Based on the pharmacological profiles of the regenerative formulations and their potential interactions with common geriatric medications, here are the recommended pairings. These selections prioritize safety by avoiding known adverse herb-drug interactions (such as potentiating bleeding or raising blood pressure) while targeting complementary therapeutic pathways.

## 1. Anticoagulants (e.g., Warfarin, Apixaban, Rivaroxaban)

- **Recommended Formulation: Albizia procera**
- **Rationale:** Unlike *Osteoking* (which contains blood-thinning Safflower and Panax) or *Peedanil Gold* (containing Curcuma), **Albizia procera** does not possess potent antiplatelet or anticoagulant properties that would dangerously elevate INR levels.
- **Beneficial Mechanism:** Traditionally, the bark decoction of *Albizia procera* has been utilized for managing hemorrhage, suggesting an astringent and stabilizing effect on vasculature rather than a blood-thinning one. This makes it a safer option for patients prone to bleeding risks. Its regenerative potential relies on restoring antioxidant enzymes (SOD, GSH, GPx) to create a conducive environment for cartilage repair without interfering with the coagulation cascade.[1]

## 2. Antihypertensives (e.g., Lisinopril, Amlodipine, Metoprolol)

- **Recommended Formulation: Peedanil Gold**
- **Rationale:** This herbo-mineral formulation is free from sympathomimetic stimulants like *Ephedra* (found in Maxing Yigan Formula) which can spike blood pressure, and devoid of *Licorice* (also in Maxing Yigan), which causes sodium retention and antagonizes ACE inhibitors.
- **Beneficial Mechanism: Peedanil Gold** works by significantly downregulating systemic inflammatory cytokines, specifically IL-6 and IL-1β.[3] Since chronic hypertension is often associated with low-grade systemic inflammation and endothelial dysfunction, reducing this cytokine load supports overall vascular health. Its active constituents, such as Guggulsterones, contribute to lipid metabolism regulation, further supporting cardiovascular stability without disrupting blood pressure control.[5]

## 3. Antidiabetics (e.g., Metformin, Glipizide, Insulin)

- **Recommended Formulation: Caryota mitis** (Fruit Peel)
- **Rationale:** This extract avoids the hypoglycemic "crash" risks associated with herbs that aggressively stimulate insulin secretion. Instead, it operates through a mechanism that enhances metabolic sensitivity, making it a strategic partner for antidiabetic regimens.
- **Beneficial Mechanism:** Emerging research identifies that **Caryota mitis** modulates PPAR-α/γ and GLUT-4 receptors. Peroxisome Proliferator-Activated Receptors (PPARs) and Glucose Transporter type 4 (GLUT-4) are critical for insulin sensitization and glucose

uptake in tissues. By targeting these metabolic regulators, *Caryota mitis* acts synergistically with drugs like Metformin to address the metabolic roots of osteoarthritis (often called "metabolic arthritis") while simultaneously protecting cartilage via xanthine oxidase inhibition.[6]

## 4. Statins (e.g., Atorvastatin, Simvastatin, Rosuvastatin)

- **Recommended Formulation: Leucas aspera**
- **Rationale:** Statin therapy places metabolic stress on the liver, and the primary safety concern is hepatotoxicity. **Leucas aspera** is distinct among the listed candidates for its strong hepatoprotective properties, making it a supportive adjunct for statin users.
- **Beneficial Mechanism:** Studies indicate that **Leucas aspera** extracts significantly reduce elevated liver enzymes and protect hepatic tissue from toxicity. Furthermore, the plant possesses intrinsic antihyperlipidemic activity, with steroidal phytochemicals that help lower serum cholesterol and triglycerides. This dual action—protecting the liver while reinforcing lipid management—offers a supportive "safety net" for patients managing hyperlipidemia alongside joint degeneration.