Grammatical misagreement in function:

Modifier to modifee

**Example: Prepositional phrase**

Increased mandibular growth was determined for the animal with the protrusion appliance.

**Revision**

Increased mandibular growth was determined for the animal treated with the protrusion appliance.

**Notes**

In the Example, it is not clear whether with the protrusion appliance is an adjectival modifying animal or an adverbial modifying was determined as in Increased mandibular growth for the animal was determined by using the protrusion appliance. The underlining cause is the ambiguity of the preposition with. In the Revision, replacement by the adjectival past participle treated explicitly marks animal as the modifiee of with the protrusion appliance.

Likewise, the adverbial modification can become explicit by usage of a syntactic unit with a decidedly adverbial function (such as the preposition-gerund phrase by using the protrusion appliance) and by transposing for the animal so that the verb phrase was determined is contiguous to by using. Although this adverbial alternative is syntactically plausible, the meaning is erroneous.

The preposition-gerund phrase is so frequent in research writing that its consideration as a unique structure seems justified. This structure...
Part 2 – Results section: results statement and preliminary interpretation

Example: Preposition-gerund phrase
Mutated PTEN that has lost only lipid phosphatase activity failed in mediating repression.

Revision
Mutated PTEN that has lost only lipid phosphatase activity failed to mediate repression.

Notes
Which is more effectively matched as the direct object of the transitive verb failed: a preposition-gerund phrase or infinitive phrase? The infinitive phrase to mediate sounds better, probably because it can function as a nominal, whereas in mediating cannot. In this example, the preposition-gerund phrase could be functioning as a modifier of the transitive verb failed, but the intent is failed something; thus, a nominal is needed as a complement (direct object).

Contextual Sections

Part 2 – Title

Example: Preposition-gerund phrase
The Ability for Synthesising Proline in Streptozotocin-Induced Diabetic Rats

Revision 1
The Ability to Synthesise Proline in Streptozotocin-Induced Diabetic Rats

Revision 2
The Proline-Synthesising Ability in Streptozotocin-Induced Diabetic Rats

Revision 3
Proline Synthesis in Streptozotocin-Induced Diabetic Rats

Notes
Many descriptive nature-of-study titles, in contrast to message titles, are noun and prepositional phrase rich and formal. In contrast, the preposition-gerund phrase (Example) and infinitive phrase (Revision 1) are more animated, but are less familiar than the noun + participle also functioning as an adjectival (Revision 2). The advantage of this structure is its highly thematic focus proline-synthesising ability. However, Revision 2 could be further revised to Revision 3 by deletion of the self-evident ability.

Part 2 – Introduction section: research problem background

Example: Adjective
Raf-1 is a common messenger in mitogenic stimulated signal transduction pathways.

Revision 1
Raf-1 is a common messenger in mitogenically stimulated signal transduction pathways.

Revision 2
Raf-1 is a common messenger in mitogenically stimulated signal transduction pathways.

Notes
In the Example, what word class is required to modify stimulated? An adjective such as mitogenic traditionally modifies a noun, but not an adjectival participle such as stimulated. In Revision 1, usage of the adverb mitogenically is grammatically correct (adverbs modify an adjective or an adjectival) but seems a hypercorrection (i.e., unfamiliar and stilted). In Revision 2, mitogen-stimulated, a noun-participle compound adjectival, is a familiar type of modifier (see Part 1). The compound nature, common for a noun followed by a participle modifier, is reinforced by hyphenation.

Part 3 – Introduction section: research importance

Example: Adverb
Lymphedema results in chronic inflammation, fibrosis, infection, and frequently loss of joint function (motion, muscle strength).

Revision
Lymphedema results in chronic inflammation, fibrosis, infection, and frequent loss of joint function (motion, muscle strength).

Notes
Usage of the adverb frequently is dissonant. Modification of the noun loss requires the adverb frequent not the adverb frequently. However, if commas segregate frequently, then frequently could back-modify the phrasal verb results in.

Summary
The following are examples of modifier-to-modifier misfunction:

Experimental sections
1. Prepositional phrase ambiguous function either adjectival animal with the protrusion appliance or possibly adverbial determined with the protrusion appliance.
2. The adverbial preposition-gerund phrase in mediating misused as a nominal direct object failed in mediating.

Contextual sections
1. The adverbial preposition-gerund phrase misused as an adjectival ability for synthesising.
2. The adjectival mitogenic misused before another adjectival mitogenic stimulated.
3. The adverb frequently misused before a noun phrase frequently loss of joint function.