# Frontiers in Bioengineering



# **Article Title**

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## 2 ABSTRACT

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- 4 http://www.frontiersin.org/Bioengineering/authorguidelines
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#### 1 INTRODUCTION

- 11 Text.

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- 17 Text Text. Author4 and Author5 (2013) might want to know about text text text
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Clinical Trial				
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Methods	2000 characters	15	12000 words	12 pages
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Review				
Technology Report				
Focused Review	2000 characters	5	5000 words	5 pages
CPC	1250 characters	6	2500 words	4 pages
Perspective	1250 characters	2	3000 words	3 pages
Mini Review				
Classification	1250 characters	10	2000 words	12 pages
Editorial	none	none	1000 words	1 page
Book review				
Frontiers Commentary	none	1	1000 words	1 page
General Commentary				
Field Grand Challenge				
Opinion	none	1	2000 words	2 pages
Specialty Grand Challenge				- •

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- 87 cleavages, etc.
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- 91 matched species (for cross species matching), number of peptide matches, ambiguous protein/peptide
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# **ACKNOWLEDGEMENT**

- 111 Text Text Text Text Text.

# SUPPLEMENTAL DATA

- 114 Text Text Text Text Text.

#### REFERENCES

- Author4, N. and Author5, N. (2013), Title of the article, Frontiers in Neurorobotics, 7, 25, doi:10.3389/
- 116 fnbot.2013.56789
- 117 LastName1, A., LastName2, A., and LastName2, A. (2013), Article title, Frontiers in Neuroscience, 30,
- 118 30, 10127–10134, doi:10.3389/fnins.2013.12345
- 119 OtherAuthor, N. and Coauthor, N. S. (2012), Article title, Frontiers in Genetics, 30, 49, 16417–16418,
- doi:10.3389/fgene.2012.54321

# **FIGURES**

121 **Figure 1.** Enter the caption for your figure here. Repeat as necessary for each of your figures.