Supplementary Table 1. Modified cell lines together with their corresponding wild-type were screened for expression of aromatase mRNA and aromatase activity.

Supplementary Figure 1. Chemical structure of A. letrozole and B. PTK/ZK

Supplementary Figure 2. PTK/ZK inhibits the proliferation and ER/ERE mediated transcription of MCF7 AROM 2A cells. A. Proliferation. MCF7 AROM 2A [AROM+/ER+] cells were treated with vehicle (0.01% (v/v) ethanol) or androstenedione (10 nM) in the presence or absence of $Log_{10}M$ increasing concentrations of PTK/ZK. After 6 days of treatment cell, number was established using a coulter counter. **B.** ER/ERE mediated transcription. MCF7 AROM 2A cells co-transfected with EREIItkLuc and pCH110 were treated with vehicle (0.01% (v/v) ethanol), androstenedione (10 nM) or estradiol (1 nM) and increasing concentrations of PTK/ZK. Luciferase activity was normalised by β-galactosidase from co-transfected pCH110. Data is expressed as fold change compared to the vehicle treated control. Bars represent ± SEM. Effects were confirmed in three independent experiments. * $p<0.01$ compared with controls.

Supplementary Figure 3. PTK/ZK does not affect E2 driven proliferation or ER/ERE mediated transcription inMCF7 AROM 2A cells.

A. Proliferation. MCF7 AROM 2A [AROM+/ER+] cells were treated with vehicle (0.01% (v/v) ethanol) or estradiol (1 nM) in the presence or absence of $Log_{10}M$ increasing concentrations of PTK/ZK. After 6 days of treatment, cell number was established using a Coulter counter. Data is expressed as fold change compared to the vehicle treated control. **B.** ER/ERE mediated transcription. MCF7 AROM 2A cells

co-transfected with EREIItkLuc and pCH110 were treated with vehicle (0.01% (v/v) ethanol), androstenedione (10 nM) or estradiol (1 nM) and increasing concentrations of PTK/ZK. Luciferase activity was normalised by β-galactosidase from co-transfected pCH110. Normalized luciferase activity from triplicate wells was expressed relative to the vehicle treated control. Bars represent ± SEM. Effects were confirmed in three independent experiments.

Supplementary Figure 4. Comparison of the IC_{50} for PTK/ZK versus letrozole and anastrozole.

Microsomes were isolated from MCF7 AROM [AROM+/ER+] cells. Microsomes were treated in triplicate with androst-4-ene-3,17-dione, [1β^{3}H(N)] (0.125 μM) in the presence of vehicle (ethanol 0.01% (v/v)), increasing concentrations of **A.** letrozole (LET), **B**. anastrozole or **C**. PTK/ZK. Aromatase activity was measured by the conversion of androstenedione to tritiated water and expressed relative to the vehicle control.