PPAR Research

Special Issue on

Posttranslational Regulation of PPAR and PPAR Cofactors

CALL FOR PAPERS

The peroxisome proliferator-activated receptor (PPAR) transcription factors are nuclear receptors initially identified for their key role in regulating metabolic processes and are now widely looked upon as targets for a myriad of disorders including cancer, diabetes, atherosclerosis, and immune-mediated diseases. PPARs form multiprotein complexes that can function as either transcriptional activators or repressors that control the expression of a myriad of genes. The stability, expression, activity, and localization of PPARs and various cofactors (e.g., RXR and PGC-1α) are regulated in part via posttranslational modifications including ubiquitination, phosphorylation, sumoylation, *O*-GlcNAcylation, and acetylation. Often these modifications can alter cofactor binding, interactions with cellular protein refolding machinery (Hsp70, Hps90), and the proteasome-dependent degradation of PPARs and PPAR cofactors.

We invite researchers to contribute to a special issue of PPAR research that focuses on protein quality control pathways and the posttranslational modification of PPARs and PPAR cofactors in both physiological and pathophysiological conditions. Original research articles including biochemical, molecular, cellular, or animal models of protein quality control pathways that affect PPAR function, the role of the ubiquitin proteasome system downstream of PPAR activation, advances in methodologies and models to study protein quality control pathways, and the modification of PPAR and PPAR cofactor proteins, as well as review articles related to the main theme of the special issue, are encouraged.

Potential topics include, but are not limited to:

- Novel cellular and/or animal models of PPARs/cofactor modifications affecting physiologic/pathologic function
- Molecular mediators and mechanisms that directly regulate PPARs/cofactor function via posttranslational modifications
- Proteomic characterization of posttranslational modifications
- Regulation of PPARs/cofactors and PPAR signaling by cellular chaperones
- Degradation of PPARs/cofactors by the ubiquitin proteasome system (UPS)
- PPARs functioning as ubiquitin ligases
- The effect of proteasome inhibitors on PPAR function
- Role and regulation of the UPS in mediating downstream effects of PPAR activation
- The effect of PPAR ligands in animal models where protein quality control is challenged (proteinopathies and proteasome inhibition)
- Advances in methodologies, in vitro or in vivo, to study posttranslational modifications of PPARs/cofactors

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/ppar/prp/.

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