAC-QOL) was 47.7% in patients treated with prucalopride 2 mg compared with 20.2% in patients on placebo. Similar results were observed at Week 12: 46.9% in 2 mg ~~prucalopride~~ Resolor patients versus 19.0% in placebo patients ($p < 0.001$ vs placebo).

In addition, the efficacy, safety and tolerability of Resolor in male patients with chronic constipation were evaluated in a 12-week, multi-centre, randomised, double-blind, placebo-controlled study (N=370). The primary endpoint of the study was met: a statistically significantly higher percentage of subjects in the Resolor group (37.9%) had an average of ≥ 3 SCBMs/week compared with subjects in the placebo treatment group (17.7%) ($p < 0.0001$) over the 12-week double-blind treatment period. The safety profile of Resolor was consistent with that seen in female patients.

Long-term study

The efficacy and safety of Resolor in patients (aged ≥ 18 or older) with chronic constipation, were evaluated in a 24 week multicentre, randomised, double-blind, placebo controlled study (N=361). The proportion of patients with an average weekly frequency of ≥ 3 Spontaneous Complete Bowel Movements (SCBMs) per week (ie, responders) over the 24-week double-blind treatment phase was not statistically different ($p = 0.367$) between the Resolor (25.1%) and placebo (20.7%) treatment groups. The difference between treatment groups in the average weekly frequency of ≥ 3 SCBMs per week was not statistically significant over Weeks 1-12 which is inconsistent with the 5 other multicentre, randomised, double-blind, 12-week placebo controlled studies demonstrating efficacy at this timepoint in adult patients. The study is therefore considered to be inconclusive with respect to efficacy. However, the totality of the data including the other double-blind placebo controlled 12 week studies support the efficacy of Resolor. The safety profile of prucalopride in this 24 week study was consistent with that seen in the previous 12 week studies.

~~prucalopride~~ Resolor has been shown not to cause rebound phenomena, nor to induce dependency.

TQT study

A thorough QT study was performed to evaluate the effects of ~~prucalopride~~ Resolor on the QT interval at therapeutic (2 mg) and suprathreshold doses (10 mg) and compared with the effects of placebo and a positive control. This study did not show significant differences between ~~prucalopride~~ Resolor and placebo at either dose, based on mean QT measurements and outlier analysis. This confirmed the results of two placebo controlled QT studies. In double-blind clinical studies, the incidence of QT-related adverse events and ventricular arrhythmias was low and comparable to placebo.

Data from open label studies up to 2.6 years offer some evidence for longer term safety and efficacy; however, no placebo controlled efficacy data for treatments longer than 12 weeks duration are available.

Paediatric population

The efficacy and safety of Resolor in paediatric patients (aged 6 months to 18 years) with functional constipation, were evaluated in an 8-week double-blind, placebo-controlled trial (N = 213), followed by a 16 week open-label comparator-controlled (Polyethylene glycol 4000) study of up to 24 weeks (N = 197). The starting dose administered was 0.04 mg/kg/day titrated between 0.02 and 0.06 mg/kg/day (to a maximum of 2 mg daily) for children weighing ≤ 50 kg given as an oral solution of Resolor or matching placebo. Children weighing > 50 kg received 2 mg/day Resolor tablets or matching placebo.

Response to the treatment was defined as having an average of ≥ 3 spontaneous bowel movements (SBMs) per week and an average number of faecal incontinence episodes of ≤ 1 per 2 weeks. The results of the study showed no difference in efficacy between Resolor and placebo with response rates of 17% and 17.8% respectively (P= 0.9002). Resolor was generally well tolerated. The incidence of subjects with at least 1 treatment-emergent adverse event (TEAE) was similar between the Resolor treatment group (69.8%) and the placebo treatment group (60.7%). Overall, the safety profile of Resolor in children was the same as in adults.

5.2 Pharmacokinetic properties

Absorption

Prucalopride is rapidly absorbed; after a single oral dose of 2 mg C_{max} was attained in 2-3 hours. The absolute oral bioavailability is >90%. Concomitant intake of food does not influence the oral bioavailability of prucalopride.

Distribution

Prucalopride is extensively distributed, and has a steady-state volume of distribution (V_{dss}) of 567 litre. The plasma protein binding of prucalopride is about 30%.

Biotransformation

Metabolism is not the major route of elimination of prucalopride. *In vitro*, human liver metabolism is very slow and only minor amounts of metabolites are found. In an oral dose study with radiolabelled prucalopride in man, small amounts of ~~eight~~ seven metabolites were recovered in urine and faeces. The **quantitatively most important** ~~major~~ metabolite in excreta, R107504, *formed by O-demethylation and oxidation of the resulting alcohol function to a carboxylic acid* accounted for less than 4% of the dose. *Unchanged active substance made up about 85% of the total radioactivity in plasma and only R107504 was a minor plasma metabolite.*, accounted for 3.2% and 3.1% of the dose in urine and faeces, respectively.

Other metabolites identified and quantified in urine and faeces were R084536 (formed by N-dealkylation) accounting for 3% of the dose and products of hydroxylation (3% of the dose) and N-oxidation (2% of the dose). Unchanged active substance made up about 92-94% of the total radioactivity in plasma. R107504, R084536 and R104065 (formed by O-demethylation) were identified as minor plasma metabolites.

Elimination

A large fraction of the active substance is excreted unchanged ~~(about 60% of the administered dose in urine and at least 6% in faeces)~~ **60-65% of the administered dose in urine and at about 5% in faeces**. Renal excretion of unchanged prucalopride involves both passive filtration and active secretion. The plasma clearance of prucalopride averages 317 ml/min. Its terminal half-life is about one day. Steady-state is reached within three to four days. On once daily treatment with 2 mg prucalopride, steady-state plasma concentrations fluctuate between trough and peak values of 2.5 and 7 ng/ml, respectively. The accumulation ratio after once daily dosing ranged from 1.9- to 2.3. The pharmacokinetics of prucalopride is dose-proportional within and beyond the therapeutic range (tested up to 20 mg). Prucalopride o.d. displays time-independent kinetics during prolonged treatment.

Special populations

Population pharmacokinetics

A population pharmacokinetic analysis showed that the apparent total clearance of prucalopride was correlated with creatinine clearance, but that age, body weight, sex or race had no influence.

Elderly

After once daily dosing of 1 mg, peak plasma concentrations and AUC of prucalopride in elderly subjects were 26% to 28% higher than in young adults. This effect can be attributed to a diminished renal function in elderly.

Renal impairment

Compared to subjects with normal renal function, plasma concentrations of prucalopride after a single 2 mg dose were on average 25% and 51% higher in subjects with mild (Cl_{CR} 50-79 ml/min) and moderate (Cl_{CR} 25-49 ml/min) renal impairment, respectively. In subjects with severe renal impairment ($Cl_{CR} \leq 24$ ml/min), plasma concentrations were 2.3 times the levels in healthy subjects (see section 4.2 and 4.4).

Hepatic impairment

Non-renal elimination contributes to about 35% of total elimination. In a small pharmacokinetic study, the C_{max} and AUC of prucalopride were, on average, 10-20% higher in patients with moderate to severe hepatic impairment compared with healthy subjects (see sections 4.2 and 4.4).

Paediatric population

~~After a single oral dose of 0.03 mg/kg in paediatric patients aged between 4 and 12 years, C_{max} of prucalopride was comparable to the C_{max} in adults after a single 2 mg dose, while unbound AUC was 30-40% lower than after 2 mg in adults. Unbound exposure was similar over the whole age range (4-12 years). The average terminal half life in the paediatric subjects was about 19 hours (range 11.6 to 26.8 hours) (see section 4.2).~~

5.3 Preclinical safety data

Non-clinical data reveal no special hazard for humans based on conventional studies of safety pharmacology, repeated dose toxicity, genotoxicity, carcinogenic potential, and toxicity to reproduction and development. An extended series of safety pharmacology studies with special emphasis on cardiovascular parameters showed no relevant changes in haemodynamic and ECG derived parameters (QTc) with the exception of a modest increase in heart rate and blood pressure observed in anaesthetized pigs after intravenous administration, and an increase in blood pressure in conscious dogs after bolus intravenous administration, which was not observed either in anaesthetized dogs or after oral administration in dogs reaching similar plasma levels. A subcutaneous neonatal/juvenile toxicity study performed in rats 7-55 days of age resulted in a NOAEL of 10mg/kg/day. The AUC0-24h exposure ratios at the NOAEL versus human children (dosed at approximately 0.04mg/kg daily) ranged between 21 and 71 providing adequate safety margins for the clinical dose.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

1mg tablet:

Tablet core

Lactose monohydrate
Microcrystalline cellulose
Colloidal silicon dioxide
Magnesium stearate

Coating

Hypromellose
Lactose monohydrate
Triacetin
Titanium dioxide (E171)
Macrogol 3000

2mg tablet:

Tablet core

Lactose monohydrate
Microcrystalline cellulose
Colloidal silicon dioxide
Magnesium stearate

Coating

Hypromellose
Lactose monohydrate
Triacetin

Titanium dioxide (E171)
Macrogol 3000
Iron oxide red (E172)
Iron oxide yellow (E172)
FD&C blue no. 2 aluminium lake (E132)

6.2 Incompatibilities

Not applicable.

6.4 Special precautions for storage

Do not store above 30⁰C.
Store in the original blister in order to protect from moisture.

6.5 Nature and contents of container

Aluminium/aluminium perforated unit dose blisters (calendar marked) containing 7 tablets.
Each pack contains 28 film-coated tablets.

6.6 Special precautions for disposal

No special requirements.

MANUFACTURER

Janssen Cilag S.p.A, Latina, Italy

REGISTRATION HOLDER

J-C Health Care Ltd, Kibbutz Shefayim 6099000