

# AD-214: progress and next steps

*Tim Oldham PhD, CEO and Managing Director*  
Investor Webinar, 2 November 2022 at 3pm AEST

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## AdAlta at a glance

AdAlta's i-body platform is enabling a high-value product pipeline in two therapeutic areas of significant unmet medical need

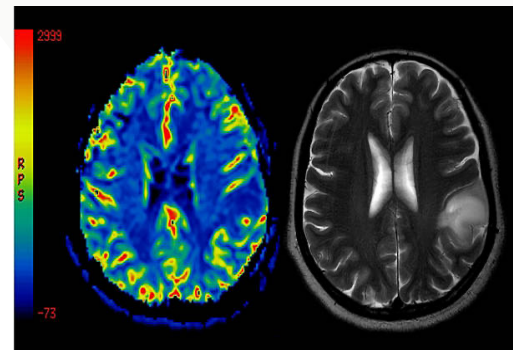


i-body platform enables  
development of multiple, high  
value assets



A wholly owned fibrosis and  
inflammation pipeline

**Focus today:  
lead program AD-214**



A co-developed immuno-  
oncology pipeline

## AD-214 – mid CY2021 status

### Pre-clinical

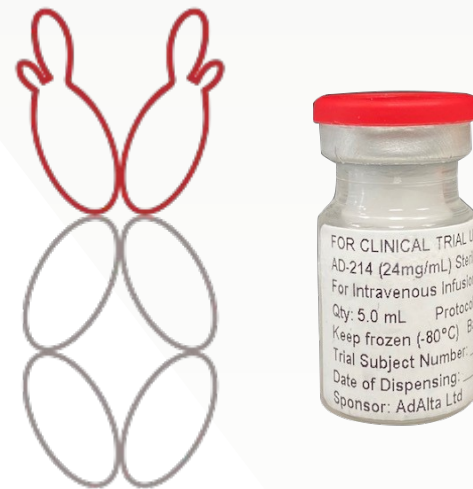
- ✓ Efficacy of injected AD-214 in lung fibrosis
- ✓ Efficacy of injected AD-114 (i-body only) in eye, kidney fibrosis
- ? Rapid clearance of IV AD-214

### Clinical

- ✓ Phase I intravenous (IV) clinical study successfully completed<sup>1</sup>
- ✓ AD-214 (IV) is well tolerated and demonstrates robust CXCR4 binding

### Manufacturing

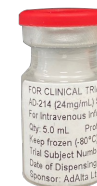
- ✓ cGMP manufacturing process established
- ? Next drug substance manufacturing slots secured, long lead time creates opportunity<sup>2</sup>



## AD-214 now – expanded options and value ahead of next clinical trial

### *Achievements since mid 2021*

- ✓ New pre-clinical data in kidney fibrosis – expands clinic ready indications
- ✓ Initiated preclinical studies (eye fibrosis) and partnership (cancer) – creates further options
- ✓ Demonstration of feasibility, possible efficacy of inhaled administration – adds value to lung fibrosis partnering
- ✓ Progress of manufacturing and IV formulation continuous improvement initiatives – enables progress of all routes of administration



## Putting all the pieces together: prioritisation process

### ***Prioritisation considerations***



- Unmet need/market potential



- Pipeline competition



- Quality of preclinical data



- Cost and time to return to clinic, to achieve preclinical proof of concept



- Ability to utilize booked manufacturing and toxicology slots



- Maximize ongoing flexibility (partners, indications)



## Our preferred approach for AD-214 today

### Internal focus

#### Lung, kidney and eye fibrosis indications

- Preclinical eye data, partnering discussions in next 6 months to further refine indication for next AdAlta sponsored clinical trial

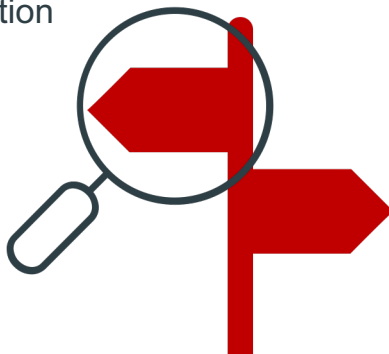
#### Injectable (IV and IVT) delivery

- Best return on investment (speed and cost)

### Progress through partnership

#### Other indications and routes of administration

- Oncology (GPCR Therapeutics collaboration in place)
- Inhalation (lung fibrosis partners)

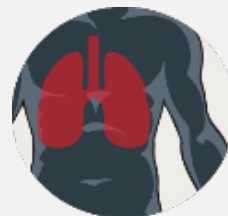


# Summary of newest data



## Four indications offer best commercial potential, most favourable landscape

- Compelling data from preclinical tissue and animal models show that AD-214 improves outcomes across a range of fibrotic diseases and cancer
- Unique formulations for different indications enable multiple potential partnering deals
- Each additional indication could address multiple markets with US\$ billion potential

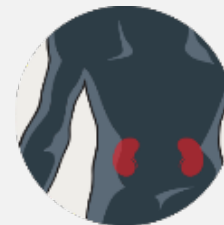


### Lung

IPF/ILD

>US\$3b

82 fibrosis trials in  
or entering clinic



### Kidney

Lupus nephritis, FSGS

>US\$10b

6 fibrosis trials in  
or entering clinic

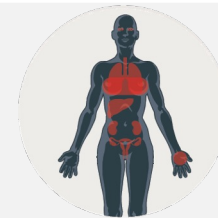


### Eye

Wet-AMD, PVR

>US\$15b

2 fibrosis trials in  
or entering clinic



### Cancer

23 different cancers, I/O

>US\$1b ea

22 trials of CXCR4 agents in  
or entering clinic

## Recent preclinical data: inhalation feasibility for lung fibrosis



Lung  
IPF/ILD

### Status at mid-2021

- ✓ IV AD-214 efficacious in BLM mouse model of lung fibrosis
- ✓ Phase I clinical study supports IV Phase II

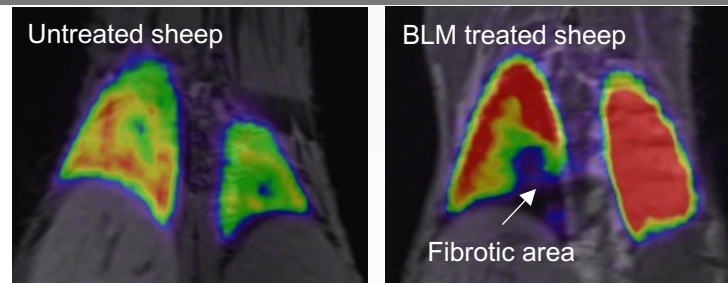
### Advances to date: inhalation feasibility

- ✓ Delivery to airways of healthy and fibrotic lungs (see figure)
- ✓ Little transport between lung and circulation: bioavailability
- ✓ Mode of action: collagen reduction in lung tissue (see figure)
- ? Statistically definitive (yes/no) efficacy results in gold standard BLM mouse

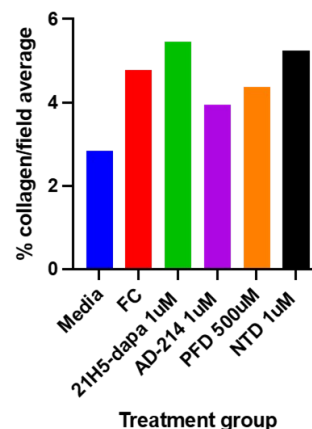
### Pending data

- Identify specific lung cell localization
- Alternate formulation stability

Inhaled AD-214 is delivered throughout the lungs including to the margins of fibrotic lesions



AD-214 reduces collagen deposition in human lung slices



(FC: fibrotic cocktail; 21H5: negative control antibody; NTD: nintendanib; PFD: pirfenidone)

## Recent preclinical data: IV efficacy in kidney fibrosis



### Kidney

Lupus nephritis  
FSGS

#### Status at mid-2021

- ✓ IV AD-114 efficacious in folic acid mouse model
- ✓ Phase I clinical study of AD-214 supports IV Ph II
- ✓ Carol Pollock, Uni Sydney collaboration

#### Advances to date<sup>1</sup>

- ✓ IV AD-214 (and AD-114) efficacious in UUO<sup>2</sup> mouse model
- ✓ Mode of action studies show impact on fibrotic markers and kidney function

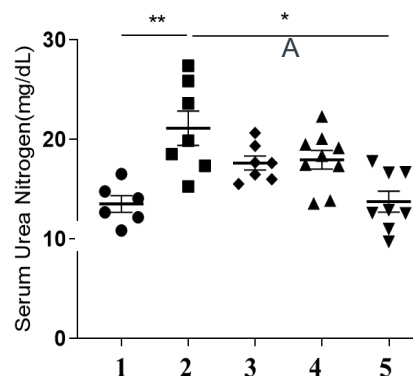
#### Pending Data

- IV AD-214 efficacy in FA mouse model

<sup>1</sup> ASX release April 2022; Cao *et al* (2022) DOI: 10.1172/jci.insight.143018

<sup>2</sup> Unilateral ureteral obstruction

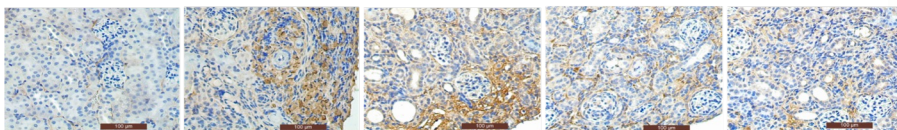
#### AD-214 prevents loss of kidney function in UUO model



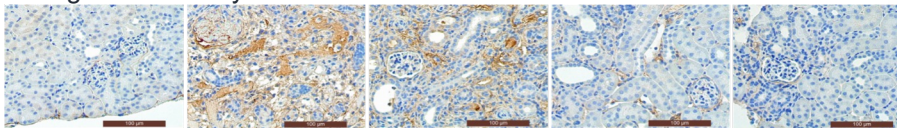
1. Control
  2. UUO
  3. UUO + negative control i-body
  4. AD-214 at 1mg/kg
  5. AD-214 at 5mg/kg
- (n=5-9. P<0.01 (1-way ANOVA))

#### AD-214 reduces collagen deposition in UUO model

##### Collagen 1 in kidneys



##### Collagen 4 in kidneys



Con      UUO      UUO+Negative i-body      UUO+AD-214 (1mg/kg)      UUO+AD-214 (5mg/kg)

## Recent preclinical data: translating AD-114 to AD-214 in eye fibrosis



Eye

Wet-AMD, PVR

### Status at mid-2021

- ✓ IVT AD-114 efficacious in laser CNV mouse model<sup>2</sup>
- ✓ Erica Fletcher, Uni Melbourne collaboration

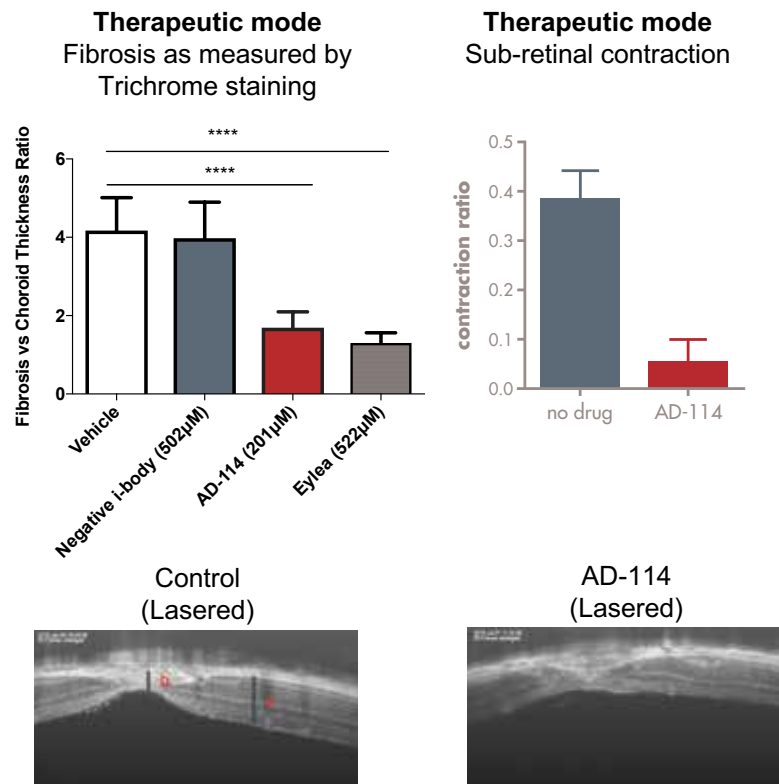
### Advances to date

- ✓ IVT AD-214 detected in eye for 30+ days post injection
- ✓ Characterisation of second mouse model (spontaneous fibrosis, more comparable to AMD)

### Pending Data

- AD-214 (and AD-114) +/- VEGF inhibitor in laser CNV mouse model
- AD-214 in new spontaneous leakage model

### AD-114 in laser CNV mouse model of eye fibrosis<sup>1</sup>



<sup>1</sup> X Wang, M Foley, G Venables, E Fletcher, poster 2259 - B0213, Association for Research in Vision and Ophthalmology Annual Conference, 2017

<sup>2</sup> IVT: intravitreal; CNV: choroidal neovascularisation

## Recent partnering progress: extending AD-214 (and other i-bodies) to cancer



### Cancer

23 different cancers, I/O

#### Status at mid-2021

- ? AD-214 and AD-114 studied in several *in vitro* models as monotherapy
- ✓ Marilyn Andersen, ONJCRI collaboration
- ✓ Literature suggest combinations beneficial

#### Advances to date

- ✓ Collaboration with GPCR Therapeutics

#### Pending Data

- *In vitro* mode of action and efficacy in combination with beta-blockers
- *In vivo* preclinical combination efficacy

#### AdAlta-GPCR Therapeutics collaboration<sup>1</sup>



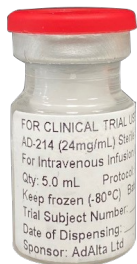
**AdAlta**  
next generation protein therapeutics



- *GPCR Therapeutics to evaluate 5 x CXCR4 i-bodies (incl AD-214) in vitro and in vivo in combination with generic beta blockers in cancer*
- *Targeting GPCR heterodimers could increase efficacy in cancer relative to monotherapy against individual GPCRs*
- *AdAlta has right of first refusal to commercialise results*

<sup>1</sup> ASX announcement October 2022

## Recent manufacturing continuous improvement progress: yield enhancement



### *Status at mid-2021*

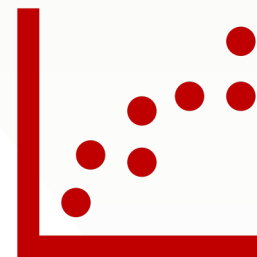
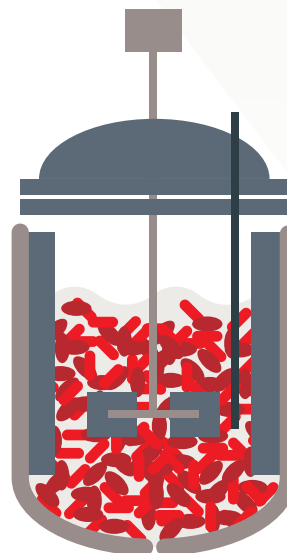
- ✓ cGMP production established
- ? Phase satisfactory yield; opportunities to improve

### *Advances to date*

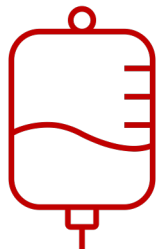
- ✓ Causes of yield loss understood
- ✓ Cell line studies indicate potential to eliminate up to 40% of losses
- ? Alternate culture conditions investigated

### *Next steps*

- Validate potential to improve cell line and culture conditions; target Phase III implementation



## Recent formulation progress: IV improvement and inhaled development



### **Status at mid-2021: IV**

- ✓ IV formulation well tolerated in Phase I
- ? Rapid clearance from blood following IV administration – might limit dose and COGS



### **Status at mid-2021: inhalation**

- ✓ Program initiated

### **Advances to date: IV**

- ✓ Screening of alternate diluents, formulations suggests potential to reduce liver clearance

### **Advances to date: inhalation**

- ✓ AD-214 stable on nebulisation
- ✓ Formulation with already approved excipients passed stability screens

### **Next steps: IV**

- Assess bioavailability of alternate formulations and diluents using imaging

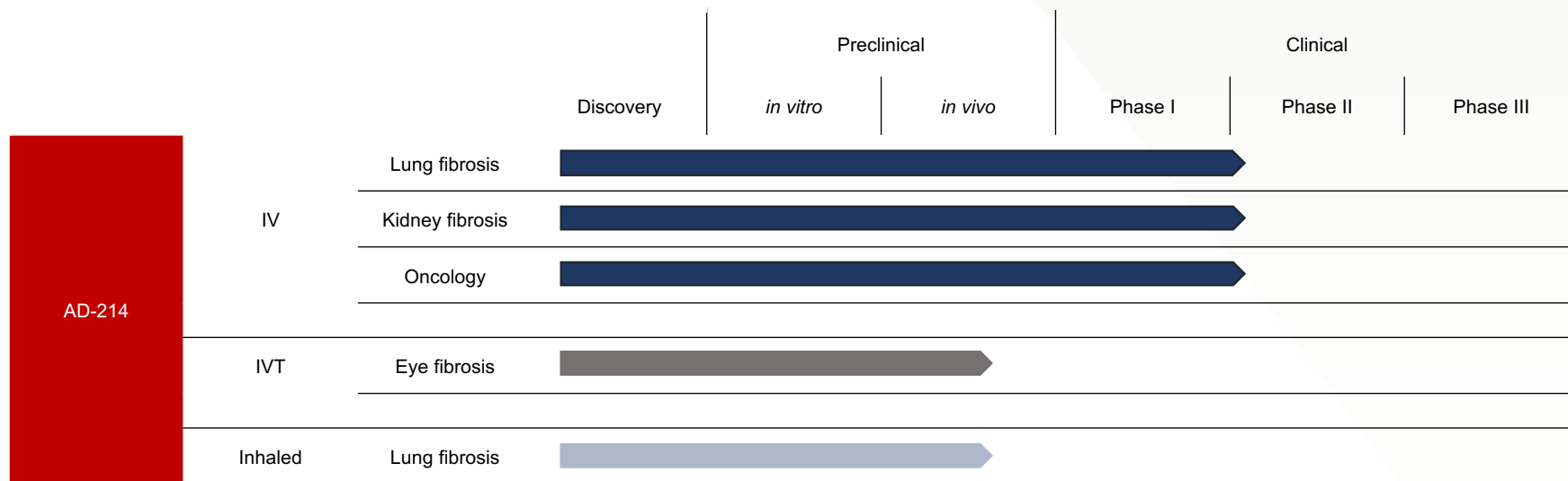
### **Next steps: inhalation**

- Assess longer term stability of nebulization formulation to support partnering

# Near term milestones



## Expanding opportunities for AD-214: multiple indications and routes of administration progressing



## AD-214 | Milestones and next steps

### 1H CY2023

- Manufacture extended dose toxicology batch
- Progress/accelerate existing partnering discussions for lung and kidney fibrosis
- Preclinical eye fibrosis data
- Preclinical kidney fibrosis data in 2<sup>nd</sup> model
- Finalise Phase II clinical strategy

### 2H CY2023

- Manufacturing AD-214 for clinical studies to start in 2024
- Commence extended dose GLP toxicology studies
- Progress/accelerate existing partnering discussions for eye fibrosis

# Corporate snapshot

## Key financial details (27 Oct 2022)

ASX code	1AD
<b>Market capitalisation</b>	<b>A\$16.02m</b>
Share price (12 month closing range)	A\$0.051 (\$0.042 - 0.092)
12 month return	(41)%
Ordinary Shares (daily volume)	314,184,746 (194,521)
Unlisted Options	14,184,060
<b>Cash (30 Sep 2022)</b>	<b>A\$7.16m*</b>

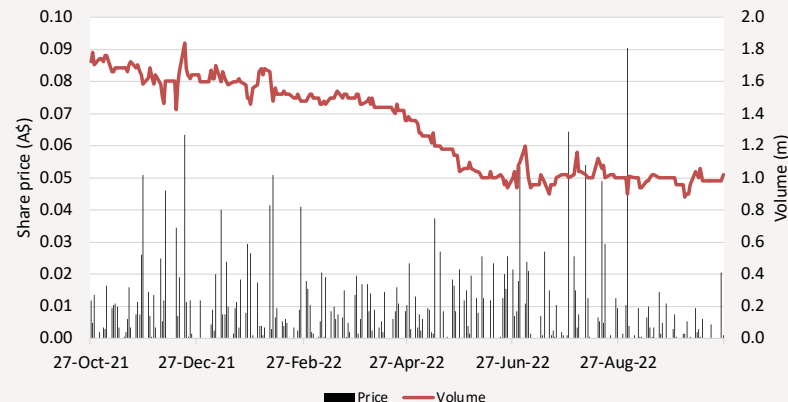
## Major shareholders (27 Oct 2022)

	%
Yuuwa Capital LP	17.2
Platinum Asset Management	15.7
Meurs Holdings Pty Ltd	6.4
Radiata Super Pty Ltd	3.5
Sacavic Pty Ltd	3.1
Other (1,472 total holders)	54.1
<b>Total</b>	<b>100%</b>

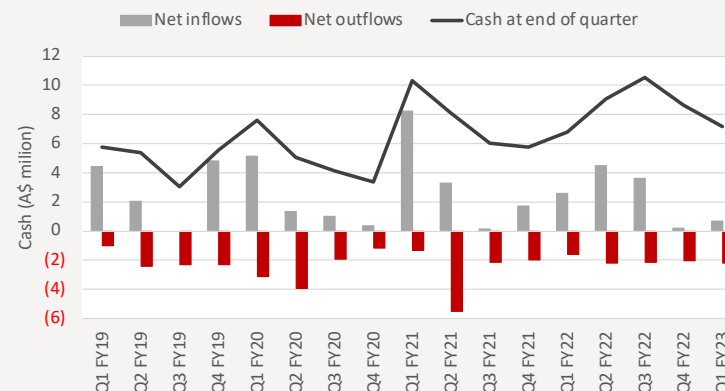
## Analyst Coverage

Lodge Partners

## Share price performance (last 12 months)



## Quarterly cash flows (A\$ million)



\* Excludes \$2.08m R&D Tax Incentive rebate received in October 2022

## Multiple assets in oncology and fibrosis, underpinned by AdAlta's i-body platform

### Co-developed assets



GE Healthcare

**Granzyme B** i-body enabled **PET imaging** agents for use in immuno-oncology

*Pre-clinical*



Precision engineered, i-body enabled **CAR-T** cells potentially providing new hope for patients with cancer  
*Discovery*

### Wholly owned assets



**AdAlta**  
next generation protein therapeutics

**Lead candidate: AD-214**

First in class anti-fibrotic targeting CXCR4

Phase I

Orphan Drug Designation for IPF

Collaboration in place to explore oncology uses



**AdAlta**  
next generation protein therapeutics

**Undisclosed target: GPCR for fibrotic disease**

*Discovery*

### Platform



Patented, diverse i-body discovery platform:  
10 billion different i-bodies for drugging undruggable targets

# Investment proposition



**i-body platform to create value**



**Fibrosis/inflammation**  
**Lead asset advancing to Phase II**  
 >\$3b market potential in first indication<sup>1</sup>  
 Multiple indication expansion initiatives and partnership

**Discovery initiated on 2<sup>nd</sup> target**



**Immuno-oncology**  
**2 x co-development collaborations to leverage platform**

- ✓ Carina Biotech: \$20b CAR-T market<sup>2</sup>
- ✓ GE Healthcare: \$6b PET market<sup>3</sup>



**Leading expertise**



**Clear vision for growth**  
**through pipeline expansion**



**Regular near-term news flow**

1. GlobalData, Idiopathic Pulmonary Fibrosis Opportunity Analysis and Forecasts to 2029, November 2020 2. 2028 forecast by Grandview Research, "T-cell Therapy Market Size, Share & Trends Analysis" Feb 2021 3. 2027 forecast by Global Industry Analysts, Imaging Agents: Global Market Trajectory and Analytics, April 2021

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