



Getting to JATS and BITS

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Basic Assumption

- XML is needed for scholarly Journals and Books
 - HTML presentation
 - Responsive design
 - Rich hyperlinks
 - Long-term (100+ year) archiving
 - Metadata feeds
 - Effective integration of new metadata requirements
 - ORCID
 - CRediT
 - DOI
 - Funding

XML: Thoughtful Choices

- XML does not "happen"
- XML requires
 - Re-engineered publication workflow
 - New software tools
 - Additional production training
 - Even if you outsource your XML conversion
- XML requires deliberate and thoughtful choices

Adding XML In The Workflow

- You can introduce XML at:
 - Authoring
 - Before editing
 - Before composition
 - Post-publication
- Each point has pros and cons

The Original XML Dream

- Authors create XML documents
- Editors edit XML documents
- XML single-source publication
 - Print
 - HTML
 - eBooks
 - Metadata feeds
 - Derivative products

Actual Author Tools

- Authors use
 - Microsoft Word
 - LaTeX

The Author Reality

- Most Authors
 - Do not think structure
 - Do not like production tasks
- Outside Authors
 - Brilliant subject matter experts
 - Hard to train and support
 - Even harder to control

Online XML Authoring

- The wave of the future?
 - “HTML”-like experience
 - XML under the hood
- Issues
 - Authors can “break” it as easily as Word documents
 - Requires online access
 - Immature math editors
- Choices
 - Freeform like Word, and get Word-like results
 - Rigid authoring tool, but many authors dislike rigidity
- It may be XML, but is the XML correct?

Will Authors Write in JATS Online?

- Possible advantages
 - Faster publication time
 - Reduced author charges
- Possible problems
 - What journal am I submitting to?
 - Does it accept JATS files?
 - Does my second/third/fourth choice journal accept JATS?
 - JATS ≠ JATS ≠ JATS
 - But does it integrate with my citation manager?
- Today: Authors will use Word/LaTeX unless you pay them not to

Post-Publication XML

- Author submits Word file
- Edited in Word
- Typeset (e.g. InDesign)
- Proof and typeset corrections
- Publish print and PDF
- Create XML from PDF

Post-Publication XML Issues

- Advantages
 - No workflow changes
- Disadvantages
 - Quality of XML unchecked
 - Extra production time and cost
 - Errors discovered in XML creation
 - It's not an integrated workflow
 - Almost essential to outsource



Outsource Vendor Management

- Vendors, like employees, need to be managed
- If you don't :
 - Tell them what you want
 - Check their workthe result may differ from expectations
- Tell your vendors, *clearly and in detail*, what you want
- Trust but verify

XML First Workflow

- Author submits Word file
- Convert Word file to XML
- Edit article in XML
- Typeset XML
- Proof and typeset corrections in XML
- Create final PDF, ePub, etc.

Advantages and Disadvantages

- Advantages
 - File is continually validated to DTD
- Disadvantages
 - Requires XML editing software for all editors
 - Customization of XML editing system can be expensive
 - Freelance editors not practical
 - Editors work amidst XML tags

XML “Middle” Workflow

- Author submits Word file
- Clean up draft and style paragraphs
- Edit in Microsoft Word
- Convert Word to XML
- Typeset from XML
- Proof PDF from XML
- Corrections in Word; regenerate XML
- Create final PDF, ePub, etc.

Advantages and Disadvantages

- Advantages
 - Editors work in Microsoft Word
 - Lower training costs
 - Freelance editors are practical
 - Structure enforced prior to final pages
 - Allows online author editing of article
- Disadvantages
 - Requires
 - Running application in-house for XML
 - Using a vendor who typesets *from* JATS

Online JATS *Editing*

Sheridan ArticleExpress

Welcome, Mike Hepp

Editor Review Collaboration Help | Download PDF | Logout

Insert Footnotes... | Insert Link | Insert Citation | Insert Reference

Autoinhibition of the kinesin-2 motor KIF17 via dual intramolecular mechanisms

Alternative title (short): **Autoinhibition of kinesin-2 KIF17**

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Abstract

Long-distance transport in cells is driven by kinesin and dynein motors that move along microtubule tracks. These motors must be tightly regulated to ensure the spatial and temporal fidelity of their transport events. Transport motors of the kinesin-1 and kinesin-3 families are regulated by autoinhibition, but little is known about the mechanisms that regulate kinesin-2 motors. We show that the homodimeric kinesin-2 motor KIF17 is kept in an inactive state in the absence of cargo. Autoinhibition is caused by a folded conformation that enables nonmotor regions to directly contact and inhibit the enzymatic activity of the motor domain. We define two molecular mechanisms that contribute to autoinhibition of KIF17. First, the C-terminal tail interferes with microtubule binding; and second, a coiled-coil segment blocks processive motility. The latter is a new mechanism for regulation of kinesin motors. This work supports the model that autoinhibition is a general mechanism for regulation of kinesin motors involved in intracellular trafficking events.

Introduction

Long-distance transport in mammalian cells is driven by motor proteins that use the energy of ATP hydrolysis to carry vesicle, organelle, and multiprotein cargoes along microtubule tracks. In general, kinesin motors undergo directed motility toward **insert some more text here** the plus ends of microtubules in the cell periphery and thus drive anterograde transport, whereas cytoplasmic dynein moves toward the minus ends of microtubules in the cell center and thus drives retrograde transport. The activity of these motors must be tightly regulated in cells to ensure that ATP hydrolysis and microtubule-based motility are **v**. Regulation also involves attachment of each motor to the correct cargo and transport of that cargo to the proper subcellular destination at the relevant time.

NAVIGATE THIS ARTICLE

- Main Section
 - Title
 - Abstract
 - Introduction
 - Results
 - Discussion
 - Materials and methods
 - Acknowledgments
 - References
- Supplemental Data Section
 - AUTHOR QUERIES **0 of 4 Answered**
 - FIGURES
 - TABLES
 - COMMENTS
 - FILE ATTACHMENT
 - TUTORIALS

Accept Edits Save Submit

Why can't I submit?

XML Quality

- XML is not free
 - Neither is XML quality
- PDF
 - Create it, proof it, publish it
- XML
 - Create it, proof it, publish *from* it
 - XML-first and XML-middle facilitate XML quality
 - PDF created from XML

XML Quality +

- What's between the tags is important
- What's not visible (metadata) is more important
- XML requires more quality checks
- Develop QC tools
 - PubMed Central Style Checker
 - False color proofing
 - Schematron (ISO/IEC 19757) scripts
 - See <https://www.ncbi.nlm.nih.gov/books/NBK425543/>
- Run tools on every XML file
 - Provide tools to any third party vendors

Benefits of “XML-Right” Workflow

- PDF created *from* XML
 - Quality of XML is assured
- Richer PDF
 - Internal hyperlinks are “free”
- Content quality checks
 - Good XML assures internal cross-checks are complete
- Allows online author editing of proofs
 - Faster and more accurate turn-around
- Faster production time
 - No extra post-PDF step to create XML

Questions? Contact Us

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