Halocynthia papillosa

Franck Jeannot - 2012

Halocynthia papillosa (Linnaeus, 1767) is also known as Sea Peach or Red sea-squirt.
The ascidian *Halocynthia papillosa* is a solitary sessile filter feeder. *H. papillosa* is commonly found on large rocky substrate surrounded by many other sessile invertebrates (Ribes 1998). Unlike most tunicates, *H. papillosa* high reproductive activity occurs in late summer early fall, which provides evidence that seasonal factors do not play a role in their reproductive activity.
Per the European Marine life Organization institute [1] it is a solitary ascidian which is generally 10 cm high but may reach 20 cm. The body is ovoïd, the red test is cartilaginous, rough with a granulous surface. The siphons are distant : the oral siphon is terminal and the atrial siphon is half-way down the body. Rigid bristles, used as sensitive elements, surround the siphons. The red sea-squirt can contract and close its siphons when disturbed.

Photos

Antimicrobial peptides Per an article in the Journal of PeptideScience [2] some marine invertebrates have developed an effective innate immune system to defend themselves against pathogenic microorganisms. Antimicrobial peptides (**AMP**) play a key role in this efficient defence system. The interest in AMP reflects both their relevance to intrinsic host defence, and their potential development as therapeutics.

Tunicates are related to subphylum **Tunicata** or **Urochordata**, considered to be evolutionarily advanced invertebrate marine organisms. They are filter feeder sac like organisms including incurrent and excurrent siphons and generally can live in three different forms of Solitary (single form), colonial (colonies of individuals), or compounds (Tunicates attached together, while having common tunic) [3] .

Références

[1] www.european-marine-life.org. http://www.european-marine-life.org/32/halocynthia-papillosa.php/.

[2] Richard Galinier et al. Halocyntin and papillosin, two new antimicrobial peptides isolated from hemocytes of the solitary tunicate, halocynthia papillosa. *Journal of PeptideScience*, DOI 10.1002/psc.1101 :., 2008.

[3] Masoumeh Hassanzadeh. Composition and application potentials of scandinavian tunicates. Master's thesis, KTH Chemical Science and Engineering, 2011.