

# **Ariel D. Chipman, Ph.D.**

## List of publications (updated 29.1.19)

### **1. Doctoral Dissertation**

**Chipman A. D.** (2000) Variation in anuran embryogenesis – evolutionary aspects. Unpublished PhD dissertation – The Hebrew University of Jerusalem. Supervisors Prof. Eitan Tchernov and Dr. Oded Khaer. Approved 2/2001.

### **2. Books**

None

### **3. Books edited**

1) Segmentation – a Cellular Perspective (In development – CRC press)

### **4. Chapters in collections**

1) **Chipman, A.D.** (2008)– Thoughts and speculations on the evolution of the arthropod segmentation mechanism. *in* “Evolving Pathways – Key Themes in Evolutionary Developmental Biology” Alessandro Minelli & Giuseppe Fusco eds. Cambridge University Press) pp. 343-358.

2) Hartenstein, V. and **Chipman, A.D.** (2015) – Hexapoda I – A *Drosophila*'s view of insect development. *in* “Evolutionary Developmental Biology of the Invertebrates” Andreas Wanninger ed. Springer. (

3) **Chipman A.D.** (2015) – Hexapoda II – Early development. *in* “Evolutionary Developmental Biology of the Invertebrates” Andreas Wanninger ed. Springer.

4) **Chipman, A.D.** (2017) – Developmental Exaptation. *In* “Evolutionary Developmental Biology - A Reference Guide” Laura Nuño de la Rosa and Gerd B. Müller eds. Springer

5) **Chipman, A.D.** (2018) – Segmentation. *In* “Evolutionary Developmental Biology - A Reference Guide” Laura Nuño de la Rosa and Gerd B. Müller eds. Springer.

6) **Chipman, A.D.** (2019) – Becoming Segmented. *In* “Perspectives on Evolutionary and Developmental Biology” Giuseppe Fusco ed. Padova University Press.

## 5. Articles

- 1) **Chipman, A.D.**, Haas, A. and Khaner, O. (1999) - Variations in anuran embryogenesis: yolk-rich embryos of *Hyperolius puncticulatus* (Hyperoliidae). *Evolution & Development* **1**:49-61
- 2) **Chipman, A. D.**, Haas, A., Tchernov, E. and Khaner, O. (2000) - Variation in anuran embryogenesis: differences in sequence and timing of early developmental events. *Journal of Experimental Zoology (Molecular and Developmental Evolution)* **288**:352-365
- 3) **Chipman, A. D.**, Khaner, O., Haas, A. and Tchernov, E. (2001) - The evolution of genome size: What can be learned from anuran development? *Journal of Experimental Zoology (Molecular and Developmental Evolution)* **291**:365-374
- 4) **Chipman, A. D.** (2001)- Developmental exaptation and evolutionary change. *Evolution & Development* **3**:299-301
- 5) **Chipman, A. D.**, and Tchernov E. (2002) - Ancient ontogenies: the larval development of the Lower Cretaceous anuran *Shomronella jordanica* (Amphibia: Pipoidae). *Evolution & Development* **4**:86-95
- 6) **Chipman, A. D.** (2002)- Variation, plasticity and modularity in anuran development. *Zoology - analysis of complex systems*. **105**:97-104
- 7) Richardson, M. K. and **Chipman, A. D.** (2003) – Developmental constraints in a comparative framework. *Journal of Experimental Zoology (Molecular and Developmental Evolution)* **296B**:8-22.
- 8) **Chipman, A. D.**, Arthur, W. and Akam, M. (2004) – Early development and segment formation in the centipede *Strigamia maritima* (Geophilomorpha). *Evolution & Development*. **6**:78-89
- 9) **Chipman A. D.**, Arthur, W. and Akam, M. (2004)– A double segment periodicity underlies segment generation in centipede development. *Current Biology* **14**:1250-1255
- 10) Arthur, W., **Chipman A. D.** (2005) - The centipede *Strigamia maritima*: what it can tell us about the development and evolution of segmentation. *Bioessays* **27**:653-660
- 11) Arthur W., **Chipman A. D.** (2005) – How does arthropod segment number evolve? – Some clues from centipedes. *Evolution & Development* **7**:600-607.
- 12) Peel, A., **Chipman A. D.** and Akam, M. (2005) - Arthropod Segmentation: Beyond the *Drosophila* paradigm.. *Nature Reviews Genetics* **6**:905-916. – invited review.
- 13) **Chipman, A. D.**, Stollewerk A. (2006) - Specification of neural precursor identity in the geophilomorph centipede *Strigamia maritima*. *Developmental Biology* **290**: 337-350

- 14) Stollewerk A., **Chipman A. D.** (2006) – Neurogenesis in myriapods and chelicerates and its importance for understanding arthropod relationships. *Integrative and Comparative Biology* **46**:195-206
- 15) Brena, C., **Chipman, A. D.**, Minelli, A. and Akam M. (2006) – The Expression of Trunk Hox genes in the Centipede *Strigamia maritima*: Sense and Antisense Transcripts. *Evolution & Development* **8**:252-265
- 16) Le Goff-Vitry, M. C., **Chipman, A. D.** and Comtet, T. (2007) – *In situ* hybridization on whole larvae: a novel method for monitoring bivalve larvae. *Marine Ecology Progress Series* **343**:161-172
- 17) **Chipman, A.D.**, Akam, M. (2008) – The segmentation cascade in the centipede *Strigamia maritima*: Involvement of the Notch pathway and pair-rule gene homologues. *Developmental Biology* **319**:160-169
- 18) Vedel, V., **Chipman, A.D.**, Akam, M., Arthur, W. (2008) – Temperature-dependent plasticity of segment number in an arthropod species: the centipede *Strigamia maritima*. *Evolution & Development* **10**:487-492
- 19) **Chipman, A.D.** (2010) – Parallel evolution of segmentation by cooption of ancestral gene regulatory networks. *Bioessays* **32**:60-70
- 20) Ben-David, J., **Chipman, A.D.** (2010) – Mutual regulatory interactions of the trunk gap genes during blastoderm patterning in the hemipteran *Oncopeltus fasciatus*. *Developmental Biology* **346**:140-149
- 21) Birkan, M., Schaeper, N.D., **Chipman, A.D.** (2011) - Early patterning and blastodermal fate map of the head in the milkweed bug *Oncopeltus fasciatus*. *Evolution & Development* **13**:436-447
- 22) Weisbrod, A., Cohen, M., **Chipman, A.D.** (2013) – Evolution of the insect terminal patterning system – Insights from the milkweed bug *Oncopeltus fasciatus*. *Developmental Biology* **380**: 125-131
- 23) Naggan Perl, T., Schmid, B. Schwirz, J., **Chipman, A.D.** (2013) – The evolution of the *knirps* gene family in arthropods. *Molecular Biology and Evolution* **30**:1348-1357
- 24) **Chipman, A.D.**, Dor, N., Bonato, L. (2013) – Diversity and biogeography of Israeli geophilomorph centipedes (Chilopoda). *Zootaxa* **3652**:232-248
- 25) **Chipman, A.D.**, Ferrier, D.E.K., et al. (2014) – The first myriapod genome sequence reveals conservative arthropod gene content and genome organisation in the centipede *Strigamia maritima*. *PloS Biology* **12**:11
- 26) Sadd, B.M. ... **Chipman A.D.** et al. (2015) – The genomes of two key bumblebee species with primitive eusocial organisation. *Genome Biology* **16**:76

- 27) **Chipman A.D.** (2015) – A developmental perspective on the early arthropod fossil record *BMC Evolutionary Biology* **15**:285
- 28) Stahi, R., **Chipman, A.D.** (2016). Blastoderm segmentation in *Oncopeltus fasciatus* and the evolution of arthropod segmentation mechanisms. *Proceedings of the Royal Society London B*, 20161745.
- 29) Auman T, **Chipman A.D.** (2017). The evolution of gene regulatory networks that define the arthropod body plan. *Integrative and Comparative Biology*. **57**:523-532
- 30) Auman T, Vreede BMI, Weiss A, Hester SD, Williams TA, Nagy LM, **Chipman A.D.** (2017). Dynamics of growth zone patterning in the milkweed bug *Oncopeltus fasciatus*. *Development*. **144**:1896-1905.
- 31) **Chipman A.D.** (2017). *Oncopeltus fasciatus* as an evo-devo research organism. *Genesis* e23020.
- 32) Ginzburg N, Cohen M, **Chipman A.D.** (2017). Factors involved in early polarization of the anterior-posterior axis in the milkweed bug *Oncopeltus fasciatus*. *Genesis* e23027
- 33) Auman, T., **Chipman, A.D.**, (2018). Growth zone segmentation in the milkweed bug *Oncopeltus fasciatus* sheds light on the evolution of insect segmentation. *BMC Evolutionary Biology* **18**:178.

#### Preprints on BioRxiv

- 34) Thomas, G.W.C., Dohmen, E., ... **Chipman, A.D.**, Waterhouse, R.M., Bornberg-Bauer, E., Hahn, M.W., Richards, S., (2018). The genomic basis of arthropod diversity. bioRxiv. 382945; doi: 10.1101/382945 (Under revision in *Nature*)
- 35) Panfilio K.A., ... **Chipman A.D.** et al. (2018). Molecular evolutionary trends and feeding ecology diversification in the Hemiptera, anchored by the milkweed bug genome. bioRxiv 201731; doi: 10.1101/201731. (accepted in *Genome Biology*)
- 36) Constantinou S.J., Duan N., **Chipman A.D.**, Nagy L.M., Williams T.A. (2018). Elongation during segmentation shows axial variability, low mitotic rates, and synchronized cell cycle domains in the crustacean, *Thamnocephalus platyurus*. bioRxiv 270728; doi: 10.1101/270728

#### Editorial material (non peer-reviewed)

- 37) **Chipman, A.D.** (2008) – Annelids step forward. *Evolution & Development* **10**:141-142
- 38) **Chipman A.D.** (2009) – On making a snake. *Evolution & Development* **11**:3-5

- 39) **Chipman, A.D.** and ten Hove, H.A. (2014) – M. Nechama Ben-Eliahu, 4 January 1935 – 23 March 2014. Obituary and some personal reminiscences. *Memoirs of Museum Victoria*. **71**:347-351
- 40) **Chipman, A.D.** and Erwin, D. (2017) – The evolution of arthropod body plans, an introduction to the symposium. *Integrative and Comparative Biology*. **57**:450-454.
- 41) **Chipman A.D.** (2017) A review of *The Serengeti Rules* by Sean B. Carroll. *The European Perspective*