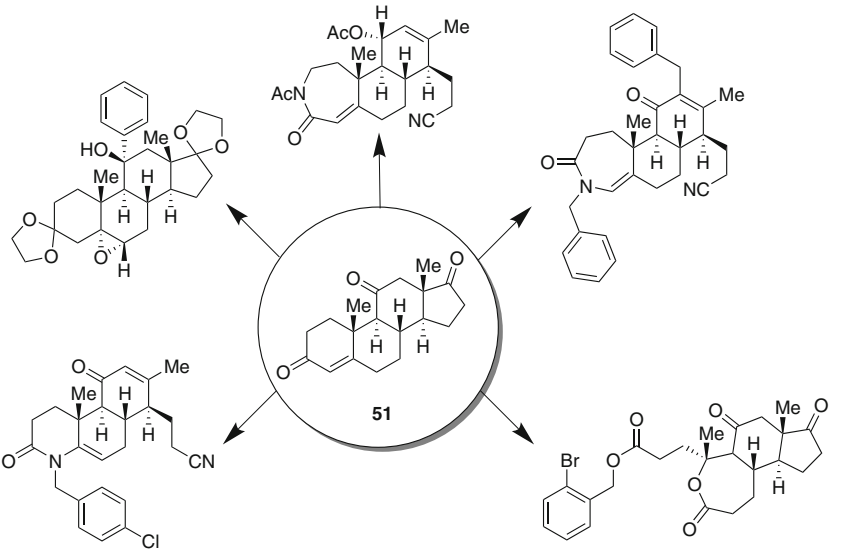

Fig. 28 Various scaffold variants to the natural steroid adrenosterone (**51**) synthesized through a ring distortion and DOS strategy in three to five steps as basis for a small library focused on diversity and complexity

4 Conclusion

Natural product research had its golden era basically from the early nineteenth century with the isolation of alkaloids and the exploration of mostly bacteria and fungi for new natural products in the mid-twentieth century. This still exerted a strong effect into our times of drug research. It is of course very clear that natural products have and still do contribute to men's health and life expectancy. They significantly contributed to the timely discovery of many cellular targets for drug development processes, and without these discoveries, progress in medicine would most probably still lag behind. There is also no doubt that there are still interesting and that important structures and bioactivities of new natural products can be found. They may even have groundbreaking properties to address new cellular targets and may provide cures we are currently unaware of. However, one has to draw a realistic picture on the developments in the sciences but also in the pharmaceutical industry. Many natural products or derivatives reaching the market in these days have been found decades ago and have been reconsidered for drug use because of their unique properties, which is evident with the antibiotics daptomycin, fidaxomicin, and ramoplanin. Fundamentally new natural products lead structures are scarce. Hence, the downscaling and termination of most natural product research groups within the pharmaceutical industry has its reasons. These comprise all the well-known arguments exchanged in a dispute between supporters and