ON THE NATURE OF THE SENSORY ARRESTINS OF THE DIPTERAN INSECTS *ANOPHELES GAMBIAE* AND *DROSOPHILA MELANOGASTER*

By

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7TM---------- seven transmembrane

β_2AR ---------- β_2 adrenergic receptor

AC ---------- adenylyl cyclase

Arr ----------arrestin

AgArr----------*Anopheles gambiae* arrestin

AgOr---------- *Anopheles gambiae* odorant receptor

AP---------- alkaline phosphatase

cAMP----------cyclic adenosine monophosphate

CNG ---------- cyclic nucleotide gated

CO_2----------carbon dioxide

DIG ----------digoxygenin

DmArr----------*Drosophila melanogaster* arrestin

DmOr---------- *Drosophila melanogaster* odorant receptor

EAG ---------- electroantennogram

FITC ----------Fluorescein isothiocyanate

FISH----------fluorescence *in situ* hybridization

G protein ---------- guanine nucleotide-binding protein

GFP ---------- green fluorescent protein

GPCR----------G protein-coupled receptor

GRK ----------G protein receptor kinase

GS---------- gene switch

ISH----------*in situ* hybridization

MAPK ---------- mitogen-activated protein kinase

MOE ---------- main olfactory epithelium

MGC ---------- macroglomerular complex

NH_3 ---------- ammonia

OBP ---------- odorant binding protein

ODE ---------- odorant degrading enzyme

OR ---------- odorant receptor

ORN ---------- odorant receptor neuron

POD ---------- peroxidase

PBS ---------- phosphate buffered saline

PLC ---------- phospholipase C

RT-PCR ---------- Real Time PCR

SH3 ---------- Src kinase Homology 3

SNMP ---------- sensory neuron membrane protein

SSR ---------- single sensillum recording

TARGET ---------- temporal and regional gene expression targeting

UTP ---------- uridine triphosphate

VNO ---------- vomeronasal organ