How cells package and traffic proteins for export

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Origins and influences
Figure 13-25c  Molecular Biology of the Cell (© Garland Science 2008)
How does endocytosis take place at a synapse?

frog neuromuscular junction

image courtesy of John Heuser
Synaptic vesicles fuse with the plasma membrane

Heuser and Reese 1981

0 msec

5 msec
Berkeley, 1976
END THE TORTURE IN THE LABS
Figure 1. Density Gradient Separation of sec1-1 and X2180 Cells
Yeast secretory pathway
Biochemistry and the connection to human disease
COPII gene duplication in mammals explains tissue-specific secretion diseases.
Major conclusions

1. Secretion and plasma membrane assembly are physically and functionally linked through a series of obligate organelle intermediates.

2. Polypeptide translocation and vesicular traffic machinery conserved over a billion years of evolution.

3. COPII coat sorts cargo molecules by recognition of transport signals and physically deforms the ER membrane to create budded vesicles.

How does peer review work?
nature

42.351*

IMPACT FACTOR

High Impact. Low Price.
Greek scientists lose access to digital journals

The country's economic crisis is hitting researchers hard.

Alison Abbott
02 July 2015

The Internet portal (HEAL-Link) has closed, denying researchers access to electronic journals. "Most researchers are using public libraries," says Athanasios Dydios, director of the Hellenic Centre for Research and Innovation (HCRI) in Athens. "The government is working on a solution to the problem of access to essential digital resources." 

Greece's stormy economic situation is not the only reason for the economic problems faced by the country. The country has been hit by the so-called "Troika" (European Union, International Monetary Fund, and the European Central Bank) and the "troika" is now in charge of managing the country's debt. This has led to a massive cut in government spending and a rise in unemployment. The situation is not easy for researchers, who are having to make do with limited resources. "We are working hard to keep our research going," says Dydios. "But it is not easy."
Citation data are a blunt instrument, at best

In every case, the medians are far lower than the means, reinforcing the point that JIF is almost useless as a predictor of likely citations for an individual paper.
关于调整研究所科技绩效奖励方案的通知

所属研究组：

经所学术委员会研究，第九届所长第 15 次所务会讨论通过，决定对我所“科技绩效奖励”方案进行如下调整：

1. 研究论文奖励等级分为：一等奖、二等奖和鼓励奖。奖励范围和金额如下：

<table>
<thead>
<tr>
<th>奖励等级</th>
<th>奖励范围</th>
<th>单篇奖金</th>
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<tbody>
<tr>
<td>一等奖</td>
<td>《Cell》, 《Nature》, 《Science》</td>
<td>20 万元</td>
</tr>
<tr>
<td>二等奖</td>
<td>《PNAS》以上及相当</td>
<td>5 万元</td>
</tr>
<tr>
<td>鼓励奖</td>
<td>《生物化学与生物物理进展》、《生物物理学报》、《Protein Cell》</td>
<td>500 元</td>
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“PNAS 以上及相当”：原则上为当年 IF≥PNAS 的期刊。特殊情况需重点实验室提交所学术委员会审议。

2. 增加对联合培养学生的奖励。对于联合培养的研究生，科研工作在我所完成，以我所为共同的第一作者单位和通讯作者单位的研究成果（其中学生资格以单位签订的联合培养学生协议为依据）。

General recommendations
- Move away from impact factors
- Assess outputs on their own merits
- Exploit new tools and approaches

And specific recommendations for publishers, funders, institutions, metrics suppliers, and researchers

>11000 signatories
Ground-breaking science, selected by experts, published without delay, open to the world

elifesciences.org
I hate the editors of these journals more than I hate Republicans.

—James Watson, of double-helix fame, speaking about recent rejections from several journals