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**Contributors**

**Preface**

**Abbreviations**

1. **Developmental pharmacology**  
   *John N. van den Anker, Natella Y. Rakhmanina, Karel Allegaert*  
   Drug absorption • Drug distribution • Drug metabolism • Phase I enzymes • Drug excretion • Other factors influencing the absorption, distribution, metabolism and excretion of drugs in neonates and young infants • Pharmacogenomics: impact for pediatric populations • Developmental pharmacodynamics • Conclusions • References

2. **Drug-induced liver injury in neonates: a developmental approach**  
   *Gavino Faa, Daniela Fanni, Clara Gerosa, Sonia Nemolato, Yukio Gibo, Massimo Castagnola, Vassilios Fanos*  
   Pharmacokinetics in neonates • Drug-induced liver injury in neonates • Liver disease due to widely utilized drugs in newborns • Conclusions and future challenges • References

3. **Influence of prenatal drug treatments on kidney function during fetal and neonatal life**  
   *Laura Cuzzolin, Vassilios Fanos*  
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4. **Excipients in neonatal drug formulations: friend and foe?**  
   *Roosmarijn De Cock, Catherijne Knibbe, Karel Allegaert*  
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5. **Pharmacotoxic effects of aminoglycosides and loud environmental noise: an overlooked risk for hearing loss in preterm infants**  
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6. Clinical pharmacology of analgosedatives in neonates: between the hammer and the anvil?
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7. New treatments of persistent pulmonary hypertension of the newborn
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8. Inotropic and vasopressor drugs in the newborn
Hercilia Guimaraes, Gustavo Rocha, Paulo Soares, Henrique Soares, Maria Beatriz Guedes
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9. Role of vasopressin and terlipressin in newborns and infants with hypotension and shock
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10. Pharmacological treatment of patent ductus arteriosus: the last days of indomethacin?
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11. The role of caffeine in neonatology
Pier Paolo Bassareo, Vassilios Fanos, Giuseppe Mercuro
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12. Pulmonary surfactant in newborn infants
Virgilio P. Carnielli, Stefano Nobile, Paola E. Cogo
13. Meconium aspiration syndrome: do we know the treatment?
Murat Yurdakök
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14. Treatment of chronic lung disease
Fabio Mosca, Valentina Polimeni, Francesca Ciuffini, Massimo Agosti, Monica Fumagalli, Mariarosa Colnaghi
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15. Postnatal steroids for the prevention and treatment of bronchopulmonary dysplasia
Eren Özek
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16. Molecular and clinical pharmacology of retinopathy of prematurity
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17. How to treat hypoxic-ischemic encephalopathy with drugs
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18. Does the best antioxidant come from the brain? Melatonin for the newborn: present and future
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Utility of melatonin in newborns • Future prospective • References
19. Invasive fungal infections in the nursery: the state of the art
Paolo Manzoni, Elio Castagnola, Eveline Jacqz-Aigrain, Mauro Stronati, Daniele Farina
Risk factors • Prevention • Treatment of neonatal invasive fungal disease: antifungal drugs • References

20. News on management of Cytomegalovirus infections
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Prenatal strategies to prevent CMV congenital infection • Neonatal diagnosis of CMV congenital infection • Postnatal CMV infection transmitted via mother’s milk • Neuroimaging of CMV congenital infected newborns • CMV and antiviral therapy • Conclusions • References

21. Global (pharmacological and non pharmacological) prevention of RSV infection
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22. Clinical review of pharmacologic agents for infants with severe viral bronchiolitis
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23. Perinatal antiretroviral therapy
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