



CDMO for PolyAmino Acids

A One Stop Shop



The logo for isodel PAA, featuring a circular icon on the left composed of vertical lines of varying heights, resembling a stylized 'i' or a sunburst. To the right of the icon, the text 'isodel PAA' is written in a dark blue, lowercase sans-serif font, with a trademark symbol (TM) to the upper right of 'isodel'.

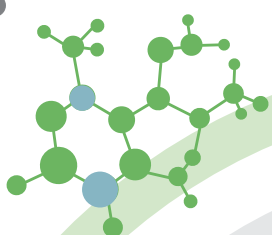
*The GMP Drug
Delivery offer of
PMC Isochem*

Promizing Functional Excipients & Drug Conjugates



PAA GMP Manufacturing

FDA Audited manufacturing plants

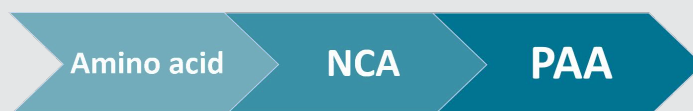


PMC Isochem: a unique integrated solution

- Highly talented & multidisciplinary R&D team with Academic connections.
- Fully equipped infrastructures and network to access cutting-edge technologies.
- Custom PAA supported by integrated NCA supply and development.

PAA Development & CMC

- PAA as Starting materials, Excipients or APIs.
- Integrated high quality and unique NCA catalogue.
- Process development.
- Analytical development.
- Full QA/Regulatory support for clinical stage.
- CMC Dossier.



Number One in manufacture of NCA
25 years / 60 monomers



Business

- Lean approach to provide a faster, cheaper and better solution to allow you to save time, costs and to limit risks.
- Flexible and creative Business development team.

Precinical and clinical batches

- 40 years experience in large scale GMP.
- Production of NCA and Custom of Manufacturing of PAA.
- PAA From Kilolab to full scale production.
- US & EU audited manufacturing facilities
- Regulatory experience (DMF, CMC file, ...).
- 3 production Sites (France).



Market

- Commercial batches of Starting Materials, Excipients and APIs.
- QA and regulatory affairs to cover Product/Project lifecycle management.

NCA: α -aminoacid N-CarboxyAnhydride

PAA: Poly-AminoAcid

Why a PAA based delivery technology?

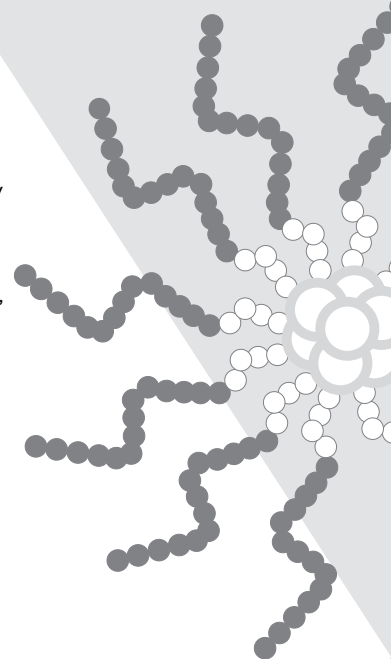
Growing interest for advanced biomedicines

Polyamino acids (PAAs)-based materials have gained much attention in the field of biomedicine as they demonstrate remarkable **biocompatibility and biodegradability** due to the nature of the building amino acid monomers.

Production of polypeptides via **ring opening polymerization of amino acid N-Carboxyanhydride** monomers yields narrow polydispersity, minimal side product formation, high reproducibility, **versatile architectures** and precise functionalization of the polypeptide backbone.

Engineering polypeptide architectures in order to **mimic nature and cross biological barriers** in a given pathology for drug delivery is nowadays being exploited in different preclinical studies and clinical trials.

O. Zagorodko et al, Macromol. Biosci. 2017, 17, 1600316.



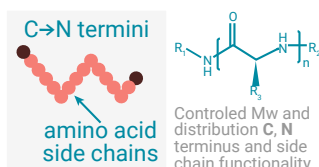
Non-limiting examples of PAA - Various architectures

HOMOPOLYPEPTIDES

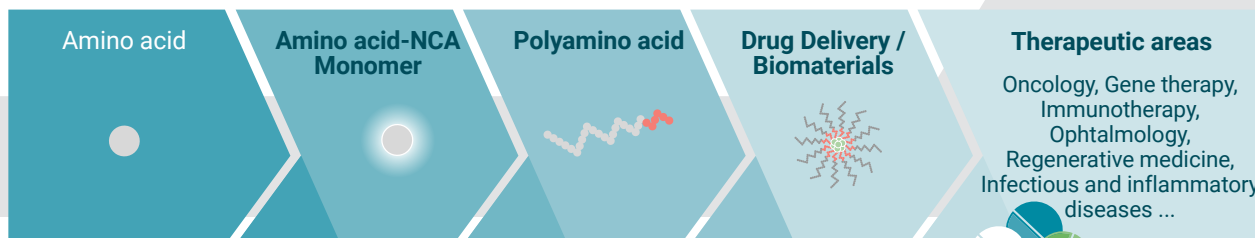
Poly-L-glutamate sodium salt
Poly-L-ornithine hydrochloride
Poly-L-arginine Hydrochloride
Poly-L-Lysine Hydrochloride

HYDROPHILIC COPOLYMERS + AMPHIPHILIC COPOLYMERS

Methoxy-poly(ethylene glycol)-block-poly-L-peptide
Poly-Sarcosine-block-poly-L-peptide
Poly-L-glutamate-block-poly-L-peptide
Poly-L-ornithine-block-poly-L-peptide
Methoxy-poly(ethylene glycol)-block-poly(L-glutamic acid sodium salt)



LINEAR, BRANCHED & GRAFTED ARCHITECTURES



Amino acid based biopolymer diversity for innovative therapies



pmc  **isochem**[™]

Your partner for Smart Delivery Technologies



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