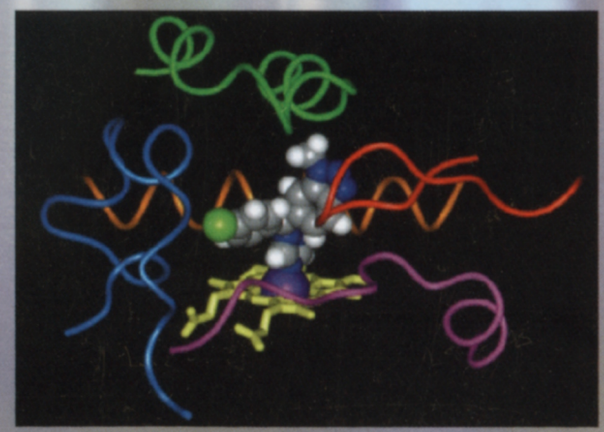
VIII International Aromatase Conference

September 18-20, 2006
Baltimore, Maryland USA

Baltimore Marriott Waterfront Hotel

Sponsored by
University of Maryland School of Medicine
Office of Professional Development and the
Department of Pharmacology
and Experimental Therapeutics



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VIII International Aromatase Conference

Aromatase 2006

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WE GRATEFULLY ACKNOWLEDGE THE FOLLOWING COMPANIES FOR THEIR CONTRIBUTIONS FOR THIS EDUCATIONAL PROGRAM

COMMERCIAL SUPPORT

ASTRA ZENECA

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4-CYTE THERAPEUTICS

IPSEN Innovation for Patient Care

EXHIBITORS

NOVARTIS

PFIZER

4-CYTE THERAPEUTICS

COURSE DESCRIPTION AND EDUCATIONAL OBJECTIVES

This course is designed to review the most recent data from the latest research on Aromatase, the key enzyme involved in estrogen biosynthesis and acts as the major forum for international experts to discuss the impact of their results and provide perspectives for the future. This conference has important implications for normal tissue physiology/development and the etiology/treatment of hormone-related diseases, most notably breast cancer

Upon completion of the course the attendee should be able to:

- Understand the role of Aromatase in estrogen biosynthesis
- Understand mechanisms of Aromatase inhibitors
- Be familiar with efficacy of Aromatase inhibitors in breast cancer
- Be aware of other conditions where Aromatase has a role

ACCREDITATION

The University of Maryland School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

CREDIT DESIGNATION

The University of Maryland School of Medicine designates this educational activity for a maximum of 20.50 AMA PRA Category 1 credits.™ Physicians should only claim credit commensurate with the extent of their participation in the activity.

DISCUSSION OF OFF-LABEL OR INVESTIGATIONAL USES OF PRODUCTS

Presentations in this continuing medical education activity may contain references to unlabeled or unapproved uses of drugs or devices. The audience is advised to consult the full prescribing information of all drugs or devices prior to use.

PROGRAM

TUESDAY, SEPTEMBER 19th - Continued

Session 8 – Clinical: Molecular Translational Studies
Chairs: P. Lonning & T. Powles

1:15-1:45	Molecular Markers in Translational Studies	C. Coombes
1:45-2:15	Biomarkers in Neoadjuvant Aromatase Inhibitor Studies	M. Ellis
2:15-2:45	Aromatase Inhibitors and Gene Discovery	W. Miller

Session 9 – Oral Presentations ***(selected from abstracts)***
Chairs: A. Brodie & A. Fulton

2:45-3:00	Structure-Function Characterization of Human Aromatase	Y Hong
3:00-3:15	The Alternative 5'-Untranslated Exon Is of Mouse Aromatase *(Cyp 19)* Gene	W.C. Boon
3:15-3:30	Recent Insights of the Enzymes (Aromatase, Sulfatase, 17β-Hydrosysteroid Dehydrogenase and Sulfotransferase) in the Bioformation and Transformation of Estradiol in Human Breast Cancer	J. Pasqualini
3:30-3:45	Aromatase in Men	V Rochira
3:45-4:00	Critical Comments Regarding COX2 and Aromatase Inhibition in Human Breast Cancer: Time for Change? Interaction of COX2, HER2 and Aromastase Pathways, with Cost and Benefit Association, and Future Therapy Implications	J. Ragaz
4:00	BUS TRIP TO MT VERNON	

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Vincent Njar, Ph.D.
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Richard Pietrus, M.D., Ph.D.
UCLA
Sherman Oaks, CA

Trevor J. Powles, M.D., Ph.D.
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Chair, Division of Pharmacology
Mayo Clinic College of Medicine
Rochester, MN

Wei Yue, M.D., Ph.D.
Assistant Professor of Research,
Department of Internal Medicine
University of Virginia

SKELETAL EFFECTS OF LONG-TERM ESTROGEN AND TESTOSTERONE REPLACEMENT: TREATMENT IN A MAN WITH CONGENITAL AROMATASE DEFICIENCY: EVIDENCES OF A PRIMING EFFECT OF ESTROGEN FOR SEX STEROIDS ACTION ON BONE STRENGTH

Cesare Carani[2], L Maffei[1], L Z.irilli[2], B Madeo[2], P Antunez[1], U Caffagni[2], *C* Aranda', B Fabre', A Sanguanini[2], VE, Montangero[4], EJA Roldan[4], V Rochira[2].

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In men, congenital estrogen deficiency is associated with bone macro-deformations, reduced bone mineral density (BMD) and bone strength. We evaluated the effects of androgen, estrogen and the combined treatment on BMD, bone architecture and markers of bone turnover in an aromatase-deficient man with concomitant mild hypogonadism during a period of 7.3 years. The subject was treated with subsequent therapies: Testosterone (T) alone, transdermal estradiol (tE_2) alone and combined treatment (T+tE_2). We assayed sex hormones and biochemical markers of bone turnover (bone alkaline phosphatase, calcium, phosphate, PTH, osteocalcin, urine deoxipyridinoline) and studied areal BMD (aBMD) by Dual-energy X-ray Absorptiometry (DXA) during each phase of therapy. Bone material and structural properties were assessed by Peripheral Quantitative Computed Tomography (pQCT) only during the combined therapy and bone strength was evaluated by means of the polar axis strain-stress index (SSIpolar). During each phase of treatment serum LH, FSH, total testosterone and estradiol were measured. Markers of bone turnover reached a pattern close to normality during T+tE_2. Baseline lumbar and femoral neck BMD were lower than normal (T-score -3.3 and -2.3) and did not increase consistently during T treatment period. After tE_2 and T4-tE_2 periods BMD T-score increased to -0.9 and -1.6 and volumetric BMD (vBMD) improved in long and short bones. The pQCT data showed an increased strength index (SSIpolar) even when vBMD was minimal. The T and tE_2 treatments and specifically their combination improved and maintained both vBMD and bone strength. These data suggest that bone strength acquisition and BMD accrual are two uncoupled phases of bone remodeling and probably take place subsequently. Thus congenital estrogen deficiency might cause osteopenia or osteoporosis by delaying the occurrence of peak bone mass rather than operating on bone resorption. Positive direct (on bone cells) or indirect (on bone mechanostat) estrogen actions may be postulated in men, with a possible priming effect of estradiol on bone cells, since pharmacological treatments (alendronate or androgens) had no effect on BMD when estrogens were absent.