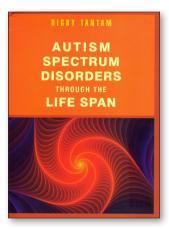
BOOK REVIEWS, NOTES AND COMMENTS

Edited by **Federica Napolitani Cheyne**



AUTISM SPECTRUM DISORDERS THROUGH THE LIFE SPAN

Digby Tantam Philadelphia, PA: Jessica Kingsley Publishers; 2013. 550 p. ISBN 9781849053440; e ISBN 9780857005113 £ 29,99.

The book Autism Spectrum Disorder through the Life Span, written by Digby Tantam and recently published by the Jessica Kingsley Publishers, represents a timely and welcome professional textbook which deals with the most recent progress both in basic science and clinical aspects concerning autism and people with an autism spectrum disorder. The author, Professor Digby Tantam, has a long, established career in psychiatry and his expertise with ASD people has been acquired in more than 30 years of clinical activity. His scholarly and professional work is well documented by his academic works, namely the many scientific international publications and opinion papers and it covers different topics which range from psychiatry and psychotherapy to applied philosophy. The book Autism Spectrum Disorders Through the Life Span is his second book dedicated to this topic. In the Preface, Professor Tantam introduces himself and explains the important contribution he received from the cultural and professional "milieu" where he grew up as psychiatric scholar. His specific interest in nonverbal behaviour and in social and emotional variables that act in human communication, together with the interaction with personalities such as John and Lorna Wing and Utha Frith at the Institute of Psychiatry in London, encouraged him to deepen his interest in nonverbal communication, his clinical commitment towards people with ASD, and in particular towards people with Asperger syndrome.

Autism spectrum disorders, as stated by Digby Tantam in the Introduction of his book, are a challenge for all mental health professionals, including neuroscientists and clinicians, and they prompt professionals who work with ASD to consider the personal development of each patient. This approach to the study of the autism spectrum is coherent with the observation that these disorders change with time and therefore it is necessary to consider the multiple factors that could

have a different development in each life span, both in the short term as well as in the long term.

The consideration that ASD is a lifelong condition means that clinicians working with adults have to accurately map the developmental trajectory of their patients, and they need to take into account the high similarity between the disabilities which could developed in ASD and those caused by other psychiatric disorders, with the resulting danger of misdiagnosis.

Along with the challenges involved when treating people with ASD, Digby Tantam introduces the unique opportunity offered to clinicians by people with autism. Many of the odd questions put by people with ASD show how much we take for granted, and among these there are some that oblige us to ask ourselves important philosophical questions. A simple question such as "Why would someone want to be my friend?" or "What is a friend?", that reflects the lack of social intuition of ASD people, would lead clinicians to reflect on their lives and experiences regarding their relationships with people, which is a critical matter in the work of clinicians. These considerations by Tantam are just a taste of the overall mood that flows through the entire book, his insight and compassion towards people with ASD who struggle every day, recognising that this may be considered an asset.

With this book the author provides a comprehensive view of the most recent research and he helps establish the relationship between basic theory, basic science and autism spectrum disorders in a clinical context. The book is divided in two main parts. The first part of the book is dedicated to the increasing evidence for the neurological origin of ASD and how these data match with the specificity of autism neurofunctioning. According to the author's discussion these data collimate with the genetics of ASD and the possible mechanisms involved in the risk of these disorders developing, including the role of interaction between gene and environment. In particular, Digby Tantam emphasises that evidence excludes either a lesion model or a singlemutation model at the basis of communication disorders involved in ASD, and he argues that a connectionist approach fits better with neurological and genetic ASD features. In this view, disorders of social interaction in ASD is attributed to impairment of the interaction between parts of the brain (minicolumns of neurons established in a complex wired networking), which in turn might originate from a dysfunctional interaction between part of genome (genes that code for synaptic proteins). Furthermore, the author provides important insights which concern the overlapping of ASD features with disorders such as Attention Deficit Hyperactive Disorder (ADHD) and speech and language disorders.

In line with his main interests, a big portion of the first part of the book examines communication and social behaviour as well as neuropsychology of ASD. A particular in-depth analysis is dedicated to concepts such as affective and cognitive empathy and their relation with theory of "mind" the latter useful theoretical construct as a model to understand the social impairment of people with autism.

The second part of the book is dedicated to the clinical aspect of ASD. With regard to clinical assessment, nonverbal communication is proposed as "the closest to a necessary criterion for an ASD diagnosis". This criterion in fact guarantees a high level of diagnosis validity and the better prognostic value. Two main further ideas have to be taken into account: the concept of spectrum, embedded ASD variation, and the observation that "complex" phenotypes of ASDs demonstrate that co-morbidity are the rule rather than the exception in the ASDs and that this may cause difficulty in separating disorders. Language impairment, rigidity, Intellectual Quotient, medical conditions, environmental factors, personal characteristics and their interaction with age and gender are all important factors which have to be taken into account when carrying out an ASD assessment. This assessment should be based on domain of impairment or difference, rather than on diagnostic categories of ASD, which however remains useful from an administratively point of view.

The detailed outline given by Digby Tantam of ASD presentation through the life span (early, middle, late childhood, adolescence and adulthood), that covers the last six chapters of the book, it is unquestionably an essential resource for all professionals who work with people with an ASD. The accurate and numerous case studies reported are particularly valuable as are the descriptions of genetic disorders possibly associated with ASD, especially for early child assessment. Since the studies and comprehensive overviews concerning the progression of Asperger syndrome are limited, Tantam's work gives us a deeper insight into people with Asperger and how their symptoms can shaped by age as well as environment.

This book will be an indispensable reference for students and professionals such as paediatricians, psychiatrists, clinical and educational psychologists, as well as many other professionals working with individuals of all ages with autism. It is clear, comprehensive and extremely reliable, and the author does not take for granted previous technical and/or professional knowledge. The background for methodology implied in neuroscience, genetic, clinical and psychological testing is explained all through the book. I would recommend this book to anyone, including carers or people with ASD who want to know about the most recent research into the etiology, treatment and presentation of these disorders.

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COMPARATIVE ISSUES IN THE GOVERNANCE **OF RESEARCH BIOBANKS** Property, Privacy, Intellectual Property, and the Role of **Technology** Giovanni Pascuzzi, Umberto Izzo, Matteo Macilotti (Eds). Berlin Heidelberg: Springer: 2013, 339 p. ISBN 978-3-642-33115-2. ISBN 978-3-642-33116-9 (eBook). € 135,15.

Biobanks have recently become a key resource, supporting many types of contemporary research like genomics and personalized medicine. This biobanking boom has prompted lively discussions on research ethics and medical ethics, concerning legal issues mostly (but not only) related to the traditional paradigms of property, privacy, informed consent and intellectual property. The debate over these topics stems from the widespread concern that scientific and technical advances in the field of research biobanking is racing ahead of legal regulation and ethical understanding.

Perspectives and opinions on these aspects made up the proceedings of the International Conference entitled "Comparative Issues in the Governance of Research Biobanks: Property, Privacy, Intellectual Property, and the Role of Technology", held in Trento, in May 2010. The conference was aimed at exploring, from a comparative viewpoint, the extent to which digital technology may assist in tackling the many regulatory issues raised by the practice of biobanking for research purposes. The scope of the book is therefore to provide a panorama of the different points of view on the complex interactions between the fast growing biobanking technology and the related legal issues. The exploration of how complementarity between these two areas in biobanking could be reached in the continuously changing scenario is a central aspect, as the ultimate goal is to ensure the protection and promotion of the patients' rights in medical research. The concept of complementarity between technology and law is exquisitely depicted by the editors' consideration that "The idea of exploring the relationship between law and technologies originates from the belief that for a deeper understanding of a given technological phenomenon, a strictly legal analysis is not sufficient. Instead, it is necessary to embrace an overall approach in order to combine the technical and social analyses of the phenomenon with the legal one".

The volume is divided into three parts. The first one is devoted to the analysis of the issues related to property and privacy in the biobanking context; the second part is dedicated to the analysis of the issues related to intellectual property in research biobanking. The last part of the book presents three contributions by scientists working in the real world of biobanking. Although mostly focused on describing the bidirectional relationship between law and technology, and how they are becoming

two complementary factors in biobanking, the book displays a multidisciplinary approach to the topic, which is functional to combine the perspectives of the different disciplines involved in the governance of research biobanks. The different contributions give an updated picture of critical topics such as privacy and informed consent, the right to know and the right not to know, ownership of biomedical information and ownership of the outcomes of research, data sharing and patents. Being written by different authors, each chapter reflects not only the personal contribution to the topic, in terms of ideas and proposals, but also the different writing style in introducing and developing the subject. Each chapter ends with an extensive bibliography of the topics covered, enabling the most interested readers to explore individual issues in greater depth.

Whilst some contributions require very basic knowledge of the topic and appear accessible to any reader, some others are clearly directed to a highly specialized readership.

As a whole, the book gives an account of the interesting debate concerning the complex field of biobanking and therefore it should be read by all stakeholders dealing with biobanking activities, as it provides a useful tool to analyse the interconnected legal and technological aspects of research biobanks.

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ADAPTIVE AND MALADAPTIVE ASPECTS OF DEVELOPMENTAL STRESS

Giovanni Laviola, Simone Macrì (Eds). New York: Springer Science + Business Media; 2013. p. 281. ISBN 978-1-4614-5604-9. ISBN 978-1-4614-5605-6. € 155,95.

When it comes to thinking about stress, the general tendency is to frame it within a negative context. Far too often do we worry about how stressed we feel and forget that possessing the ability to mount a physiological response under conditions of potential threat is crucial to survival. Essentially, as fur-less monkeys with very limited tree-climbing skills, we should acknowledge that being able to show a stress response (increasing heart-beat frequency and respiration, and directing our available energies to those muscles involved in fight or flight responses) makes the difference between coming back home for lunch or being somebody else's lunch. Needless to mention, too much stress may not be good for our health and survival. Yet, the complete absence of stress may be detrimental as well. This book, guest edited by Giovanni Laviola and Simone Macrì (respectively

senior and junior scientist at the "Istituto Superiore di Sanità, Dept. Cell Biology and Neuroscience, Sect. Behavioural Neuroscience), and featuring contributions from eminent scientists operating in different countries, attempts dissecting the multifaceted nature of stress. When, then, does stress equate to health? When does it equate to disease? Do other mammals experience stress or does this concept only pertain to human beings? What happens during development? Are we born with the capability of perceiving and responding to stressful events? What happens if the biological systems mediating stress responses undergo abnormal development?

As mentioned in the preface, Laviola and Macrì debated these issues for ages and came to the conclusion that they were unable to address them, unless aided by other colleagues, in turn, top-notch experts in the field of "stressology". This is the reason why they gathered scholars from several countries and asked them to elaborate on these questions and propose reasonable responses. The elaborations of the aforementioned scientists have been incorporated into this remarkable editorial initiative and subdivided into three main sections aimed at describing: (i) the evolutionary adaptive meaning of the stress response system (in other words, why something as unpleasant as sweating on a first date should have been of any use to our ancestors?); (II) the positive and negative aspects of stress in our species, and how such entity develops across the lifespan; (iii) why it makes sense to study the stress response in animals other than humans, and what contribution has animal research bestowed to this field of investigation.

The breadth, quality, and communication skills of the scientists convened by the editors are amazing. Some of the chapter authors are world-recognized experts in their fields. Particularly cogent and comprehensive did we find the general introduction proposed by Marco Del Giudice (University of Torino) and collaborators: this chapter per se may well constitute an in-depth introduction to the evolutionary underpinnings of the concept of stress. The book then benefits from the inspiring contribution of Dario Maestripieri and Amanda Klimczuk (University of Chicago) who introduce us to the "stressful world" of non-human primates. In this chapter they explain how young monkeys cope with stressful situations and how their mothers strive to prepare them to the challenges they will encounter throughout development. The second section of the book will certainly be of interest to psychologists, psychiatrists and physicians: it is in this section, that Ed Tronick (an Harvard-based professor whose elaborations once inspired a "Law and Order" TV-series episode), Mark Flinn (University of Missouri), Urs Nater (University of Marburg), and their colleagues detail how the stress system mingles human development to result in health or disease. The approach linking development (infancy through adulthood), stress and (dys)function ranges from psychiatry to psychology, to anthropology. This human-centred section is then paralleled by the third section of the book, in which high-ranking fundamental neuroscientists describe how clinical knowledge on the stress response system (and its development) can be translated to laboratory animal research, and back. This section, incorporating

preclinical data collected in mice, rats, voles, monkeys, and birds will most likely be of interest to fundamental biologists, neuroscientists and veterinarians.

The original twist of the book resides in the consideration that the stress response system is not a predetermined entity but rather a developing organ (as the heart and the brain). As such, its development is highly sensitive to environmental influences occurring throughout life and just like any other organ it needs training. The needed amount of training depends on the specific goal that needs to be achieved. To use the same metaphor used in the book by Jennifer DiCorcia and her collaborators, a marathon and 100-metre dash request completely different forms of training. What would happen to perfectly fit marathon runner if requested to sprint for a 100 metres? A likely miserable performance or, back to stress and evolutionary adaptive reasoning, *phenotypic mismatch*...

Ultimately, this book will be of great interest and use to a broad range of scholars who, beside detailed scientific information, will find herein an elegant language and many inspiring stimuli capable of eliciting original elaborations and further scientific endeavours.

In sum, although the concept of eustress emerged several years ago, most of the research avenues in pathophysiological aspects of stress do not take into account this simple, evolutionary, Darwinian explanation: organisms, vertebrates in particular (and the human species even more markedly), have to cope with an ever-challenging environment. The struggle for existence shaped the general constraints of the coping response for any given species, in turn, a complex ensemble of natural populations scattered on our Planet. More intriguingly, even at the individual level, coping responses are the result of early experiences, sculptured by epigenetic influences, occurring during the neonatal, infantile, and adolescent stages (with a remarkable role played by the Nerve Growth Factor, see [1] and [2]). Since 1975, Robert Dantzer, Seymour "Gig" Levine, Robert Sapolsky, and Bruce McEwen, started a Journal [3] intended at offering editorial equal opportunities to seemingly distant disciplines. We then attempted to bestow analogous relevance to, on the one hand, behaviour, and, on the other hand, neurochemical, hormonal, molecular, and cellular investigations: from such a perspective we still do believe that the explanation of complex psychopathological phenomena, encompassing neurological and psychiatric issues, will arise.

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L'ERBA DELLA REGINA Storia di un decotto miracoloso

Paolo Mazzarello Torino: Bollati Boringhieri; 2013. 190 p. ISBN 978-88-339-2438-0 € 16,00.

[The Herb of the Queen - History of a Miraculous Decoction]

This work is a rigorous and lively account of the complex events which resulted in the increasingly extensive use of *Atropa belladonna* – the deadly nightshade – in the management of subjects chronically maimed by von Economo's lethargic encephalitis (LE); an escalation promoted by the unrelenting pressure of queen Elena of Italy (1873-1952)⁽¹⁾. The author, who teaches history of medicine at the University of Pavia, succeeds in combining quite effectively a large body of information from different sources: history *tout court*, politics (ranging from geopolitics to waiting room lobbying), history of medicine, ethnomedicine and ethnopharmacology, modern medicine and pathology, etc.

The first chapter is devoted to a clear medical, pathological and epidemiological description of the LE epidemics which raged between 1916/7 and 1924, almost in parallel with the Spanish flu pandemic (but the flu and LE were not caused by the same viral agent), and left for several years afterwards a large number of surviving "neuropsychological wrecks" with Parkinsonian and a variety of other neurological and behavioural symptoms⁽²⁾. After this medical-scientific prologue, several chapters are devoted to the reconstruction of the workings, particularly in Bulgaria, of "alternative medicine" practitioners, often with an excellent knowledge of the properties of various natural (mainly herbal) remedies. One of them accidentally administered a near-lethal dose of the deadly nightshade to a sick woman, who apparently showed a remarkable improvement of her severe LE symptoms after recovering from the intoxication; and at this point the use of belladonna root extracts started its unrelenting escalation. There was, of course, considerable opposition to this and other related practices by the medical establishment; however, there were exceptions facilitating the spread of the "good news" which created hope for desperately incurable patients. These news eventually arrived in Cetinje, the mountain capital of the small Montenegro ruled by gosdpodari Nicholas I and protected by the Russian Czar for substantial geopolitical reasons (the rivalry with the Ottoman empire). Jelena, one of the ruler's numerous children (12 legitimate, about 50 illegitimate), was an intelligent young woman who received a rigorous education, first at home and then for several years in a Petersburg college for noble girls. She developed a real passion for medical affairs and for taking care of patients,

starting already when she was a child and insisted for acting as an assistant nurse in the care of Montenegro soldiers wounded in the Serbo-Turkish wars of 1876-8. In particular, she soon became an enthousiastic supporter of ethnomedicime, ethnopharmacology, and the like.

The author at this point takes an interesting step back to illustrate how the unhappy condition of the Italian Crown prince Vittorio Emanuele - tortured for years with all sorts of medical, physical and even mechanical (literally procrustean) "remedies" because of his poor health and shortness (eventually about 1.50 m as an adult) - raised the fear of a "Lombrosian degeneration" threatening the dynasty. (Umberto and his wife Margherita were first cousins). This started a hectic search for an appropriate spouse who might bring "healthy good blood" to the Italian royal family. The choice of available European princesses glooming with health was quite ample. The Crown prince, however, whose character resented of his experience of suffering (his intelligence and memory power, however, were much above average^[3]), refused them all: he was shy and felt ashamed of his physical look, particularly as compared to the good looks of his parents (Umberto, like his father Vittorio Emanuele II but more aristocratical. was a tireless and successful tombeur de femmes). But, when the royal court's paranymphs made him meet "by chance" Jelena of Montenegro (1.77 m tall, the very image of excellent health, intelligent and well educated), it was love at first sight; and after the usual formal paraphernalia, the majestic Elena and the tiny Vittorio Emanuele⁽⁴⁾ became husband ad wife in 1896. A perfect couple, save for the later disastrous political errors of V.E. III as king of Italy⁽⁵⁾. After the death in 1926 of the conservative, authoritarian and rather meddlesome gueen mother Margherita⁽⁶⁾, queen Elena became free to pursue her interests without limitations, her royal spouse's main interests being coins and photographs. Elena's sponsorship of ethnomedicine and ethnopharmacology was facilitated by the wedding of one of her daughters, Giovanna, with Boris III, the Czar of Bulgaria, who was a botany and zoogeography expert and had close connections with both official and "alternative" physicians and pharmacologists in his country. Shortly afterwards the deadly nightshade and the Bulgarian experts of its use in LE arrived in Italy in full regalia – hence the already mentioned ad hoc law "suggested" by Elena to the fascist government via the Minister of Social affairs. Giuseppe Bottai, and the various therapeutical initiatives including an ad hoc institute in Rome's Policlinico.

We shall not attempt to summarize the following events, which involved an increasing number of medical institutions in various parts of Italy, numerous expert botanists, chemists and pharmacologists for the production and improvement of the drug (initially extracted from belladonna roots from Bulgaria, later increasingly from plants grown in Italy) and numerous physicians who took care of the patients, and/or participated in the promotion of the therapy; many of them were also involved in all sorts of experiments aimed at the optimal use of the "herb of the queen" (7). Then this venture was exported, particularly to Germany (again with the political and financial support of queen Elena), and was exploited as an effective catalyst of the "brothership" between fascist Italy and the nazi Third Reich. This contributed to the survival of several German

LE patients hospitalized in ad hoc institutions which were separate from those for other disabled patients, who became the target of "eugenetic" mass murder, being condemned as valueless and burdensome underdogs unable to contribute to the nazi new order.

This story is particularly instructive since it often shows the early stages of thorny problems occurring today on a much larger scale: the increasing tensions between official and alternative medicine; the economically important conflicts between supporters of remedies containing the whole range of components of the natural source and the supporters of the use of specific and quantitatively well defined components, or synthetic industrial products (in this case, much more costly preparations of pure atropine or a mixture or atropine, scopolamine and some other alkaloid); the games, double games and secrets used to beat the competitors in the same market (in this case, manipulations of the evidence supporting, or viceversa denying, the therapeutic equivalence of extracts of belladonna grown in Italy and in Bulgaria); the politics behind some nominally scientific decisions (in this case, the aforementioned sparing of the life of LE patients in nazi Germany, aimed at obtaining the alliance of fascist Italy in a period of political uncertainties). But, Jelena's "good and healthy blood", generosity, and widely appreciated therapeutical vocation did not suffice to prevent the decline and fall of a formerly strong and successful dynasty.

Notes

- The Montenegrin princess Jelena had married in 1896 –
 after conversion from the Orthodox to the Roman Catholic religion and the change of her name to Elena the
 Italian crown prince Vittorio Emanuele (1869-1947),
 who became king as V.E.III after the assassination of his
 father Umberto I in 1900.
- 2. This reviewer, for example, has a vivid recollection of his visits to a brother of his grandfather, a LE patient who survived the acute episode in the twenties until death put an end to his suffering in the late thirties. The few patients still surviving at a much later time were the subjects in Oliver Sacks' experiments with l-dopa, of which in Awakenings and the corresponding 1990 movie directed by Penny Marshall, one of the most amazing exploits of Robert De Niro.
- For example, he quickly became one of the world's best experts of numismatics and an expert photographer. His immense and precious coin collections are now in the basement of the Palazzo Massimo section of the National Archeological Museum in Rome.
- Popularly known as "sciaboletta" (small sabre), due to the disproportion between his stature and the size of the sword which was part of his uniform as Chief commander of the Italian Royal Army.
- 5. The king was essentially against, or at least skeptical about, Italy's participation in the ordeal of World War I. His conduct as Chief Commander, however, was exemplary: he often came close to the line of fire, in a crazy war in which entire regions were ploughed by showers of heavy artillery shells which could travel several tens of kilometers. In the meantime Elena converted most of the Royal Quirinale palace into a hospital for convalescent wounded and maimed soldiers like Downton Abbey in the famous TV serial, but on a much larger scale and without distinction between officers and men. Soon after-

wards, however, came the king's subduing to the abuses of Benito Mussolini and his murderous cronies; the support to the brutal African war which made him Emperor of Ethiopia in 1936; in 1938, the signing of the racial laws and the pompous welcome to Adolf Hitler in Rome in 1938; etc, ending up in Italy's disastrous participation in World War II.

- 6. Yes, the one who graciously accepted to give her name to the wordlwide famous pizza bearing the colours of the Italian flag (mozzarella white, tomato red, basil green). The majestic palace built for her in via Veneto after Umberto's assassination is now better known as the US Embassy.
- 7. She supported this enterprise with a large amount of money out of her royal pocket, in spite of her avaricious husband's veiled opposition (about 100 000 000 Italian Liras, the equivalent in the 1930s of US \$ 20 000 000 or British £ 5 000 000). And in 1940 she reluctantly received an M.D. honoris causa from the Rome medical faculty, not far from the time when the fascist government for which she had an increasingly strong dislike delivered to the French and British ambassadors the declaration of war countersigned by her husband.

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GUIDA AI RAGNI D'EUROPA Oltre 400 specie Heiko Bellmann

Roma: Franco Muzzio
Editore; 2011
(collana Scienze naturali.
Manuali). 429 p.
ISBN: 978-88-7413-239-3.
€ 29,00.
[Guide to European
spiders. More than
400 species]

This captivating, pocket-sized book, whose waterproof cover is even provided with a built-in ruler (to measure wild-caught specimens), is about spiders: specifically the hundreds of European species. In fact, after a first chapter focused on useful information, starting from the general characteristics of any single species (anatomy, web construction, predation techniques, courtship behaviour, mating, parental care, habitats and main predators), up to delving into the most fairly technical details, the

German author describes over 400 species of spiders and other arachnids inhabiting our Old Continent.

Spiders, as all animal and plant Genera, are classified by Family: every Family is endowed by its own specification sheet and all the descriptions are accompanied by really nice photographs that "ensnare" the imagination of the reader. They also allow easy taxonomical identification of the various spider species.

Why are spiders of "special" interest for biomedicine? For their original sin, since they are all poisonous species. The way they digest their preys happens in fact by injecting digestive enzymes in the body of their preys or carcasses: this "salivary" injection makes it possible that the internal part of their preys is digested, and then pumped back by the spider. Therefore, to nourish themselves, they have to inject digestive juices. This challenge not rarely causes a danger to any human being, pet or farm animal, when bitten by a spider.

Of course, some species are much more dangerous than others, such as the well known Mediterranean black widow (*Latrodectus tredecimguttatus*, depicted on page 94), a black spider with thirteen small red spots on its dorsal abdomen, which in Italy causes some harms (only female widows are sufficiently poisonous; moreover, hazard information of this species are rather contradictory: for more details, see Isbister and White, 2004; and Kara *et al.*, 2013).

Another risk dealing tangentially with this useful pocket textbook is represented by exotic spiders introduced in Europe and marketed because highly requested by people who enjoy having them in their apartments or houses. Specific rules and regulations should be enforced to deal with this risk, also at the educational level. It represents an ever-increasing health hazard, caused by globalisation of "pet" commerce.

This book is recommended to paediatricians, general practitioners, in particular toxicologists dealing with patients who may have (for ontogenetic or pathophysiological reasons) a fragile immune system.

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