

# JOURNAL OF MOLECULAR ENDOCRINOLOGY

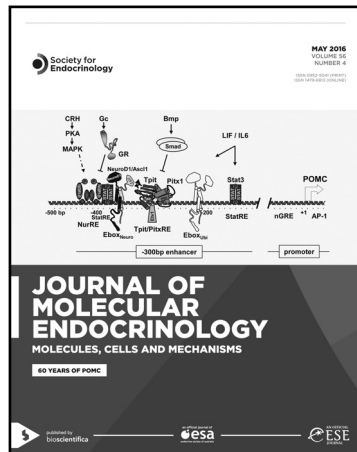
MOLECULES, CELLS AND MECHANISMS

MAY 2016  
VOLUME 56  
NUMBER 4

ISSN 0952-5041 (PRINT)  
ISSN 1479-6813 (ONLINE)

## CONTENTS

<http://jme.endocrinology-journals.org>



The image depicts the regulatory sequences of the rat *POMC* gene. In addition to the promoter, three enhancer sequences contribute to either pituitary or hypothalamic expression of *POMC*. The diagrams depict current knowledge on DNA binding transcription factors acting on these enhancers. From Drouin 2016 56 T99-T112.

Credit: J Drouin, Institut de recherches cliniques de Montréal (IRCM), Montréal, Canada

### EDITORIAL

**60 YEARS OF POMC: POMC: the consummate peptide hormone precursor**

*Adrian J L Clark & Philip Lowry*

E1-E2

### THEMATIC REVIEWS

**60 YEARS OF POMC: Purification and biological characterisation of melanotrophins and corticotrophins**

*Philip Lowry*

T1-T12

**60 YEARS OF POMC: Lipotropin and beta-endorphin: a perspective**

*D G Smyth*

T13-T25

**60 YEARS OF POMC: The proopiomelanocortin gene: discovery, deletion and disease**

*Adrian J L Clark*

T27-T37

**60 YEARS OF POMC: N-terminal POMC peptides and adrenal growth**

*Andrew B Bicknell*

T39-T48

**60 YEARS OF POMC: From the prohormone theory to pro-opiomelanocortin and to proprotein convertases (PCSK1 to PCSK9)**

*Michel Chrétien & Majambu Mbikay*

T49-T62

**60 YEARS OF POMC: From POMC and  $\alpha$ -MSH to PAM, molecular oxygen, copper, and vitamin C**

*Divya Kumar, Richard E Mains & Betty A Eipper*

T63-T76

**60 YEARS OF POMC: Biosynthesis, trafficking, and secretion of pro-opiomelanocortin-derived peptides**

*Niamh X Cawley, Zhaojin Li & Y Peng Loh*

T77-T97

# CONTENTS

---

**60 YEARS OF POMC: Transcriptional and epigenetic regulation of POMC gene expression**

*Jacques Drouin*

**T99-T112**

---

**60 YEARS OF POMC: POMC: an evolutionary perspective**

*Sandra Navarro, Lucia Soletto, Sara Puchol, Josep Rotllant, Jose Luis Soengas & Jose Miguel Cerdá-Reverter*

**T113-T118**

---

**60 YEARS OF POMC: Melanocortin receptors: evolution of ligand selectivity for melanocortin peptides**

*Robert M Does, Liang Liang, Perry Davis, Alexa L Thomas & Bogdana Petko*

**T119-T133**

---

**60 YEARS OF POMC: Adrenal and extra-adrenal functions of ACTH**

*Nicole Gallo-Payet*

**T135-T156**

---

**60 YEARS OF POMC: Regulation of feeding and energy homeostasis by  $\alpha$ -MSH**

*Erica J P Anderson, Isin Çakir, Sheridan J Carrington, Roger D Cone, Masoud Ghamari-Langroudi, Taneisha Gillyard, Luis E Gimenez & Michael J Litt*

**T157-T174**

---

## RESEARCH

**Autophagy protects osteoblasts from advanced glycation end products-induced apoptosis through intracellular reactive oxygen species**

*Lei Yang, Hongzheng Meng & Maowei Yang*

**291-300**

---

**SGK1 inhibitor reverses hyperglycemia partly through decreasing glucose absorption**

*Ping Li, Yan Hao, Feng-Hui Pan, Min Zhang, Jian-Qiang Ma & Da-Long Zhu*

**301-309**

---

**3,5-T<sub>2</sub> alters murine genes relevant for xenobiotic, steroid, and thyroid hormone metabolism**

*Julika Lietzow, Janine Golchert, Georg Homuth, Uwe Völker, Wenke Jonas & Josef Köhrle*

**311-323**

---

**Prohibitin regulates the FSH signaling pathway in rat granulosa cell differentiation**

*Indrajit Chowdhury, Kelwyn Thomas, Anthony Zeleznik & Winston E Thompson*

**325-336**

---

**Foxo3b but not Foxo3a activates *cyp19a1a* in *Epinephelus coioides***

*Qiongyou Liu, Yang Zhang, Boyang Shi, Huijie Lu, Lihong Zhang & Weimin Zhang*

**337-349**