

## CLINICAL SPECIFICATIONS

# SCALLOPS + SQUID, COOKED

### Antigen Made From:

Squid (calamari) and scallops cooked in a pan with no added ingredients

### Associated With:

Squid (Calamari) immune reactivity  
Scallop immune reactivity

### Known Cross-Reactions:

**Scallops:** Tropomyosin of Shrimp;<sup>1</sup> Crab<sup>2</sup>

**Squid:** A $\beta_{42}$  peptide;<sup>3</sup> Shrimp<sup>4</sup>

### Clinical Significance:

Immune reactivity against cooked Scallops + Squid may indicate an adverse reaction to the food. As a known trigger of autoimmunity, the food should be avoided as a life-long lifestyle change. In a recent study, Vojdani and Vojdani showed that antibody made against amyloid beta (A $\beta_{42}$ ) reacted with both Scallop and Squid antigens.<sup>3</sup> The Squid showed cross reactivity with A $\beta_{42}$  and thus may play a role in the pathogenesis of Alzheimer's disease (AD) when there is a breach of the blood-brain barrier. Scallops on the other hand had a mild cross-reactivity with A $\beta_{42}$ . In Japan, the oral administration of scallop-derived purified plasmalogens in patients with mild cognitive impairment (MCI), or mild AD, showed significant improved memory function in females under the age of 77 with mild AD; no significant improvements were seen in males, participants over age 78, or patients with MCI.<sup>5</sup> When followed over time, avoidance/prevention treatment plans tailored and supervised by the ordering healthcare professional may help repair the gut barrier, re-establish oral tolerance to the offending food, and prevent/reverse cognitive decline.<sup>3,6,7</sup> The food and its related products should be avoided in order to calm the immune reaction against A $\beta_{42}$  peptide and negate its contribution to the pathophysiology of AD.

### References:

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3. Vojdani and Vojdani. Immunoreactivity of anti-A $\beta$ P-42 specific antibody with toxic chemical food antigens. *J Alzheimers Dis Parkinsonism*, 2018; 8(3):1-11.
4. Carrillo et al. Squid hypersensitivity: a clinical and immunologic study. *Ann Allergy*, 1992; 68:483-487.
5. Fujino et al. Efficacy and blood plasmalogen changes by oral administration of plasmalogen in patients with mild Alzheimer's disease and mild cognitive impairment: a multicenter, randomized, double-blind, placebo-controlled trial. *EBioMedicine*, 2017; 17:199-205.
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7. Atkinson et al. Food elimination based on IgG antibodies in irritable bowel syndrome: a randomized controlled trial. *Gut*, 2004; 53(10):1459-1464.