

R&D Opportunity

RJR September '03
DRAFT

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Background

- Gallaher R&D inquires about reduced risk products
- To defend against PM's launch of reduced exposure product
 - In 2004
 - Parliament likely to be first execution, possibly Marlboro
- Discussions between RJR R&D and Gallaher R&D
 - Product development, claims, substantiation
 - EW determined to be best near term counteraction to PM's launch
- RJR(J.Scaritt) and RGI (Y. Tardiff) to assess commercial opportunity for possible joint initiative

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EW - What is it?

- EW is a reduced exposure cigarette
 - Reduction of controversial compounds found in mainstream smoke
 - Reduction of ^{ITM15126} ~~in~~ vitro biological activity (i.e. cellular and biological damage)
 - Reduction of biomarkers of exposure of certain controversial compounds in smokers
- Scientific Advisory Board (external panel) states
"The Board reached consensus that the EW cigarette is a reduced exposure cigarette relative to the leading light cigarette in the US market"*

* Marlboro Light

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EW - What is it?

- T/N/CO – 10mg/0.8mg/9mg
 - DGV compliant
- Product specs:
 - Length 84mm = filter 27mm + rod 57mm
 - Circumference = 24.83mm
 - Cigarette weight = 0.925g

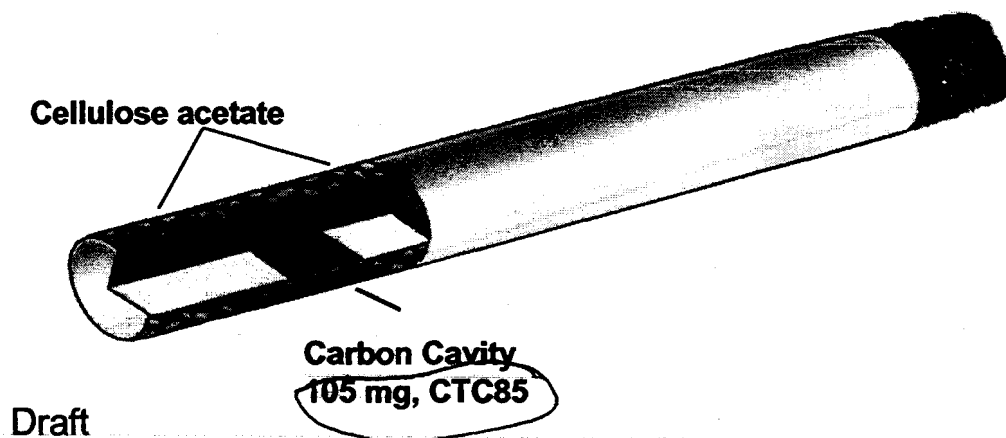
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Source: <https://www.industrydocuments.ucsf.edu/docs/fqdx0231>

EW - How?

- Reduced exposure is achieved through:
 1. Low nitrogen blend – reduces tobacco-specific nitrosamines (^{IARC}IRAC carcinogen) and NO_x (toxin)
 2. Carbon filter – reduces gas phase compounds (i.e. toxins, irritants, and other impurities)
 3. Steps #1 and #2, when combined, result in further reductions of controversial compounds



EW - History

- 1994 – Development goal achieved (FTC yields)
 - Significant reductions in smoke chemistry (50%)
 - Reductions in biological activity
- 1995-1997 – Test market
 - Winston Select (6 styles) in Oklahoma
 - “Flavor filter” claim, no reduced exposure mentioned
 - Parity performance (SOM) with conventional Winston Select
- 1999 – Blend modification to reduce tobacco-specific nitrosamines
 - Reformulated reconstituted sheet
 - Utilized heat-exchange flue-cured tobacco

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EW - History

- 2000 – Redesigned carbon filter
 - Dual segment carbon filter (Carbon scrubber) → Triple segment carbon filter (Cavitec)^(TM)
efficient removal of controversial compounds
 - More smoke stream exposed to carbon *? remove*
 - Reductions achieved under more intense smoking conditions (i.e. non-FTC conditions)
 - More efficient removal of controversial compounds
- 2001 – Blend modification II
 - Improved American blend flavor
 - *Sub* By utilizing “select” burley tobacco *to improve*

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EW - History

- 2001 – Acceptance and Adaptation Test
 - 4 concepts tested:
 1. Less risk of chronic bronchitis + EW
 2. Less risk of cancer + EW
 3. Reduces exposure to certain cancer-causing smoke compounds + EW
 4. Less risk of chronic bronchitis + Camel Lights

Key Findings:

- Results indicate significant opportunity for reduced risk
 - YR 1: 0.7% – 1.2% SOM
- “Less risk of cancer” most compelling claim
- Weak believability is a primary barrier to trial
- Fully optimized product significantly improves potential

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Source: <https://www.industrydocuments.ucsf.edu/docs/fqdx0231>

EW - History

- 2002 – Clinical Trials (10mg “tar” version) vs leading lights

- Human exposure (Piedmont Medical)

- 3 month study, 60 smokers

cross-over of 6 weeks

- Urine Mutagenicity

Details
Key Findings:

*3 week study (EW 1 week; m LT 2 weeks), 27 smokers
10 non-smokers*

- Test results *provided* demonstrated reductions in certain biomarkers

- Reduced exposure claim substantiated versus leading US lights

– Key data set to support reduced exposure claim

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EW - On-going development

10 mg "1"er"

Filter Optimization ~~for~~

Appropriate filter configuration to ^{further} enhance removal efficiency of entosicil compounds

Blend modification

Improved AB flavor

Panther reduction in CC

8 mg "1"er"
potassium

Indicated Development

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EW – Opportunities

- Competitive defense e.g. PM's launch in '04
 - Earliest launch date – ~~mid~~^{mid} 2004 ?
- Create a new segment
 - via line extension
 - via new brand
- Joint funding for further development of other reduced risk ^{style}products (low ^{ult}tar, 100mm, menthol)
 - share costs and use

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Source: <https://www.industrydocuments.ucsf.edu/docs/fqdx0231>

EW –Potential Claims

- Smoother, cleaner, fresher smoking experience
e.g. Mild Seven, Parliament
- More taste , less toxins... the flavor filter
approach
- Reduced exposure to toxins → Less guilt =
More pleasure ↑
- The New Generation Cigarette
 - With same great taste

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EW - Issues

- Unique Blend Requirements
 - Requires selected sourcing of tobacco
- Carbon filter
 - Slack Don*
 - Single source supplier
 - ~ US\$2 incremental/m
 - Style dependent
 - Long term with house*
- Additional development time required for other styles
 - ~ 6 months

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EW - Issues

- Additional testing may be required
 - If product requires changes e.g. T/N/CO
 - If additional substantiation is required
 - Timing:
 - Smoke Chemistry (1 style) – 3 months
 - Biological activity (1 style)
 - 3 months – in vitro
 - 9 – 18 months – inhalation/dermal studies
 - Clinical test (human)
 - ~18 months
 - Costs – US\$2mm

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EW – Next Steps

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