

International Conference on

# Thyroid Disorders and Treatment

February 29-March 01, 2016 Philadelphia, Pennsylvania, USA

## Pharmacological activities of 3-iodothyronamine (T1AM) and 3-iodothyroacetic acid (TA1), two among the end metabolites of Thyroid hormone

Laura Raimondi and Annunzina Laurino  
University of Florence, Italy

3-iodothyronamine (T1AM) is a trace amine derived from Thyroid hormone metabolism circulating in rodents and humans whose physiological role remains to be discovered. Much is instead known on T1AM pharmacological effects even if the mechanism(s) responsible for such effects are only partially exploited. T1AM pharmacodynamics features include interaction at trace amine receptors (subtypes 1-3-8),  $\alpha_2$  and  $\beta_2$  adrenergic receptors. Interestingly, at  $\alpha_2$  and TAAR8 the amine behaves as an inverse agonist. More recently, T1AM was reported as a modulator of TRPM8, thus suggesting T1AM as a multi-target molecule and as a possible modulator of G-protein coupled receptors. Accordingly, we have recently described T1AM as an antagonist at muscarinic type 3 receptor. In the last years we have been involved in exploiting pharmacological effects of T1AM low doses in mice. In recent years we have our results suggest T1AM has the potential to behave as a neuromediator of the histaminergic signaling. In particular we found that the amine is able to modify mice behavior including feeding, learning and memory, pain threshold. All these effects were due, at least in part, to the production of its oxidative metabolite, the TA1. Interestingly enough, the TA1/T1AM endogenous levels averaging 1.7% is maintained also after pharmacological administration of T1AM. All the effects of T1AM and of TA1 so far studied are mediated by the release of histamine. Our data indicate the existence of a novel network connecting the Thyroid with histamine. Furthermore, accumulation of T1AM and/or TA1 may account for the histaminergic and antimuscarinic effects observed in Thyroid patients including itch, hyperalgesia and disturbances of sleep/arousal cycle.

[laura.raimondi@unifi.it](mailto:laura.raimondi@unifi.it)

## Follicular Variant of Papillary Thyroid carcinoma: A distinct clinical entity in endemic area

Gyan Chand  
Sanjay Gandhi Post Graduate Institute of Medical Sciences, India

**Introduction:** Follicular Variant of Papillary Thyroid Carcinoma (FVPTC) is being increasingly diagnosed in recent years, however little is known about its histopathological and clinical behavior.

**Aim:** The purpose of this study is to determine clinical characteristics of FVPTC and to compare it with classical Papillary Thyroid Carcinoma (cPTC).

**Methods:** We prospectively analyzed the retrospectively collected data of 182 PTC patients treated between 2009 and 2012. Two pathologists, who were blinded of the clinical and previous histopathology report, individually reviewed the slides. Statistical analysis was done using SPSS version 17.0 and non parametric tests were used to compare FVPTC and cPTC.

**Results:** There were 35 cases of follicular variant of PTC (FVPTC) and 147 cases of classic PTC (cPTC). On comparison, FVPTC presented more commonly in males and as multinodular goiters and cPTC had more incidence of LN metastasis. Compared to cPTC, FVPTC had histopathologically higher incidence of capsular invasion and extraThyroidal extension and distant metastasis ( $p < 0.001$ ). FVPTC patients had bone as the more common site of metastasis, whereas cPTC patients had pulmonary as the site of metastasis.

**Conclusions:** FVPTC is a common variant of PTC and has unique clinical behavior. In spite of there being variations in clinical behavior between FVPTC and cPTC, the long term outcome of FVPTC patients remains similar to that of cPTC.

[drgyanchandpgi@gmail.com](mailto:drgyanchandpgi@gmail.com)