

CORPORATE PHILOSOPHY

laterion, Inc. strives to become the leading Women's Health company Through
transformative science
and detailed
attention to
complexity, we're
creating the next
generation of lifesupporting medicines

Careful molecular toxicology is pursued prior to advancing any lead compound, to create safe therapies

We are translating nature into new treatments

OUR VISION

TO BRING CHANGE FOR A
HEALTHEIR WORLD FOR ALL PEOPLE

OUR MISSION

TO DISCOVER, DEVELOP AND DELIVER INNOVATIVE THERAPEUTICS FOR ALL WHO SUFFER DISEASES

THERE IS AN URGENT NEED TO SUPPORT WOMEN'S HEALTH

1

The Vast
Majority of
Women
Experience
Menopause

3

Currently there is

No Investment in

Women's Health

2

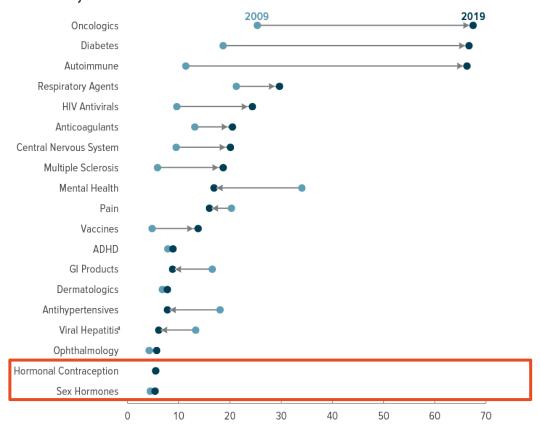
Current
Therapies
are Not Safe

WOMEN'S HEALTH FUNDING

"Proving the return on investment is the hardest thing for most healthcare companies—providing it for women's health is even harder, even if we may have overcome the barrier of belief that women's health opportunities are significant"

Rock Health CEO Bill Evans. Aug 18, 2021

Total U.S. Retail Drug Spending by Therapeutic Class, 2009 and 2019



MARKET INEFFICIENCIES

Despite media and political discussion concerning women's health there is no investment in women's health

There is not a single large or medium size pharma investing in women's health

There is no NIH study section dedicated to women's health

Most women's health products are on the market for >50 years

FEMALE SPECIFIC HEALTH ISSUES



Puberty

World-wide increase in premature puberty results in increased female cancer risk later in life and reduces girls' quality of life



Menstruation

Up to 91% of women experience Dysmenorrhea (painful menstruation) and 14% experience Heavy Bleeding



Conception

There is world-wide increase in female infertility which is not just due to increase in age of first pregnancy. Up to 12% of couples suffer Infertility, with up to 80% due to female disorders. The overall success of in vitro fertilization is 9%



Pregnancy

Up to 46% of women experience Spontaneous abortion, (miscarriage). There is increasing trend in Gestational diabetes, Preterm labor, Preeclampsia, and gestational Anemia



Young Adults

22% of adult women vs 5% of adult men suffer from acne resulting in poorer quality of life. Polycystic ovary syndrome is the most common endocrine disorder in women and increases the risk of diabetes. Many additional indications related to female health result in age related poorer quality of life when compared to men



Women

Approximately 70% of all Autoimmune diseases are in women including rheumatoid arthritis, lupus, Sjogren's syndrome, scleroderma, Hashimoto's thyroiditis, multiple sclerosis among others.



Menopause

70% of women experience Menopausal symptoms, 50% experience Vaginal atrophy. Following menopause cardiovascular diseases & Type 2 diabetes equals between men and women. Approximately 70% of Osteoporosis is in women



Aging

There is increased incidence of Breast cancer and Ovarian cancer with age. Breast cancer is the second cancer leading cause of death in women. Approximately 70% of Alzheimer's diseases & dementia is in women

FOUR HORMONAL STAGES IN WOMEN'S LIFE

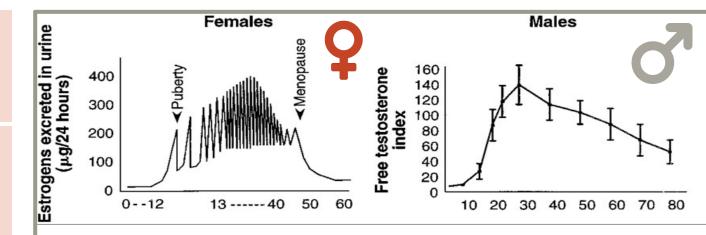
In males, testosterone peaks at age 20 (average 400- 600 ng/dl) and stays somewhat stable throughout a men's life

In pre-puberty, prior to sexual maturation sex hormones are very low and are not playing a role in growth and development

Upon the initiation of menstruation and throughout menarche sex hormones play a crucial role beyond reproductive ability in tissue differentiation, growth, metabolism, immunity, and the nervous system (central and peripheral)

From conception through pregnancy and lactation sex hormones modulate the dramatic changes the body goes through to accommodate the semiallogenic fetus through modifications in immunity, metabolism and blood supply

Following menopause sex hormones decline to almost pre-puberty levels and significant tissue modifications occurs, accelerating the risks for aging diseases such as cardiovascular, cancer and metabolic diseases as well as significantly more Alzheimer's and dementia than in men











SIGNIFICANT SEX HORMONE FLACTUATIONS

NUCLEAR RECEPTORS SELECTIVE MODULATORS

Approximately 10–20% of current FDA-approved drugs target nuclear receptors. These drugs have a market value of 30 billion dollars per year.

We developed a diverse platform for nuclear receptors selective modulation, including selective agonists, selective receptor modulators, estrogen receptor downregulators, $\text{ER}\alpha$ reprogramming ligands and $\text{ER}\beta$ selective ligands

Estrogen receptors modulation results in an opportunity for many therapies for Women's Health indications, including menopausal symptoms, breast cancer, vaginal dryness, osteoporosis, prevention of Type-2 diabetes and metabolic syndrome

Other nuclear receptors include the androgen receptor, glucocorticoid receptor, thyroid receptor, progesterone receptor and the peroxisome proliferator-activated receptors

ESTROGEN REGULATION AND ESTROGEN RECEPTORS

TARGET RECEPTOR



There are two estrogen receptor subtypes encoded on two separate genes: $\text{ER}\alpha$ and $\text{ER}\beta$

RECEPTOR SUBTYPE REGULATION

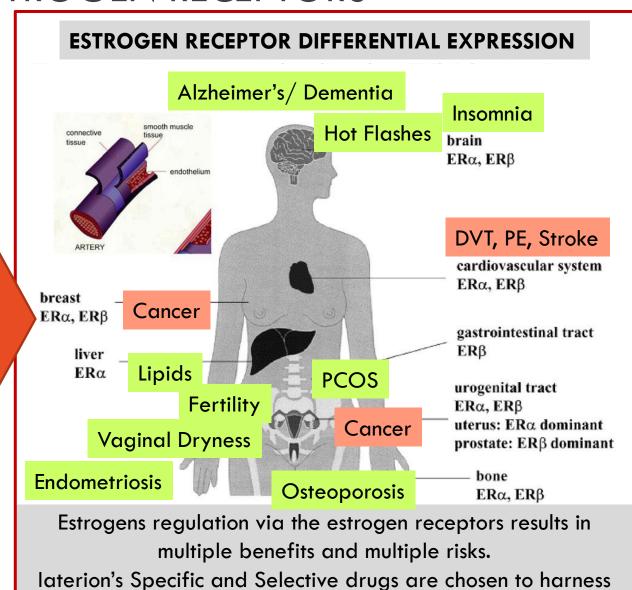


 $\mathsf{ER}\alpha$ and $\mathsf{ER}\beta$ Agonists, Antagonists

NUCLEAR RECEPTOR REPROGRAMMING (NRRP)



NRRP co-ligand change the genes regulated by estrogen resulting in safe long-term use of estrogens



the benefits and avoid the risks

SYMPTOM BASED MOLECULAR TARGETING (PROGRAMMING)

Estrogen **Turner Syndrome** Menopause ERα Receptors $ER\beta$ Development Kallmann Alzheimer/ Aging Syndrome Dementia Congenital Estrogen Osteoporosis Primary Amenorrhea **Breast Cancer** Neuropsychiatric **Uterine Cancer** Metabolism Reproduction Menstrual **Disorders Ovarian Cancer Immunity Fertility** Type 2 Diabetes Pregnancy **PCOS Endometriosis Autoimmune Disorders**

MF5: MENOPAUSAL HOT FLASHES

Phase 2 results of Bionovo, Inc. botanical drug Menerba (MF101) under FDA IND

MF5 active chemical compounds were isolated

MF5 has a unique mechanism of action: Selective Estrogen Receptor β (ER β) agonist

MF5 prevents breast and uterine cancer

MF5 does not increase the risk of clotting

MF5 may also prevent osteoporosis

"Although MF-101 appears to be a promising therapeutic, the herbal composition of the drug may be a disadvantage... If these isolates were demonstrated to be as effective and safe in clinical trials as preliminary data suggest regarding MF-101, these compounds could change the way clinicians treat menopause-associated symptoms"

VG3: VAGINAL DRYNESS

For women with a history of breast cancer vaginal atrophy is a significant unmet medical need

Menopausal Vaginal Atrophy

- 75% of middle-aged women report that sex is moderately to extremely important
- 55% of post menopausal women have vaginal dryness
- 41% of post menopausal women experience painful intercourse
- 40% of women taking oral hormone replacement have persistent vaginal dryness

VG3 for Vaginal Atrophy

- Topical estrogen receptor β
 (ERβ) modulator
- Potential advantage over topical estrogens with regard to safety (systemic absorption)
- Like MF5, Iaterion will proceed with the ER β active compounds identified in the VG101 extract

WL2: MENOPAUSAL OBESITY

Significant number of menopausal women experience weight gain and thereby an increased risk for Type 2 diabetes and cardiovascular diseases

Menopausal Weight Gain

- Weight gain per se cannot be attributed to the menopause transition
- Change in the hormonal milieu at menopause is associated with an increase in total body fat and an increase in abdominal fat
- Weight excess at midlife is associated with risk of cardiovascular and metabolic disease
- It also adversely impacts healthrelated quality of life and sexual function

WL2 for Menopausal Weight Gain

- Tissue selective ERα modulator
- The product will reduce weight in menopausal women
- The product will inhibit fat redistribution
- The product will improve insulin sensitivity and glucose tolerance
- The product will not increase uterine hyperplasia or uterine cancer risk
- The product will not increase breast cancer risk
- Like MF5, Iaterion will proceed with the tissue selective $ER\alpha$ active compounds identified in the extracts

IATERRP9: FIRST IN CLASS NUCLEAR RECEPTOR REPROGRAMMING DRUG

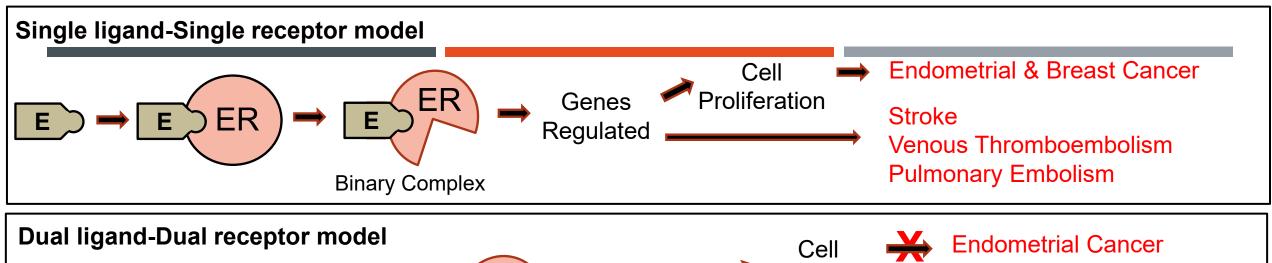
Menopause hormone therapy (MHT) include risks such as breast cancer, clotting events and early Alzheimer's disease. Since 2002, when these risks were revealed in the Women's Health Initiative (WHI) trials, MHT use has dropped by 80% and currently only 10% of women use MHT

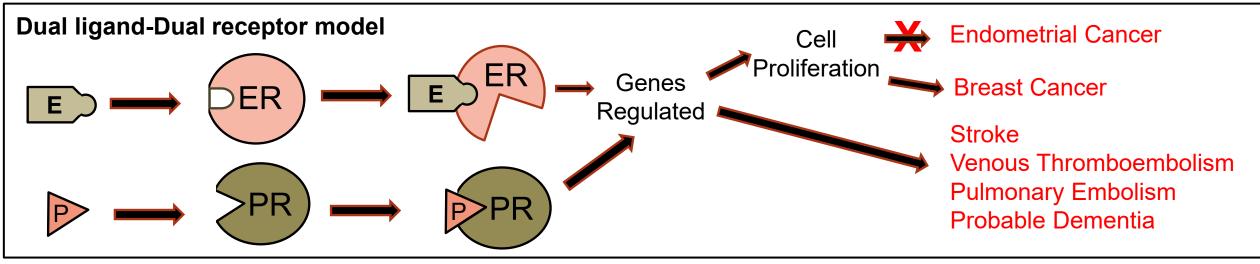
Current nuclear receptor ligand drugs interact with their nuclear receptors, they can promote serious adverse effects, in addition to the beneficial effects that the drug is prescribed for

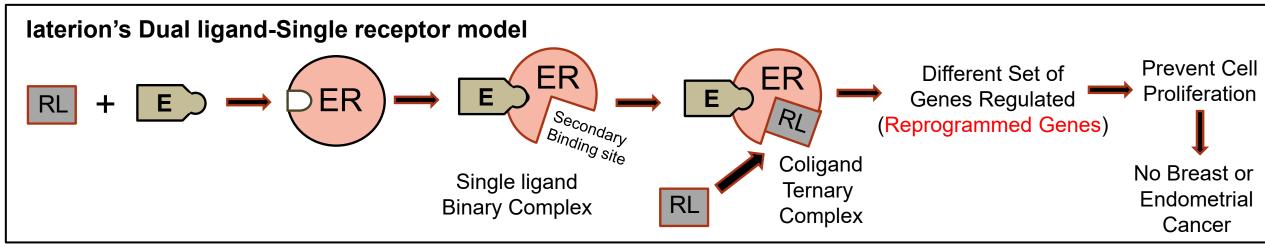
Our initial drug is designed to capitulate on estrogen's pharmacological ability to treat menopausal symptoms and to reduce type 2 diabetes risk and other long-term conditions associated with postmenopausal women

Unlike current estrogens and SERMs, IATERRP9 does not act as an estrogen agonist or antagonist. Instead, it acts by reprogramming the genes regulated

laterion Inc. plans to market a new class of drugs that we discovered called nuclear receptor reprogramming (NRRP) drugs







ONCOLOGY

In the U.S., more than 1.8 million new cancer cases are expected to be diagnosed in 2020 and about 606,520 Americans are expected to die of cancer in 2020

At laterion we harness multiple different pathways related to cellular mechanisms that cancer cells employ to thrive, while ensuring in advance that their deployment will not damage normal cells

Our drugs address multiple mechanisms to exert control over cancer cells including BIM inhibitors, dual mTOR inhibitors and glycolysis inhibitors among others We also focus on cancer prevention, which deploys mechanisms associated with increased risks that accelerate mutations accumulation and proliferation resulting in cancer

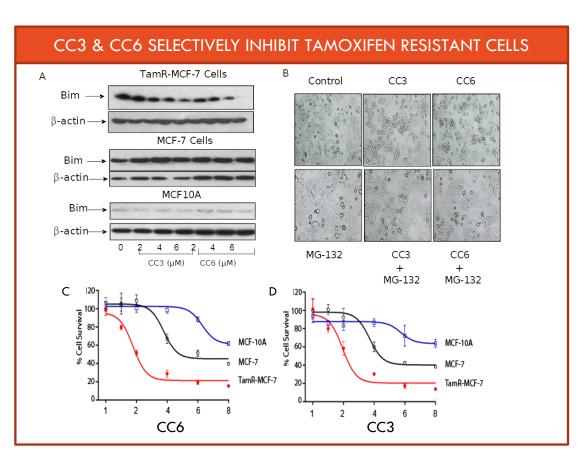
IACC3 & IACC6

Approximately two-thirds of breast cancer tumors are classified as estrogen receptor positive, expressing $ER\alpha$. While there are treatments to address the estrogenic effect, majority of these women will become resistant to estrogen therapy

Women with tumors resistant to endocrine therapy have a poor prognosis resulting in critical need for new drugs to treat resistant breast cancer

iaCC3 and iaCC6 are a new class of drugs called Bim down-regulators for endocrine resistant breast tumors

Bim is upregulated in endocrine resistant breast cancer



IP AND COLLABORATIONS

The company filed multiple provisional patents for its products

Multiple filings are pending, including composition of matter and utility

The company is collaborating on the product science with multiple institutions

To date, all IPs are fully with the company













INVESTMENT REQUIRED TO PROGRESS MF5 THROUGH TRIALS

laterion requests \$18M to advance MF5 to the end of Phase 1 and 2

| EXPENSE TYPE | COST |
|---------------------------|--------|
| Synthesis and Scale-up | \$0.5M |
| Final Formulation | \$0.4M |
| Pre-Clinical Pharmacology | \$1.6M |
| Animal Hot Flash Model | \$0.5M |
| Toxicology | \$2.5M |
| Phase 1/2 Clinical Trial | \$8.0M |
| Regulatory | \$0.5M |
| Legal (Corp and IP) | \$1.0M |
| Corporate | \$3.0M |
| Total | \$18M |

PERSONNEL

- Isaac Cohen, OMD, PhD- Chief Executive Officer
- Dale Leitman, MD, PhD- Chief Scientific Officer
- Klaus Kohl, PhD- Chief Technology Officer
- Lorin Johnson, PhD- BOD and SAB member. Founder Salix Pharmaceuticals
- Carlos Milla, MD- Acting Advisory Chief Medical Officer
- Uwe Christians, MD, PhD- Scientific Advisor for Clinical Pharmacology
- Mindy Goldman, MD- Scientific Advisor for Menopause
- Marcelle Cedars, MD- Scientific Advisor for Menopause
- Wally Wang, PhD- Scientific Advisor for Nuclear Receptors
- Chaoshen Yuan, MD, PhD- Senior Scientist
- Mark Rosenthal, MD- Scientific Advisor for Gerontology

MF5 OPPORTUNITY SUMMARY

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3

4

5

Iaterion's MF5 is the first and only clinically proven (with FDA Phase 2B study) to be safe and effective natural product for the treatment of menopausal women's symptoms

MF5 is
likely
superior to
MHT
because of
its longterm
safety

MF5 is superior to anti-depressants because of its safety, tolerability and long-term benefits

Women prefer natural products for Menopause, yet FDA approved MF5 is likely to capture significant market share with proper marketing and continued clinical analysis (reduction in breast cancer risk, clotting events and stroke)



CONCLUSION

