**Axons and Brain Architecture**

**Description:**
Several excellent monographs exist which deal with axons. These, however, focus either on the cellular and molecular biology of axons proper or on network organization of connections, the latter with only an incidental or abstract reference to axons per se. Still relatively neglected, however, is the middle ground of terminations and trajectories of single axons in the mammalian central nervous system. This middle level of connectivity, between networks on the one hand and local, in vitro investigations on the other, is to some extent represented by retrograde tracer studies and labeled neurons, but there have so far been many fewer of the complementary anterograde studies, with total visualization of the axonal arborization.

The present volume brings together in one source an interrelated treatment of single axons from the perspective of microcircuitry and as substrates of larger scale organization (tractography). Especially for the former area - axons in microcircuitry - an abundance of published data exists, but these are typically in specialty journals that are not often accessed by the broader community. By highlighting and unifying the span from microcircuitry to tractography, the proposed volume serves as a convenient reference source and in addition inspires further interactions between what currently tend to be separate communities. The volume also redresses the imbalance between in vitro/local connectivity and long-distance connections.

Focusing on mammalian systems, Part 1 of this book is devoted to anatomical investigations of connections at the single axon level, drawing on modern techniques and classical methods from the 1990s. A particular emphasis is on broad coverage of cortical and subcortical connections from different species, so that common patterns of divergence, convergence, and collateralization can be easily appreciated. Part 2 addresses mechanisms of axon guidance, as these seem particularly relevant to pathways and branching patterns. Part 3 covers axon dynamics and functional aspects; and Part 4 focuses on tractography, notably including comparisons between histological substrates and imaging.

- A novel innovative reference on the axon as a connectional unit, encompassing microcircuitry, axon guidance, and function
- Featuring chapters from leading researchers in the field
- Full-colour text that includes both an overview of axon function and the multiple underlying molecular mechanisms
- The only volume to bring together the configuration of individual axons at a circuit level and to relate the histological geometry of axons and axon bundles to in vivo tractography imaging studies

**Contents:**


Axon dynamics 11. In vivo visualization of single axons and synaptic remodeling in normal and pathological conditions 12. Contribution of axons to short-term dynamics of neuronal communication


Ordering:

Order Online - http://www.researchandmarkets.com/reports/3451982/

Order by Fax - using the form below

Order by Post - print the order form below and send to

Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit
http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct.

Product Name: Axons and Brain Architecture
Web Address: http://www.researchandmarkets.com/reports/3451982/
Office Code: SCPL27V3

Product Format
Please select the product format and quantity you require:

**Quantity**

| Hard Copy (Hard Back) | USD 102 + USD 28 Shipping/Handling |

* Shipping/Handling is only charged once per order.

Contact Information
Please enter all the information below in BLOCK CAPITALS

<table>
<thead>
<tr>
<th>Title:</th>
<th>Mr</th>
<th>Mrs</th>
<th>Dr</th>
<th>Miss</th>
<th>Ms</th>
<th>Prof</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Last Name:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email Address: *</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Title:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postal / Zip Code:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone Number:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fax Number:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:

Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer: Please transfer funds to:

Account number 833 130 83
Sort code 98-53-30
Swift code ULSBIE2D
IBAN number IE78ULSB98533083313083
Bank Address Ulster Bank,
27-35 Main Street,
Blackrock,
Co. Dublin,
Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: _______________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:
(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World