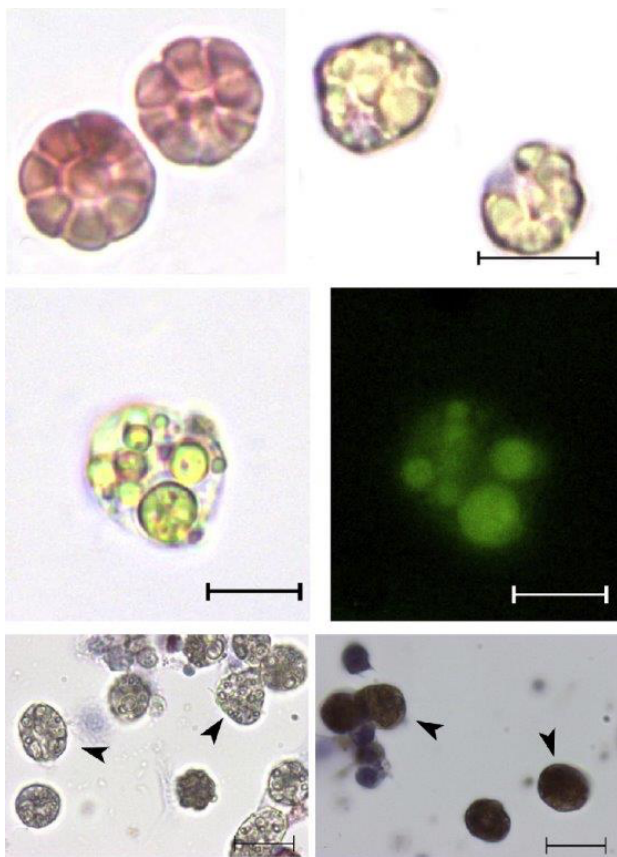


## Ascidian cytotoxic cells: from zero to hero

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日時： 2022年7月18日 (月=海の日)  
10:30~12:00  
場所： 朝倉キャンパス 共通教育棟 137 教室  
(教室は変更する可能性があります)



Ascidian cytotoxic cells are multivacuolated cells, variable in morphology, abundantly represented in the circulation, playing important roles in ascidian immunosurveillance. The interest of researchers towards these cells arose three decades ago when it was realized that, in colonial species, they were the effectors of the rejection reaction between contacting, genetically incompatible colonies. Indeed, they are the first cells to sense nonself and, upon the recognition of foreign molecules, are selectively recruited to the infection site where they release the content of their vacuoles. Their cytotoxic activity is closely linked to the activity of the enzyme phenoloxidase (PO), a copper-containing

enzyme widely distributed in invertebrates, contained inside their vacuoles together with its polyphenol substrata. Recent data indicate that ascidian cytotoxic cells synthesize and release the majority of the complement factors of both the alternative and lectin pathways. In addition, they are also the main source of antimicrobial peptides codified by the ascidian genome. Therefore, these cells, once neglected, are now drawing the attention of researchers for their multiple roles in immune defense.

原始的な脊索動物ホヤには移植拒絶に似た現象が知られています。そのような場面で活躍する細胞傷害性の血球細胞 (写真) は、補体系を構成するタンパク質を生産するなど、最近また注目を集めています。免疫系の進化に興味のある方は是非！